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PHASE 2 REMEDIAL INVESTIGATION AND BASELINE ECOLOGICAL RISK ASSESSMENT SITE 17 BUILDING 32 GOULD ISLAND NS NEWPORT RI

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TETRA TECH

Phase 2 Remedial Investigation

And

Baseline Ecological Risk Assessment

Site 17: Building 32, Gould Island

Naval Station Newport
Newport, Rhode Island

Naval Facilities Engineering Command
Mid-Atlantic

Contract Number N62467-04-D-0055
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PHASE 2 REMEDIAL INVESTIGATION

AND

BASELINE ECOLOGICAL RISK ASSESSMENT

SITE 17: BUILDING 32, GOULD ISLAND

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

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I Summary of On Shore PCB Removal Actions, Foster-Wheeler 2002

J Summary Report on Sediment Physical Conditions, Tetra Tech, July 2010

LIST OF ACRONYMS

AST	Aboveground storage tank
AET	Apparent Effects Threshold
BEHP	bis(2-ethylhexyl)phthalate
BERA	Baseline Ecological Risk Assessment
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLEAN	Comprehensive Long-Term Environmental Action - Navy
cm	centimeter
COPC	Contaminant of Potential Concern
COC	Contaminant of Concern
CS	Confirmation Study
CSM	Conceptual Site Model
CSF	cancer slope factor
CTE	Central Tendency Exposure
CTL	Critical Tissue Level
CTO	Contract Task Order
DABS	Dermal Absorption Factors
DAD	Dermally Absorbed Dose
DA_{event}	Dose absorbed per unit area per event
DDD	dichloro diphenyl dichloroethane
DDE	dichloro diphenyl dichloroethylene
DDT	dichloro diphenyl trichloroethane
DERP	Defense Environmental Restoration Program
dL	deciliter
DOD	Department of Defense
DRO	Diesel Range Organics
EBS	Environmental Baseline Survey
EEQ	Ecological Effects Quotient
EPA	United States Environmental Protection Agency
EPC	exposure point concentrations
ER-L	Effects Range - Low
ER-M	Effects Range – Median
ERM-Q	Effects Range – Median Quotient
ESTCP	Environmental Security Technology Certification Program
FFA	Federal Facilities Agreement

FID	Flame ionization detector
FMR	Field Modification Record
FS	Feasibility Study
FUDS	Formerly Used Defense Site
GA	State of Rhode Island Classification for Drinking Water source
GPS	Global Positioning System
GRO	Gasoline Range Organics
HEAST	Health Effects Assessment Summary Tables
HHRA	Human Health Risk Assessment
HI	hazard index
HMW	High Molecular Weight
HSA	Hollow Stem Auger
HQ	hazard quotient
IC/DEC	Industrial/commercial direct exposure criteria
IEUBK	Integrated Exposure Uptake Biokinetic model
ILCR	incremental lifetime cancer risk
IRIS	Integrated Risk Information System
kg	kilogram
Kp	Permeability Coeffient
L	Liter
LMW	Low Molecular Weight
LNAPL	Light non-aqueous phase liquid
LOAEL	Lowest observed adverse effect level
LOEC	Lowest Observed Effects Concentration
LUCIP	Land-use control implementation plan
m^3	cubic meters
MCL	Maximum Contaminant Level
ME	Monitoring event
MSL	Mean Sea Level
µg	microgram
µg/dL	micrograms per deciliter
µg/kg	micrograms per kilogram
µg/l or µg/L	micrograms per liter
µg/L	Microgram per liter
mg	milligram
mg/cm^2	milligram per square centimeter
mg/kg	milligrams per kilogram

mg/l or mg/L	milligrams per liter
MSL	Mean sea level
MVUE	Minimum variance un-biased estimator
MW	Monitoring well
NAVSTA	Naval Station Newport
NCEA	National Center for Environmental Assessment
NGVD	National Geodetic Vertical Datum
NOAA	National Oceanic and Atmospheric Administration
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effects Level
OABS	Oral Absorption Factors
OSWER	Office of Solid Waste and Emergency Response
PAH	Polycyclic Aromatic Hydrocarbon
PAL	Project action limit
PID	Photo ionization detector
QAPP	Quality assurance project plan
PCB	polychlorinated biphenyl
RAGS HHEM	Risk Assessment Guidance for Superfund: Human Health Risk Evaluation Manual
RBC	Risk-Based Concentration
RfC	Reference Concentration
RfD	Reference Dose
RI	Remedial Investigation
RIDEM	Rhode Island Department of Environmental Management
RME	Reasonable Maximum Exposure
SIM	Selective Ion Monitoring
SSL	Soil Screening Level
SQB	Sediment Quality Benchmark
SVOC	Semi Volatile Organic Compound
SVOCs	Semi Volatile Organic Compounds
TAL	(CLP) Target Analyte List for Inorganics
TCE	Trichloroethene
TCL	Target compound list
TEF	Toxicity Equivalence Factor
TPH	Total petroleum hydrocarbons
TOC	Total Organic Carbon
TSCA	Toxic Substances Control Act
UCL	Upper Concentration Limit
UST	Underground storage tank

VC	Vinyl chloride
VDEQ	Virginia Department of Environmental Quality
VF	Volatilization Factor
VOC	Volatile Organic Compound
Yr	Year

EXECUTIVE SUMMARY

This report presents the findings of the Phase 2 Remedial Investigation (RI) and Baseline Ecological Risk Assessment (BERA) for Navy Installation Restoration Program (IRP) Site 17, the Building 32 Area at Gould Island, which is part of Jamestown, Rhode Island, and is part of Naval Station Newport.

The general objectives of the Phase 2 RI and BERA, which were met, are as follows:

1) Resolve the nature and extent of contamination in marine sediment associated with the past use and disposal of chemicals and chemical wastes at Site 17.
2) Provide and interpret exposure data and develop a BERA in accordance with EPA and Navy policy and guidance.
3) Resolve the source and extent of fuel contamination in soil at the southwest corner of former Building 32.
4) Determine if there is residual soil contamination at the former rigging building (Building 41).

Site 17 includes former Building 32, located at the northern end of Gould Island, and the immediate surroundings. The site occupies approximately 6 acres. It is bordered by state property to the south, and is surrounded by a portion of the East Passage of Narragansett Bay to the east, north, and west. The site buildings have been demolished, and the island is unoccupied, but occasional trespassers are likely. The site was home to a Navy torpedo overhaul shop from World War II, which ceased major operations in the 1950s. During that time, operations included degreasing, parts washing, electroplating, sandblasting, testing, and other operations.

The site was identified as a study area in the Initial Assessment Study in 1986, which found heavy metals and cyanide in the sediments and shellfish. Stored chemicals and electroplating baths in Building 32 were removed and cleaned in 1992. The building and facilities were demolished in the period from 1999 through 2002. The concrete roadways were removed at that time, and polychlorinated biphenyl (PCB) releases were discovered near transformer buildings, other structures, and in the roadway. Approximately 5,000 cubic yards of contaminated soil, concrete, and sediment were removed from these locations under actions carried out under Toxic Substances Control Act (TSCA) and Rhode Island Department of Environmental Management (RIDEM) regulations.

A Study Area Screening Evaluation (SASE) conducted in 1999 to 2000 found trichloroethylene (TCE) and polycyclic aromatic hydrocarbons (PAHs) in soil gas under Building 32, and metals in surface soil in the southwest corner of Building 32.

Closure of seven fuel underground storage tanks (USTs) at Building 44 was conducted in the late 1990s, and included removal of approximately 9,000 cubic yards of petroleum-contaminated soil. A subsequent groundwater monitoring program was implemented in this area under RIDEM regulations and through the Navy UST Program. One former UST at the south end of Building 32 was addressed through the UST program. A release of diesel fuel from the UST resulted in removal of the tank and associated contaminated soil.

The RI for Site 17 – Gould Island was conducted in two phases. The first phase was conducted in 2005 and the subsequent report was finalized in 2006 (Tetra Tech, December 2006). The Phase 1 RI found that activities associated with former site operations have resulted in the presence of volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, PCBs, petroleum hydrocarbons, metals, and cyanide in limited areas of the site soils and the presence of PAHs, PCBs, and metals in sediments where waste was disposed of through discharge pipes or overland flow. Additionally, VOCs, SVOCs, petroleum hydrocarbons, and metals were detected in site groundwater at low concentrations. Phase 1 RI evaluated human health risks, and also included a screening level ecological risk assessment (ERA). The Phase 1 RI Report concluded that a second phase was necessary to resolve source and extent of soil contamination in the southeast corner of Building 32, and to conduct a BERA for the marine sediment.

Findings of the Phase 2 RI

To follow up on Phase 1 soil investigations, Phase 2 investigations were conducted to resolve source and extent of soil contaminants, and extent and risk from sediment contaminants. In soils, three possible source areas were evaluated: a former coal pile, former fuel tank/sanitary leaching system upgradient from the southwest corner of Building 32, and the former Building 41 and Rigging Platform (north of Building 32). Surface and subsurface soil data from these borings led to the following conclusions:

- The former coal pile and former fuel tank/sanitary leaching system upgradient from the southwest corner of Building 32 are not likely to have provided the PAHs in the soil southwest of Building 32. Therefore, it is concluded that PAHs in this area are a result of fuel or solvent releases during or after operations.

- Residual PCBs and PAHs are present in very limited areas of the surface soil near Building 41, but not at concentrations that would pose a significant threat to the adjacent sediment.

Pesticides, PCBs, and metals found in soils are stable and relatively insoluble in water. However, through erosion and migration of contaminated soils, these compounds could be transported from soils to marine sediments, and could also migrate with sediment within the marine environment, particularly in disturbed or high energy areas at the shoreline.

The PCBs already in sediments of the Stillwater Basin are likely to remain in this area until the physical properties of the shoreline change. Chemically, the PCBs are bound within the sediment and are likely to break down or degrade only very slowly; however, they are subject to physical erosion under the right conditions. A full evaluation of the potential for sediment transport at this site is in development and will be published as a separate document.

Conclusions

The conclusions from the Phase 1 RI, as augmented by the Phase 2 RI findings, are provided below:

Soil

Elevated concentrations of soil PAHs and metals (including cadmium) are present within vaults and sumps in the foundation of former Building 32, and just outside the southwest corner of Building 32, near the former locations of the dust collection storage building and acid storage shed. These PAHs and metals are modeled to pose a cancer risk of 1E-5 and a noncancer hazard index of 1. Additionally, soil-debris in the sumps are presumed to have affected water withheld in the sumps (addressed below). This soil-debris is confined within the sumps and can be easily addressed through excavation if necessary. This material is limited in extent, and the source of the metals and PAHs is presumed to be a result of localized releases from the debris and / or near these materials storage areas.

A very small area of surface soils near the former riggers storage house (Former Building 41) appears to be impacted with PAHs (maximum concentration of 104 mg/kg) and PCBs (maximum concentration 1.8 mg/kg), which are likely a result of former releases in this area. These soils are not expected to impact the adjacent marine sediments in the Stillwater Area, but they could easily be addressed through a small excavation.

Residual contaminants may also be present in underground utilities present at the site, including the sewer systems, the trench drain, and other drainage systems that handled waste chemicals within and near Building 32.

The screening level ERA conducted during the Phase 1 RI on the terrestrial invertebrates identified possibility for mortality of soil invertebrates from metals and PAHs, and possibility for the uptake of zinc by

insectivorous birds. However, in 2008, this was revisited, and it was recognized that most of the high PAHs and metals in surface soil were limited to small areas of fill within former sumps at the former Building 32, and in the south west corner of Building 32. Because the risk was associated with only these small areas of soil, it was determined that there was no need to investigate the surface soils further.

Groundwater

Groundwater contaminant levels are below federal MCLs, with the exception of pentachlorophenol and tetrachloroethene, both found exceeding MCLs at one location each, in the shallow overburden groundwater. Based on the estimated local hydraulic gradient of the shallow overburden aquifer, it is likely that these contaminants are moving toward the Northeast Shoreline [and degrading along the way] where they will discharge to the bay and be lost through dilution upon discharge to the surface water.

There are no known current groundwater exposure pathways that are predicted to pose a risk to human receptors. Historically, groundwater was used at the island for potable use when the island was operated as a family farm (prior to Navy ownership). The Navy attempted to install production wells on the island but they did not produce enough water to meet their needs, and fresh water was piped from Aquidneck Island. The state's groundwater designation for Gould Island is GA, and although the Navy's production wells are still in place, they are inactive. As such, there are currently no groundwater drinking water supplies at the island, and no such future use is planned for groundwater at this location; therefore, there is no current or anticipated exposure via a potable water source. Potential future exposures to volatiles in groundwater through vapor intrusion into indoor air spaces were eliminated as a complete exposure pathway. Human health risks from groundwater are limited to future construction workers digging within the water table; these risks are driven by PAHs, PCBs, and pentachlorophenol (Tetra Tech, December 2006).

PAHs and PCBs detected in water accumulating in test excavations conducted within building sumps during the Phase 1 RI were found to pose risk to construction workers through a predicted air concentration based on the presence of the constituents in the standing water. This is not a true groundwater risk, but is noteworthy, and these sumps will need to be addressed in the FS.

Sediment

High concentrations of PCBs and PAHs were noted in the sediment in the Stillwater Basin, particularly adjacent to the former rigging platform, and indications of toxic effects to marine organisms are present in the same area. Laboratory toxicity was measured in samples from stations where PAHs and PCBs are present in intertidal sediment at the Northeast Shoreline, and at two stations at the Northwest Shoreline; however, these effects were not clearly correlated to elevated contaminant concentrations.

Toxicity was not found to be correlated with concentrations of metals in sediment, and data generally do not show metals to be highly concentrated in the surface sediment. As such, metals do not appear to present a significant concern for ecological receptors at this site.

There are no known current sediment exposure pathways that are predicted to pose elevated risk to human receptors. Chromium found at one location in the intertidal sediment is predicted to pose a human health risk from potential future recreational use of the site by children. The extent of metals contamination in the sediment appears to be intermittent and limited.

Shellfish

PCBs were found in clams, mussels, and crabs near the site. In regards to human health, concentrations measured were below FDA standards for food sources. Using a recreational and subsistence fishing scenario, the risk assessment predicts a possible risk of health effects to these people repeatedly eating shellfish collected from this area. However, much of the predicted risk is associated with arsenic which was confirmed in this study to be a background condition in shellfish.

Recommendations

It is recommended that a Feasibility Study be developed to evaluate remedial alternatives to address the risks posed by contaminants as described in this report.

- PCBs, PAHs, metals and pentachlorophenol in water and soil-debris within sumps that pose potential risk to future industrial and construction workers under a conservative trench-air modeling scenario;
- chromium in intertidal sediment, that poses risk to future unrestricted recreational visitor;
- PCBs, PAHs, and thallium in shellfish that poses risk to persons regularly eating shellfish from this area; and
- PCB, PAHs, and (to a lesser extent) metals posing risk to ecological receptors.

In addition, The FS will need to address tetrachloroethene and pentachlorophenol which slightly exceed MCLs in the overburden groundwater at the site.

Finally, the likelihood for sediment transport under different conditions at the site is evaluated in the sediment transport model included, which is to be provided as an appendix to the Feasibility Study report.

1.0 INTRODUCTION

This report presents the Phase 2 Remedial Investigation (RI) for the Building 32 area (the site) on Gould Island, which is located in Jamestown, Rhode Island, and owned by the Naval Station Newport (NAVSTA), formerly Naval Education and Training Center (NETC). The Building 32 area is designated as "Site 17" per Navy correspondence, after completion of the Phase 1 Study Area Screening Evaluation (SASE), conducted in April 2000. This Phase 2 RI and Baseline Ecological Risk Assessment (BERA) Report are submitted in accordance with the Federal Facilities Agreement (FFA) between the U.S. Navy, the U.S. Environmental Protection Agency (EPA), and Rhode Island Department of Environmental Management (RIDEM), which provides for the implementation of the Installation Restoration Program (IRP) for NAVSTA. The Phase 2 RI was conducted by Tetra Tech) on behalf of the Navy, under the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract No. N62467-04-D-0055, Contract Task Order (CTO) 458. The RI was performed in accordance with EPA guidance and the Sampling and Analysis Plan for Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment (Sampling and Analysis Plan [SAP]).

The purpose of the Phase 2 RI and BERA, as indicated in the SAP, is as follows:

1) Resolve the nature and extent of contamination in marine sediment associated with the past use and disposal of chemicals and chemical wastes at Site 17.
2) Provide and interpret exposure data and develop a BERA in accordance with EPA and Navy policy and guidance.
3) Resolve the source and extent of fuel contamination in soil at the southwest corner of former Building 32.
4) Determine if there is residual soil contamination at the former rigging building (Building 41), following a removal action conducted there by others.

Site 17 is focused on the former Building 32, which was a torpedo overhaul shop. The former Building 32 contained an electroplating shop, machine shops, degreasing shops, grinding and buffing shops, and other workshops used for torpedo service and maintenance during and after the Second World War. All above-ground structures in the vicinity, including Building 32 itself, were demolished in 2001 and 2002. Site 17 is currently described as the "Building 32 Area," and at the outset of this study, its exact boundaries were not completely defined. Because this RI provides resolution of the extent of contamination, based on the data collected, these boundaries are adjusted herein to encompass the area where site-related contaminants have come to reside. Figures 1-1 and 1-2 present a generalized location of the site, relative to other Navy–held properties in the Newport area.

This report uses and builds on data that was collected as part of the Remedial Investigation for Site 17, Building 32, which was conducted in 2005 and published as final in December 2006 (herein referred to as the Phase 1 RI). The findings and recommendations of that document are briefly summarized in this report. Additionally, other investigations and removal actions were previously conducted at this and other release sites in the area. A detailed description of these investigations/removal actions is presented in the Background Summary Report for Site 17, which is located in Appendix A of the Phase 1 RI (Tetra Tech, 2006).

Other environmental release sites on Gould Island are on property owned by the State of Rhode Island and managed under the Formerly Used Defense Sites (FUDS) Program, operated by the Army Corps of Engineers (Corps of Engineers) (refer to Section 1.4.2). The New England District of the Corps of Engineers reported in both 2002 and 2003 that a Phase II Engineering Evaluation for Contamination was initiated for FUDS sites on Gould Island, but has been put on hold, pending discussion with RIDEM on the scope of further investigations. Figure 1-3 presents the boundary between Navy-owned Site 17, the focus of this report, and the FUDS property, which lies immediately to the south and is under the jurisdiction of the Corps of Engineers.

1.1 REPORT ORGANIZATION

This report is organized as indicated in the Table of Contents.

An update of the human health risk assessment was not conducted as part of this Phase 2 RI, since the newer (Phase 2) data did not provide significantly different chemical concentrations from those already evaluated in the Phase 1 RI, nor did it result in additional exposure routes. The Phase 2 data are comparable to the Phase 1 data set previously used for risk calculations in the Phase 1 RI, therefore, the human health risk assessment does not require update.

1.2 OBJECTIVES AND SCOPE OF THE INVESTIGATION

The general objectives of the Phase 2 RI are to provide a BERA and to close the previously-identified data gaps, discussed below.

The BERA consists of Steps 3 through 8 of the Ecological Risk Assessment Guidance for Superfund (USEPA, 1997). For marine sediment, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and several metals (antimony, cadmium, chromium, lead, manganese, and selenium) were determined to be Chemicals of Potential Concern (COPCs), based on Steps 1 and 2 of the Ecological Risk Assessment Guidance for Superfund, previously conducted as part of the Phase 1 RI. These contaminants possibly pose a risk to marine organisms at one or more of the sediment locations at the

site. The purpose of the BERA is to quantify these possible risks through testing of marine sediment for toxicity to sediment invertebrates, and to conduct "other effects analysis", to determine if negative effects are occurring. This data and assessment will also be used to develop Preliminary Remediation Goals (PRGs) as a part of the Feasibility Study (FS) to be prepared for this site at a future date.

Two data gaps were identified after the Phase 1 RI:

- The extent (and source) of fuel contamination in soil at the southwest corner of former Building 32.
- The extent of PCB, PAH, and metals contamination in sediments at the site, particularly in the Stillwater Area, a former boat basin located at the north end of Gould Island.

A third data gap was identified during development of the SAP for the Phase 2 RI:

- The presence of PCB contamination in soil near the former rigging house (Building 41), which may be contributing or may have previously contributed to PCB contamination in sediment in the Stillwater Area. A PCB removal was conducted in this area, but excavation was reportedly limited by the instability of the ground in the area near the deteriorated rigging platform, which has partially failed and is no longer structurally sound.

1.3 APPROACH FOR THE PHASE 2 RI AND BERA

The Phase 2 RI and BERA field program was conducted in three parts, as planned in the project-specific SAP.

First, the extent of contamination in sediment was established through a series of surface grab samples and core samples collected at target areas identified by the project team (Navy, EPA, and RIDEM); in the SAP, these samples are referred to as "Extent of Contamination Samples". These samples were analyzed for target contaminant groups only: PCBs, PAHs, and metals. This part of the investigation is referred to as the Step 1 sediment investigation. The data was used to map the horizontal and vertical extent of contaminants in depositional sediments, and to select stations to be re-sampled for detailed chemical, biological, and effects analysis (Step 2 sediment sampling). Target locations for the detailed analysis were proposed to the team through a Technical Memorandum, distributed via email on February 2, 2010 (and redistributed as Revision 1 on February 4, 2010). This memorandum was discussed in detail during a conference call held on February 25, 2010. During this conference call, Step 2 sediment locations were finalized and were documented in "meeting minutes", as well as in a Field Modification Record (FMR G00949-04R). The technical memorandum, meeting minutes, and FMR are included in Appendix A.

The Step 2 sediment investigation included the collection of surface sediment grab samples at target locations, chosen as described above, for detailed chemical, biological, and effects analysis. To evaluate those sediments to which ecological receptors are presumably most exposed, surface sediment samples were collected, via a surface grab sampler; these samples are referred to as "Ecological Samples" in the SAP. These sediment samples were also analyzed for toxicity using a 28-day, amphipod full-life-cycle, chronic-toxicity test. Tissue samples were also collected during this step of the investigation at select surface sediment sample locations. At each location, one of four different species was collected: hard clams, blue mussels, green crabs, or spider crabs.

Lastly, the on-shore soil data gaps were addressed through installation and sampling of soil borings conducted in target areas, as determined during the development of the SAP. During the advancement of soil borings, soil samples were collected for both characterization and laboratory analysis.

Details regarding sample collection are presented in Section 2 of this report. The associated analytical data is presented in Section 4.

1.4 NAVSTA BACKGROUND INFORMATION

This section presents an overall description of NAVSTA, as well as its history, a summary of response actions taken at Site 17, and a summary of previous environmental investigations conducted at the site. This information from the Phase 1 RI is included here for the purpose of completeness of this Phase 2 report.

1.4.1 NAVSTA Description

NAVSTA is located approximately 60 miles southwest of Boston, Massachusetts, approximately 25 miles south of Providence, Rhode Island, and immediately north of the city of Newport, Rhode Island. It occupies approximately 1,063 acres, with portions of the facility located in the City of Newport and Towns of Middletown and Portsmouth, Rhode Island. The NAVSTA facility layout is long and narrow, following the western shoreline of Aquidneck Island for nearly 6 miles, facing the east passage of Narragansett Bay. General location maps of the current extent of NAVSTA and the Site are provided as Figures 1-1 and 1-2, respectively.

1.4.2 NAVSTA History

Extensive background information for these areas has already been gathered in the Initial Assessment Study (IAS) (Envirodyne Engineers, 1983), the Confirmation Study (CS) (Loureiro Engineering Associates,

1985), and the SASE (Tetra Tech, 2000). The history of the base, as presented below, is excerpted from the IAS (pp. 5-6 to 5-14):

> The Newport area was first used by the Navy during the Civil War when the Naval Academy was moved from Annapolis, Maryland to Newport in order to protect it from Confederate troops. The Naval Academy operated at Newport for about four years before returning to Annapolis.
>
> In 1869, the experimental Torpedo Station at Goat Island was established. This was the Navy's first permanent activity at Newport. The station was responsible for developing torpedoes and conducting experimental work on other forms of naval ordinance.
>
> In 1881, Coasters Harbor Island was acquired by the Navy from the City of Newport and used for training purposes. In 1884, the Naval War College was established on the island. A causeway and bridge linking the island to the mainland was constructed in 1892. In 1884, the USS Constellation was permanently anchored as a training ship for the Naval War College.
>
> The Melville, Rhode Island area was established as a coaling station for the steam-powered ships in 1900. The Navy purchased 160 acres of land and constructed the Narragansett Bay Coal Depot. With the advent of ships burning liquid fuel, it became necessary to add oil tanks. Consequently, in 1910, four fuel oil tanks were added in the Melville area.
>
> In 1913, the Navy established the Naval Hospital on the mainland of Aquidneck Island, directly adjacent to Coasters Harbor Island. At this time, the main hospital building was constructed.
>
> The outbreak of World War I caused a significant increase in military activity in Newport. Some 1,700 men were sent to Newport and housed in tents on Coddington Point and Coasters Harbor Island. A bridge was built at this time connecting Coddington Point with Coasters Harbor Island. In 1918, Coddington Point was purchased by the Navy. Much of the naval base organization was then transferred to Coddington Point. During the war, numerous destroyers and cruisers were fueled by the Melville coal depot and fuel tanks. By this time, a pipeline had been extended to the north fueling pier and two additional oil tanks constructed.
>
> Following World War I, fuel oil gradually replaced the use of coal by the Navy fleet. In 1921, the Coal Depot was changed to the Navy Fuel Depot. In 1931, the coal barges and coaling equipment were sold to the highest bidder.

In 1923, some two hundred buildings, which were part of the emergency war camps established on Coddington Point, were stripped and sold for scrap. The station was put on caretaker status in 1933. The base remained relatively inactive until the onset of World War II.

Reactivation of the naval base occurred in the late 1930s as a result of military build-up in Europe. Just prior to the reactivation, a 1938 hurricane and storm surge destroyed or severely damaged over 100 buildings and much of the sea walls. In 1940, Coddington Cove was acquired for use as a supply station, and hundreds of Quonset huts were constructed throughout the base. Additional barracks were constructed on Coasters Harbor Island, increasing the base housing capacity to over 3,500 men. Power plant facilities were also constructed at this time. Coddington Point was reactivated to house thousands of recruits. The Anchorage housing complex in the Coddington Cove area was constructed in 1942. In the Melville area, additional fuel facilities were constructed along with a Motor Torpedo Squadron Boat Training Center and nets for harbor defense were constructed. Tank Farms 1 through 5 were constructed during this time period. The Fire Fighting School, Fire Control Training Building, and the Steam Engineering Building were constructed in 1944.

The Torpedo Station at Goat Island was very active during World War II and expanded its operation to Gould Island. The Torpedo Station employed more than 13,000 people and manufactured 80 percent of all torpedoes used by the U.S. during the war. The Station was the largest single industry ever operated in Rhode Island.

Following World War II, naval activities at Newport converted to a peace time status. This resulted in a reduction of naval activity. Some 300 Quonset huts and buildings were removed, and the entire naval complex was consolidated into a single naval command designated the U.S. Naval Base in 1946.

The Naval Base adjusted to its peace time status by increasing its activities in the fields of research and development, specialized training, and preparedness for modern warfare. There was a brief period during the Korean War when some 25,000 sailors trained at Newport.

In 1951, the Torpedo Station was permanently disestablished after 83 years of service. Future manufacture of torpedoes was to be awarded to private industry. In place of the Torpedo Station, a new research and development facility, the Naval Underwater Ordinance Station, was established and given the responsibility of overseeing the private contractors. The Officer Candidate School was also established in 1951.

In 1952, the Training Station and other naval schools were disestablished, and the U.S. Naval Station and the U.S. Naval Schools Command were established.

In 1955, Pier 1 was constructed, with Pier 2 being added in 1957. Newport became the headquarters of the Commander Cruiser-Destroyer Force Atlantic in 1962. Some 55 naval warships and auxiliary craft were homeported at Newport. New housing and bachelor quarters were added in the late 1950s and early 1960s.

Major expansion of the Naval War College occurred during the late 1950's and early 1970's, transforming the college into a major university. In July of 1971, the Naval Schools Command was restructured and named the Naval Officer Training Center (NOTC).

In April of 1973, the Shore Establishment Realignment Program (SER) was announced and resulted in the largest reorganization of naval forces in the Newport area. The fleet stationed in Newport was relocated to other naval stations on the east coast. SER resulted in the disestablishment of the Naval Communication Station and the Fleet Training Center and related activities. The Public Works Center, Naval Supply Center, Naval Station and Naval Base were absorbed by NOTC. In April of 1974, NOTC was changed to the NETC.

From 1974 to the present, research and development and training have been the primary activities at Newport. The base was renamed Naval Station Newport ("NAVSTA" in this RI report) in 1998. The major commands currently located at NAVSTA include the Naval Education and Training Center, Surface Warfare Officers School Command, Naval Undersea Warfare Center, and the Naval War College.

1.4.3 Previous Investigations at NAVSTA

Previous NAVSTA investigations that pertain to Site 17 include the 1983 IAS and the 1986 CS, the SASE (2000), and the Phase 1 Remedial Investigation (2006). Other secondary investigations are described in Section 1.4.4 of this report.

The IAS was conducted for the Navy in 1983, by Envirodyne Engineers, Inc., of St. Louis, Missouri. The IAS identified 18 sites at the naval base with suspected contamination that may have posed a threat to human health or the environment. Six of these sites (including the Gould Island Electroplating Shop) were judged to require further study and were investigated under a CS conducted by Loureiro Engineering Associates, Avon, Connecticut, completed in 1986.

During the period of 1986 to the present, numerous investigations and remedial actions have been conducted under the Navy's IRP for NAVSTA. These activities are documented in the Administrative Record for NAVSTA.

In addition, EPA conducted sediment sampling at NAVSTA, which included the area of Gould Island in September 2003. This activity is discussed further in Section 1.4.4 of the Phase 1 RI report, and the resulting analytical data is presented in Appendix B of that report (Tetra Tech, 2006). Other investigations that are specific to Site 17 are also listed in Section 1.4.4, below.

1.4.4 History of Response Actions Pertaining to Site 17

This section presents a brief chronology of the response actions previously conducted that are pertinent to environmental issues at Site 17. The following chronology is based on information in previous environmental reports prepared for the Navy, and information obtained from review of RIDEM files.

September 11, 1980 - The Naval Assessment and Control of Installation Pollutants (NACIP) program was initiated. The purpose of this program is to systematically identify, assess, and control environmental contamination from past use and disposal of hazardous substances at Navy and Marine Corps installations.

March 1983 - The IAS of NAVSTA was completed. Eighteen potentially contaminated sites were identified under the IAS, including the Gould Island Electroplating Shop (Study Area 17).

1984 - The Defense Environmental Restoration Program (DERP) was established to promote and coordinate efforts for the evaluation and cleanup of contamination at the Department of Defense (DOD) installations. A major element of the program was the establishment of the IRP. The IRP focuses on the investigation and cleanup of contaminated sites in compliance with the procedural and substantive requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by Superfund Amendments and Reauthorization Act (SARA), as well as regulations promulgated under these acts or by applicable state law.

May 1986 - The Confirmation Study for NAVSTA was completed at six sites, including Study Area 17 - Gould Island Electroplating Shop.

1988 - A Technical Review Committee (TRC) was convened to facilitate communication of information with regard to actions to be undertaken at NAVSTA. TRC members include representatives from the Navy, EPA, RIDEM, the City of Newport, the Towns of Portsmouth and Middletown, and local citizens groups.

November 21, 1989 - NAVSTA was listed on EPA's National Priorities List as the "Naval Education and Training Center (NETC)".

1990 - A Community Relations Plan was issued for NAVSTA by the Navy. Public Information Repositories were also established to allow public access to NAVSTA documents. These are located in the public libraries in Newport, Middletown, Portsmouth, and Jamestown, Rhode Island.

November 1991 - The Draft Phase 1 RI and Risk Assessment Report on the four NAVSTA sites (McAllister Point Landfill, Old Fire Fighting Training Area, Tank Farm Four, and Tank Farm Five) and Melville North Landfill was completed.

1992 - A waste inventory was performed in 1992 to determine the contents of miscellaneous drums and other containers located in the buildings at Site 17. Bulk hazardous materials were subsequently removed.

July 1992 - A Draft SASE Work Plan for investigation of six suspected sites at NAVSTA was completed, which included the Gould Island Electroplating Shop (Study Area 17).

December 1992 - The Final SASE Work Plan for investigation of three suspected sites at NAVSTA was completed, which included the Gould Island Electroplating Shop (Study Area 17).

1995 – The Navy established the Restoration Advisory Board (RAB), in order to provide ongoing information to the citizens in towns where Navy IRP sites are present.

1993 to 1998 – The Navy directed IRP efforts at higher priority sites, including McAllister Landfill (Site 1), Tank Farms 4 and 5 (Sites 12 and 13), Old Fire Fighting Training Area (Site 9), and Derecktor Shipyard (Site 19).

1998 – The Navy revised the SASE Work Plan for the Gould Island Electroplating Shop. As documented in correspondence between the Navy and EPA, the site is redefined from "the Electroplating Shop at Building 32" to "the Building 32 Area at Gould Island".

2000 – Several small buildings adjacent to Building 32 were confirmed to house electrical transformers that contained PCB oil. The PCB transformers had previously been removed, and building demolition was conducted in 2000. Concrete-chip sampling for PCB contamination was subsequently conducted on the floors and walls of the transformer vault buildings under Toxic Substances Control Act (TSCA) regulations. This effort led to additional soil testing, concrete and soil removal actions, and other investigations in 2001 and 2002 (see below).

March and April 2000 - The first phase of a SASE was conducted at Building 32. The SASE reported chlorinated solvents and PAHs found in soil gas, and elevated levels of metals found in sludge and soil samples.

May 2000 - A number of buildings on Site 17 were removed due to their state of deterioration and the physical hazards they presented. This work commenced on May 1, 2000 and consisted of asbestos abatement, hazardous materials removals, and demolition of buildings, to the slab elevation only.

December 2000 - The Draft Final SASE for Building 32 was completed, including the Gould Island Electroplating Shop (Study Area 17).

2001 through 2003 - PCB sampling was conducted at the transformer locations and surrounding roadways, under TSCA regulations. Elevated levels of PCBs were found in soil and concrete around transformer Buildings 53, 54, 56, 60, and 61; Building 58 - Deep Well House; Building 59 - Switch House; Building 52 - Riggers Storage Building; on the road which encircles Building 32, and on the beach; and in the shoreline sand and gravel adjacent to Transformer Vault 54. Oil containing 430,000 ppm of PCBs was also found beneath Building 54, and free product containing PCBs was found on the water table when the building was demolished PCBs up to 8800 µg/kg were found in sediment samples collected downgradient of Building 54. The transformer buildings were demolished in 2001 and 2002. Approximately five thousand cubic yards of contaminated soil, concrete, and sediment were removed from these locations under actions carried out under TSCA and RIDEM regulations. Although PCBs were not found in groundwater collected from wells installed downgradient of the former Building 54 foundation (Tetra Tech, 2001), PCBs

(0.229-0.324 milligrams per liter [mg/L]) were found in pooled groundwater in excavations completed downgradient in September 2003 (TtFW, 2004) (also refer to Tetra Tech 2006, Appendix A). Removal action areas are depicted on Figure 1-3.

September 2003 – The EPA conducted marine sediment sampling adjacent to Gould Island. Samples were analyzed for total metals, cyanide, and PCBs. PCB, lead, and copper concentrations were detected in exceedance of sediment criteria from National Oceanic and Atmospheric Administration (NOAA) Screening Quick Reference Tables (effects range low, effects range medium, and apparent effects threshold) (Tetra Tech 2006, Appendix B).

July 2004 – The Final RI Work Plan for Site 17, Building 32, Gould Island was completed.

2005 – Field investigations for the Phase 1 RI were conducted that included soil, groundwater, subsurface waste discharge systems, concrete, sediment, and biota sampling.

December 2006 - The Phase 1 RI report was finalized after regulatory review.

January 2007 – A meeting was held at NAVSTA and a site visit was conducted to discuss the findings of the Phase 1 RI and a Tier 1 Sediment Transport model that was conducted and published by Naval Sea Systems Command (NAVSEA). It was determined that additional study and sediment transport modeling was necessary to support the RI/FS.

September/October 2009 – The Step 1 sediment sampling for the Phase 2 RI was conducted.

December 2009 – The SAP for the Phase 2 RI and BERA was published as a final document to direct additional investigation work.

1.5 BUILDING 32 AREA BACKGROUND INFORMATION

This section presents the site description and history for the Building 32 area, and summarizes the findings of previous environmental investigations conducted at the site.

1.5.1 Site Description

Gould Island is located in the East Passage of Narragansett Bay, approximately 1.5 miles west of Newport, Rhode Island, and between Aquidneck and Conanicut Islands. It has an area of approximately 52 acres (Figure 1-2). Building 32 (Site 17) is located on the northeast end of Gould Island, and served as a torpedo overhaul shop. It has been inactive since the 1950s (Figure 1-3).

Appendix A of the Phase 1 RI report contains the Background Summary Report for Site 17, which presents a detailed summary of the Building 32 area. This summary includes a physical description of the area, a description of the buildings that were present there, a history of the site, a review of pertinent environmental investigations, and details on removal actions conducted at the site.

To summarize from the Background Summary Report, Site 17 is located on the northern portion of Gould Island, and occupies approximately 6 acres of land. In 2001 and 2002, the buildings on the Navy-held portion of Gould Island were demolished to the existing grade, with the at-grade slab foundations left in place. Some of this demolition material was used to backfill an excavation area at the former Building 44 area, and the remainder was moved off site for land disposal elsewhere.

Building 35, located on the so-called "Firing Pier", extending north from the north end of Gould Island, is the only remaining structure on the Navy-held portions of the Island. Building 35 and the north portion of the Firing Pier are constructed on piles over water and are not part of Site 17.

At the north end of Gould Island, where Site 17 is located, a series of man-made structures was constructed, built on a combination of filled land and natural island formations. The area is subject to prevailing wind exposure and water currents, almost year-round. Sedimentation is not evident in the intertidal areas, but some has occurred in the "Stillwater" boat basin, adjacent to (east of) the Firing Pier (Figure 1-3). The intertidal shoreline is subject to wave action and consists of a mixture of deteriorated, steel-sheetpile wall and stony beach face. Figure 1-3 depicts the primary (current and former) features of the site. Figure 1-4 depicts the historical shoreline and original topography of the island.

The subject of this RI is the Building 32 area, and lacking further definition, the investigation area is generally discussed as the area on the north end of the island. This area was developed from coastal agricultural land in the early 1940s. Aerial photography from the 1940s (Tetra Tech 2006, Appendix A) shows that over 80 percent of the surface soils of Gould Island were re-worked during development of the facilities there. At the east shoreline of the island (and south of the site), the overburden is very thin or nonexistent, and bedrock is exposed in places, and is eroding under the normal wave action, forming a shingle-style beach face. Bedrock is undulating, brittle, and highly fractured, allowing available water to

seep through the fractures. There is no pervasive dip or strike to the exposed bedrock on the east shore, due to the extreme undulations.

1.5.2 Site History

Gould Island was purchased by the U.S. Government in 1918 (Presidential Proclamation, 1918). The southern end of the island was immediately developed as a torpedo storage and seaplane station (Snyder, Enright, 2003). The northern end of the island, where the site is located, was developed in the 1940s as a weapons support center for naval vessels. Ownership of the southern three-fourths of the Island was transferred to the State of Rhode Island in the late 1970s. NAVSTA retains ownership of the northern section. A fence separates the two properties (Figure 1-3).

To summarize from the Background Summary Report, during the 1940s, until 1951, Building 32 housed operations such as electroplating, machining, parts-washing, buffing, grinding, and other machinery operations (EEI, 1983). Other structures on the property included transformer buildings, a power plant, an acetylene generator building, an administration building, and various structures used for loading and unloading personnel, torpedoes, and other materials from small vessels.

Historic information indicates that four water-supply wells were drilled on Gould Island in the early 1940s (U.S. Navy, 1959). These wells were installed at different locations in an effort to find a usable fresh water supply. Two of the wells were reportedly advanced to a depth of 330 feet, and two wells were advanced to a depth of approximately 530 feet. The wells' yields were deemed inadequate to support the island's industrial needs, and therefore a fresh water supply line was extended from Aquidneck Island (U.S. Navy, 1943; U.S. Navy, 1959). The locations of these wells are presented on historic maps provided in Appendix C of the Phase 1 RI Report (Tetra Tech, 2006).

A number of targeted environmental investigations and removal actions have been performed at the site, as described in the Background Summary Report. Based on the documentation from these efforts, at the onset of the Phase 1 RI, the following environmental conditions were deemed likely to exist:

Groundwater Contamination – Groundwater in the area of Building 44 (north of Building 32, and shown on Figure 1-3) was found to contain low concentrations of petroleum, chlorinated solvents, PAHs, and metals. Groundwater movement at the site is likely to reflect surface topography, discharging to the bay, which surrounds the site on three sides. RIDEM reports that TPH and free product were found at Building 33, west of Building 32 (RIDEM, 2006). RIDEM also states that PCBs were found in groundwater in the former locations of Buildings 53 and 54, which are former transformer buildings, demolished and remediated under TSCA and RIDEM regulations. While PCBs were not detected in groundwater monitoring wells downgradient of Building 54, PCBs (<1 mg/L) were detected in standing water in

excavations completed for removal of PCB-contaminated soil at Building 54 (Tetra Tech, 2001; TtFW, 2004).

Vadose Zone Contamination – Chlorinated solvents, toluene, and PAHs were found, but not quantified, in soil-gas samples from the vadose zone: these samples were collected in the area north of Building 32, in 1997, and under the Building 32 foundation, in 2000.

Soil Contamination – Soils containing PCBs at concentrations less than 10 mg/kg are likely to be present at the former locations of Buildings 52, 53, 54, 56, 59, 60, and 61, which surround Building 32. Removal actions for soil containing PCBs were conducted to address transformer buildings and other structures and locations where PCB releases were evident based on observations and based on initial sampling of concrete and soil. Soil excavations were conducted as reported by Foster-Wheeler Environmental Corporation, using a grid sampling approach to locate PCBs in surface soil and concrete near the suspected release areas, and by excavation of soil and concrete above the action levels. Removal actions were terminated once the cleanup objective for that project (10 mg/kg PCB in soil and 1 mg/kg PCB in sediment) was obtained. Removal action areas are depicted on Figure 1-3 of this report. Available details on these excavation areas and post – excavation sample results reported by Foster Wheeler are provided in Appendix I of this report.

One of the transformer buildings, Building 54, was found to have had a significant release of PCB oil from the transformer within it. PCB oil was removed from the foundation, and the foundation was removed from the ground. Free product was discovered on the water table within the excavation (RIDEM 2011). RIDEM reported that a "PCB sheen was observed flowing in at the northern side of the excavation". Extensive water and soil removals were subsequently conducted at this location, and then additional removals were conducted down-gradient at the shoreline in 2003. It was presumed that some oil may have migrated to the shoreline either overland or via groundwater. Tetra Tech installed groundwater monitoring points between the former location of Building 54 and the shoreline, but PCBs were not found in the groundwater at this location. The removal actions were deemed complete with the submittal of the final removal action report (Foster-Wheeler 2004).

Additionally, some oil (likely No. 2 fuel oil) was encountered in the excavation for the Building 56 foundation, west of Building 32 (Foster Wheeler, 2003) (this was later found to be part of the contamination associated with the street drain ["trench drain"] on the southwest corner of Building 32).

RIDEM reported that additional action was deemed necessary at certain sites such as Building 56 (TPH present), and Building 54 (RIDEM reported that a sheen was observed on the north side of the excavation), A perforated PVC pipe was installed at RIDEM request in this location to facilitate additional investigation and/or action.

Sediment Contamination – Based on historical records, wastes from solvent cleaners and electroplating operations were likely discharged to Narragansett Bay from the east side of Building 32 through a floor drain system. In 1986, low concentrations of cyanide and heavy metals were found in sediment samples collected in Narragansett Bay from locations near the outfall of a discharge pipe, east of Building 32.

PCB-contaminated soils near Building 54 were remediated east of the release area (Building 54) and extending out to the shoreline, but not beyond the shoreline. PCBs in excess of 1 mg/kg were deemed likely to be present in marine sediments further to the east, beyond this area. Sediment samples were collected at the shoreline and seaward of this excavation area for all phases of the RI.

1.5.3 Waste Discharge Systems

Architectural and design drawings for the construction of Building 32, from the archives of the NAVSTA records, were reviewed to determine waste discharge patterns. These drawings show that floor drains, sewer drains, and storm drains were originally planned to discharge from Building 32 through a series of pipes to the east, to the intertidal and subtidal areas of the constructed shoreline. The drawings suggest that these systems would function on gravity alone.

Further review of these records shows upgrades to the sewer systems in approximately 1957. These upgrades included installation of concrete septic tanks and discharge of sewer waste to the ocean on the west shoreline of the island. Floor drains and storm drains did not appear to be altered by these upgrades. Historical drawings evaluated as part of the Phase 1 RI are presented in Appendix C of the Phase 1 RI report.

1.5.4 Previous Site Investigations

Previous investigations of the site are summarized in the Phase 1 RI report (Tetra Tech 2006, Appendix A). Further details of these investigations can be found in their originating reports:

- Initial Assessment Study – Envirodyne Engineers, 1983
- Verification Study and Confirmation Study – Louriero Engineering, 1984 and 1986
- Building 44 Underground Storage Tank (UST) Closure Assessment – Environmental Resource Associates, 1994
- Building 44 Phase 1 Environmental Assessment – Q3G, 1995 and 1996
- Building 32 UST Site Investigation Report - Brown and Root Environmental, 1997
- UST Site Investigation of Building 44 Area - Brown and Root Environmental, 1997
- Building 44 Corrective Action Excavation – Tetra Tech, 2000

- Building 44 Interim Monitoring – Tetra Tech, 2002 and 2004
- Study Area Screening Evaluation (SASE) for Building 32 – Tetra Tech, 2000
- Phase 1 PCB Sampling – Foster Wheeler, 2002
- Phase II PCB Contaminated Concrete and Soil Remediation – Foster Wheeler, 2004
- Phase 1 Remedial Investigation – Tetra Tech, 2006 (includes EPA sediment evaluation from 2003)
- Tier 1 Sediment Transport Model – NAVSEA, 2005

1.5.5 Phase 1 Remedial Investigation

The Phase 1 RI included the collection of: 87 soil samples from borings and test pits; 14 groundwater samples from monitoring wells; 9 groundwater "discrete zone samples" from bedrock fracture zones; 66 sediment samples from intertidal and subtidal areas around Gould Island; 21 biota samples (clams and mussels, as were available at sample stations); 9 aqueous samples from standing water in test pits and in underground utilities; 2 samples of soil and sludge from these utilities; and 2 samples of concrete.

In addition, data gathered for the RI included groundwater flow information, information on ecological receptors present and likely to be present, geotechnical information on soils and bedrock pertinent to groundwater and contaminant movement, information on sediment characterization, and over 300 soil samples for headspace-screening analysis and soil characterization.

Geology and Hydrogeology

The Phase 1 RI determined that the site was constructed by cut-and-fill operations, cutting the natural soil from the hillside at the south end of the site, and filling the sub-tidal waters to the north, to create a level area large enough to construct Building 32 and its support systems. As a result, some of the site is underlain by fill, primarily comprised of disturbed, natural soils from the area, consisting of a mix of silty sand and gravel. Portions of the site are underlain by glacial till, consisting of silt, sand, and gravel. The thickness of the fill ranges from about 6 to 12 feet, the greater thickness at the northern end of the site. The till unit was not present at the south end of the site, and was up to 74 feet thick at the north end of the site. The lack of till to the south is further evidence that this area was excavated down to bedrock before filling and leveling for building construction.

The bedrock at the site is characterized as metamorphosed sedimentary rock, predominantly phyllite. This rock was found to be weathered in the upper 3 to 18 feet. As a result of the softness of the weathered zone, the transition from overburden to bedrock was not clearly defined in two of the seven bedrock wells installed.

Groundwater elevation measurements indicate that groundwater generally flows from south to north across the site. However, overburden groundwater appears to flow to the northeast, whereas the bedrock groundwater appears to flow to the northwest. A tidal-influence study indicated that a tidal influence is felt in both the overburden and bedrock aquifers at the site.

Packer-testing results indicated that the bedrock aquifer did not yield appreciable amounts of water. The average hydraulic conductivities measured in the packer tests ranged from negligible to 3.1×10^{-5} centimeters per second (cm/sec).

Both upward and downward vertical groundwater gradients were measured at monitoring well clusters at the site, depending on location. Where upward gradients were measured, an upward vertical flow of groundwater from the bedrock to the overburden is indicated. At higher elevations, upgradient (south) of the site, groundwater elevations indicated a downward vertical flow of groundwater, from the overburden to the bedrock aquifer. However, the actual exchange of groundwater between shallow overburden and bedrock is likely to be hindered in areas where dense till is present, where it was not excavated. The area south of Building 32, where till is not present, appears to have groundwater outbreaks occurring at the hillside; the interaction of the overburden and bedrock aquifers in this area is not known.

Soil

During the Phase 1 RI, elevated concentrations of soil contaminants were found within vaults and sumps in the foundation of former Building 32. These soils are confined, and can be easily obtained through excavation. In addition, apparent "hot spots" of metals and petroleum in soil are present in the southwest corner of Building 32, near the former locations of the dust collection storage building and acid storage shed. Although the area is limited in extent, the source of the petroleum in this area was not determined, and additional focused investigations were recommended.

Residual contaminants may also be present in underground utilities present at the site, including the sewer systems, the trench drain, and other drainage systems under and around Building 32.

Trace concentrations of TCE were detected in soil at the southwest corner of Building 32, which may be a result of the former storage and disposal (trench drain) in this area.

Groundwater

The groundwater beneath Gould Island is classified as GA, indicating that it should be suitable for use as a current or potential source of drinking water, as described in the RIDEM Rules and Regulations for

Groundwater Quality. Overall, groundwater contaminant levels during the Phase 1 RI did not exceed the RIDEM GA Groundwater Objectives and federal Maximum Contaminant Levels (MCLs), with the exception of two contaminants, pentachlorophenol and tetrachloroethene, both found in the shallow overburden groundwater at low concentrations slightly exceeding the GA Groundwater objectives and MCLs. Based on the estimated local hydraulic gradient of the shallow overburden aquifer, it was concluded that these contaminants are moving toward the northeast shoreline with groundwater flow. As the contaminants move with groundwater to the northeast, they will discharge to the bay, and be lost through dilution upon discharge to the surface water.

Samples from Manholes

During the Phase 1 RI, soil/sludge, light nonaqueous phase liquid (LNAPL), and water samples were collected from selected manholes that were part of the underground utilities system. Petroleum-related contaminants (total petroleum hydrocarbons [TPH] diesel range organics [DRO], TPH gasoline range organics [GRO], and PAHs), pesticides, and one PCB (Aroclor-1260) were detected in the soil/sludge sample collected from manhole MH-01, near the electroplating room. In addition, heavy metals (cadmium, copper, chromium, nickel, and lead) were detected at high concentrations in this soil//sludge sample. A small amount of free product was found and sampled in MH-01, and was removed with a large quantity of water and taken off site for disposal. The organic compounds and metals in the soil/sludge from MH-01 were also detected in the soil sample from MH-05, located to the north west of Building 32, at lower concentrations. It was later determined that a sanitary system connects these manholes, and led to a discharge to the northwest shoreline of the site.

Concrete

Two concrete samples were collected from the north end of the Building 32 foundation. The volatile organic compounds (VOCs) detected (carbon disulfide, toluene, and methylcyclohexane) in concrete samples may have been used in shop areas for parts cleaning or other purposes. PAHs were also detected in the concrete. The concrete floor of the building was once covered with a wood parquet mat to provide a non-conductive working surface. It is likely that this material was treated with preservatives, which would have been common at the time of construction (creosote, containing a mix of PAHs). Such preservatives could have entrained themselves into the surface concrete over time, resulting in low concentrations of PAHs in the concrete samples. Risk from exposure to the concrete was not evaluated based on the low concentrations measured.

Sediment

Sediment data from the Phase 1 RI indicated elevated concentrations of metals, PAHs, and PCBs at some sample locations along the shoreline and in the subtidal sediment. These are identified as the Stillwater Area to the north of the site, the northeast shoreline, which received waste discharges from Building 32 operations, and, to a lesser degree, the northwest shoreline, which also received waste discharges from Building 32 operations. In addition, trace levels of VOCs were found at the north and northeast shoreline.

PCB concentrations in sediments were noted to be highest in the Stillwater Area, north of the site. PCBs detected in the sediments and in the soil at the site include primarily Aroclor-1260. Aroclor-1260 was found in soil and concrete near Buildings 53, 54, 56, 59, 60, and 61. The distribution of PCBs in sediment samples indicated a gradient with highest concentrations in the Stillwater Area and lower concentrations to the south. However, it was recognized that there were no available data north of Station SD-416, which is located in the northern most part of the Stillwater Area. It was concluded that additional information from the northern sections of the Stillwater Area and data north of that location may be necessary to determine the limits of contaminants to the north.

Metals and cyanide were found in sediment locations where outfalls once discharged to the subtidal shoreline. The elevated concentrations of heavy metals and cyanide present in the sediment near existing and historic outfalls can be traced back through pipeline transport from the electroplating rooms and dust storage shed, where high concentrations of heavy metals were found in soil samples. It is noted that cyanide was also found in the subtidal sediment sample near the former landfill at Gould Island (SD-311), indicating a second possible source of cyanide in the area. This sample station was resampled as part of this Phase 2 RI and is further discussed later in this report.

PAHs in sediment may be a result of former use and release from general degreasing operations in the overhaul shop, or they may be a remnant of fuel piping and storage at Building 44. PAHs were found in sumps and vaults within the Building 32 foundation, and some of these sumps were previously noted to have floor drains that connected to the drains exiting to the northeast shoreline. PAHs present in sediments near outfall locations (SD-304 and SD-305) are likely a result of fuel-contaminated soil at the southwest corner of Building 32 that was transported to the shoreline through pipelines and sewer systems.

Clams and Mussels

Phase 1 RI biota sample data from stations ET-304 (clams) and ET-312 (mussels) located at the southwest corner of the Stillwater area showed PCBs are being accumulated to some degree in the

bivalve tissues. The locations of elevated PCBs in biota samples corresponded to elevated PCBs in sediment samples. Traces of heavy metals (chromium and cadmium) were found in some tissue samples. Other contaminants do not appear to be particularly elevated in collected biota samples.

Physical Disposal Routes

Three primary pathways of contaminant transport were identified: The first is the storm drainage system and "trench drain" that gathered groundwater and runoff from the roadway and storage areas (acid storage shed, dust collection building) outside the southwestern corner of Building 32. The groundwater and runoff from this system was discharged onto the shoreline and into the water near the southeast corner of Building 32 (near sediment sample location SD 304F).

The second contaminant transport pathway is a system of original sanitary and waste drains from lavatories and the electroplating room that appear to have gravity-drained wastes from the building to the shoreline to the east.

The third pathway is the sanitary waste system upgrade constructed in 1956 and 1957. At that time, sewer system upgrades were installed to provide collection chambers and pumps to route sanitary waste to discharge at the northwest shoreline. The redirection of the waste flow was confirmed through this investigation, but the shoreline installation was either built differently from the design, or altered again at a later date. Investigations confirmed that wastes from the southwest lavatory were collected in a manhole (MH-01), and pumped to the northwest to a junction box and dry well constructed at the northwest shoreline. The dry well had a gravel bottom and appeared to be constructed to drain or filter to the ocean. Other systems appeared to be tied in to the dry well and others were crossing the pipelines. Further excavation during the RI activities would have damaged the shoreline extensively, and the excavation was halted after confirming the connection between this dry well and Building 32. A pipe connection was also found between one drain in the electroplating room and MH-01.

In addition, an overland release of PCBs to sediments appears to have occurred to the north of Building 32, near the former rigging platform. This is the former location of a PCB-contaminated soil removal action conducted in 1999-2002 at the former rigging house (Building 52), also known as excavation area F2. PCBs from this area appear to have been transported overland with runoff, and deposited in sediments in this area.

Chemical Fate and Transport

Regarding VOCs, only marginal concentrations of chlorinated solvents were detected at the site, and no breakdown products were detected. This indicates very minor releases to the soil and groundwater have occurred at the site. Traces of fuel-related VOCs were also detected, although their concentrations indicate older releases that have degraded over time.

The much less soluble and less volatile PAHs are still present at high concentrations in the soils along the southwestern corner of Building 32, where petroleum was found. These contaminants may leach into the groundwater, but the low solubility and adsorptive properties of PAHs prevent this from occurring at a very high rate. Groundwater PAH concentrations are currently low and are anticipated to remain low. However, when test pits are excavated into petroleum/PAH-contaminated areas, PAHs and petroleum contaminants bound within the soil may be liberated into standing shallow waters that collect in the excavations.

Cyanide was detected infrequently at trace concentrations (less than [<] 1 milligram per kilogram [mg/kg]) in surface and subsurface soils, and in intertidal and subtidal sediments. Cyanide was not detected in groundwater samples.

Pesticides, PCBs, and metals found in soils are non-volatile or relatively non-volatile compounds and are relatively insoluble in water. Therefore, there is very limited leaching of these chemicals from soils into groundwater. However, through erosion and migration of contaminated soils, these compounds could be transported from soils to marine sediments, and could also migrate with sediment within the marine environment, particularly in disturbed or high energy areas at the shoreline.

The PCBs in subtidal sediments of the Stillwater Area are likely to remain in this area until the physical properties of the shoreline change. The breakwater protecting this shoreline has deteriorated, and will continue to deteriorate unless repaired. Hydraulic forces that can mobilize these sediments could potentially increase if this breakwater barrier further degrades.

In addition, the rigging platform at the north shoreline has also partially collapsed, allowing soils behind the former sheet piling to erode and re-deposit as sediments in this area. Such erosion from the shoreline may initially cover the contaminated sediments and debris from the rigging platform; however, over time, continued erosion may re-expose these sediments, subjecting them to potential mobilization to other areas.

Human Health Risk Assessment

The baseline human health risk assessment (HHRA) (Tetra Tech, 2006), provided in Section 6 of the Phase 1 RI, evaluated exposures to surface soil, subsurface soil, groundwater, sediment, and shellfish (clams and mussels only). The following receptors were evaluated:

- Current and future recreational visitors
- Current and future trespassers
- Current industrial workers
- Future industrial workers
- Future construction workers
- Current and future subsistence fishermen
- Current and future recreational fishermen
- Lead exposure through blood lead modeling

The non-cancer risks to the current and future child recreational visitors, future industrial workers, future construction workers, and fishermen (both recreational and subsistence) were estimated to have a hazard index above the target of unity (1). These non-cancer risks are driven by specific contaminants, as follows:

- Current and future recreational exposure to children – exposure to chromium in intertidal sediments.
- Future industrial workers – exposure to cadmium in soil.
- Future construction workers – exposure to cadmium in subsurface soil, PAHs and PCBs in shallow groundwater.
- Current and future shellfish ingestion (both recreational and subsistence fishing) by adults and children – exposure to PCBs and metals including arsenic and thallium.

Cancer risk to the future construction worker and to persons ingesting shellfish on a subsistence level were found to have an elevated risk of cancer described as follows:

- The cancer risks to the future construction workers were estimated to be above the EPA cancer risk target range of 1x10-4 to 1x10-6. This risk is largely based on the presumption that naphthalene, 2-methylnapthalene, fluoranthene, and Aroclor-1260 in the shallow groundwater will be available for inhalation by the worker within the trench. For this scenario, maximum concentrations from samples of shallow groundwater from test pit samples were used, which may overestimate risk.

- The cancer risks to persons ingesting shellfish on a subsistence level (current and future) are estimated to be above the EPA cancer risk target range. These unacceptable risks are driven by exposure to PCBs, arsenic, beta-BHC, and PAHs. Cancer risks to persons ingesting shellfish on a recreational level as defined in this report are within the EPA cancer risk target range.

The cancer risks estimated for the recreational visitors and trespassers exposed to surface soils and intertidal sediments, current industrial workers exposed to surface soil, future industrial workers exposed to subsurface soils, as well as recreational fisherman consuming clams and mussels from the site, were within or below the EPA cancer risk target range.

There are no known current groundwater exposure pathways that are predicted to pose a risk to human receptors. There are currently no groundwater drinking water supplies at the island, and no such future use is planned for groundwater at this location; therefore, there is no anticipated exposure via a potable water source.

Ecological Risk

As part of the Phase 1 RI, a screening ecological risk assessment was conducted to determine contaminants of potential ecological concern, and to assist in determining whether a BERA should be conducted.

For terrestrial exposures, no COPCs were retained for further evaluation in a BERA based on ecological receptors exposure to constituents in surface soil samples collected.

For the marine exposures, PAHs, pesticides, PCBs, and several metals (antimony, cadmium, chromium, lead, manganese, and selenium) were determined to be COPCs that may pose adverse effects to marine organisms at one or more of the marine sediment locations at the site. In addition, 4-methylphenol, phenol, carbazole, and dibenzofuran were retained as COPCs.
Based on the concentrations of these constituents, it was determined that additional evaluation of the marine sediments through the performance of a BERA was required.

1.6 CONCEPTUAL SITE MODEL

In the Phase 1 RI report, a conceptual site model (CSM) was developed to summarize the understanding of the site conditions and the risks that the site poses. The CSM was developed around three two-dimensional views of the site and its surrounding landforms: a plan view of the island and its surrounding influences and cross-sectional views. A schematic diagram was also provided that included the general movement of contaminants based on the mechanical systems and physical properties found at the site. Specific sources,

flow paths, and discharge areas are identified within the diagram for reference. Pertinent information specific to the chemical constituents found and the predicted risks they pose to the different receptors was presented in table format, showing fate and transport of contaminants and predicted risks. This information is summarized in an updated CSM as described in Section 7 of this report.

2.0 STUDY AREA INVESTIGATIONS

This section describes the field investigation activities implemented as part of the Phase 2 RI for Site 17, Gould Island, conducted between September 2009 and September 2010. All activities were conducted in accordance with the SAP (Tetra Tech, 2009).

Worksheet (WS) 17 of the SAP was prepared to direct the collection of data needed to provide a foundation for the Phase 2 RI report and BERA. The data collected, as described in that document and in the sections that follow, will be used to refine the nature and extent of contamination at the site previously published in the Phase 1 RI report, provide exposure point concentrations for a BERA, and support a sediment transport model (published under separate cover) for the site.

Separate discussions for each of the field investigation activities conducted at the site are provided in Sections 2.1 through 2.3 of this report. In each section an overview of the investigation activities for each major field task is presented, including sample locations, analyses, and rationale. Also provided is a discussion of field observations and measurements if applicable. Samples were collected and analyzed according to the quality assurance/quality control (QA/QC) criteria defined in the SAP.

2.1 SOIL BORING INVESTIGATION

A soil investigation was conducted to resolve data gaps identified in the Phase 1 RI. This investigation focused on two specific areas and utilized a series of soil borings at each area. This effort focused on subsurface soil contamination at the southwest corner of Building 32 (the former coal pile) and at former Building 41 (riggers storage building). A description of the site geology based on the data collected during the RI is provided in Section 3.2. Analytical data for subsurface soil samples are discussed in Section 4.0.

2.1.1 Overview of Soil Boring Investigation

During the Phase 2 RI, 13 soil borings were advanced in two areas of the site. Soils were sampled in each boring to characterize the soils and to aid in determination of the nature and extent of the surface and subsurface soil contamination. The soil boring locations from both RI phases are shown on Figure 2-1. Boring logs are presented in Appendix B. Table 2-1 presents a summary of rationale for the locations of each boring. A summary of soil samples collected and selected for laboratory analysis is presented in Table 2-2.

Soil borings SB-401 through SB-409 were advanced in the south west corner of the site and the area of the former coal pile. These borings were installed for two purposes: 1) to assist determination of the

source of fuel contamination found at the southwest corner of Building 32, and 2) to assist determination of the extent of contamination found in this area.

Soil borings SB-410 through SB-413 were advanced in the area of the former riggers storage building (Building 41) and the former rigging platform (Figure 2-1). These borings were installed for two purposes: 1) to assist in the interpretation of the PCB contamination in the marine sediment immediately north of this area, and 2) to determine if any residual PCBs were present in soil at this location following the removal action conducted in 2004, as requested by RIDEM and EPA.

Soils were logged continuously at each soil boring using split spoon samplers. Boring logs are presented in Appendix B. The physical characteristics were described using the Unified Soil Classification System (USCS) and recorded on the boring log. In addition to soil characteristics, other pertinent observations such as water levels, sample moisture, depth changes in lithology, presence of fill material, staining, and visual contaminants or odors were recorded on the boring logs. General observations such as sample type and number, sample time, depth, interval, recovery, drilling and sampling equipment, and methods used were also recorded on each boring log. As each split-spoon sampler was opened, the soils were monitored for organic vapors using a photoionization detector (PID). Headspace readings of sample aliquots were also measured using the PID. These readings were recorded on the borings logs.

The nine soil borings located at the former coal pile area (SB-401 through SB-409) were advanced using hollow stem auger (HSA) drilling techniques. Four samples were collected from each boring at the following intervals: 0 to 6 inches, 12 to 18 inches, 24 to 30 inches and 42 to 48 inches. At each sample interval, two sample aliquots were collected: one aliquot was used for jar headspace screening as described above, and the second aliquot was used to fill sample containers to be sent to the lab for analysis of PAHs, Target Analyte List (TAL) metals, and TPH-DRO and -GRO.

The four soil borings located at the former rigging platform (SB-410 through SB-413) were also advanced using HSA drilling techniques. In accordance with the SAP, samples for laboratory analysis were collected from depths as follows: a) 0 to 1 foot, b) the two-foot interval immediately above the saturated zone, and c) a two-foot interval determined by the field geologist (based on visual evidence of contamination, staining or sheen, or olfactory evidence of contamination). For each interval that was retrieved from the boring, two sample aliquots were collected from each 2-foot interval. One aliquot was used for jar headspace screening for organic vapors, and the second aliquot was containerized and stored for possible laboratory analysis (aliquots collected to represent surface soil, 0-1 foot, were collected only from the top foot of the 0-2 foot sample interval). Samples collected from these borings and selected for laboratory analysis were analyzed for PCBs, PAHs, and TAL metals.

Samples were collected as specified in the SAP. Upon retrieval of the split-spoon samplers, they were opened, visually inspected, and screened for VOCs using a PID. For TPH-GRO samples (SB-401 through SB-409) the aliquot was collected before other aliquots for the other analyses. TPH-GRO soil samples for laboratory analysis were collected as grab samples from the most heavily contaminated portion of the split-spoon sampler based on the initial organic vapor screening results and/or visual observations. If no organic vapor detections and no visual evidence of contamination were noted, the grab VOC sample was collected from the center of the target sample interval.

Following the collection of the jar headspace screening aliquot and the collection of soil for GRO analysis, the remaining soil was composited for collection for the remaining analyses. Observed geologic conditions possibly affecting contaminant distribution, such as potential confining layers, coarse-grained (relatively high porosity/permeability) soils, or the vadose zone above the water table, were taken into account when selecting the VOC sample location from the split-spoon sampler. Remaining soils from each boring were used as backfill for the borehole. The top 2 feet of each borehole were backfilled with clean imported sand. Any drill cuttings that remained at completion were containerized into a 55-gallon drum, which was labeled, sealed, and appropriately stored for transportation and disposal off site in accordance with State IDW Management regulations.

2.1.2 Soil Boring Investigation Field Measurements and Observations

Field screening results are summarized in Table 2-2. A more detailed description of individual borings and observations within each can be found on boring logs, located in Appendix B.

Soil borings SB-401, and SB-406 through SB-409 were completed along the fence line between the former coal pile area and the former location of Building 33. These borings were installed to locate a possible source of petroleum that was found in the southwest corner of Building 32. RIDEM reported a potential source of petroleum in this area, and these borings were intended to determine if the petroleum had migrated in a southeasterly direction. All of these borings encountered topsoil and fill until a depth of 1 to 4 feet below ground surface (bgs), and then encountered till. There were no VOCs detected with the PID during either split-spoon or headspace screening in any of the borings.

Soil borings SB-402 through SB-405 were completed along the fence line between the former coal pile area and the southwest corner of the foundation of the former Building 32. These borings were advanced in order to determine if oil was present in the former coal pile area, and if that oil may be the source of petroleum previously found in the southwest corner of Building 32. All of these borings encountered topsoil and fill until a depth of 2 to 5 feet bgs, and then encountered till. Soil samples from two of the borings, SB-402 and SB-404, had elevated PID readings when screened (from the split-spoon sampler and from headspace) indicating the presence of VOCs. Samples from SB-402 provided elevated readings

from both the split-spoon and headspace screening from 4 to 8 feet bgs, and elevated headspace readings only from 8 to 14 feet bgs. SB-404 provided elevated headspace screening readings from 0 to 8 feet bgs, and elevated split-barrel screening readings from 2 to 6 feet bgs. There were no VOCs detected with the PID in soils from SB-403 or SB-405.

Soil borings SB-410 through SB-413 were completed at the former rigging platform in order to investigate whether PCBs, PAHs, and metals present in soils are contributing to sediment contamination in the Stillwater Area. Till was encountered in these boring between 10 and 14.5 feet bgs. There were no VOCs detected during split-spoon screening in any borings, but there were marginal VOC responses during headspace screening with the PID (Table 2-2).

2.2 SEDIMENT INVESTIGATION

Sediment sample stations were selected to characterize present levels of site-related contaminants in the sediments near the site. Table 2-3 provides a description of each sample station location and the sampling rationale. Table 2-4 provides a summary of sediment sample locations and all sediment or biota samples that were collected at each location.

Figure 2-2 shows the locations of the sediment sample stations from both the Phase 1 and Phase 2 RIs. All stations were predetermined in the SAP, and these positions were navigated to using a boat-mounted DGPS Leica Model 421B which is accurate within 1-3 meters.

It is noted that sediment samples for the Phase 1 RI (2005) were located using a Trimble Pro XR DGPS and post corrected to achieve sub-meter accuracy. This unit is operated above the water level either on a rod that extends to the sediment surface (in shallow water) or on a boat which drops a weighted marker so that a diver can locate the position later. In addition, Samples designated "F" were collected in 2005 at the terminus of the drain pipes found by divers.

Sediment samples for the Phase 2 RI were collected in two steps. The first step of sediment collection was conducted between September 21 and October 13, 2009. These samples were referred to in the SAP as "Extent of Contamination Samples." Data from these samples were used in conjunction with Phase 1 RI data collected in 2005 to select a subset of stations that would be re-sampled for additional parameters for the purpose of conducting the BERA. The second step of the Phase 2 sediment collection – the "Ecological Samples" - was conducted between April 30 and May 13, 2010.

During the first step of Phase 2 sediment sampling (2009), sediment was collected from four separate areas: the Stillwater Basin, the Northeast Shoreline, the Northwest Shoreline, and reference area (Potters Cove and Cranston Cove). Within the Stillwater Basin, surface sediment and subsurface sediment

samples were collected from 20 locations. From the Northeast Shoreline, surface sediment (0-6 in) was collected from 20 locations; from the Northwest Shoreline, surface sediment was collected from seven locations; and from the reference areas, surface sediment was collected from six locations.

During the second step of Phase 2 RI sediment sampling (2010), sediment was collected from the same four areas, as well as a fifth additional area at the south end of the island. From the Stillwater area, surface sediment was collected from eleven locations; from the Northeast Shoreline, surface sediment was collected from 13 locations; from the Northwest Shoreline, surface sediment was collected from four locations; from the south end of the island, surface sediment was collected from one location; and, lastly, from the reference areas, surface sediment was collected from three locations.

2.2.1 Overview of 2009 (Step 1) Sediment Investigation

The Step 1 (2009) sediment sampling event was conducted following procedures described in the *Draft Final SAP* prepared by Tetra Tech NUS, Inc. in September 2009. These samples were collected to refine the extent of contamination for the site and select stations for detailed evaluation under Step 2.

All samples were sent to Mitkem Laboratories in Warwick, RI, and were analyzed for PCBs (Aroclors), TAL Metals, and PAHs. Grain size analysis was conducted on the reference samples only, and the material collected for that analysis was sent to Columbia Analytical Services in Rochester, NY. All sample stations were navigated to using a DGPS Leica model 421B with an accuracy of 1-3 meters. For sample stations that were accessed by boat the DGPS was mounted to the boat, and for locations that were accessed by land the DGPS was handheld.

Sediment samples were collected using three techniques during the Phase 2 RI step 1 sampling event: Ponar dredge, vibracore, or hand shovel/trowel.

When the Ponar dredge was utilized it was lowered to the bottom by hand, once it reached the bottom and the rope it was attached to was tugged, the mechanism was tripped and the Ponar dredge would collect sediment in an area of about 1 ft^2 down to a maximum depth of six inches. Samples that were collected using a hand shovel or trowel were collected by digging a small hole at the sample location to a depth of 6 inches. Samples that were collected using the Ponar dredge or the stainless steel shovel were transferred directly into a stainless steel bowl upon retrieval. Once in the bowl large material was removed, the sediment was homogenized, and then transferred into the appropriate sample containers. For each sample, color, depth, and description of the sediment were recorded on sample log sheets.

Vibracore samples were collected utilizing the following technique: The acetate liner was equipped with a stainless steel basket above the core cutting head and a plug with a one way valve (to allow water to

escape the tube while sediment is being pushed into the tube) on the upper end of the core tube. Once the boat was positioned over the sample location the water column depth was measured using the boat's depth gauge and the acetate liner and vibrating hammer were lowered into the water vertically. When the acetate liner reached the sediment the vibrating hammer was activated and the acetate liner was driven via gravity into the sediment to the target depth (6 inches or 4 feet depending on the location). The device was then retrieved; the acetate liner was removed from the hammer, and after being capped on each end was delivered to the Tetra Tech field scientist for sampling. Once the field scientist was in possession of the core, measurements were taken and the core was then split into the appropriate intervals by separating it into separate stainless steel bowls for each interval. Each bowl was homogenized and transferred into the appropriate sample containers. For each interval, color, depth, and a description of the sediment were recorded on sample log sheets (Appendix B).

2.2.1.1 Stillwater Area

Vibracore sampling occurred in the Stillwater Area from October 6, 2009 to October 13, 2009. The SAP called for sediment cores down to 4 feet at the 20 sample locations planned in the Stillwater Area. Although every sediment core from the Stillwater Area was collected and the acetate sleeve penetrated 4 feet deep at every location, recovery at the majority of the locations was low and, as a result, location-specific field judgment required selection of different sample intervals. Many cores yielded only enough recovery for one to three samples, instead of the planned four samples (Table 2-4).

Although the core device penetrated 4 feet at every location in the Stillwater Area, recovery was less than 48 inches in all but 2 cores. The low recovery was likely the result of compression of the soft sediment during the core penetration: A common occurrence during sediment coring is that as the sediment is pushed past the core basket into the acetate liner, it is compressed as a result of 1) the pressure against the basket and 2) friction against the walls of the core liner. Because penetration at each location was 4 feet, and because no obstructions were found in the core tip when the cores were retrieved, it had to be assumed that the material recovered in the core tube represented the full 48 inches of the sediment column penetrated, regardless of the actual recovery. This is an assumption that poses unavoidable uncertainty in the interpretation of the depths of samples recorded. Table 2-5 describes core recovery and the interpretation of the depth sampled in the Stillwater area. Figure 2-3 is a graphic depiction of depths sampled.

It is also noted that during core collection conducted by others in March 2011 (not described in this report) gravity cores were used to acquire sediment for erodibility testing. This effort was unsuccessful in collection of even six inches of sediment in the southern portions of the Stillwater area, and discussion on the topic pointed to the presence of rock on the bottom (B. Bergen, 4/11). Cores were collected in 2005 by divers, although a pneumatic hammer was required to achieve the depth (1 foot) required at the time.

Overall, this information points to an overall lack of soft depositional sediment, even within the Stillwater basin.

In the field, the recovered sediment was distributed into separate bowls in 6-inch recovered sections. For example, if the core had 12 inches of sediment recovery, that sediment was divided into two samples representing the full length (48 inches) of the sampled sediment. In this case the top sample would represent the top 0-24 inches of the core run and the bottom sample would represent the lower half 24-48 inches, of the core run.

Thus the numerical designation at the end of each sample ID represents the interval in inches sampled from the recovery, and the depth of that interval was calculated. In order to convert the recovery sample interval into actual sampled depth, the penetration (48 inches) was divided by the measured length of the recovered core to obtain a ratio. This ratio was then multiplied by the length to determine the sample depth interval.

2.2.1.2 Northeast and Northwest Shorelines

As part of the Step 1 sampling, surface sediment samples were collected from the Northeast and Northwest shorelines from September 21 to 23, 2009.

Along the Northeast shoreline 23 locations were designated for surface sediment collection. Four samples were collected at the mid-tide line along shore using a hand trowel and 11 samples were collected using a Ponar Dredge as specified in the SAP. Five locations had rocky bottom substrate and the field team was unable to sample with the Ponar sampling device. Therefore, they were sampled on October 5, 2009, using a boat-mounted vibracore drilling apparatus. Only 20 of the 23 planned samples were collected; SD-438 and SD-429 were not collected because of weather restrictions; and sample SD-448 was not collected because there was no sediment at this location; boulders and concrete were present and no surface sediment was available. Substitute samples (508 and 509) were provided as part of the second step samples, collected in 2010 (refer to Section 2.2.2, below).

Along the Northwest Shoreline seven locations were designated for surface sediment collection. Three samples were collected using the Ponar Dredge on September 22, 2009 four were collected using vibracore techniques (because sediment characteristics did not allow for the use of the Ponar dredge) on October 5, 2009.

2.2.1.3 Reference Stations

Six surface sediment samples were collected at candidate reference stations identified in the SAP: three were located in Potters Cove and three were located in Cranston Cove (Figure 2-4). Both locations are located in Jamestown, RI. Grain size and chemical analyses were conducted for these samples to be compared to site samples for the purpose of selecting appropriate reference samples for the Phase 2 RI and BERA. Upon review of the data, three locations (JPC01, JPC02, and JCC04) were selected for use in the BERA by the project team during the January 2010 RPM meeting.

2.2.2 Overview of 2010 (Step 2) Sediment Investigation

As described in Section 1 of this report, the Step 1 sediment data (2009) was used to map the horizontal and vertical extent of contaminants in depositional sediments, and to select stations to be re-sampled for detailed chemical, biological, and effects analysis (Step 2 sediment sampling). Target locations for the detailed analysis were proposed to the project work group through a Technical Memo distributed via email on February 2nd, 2010; and then redistributed as Revision 1 on February 4th, 2010. This memo was discussed in detail during a conference call held on February 25th 2010. During this conference call Step 2 sediment locations were finalized; these locations were formalized in meeting minutes, as well as FMR G00949-04R. The technical memo, meeting minutes and FMR is provided in Appendix A.

Considering the Phase 1 RI sediment samples (details regarding the collection and analysis of these samples can be found in the Phase 1, Remedial Investigation Report for Site 17, Building 32, Gould Island (Tetra Tech 2006) and the Phase 2 RI Step 1 sediment samples, 32 sediment locations were chosen to re-sample surface sediment (0-6 inches in depth) in order to obtain analytical data for the BERA. The sample stations included 11 locations in the Stillwater Area; 13 locations along the Northeast Shoreline; 4 locations along the Northwest Shoreline; 3 reference stations, 2 in Potters Cove and 1 in Cranston Cove; and 1 location on the south end of the island. The locations were chosen to represent a range of low to high concentrations of total PAHs and PCBs found at the site. Sample stations were chosen by the project team during a February 2010 technical meeting.

Sediment samples were collected in three different ways during the Step 2 sediment sampling: with a Ponar dredge, with a diver, and with a shovel. The Ponar dredge was utilized from April 30 to May 4, 2010, to collect sediment at all stations selected for sampling during Step 2. At ten locations where sediment characteristics did not allow successful recovery using the Ponar dredge, divers were used to collect the target sediment interval. Divers collected sediment on May 13, 2010. At one station (SD-447, sample SD-518) along the Northeast Shoreline, a stainless steel shovel was used to collect sediment directly on May 3, 2010. This location was above the low tide level so it could be accessed from shore. During sediment sampling, characteristics such as color, depth, and sediment description were recorded

on sample log sheets. All sample stations were navigated to using a DGPS Leica model 421B with an accuracy of 1-3 meters. For sample stations that were accessed by boat the DGPS was mounted to the boat, and for locations that were accessed by land the DGPS was handheld. Whenever a sample was obtained utilizing a diver a buoy attached to an anchor was placed at the sample location and the divers collected samples from an area within a 5 foot radius of the marker. Permanent buoys that were anchored to the ocean bottom at sediment sample stations during the Phase 1 RI were used by the field team to locate Phase 2 RI step 2 sediment sample stations wherever stations overlapped and the buoy was still present.

The Step 2 (2010) sediment sampling efforts were conducted following procedures described in the *Final SAP* prepared by Tetra Tech in December 2009. All samples were sent to Columbia Analytical Services in Rochester, NY, and were analyzed for grain size, PCB homologs, SVOCs (including PAHs), metals, and total organic carbon (TOC). The samples were also analyzed for toxicity by Enviro Systems, Inc. in Hampton, NH.

2.2.2.1 Samples Collected by Dredge

Twenty-one samples were collected using the Ponar dredge (SD-501 through SD-511, SD-514, SD-515, SD-519, SD-524 through SD-527, and SD-566). To collect the samples the dredge was lowered into the water from a boat equipped with a winch. Once the dredge reached the bottom the mechanism was automatically tripped and the top 6 inches of sediment from an area of about 1 square foot (ft^2) was retrieved from the bottom. The dredge was brought up to the deck of the boat, rested on a stand, and the sediment was transferred into a stainless steel bowl. Once in the bowl, large material such as shells and sticks, as well as any living creatures on the surface, were discarded. The sample was then homogenized and the appropriate sample containers were filled. The containers were labeled and the samples were placed on ice.

2.2.2.2 Samples Collected by Diver

Ten samples were collected using divers (SD-528, SD-531, SD-512, SD-513, SD-517, and SD-520 through SD-523). To collect the samples, a weighted buoy was placed at the sample location using a Leica Model 421B GPS unit with an accuracy of 1 to 3 meters. The divers located an area within 5 feet of the anchored position where depositional sediment was present and could be collected. The sample containers were filled using scoops directly from the bottom sediment. Once all containers were filled they were capped and returned to the surface; the containers were then labeled and placed on ice.

2.2.2.3 Sample Collected by Shovel

One sample was collected using a small stainless steel hand shovel (SD-518). This location was above the low tide level so it could be accessed from shore. The sediment was collected at the sample location and transferred directly into the stainless steel bowl. Large material was removed from the sediment and the sediment was homogenized. The sample containers were filled at the sample location, then labeled and placed on ice.

2.3 BIOTA SAMPLE COLLECTION

Four species of shellfish were collected from a total of 18 locations for the biota investigation. Hardshell Clam (*Mercenaria mercenaria*) or Blue Mussel (*Mytilus edulis*), and green crabs (*Carcinus maenas*) or spider crabs (*Libinia emarginata*) were all collected based on availability at each station. Target species were discussed and selected during a planning conference call held with EPA, NOAA, and RIDEM. Clam and mussel samples were collected at 13 stations that were collocated with sediment stations. Clams were sampled at each station, where available; if clams were not present, mussel samples were collected. Traps were set to collect crabs for tissue sampling at twelve locations. Green crabs were the target for this analysis. However, green crabs were not available at most stations and spider crabs were collected as a substitute. Table 2-6 presents a summary of biota sample stations and species collected.

During collection of clams and mussels, a weighted buoy was placed at the sample location. Clams or mussels were collected by divers within a maximum 12.5 foot radius around the target survey position at each of the aforementioned locations (Figure 2-2). This was the same approach used for biota sampling during the Phase 1 RI conducted in 2005.

Divers located and collected clams or mussels by hand. Clam samples ranged between 3 and 22 animals; mussel samples ranged between 18 and 29 animals per sample. This variation was directed by the variation in the size of the animals found. At location ET435, clams that were collected were split into two sample aliquots determined by size. Aliquot A was comprised of 11 smaller clams, and aliquot B sample was comprised of three larger clams. This was done to observe differences between contaminant concentrations in the different size clams. Once collected, the shellfish were subsequently scrubbed in seawater to remove any exterior sediment, patted dry, and then bagged to be sent to the laboratory. All other sample prep, including shucking and blending, was completed at the analytical laboratory.

Crabs were collected using crab traps baited with squid that was purchased from a local bait shop in Falmouth, MA. Squid are transient pelagic species which would not have been expected to have contact with the site or site sediments. Crab traps were deployed at 12 locations collocated with sediment sample locations described above. The traps were left in place to collect crabs for approximately 48 hours. Crabs

were recovered from nine of those traps for sampling. Although spider crabs were not called for in the SAP, upon retrieval they were the only species available in most traps so a field change (FMR G00949 05) was made. The field team chose crabs that were a similar size to the extent possible for samples, but in some cases only a few crabs were recovered so they were all included in the sample regardless of size. Crabs were rinsed with seawater to remove excess sediment, their carapace length was measured, and they were placed in plastic bags with a label for shipment to the analytical laboratory.

All collected specimens were characterized according to species type, and the shell length and width were measured using dial calipers in millimeters. Biota sample information is documented in sample collection log sheets presented in Appendix B. Biota tissue analyses included PCB homologs, metals, and percent lipids. Details on chemical analysis and results are presented in Section 4.0 of this report.

3.0 PHYSICAL CHARACTERISTICS

This section presents information developed during both the Phase 1 and Phase 2 RIs including the site-specific physiography, bathymetry, and overburden geology at Site 17. Regional information and other information pertinent to the other media at the site are provided in the Phase 1 RI report for this site.

3.1 REGIONAL PHYSIOGRAPHY

This section is divided into five subsections: setting and topography, threatened and endangered species, terrestrial habitats, marine habitats, and sediment. Much of the information in this section is repeated from the 2005 Phase 1 RI report and references the supporting information in the appendices of that report. It has been repeated here to provide completeness of the BERA. The settings and topography, marine habitats, and sediment descriptions have been updated with information gathered during the Phase 2 RI field work. Overburden geology pertinent to the on-shore portions of the Phase 2 RI are addressed in a separate section following this discussion.

3.1.1 Setting and Topography

NAVSTA is located in the Narragansett Bay Basin. The facility follows the western shoreline of Aquidneck Island for nearly 6 miles, facing the East Passage of Narragansett Bay (Figure 1-1). Gould Island is located in the East Passage of Narragansett Bay in Rhode Island, approximately 1.5 miles west of Newport, Rhode Island. Gould Island is located between Aquidneck and Conanicut Islands, and occupies approximately 52 acres. Site 17 is located on the north end of Gould Island where former Building 32 was located.

The islands in Narragansett Bay are elongated and generally oriented in a north-south direction as a result of glacial movement. Elevations at NAVSTA Newport range from near mean sea level (MSL) to approximately 170 feet above MSL in the Melville North area (USGS, 1975). Areas at low elevations are susceptible to flooding during storm surges.

Ground surface elevations on the site range from 0 to 20 feet above local Naval Base mean low water (MLW). Topography is generally level, with the western half of the north end of the island leveled at approximately 18 feet MLW and the former Building 32 area at less than 10 feet MLW. The historical topography and shoreline of the island was quite different than the current configuration. The north end of Gould Island had steeply sloping sides to elevations above 30 feet. However, cut-and-fill operations are evident in historical construction drawings presented in Appendix C of the Phase 1 RI (P.W. Drawing nos. 3861-46 and 3859-46). These drawings indicate that the original shoreline was extended to the east and north for the purposes of constructing Building 32 and other facilities (piers, loading platforms, firing piers, tank systems, etc) in this

area. It is most likely that the fill for the shoreline was material removed from the hillsides to the south. The dramatic soil working is evident on historical air photos provided in Appendix C of the Phase 1 RI.

Water depths in the East Passage of Narragansett Bay in the vicinity of Gould Island reach a maximum of about 60 feet (Rhode Island Geographical Information System [RIGIS] 2010). A bathymetric survey was conducted around the north end of the island as part of the Phase 2 RI field work. On the east side of the island the depth decreases quickly dropping to 50 feet of depth within 300 feet of the shoreline. On the west side of the island the decrease in depth is much more gradual, dropping to a depth of 50 feet within 600 feet from the shoreline. Depths in the Stillwater Area vary from about 20 to 22 feet along the east side, to 28 to 30 feet in the northwest corner. Approximately 100 to 150 feet to the north of the Stillwater Area, there is a depression where the depth reaches 50 feet. It is believed that this area was dredged, and spoils were used to create the base for the wood pilings on the north side of the Stillwater Area. Figure 3-1 presents results of the bathymetric survey. The bathymetric survey was limited to the north end of the island where Site 17 is located.

3.1.2 Threatened and Endangered Species

As a part of the Phase 1 RI and the screening level ecological risk assessment, records of the presence of rare and endangered species were sought for this site. Requests were provided to NOAA and the U.S. Fish and Wildlife Service (USFWS) to provide recorded information on endangered species present at Gould Island. It is recognized that this location is a small portion of a large estuary, but it is necessary to identify local receptors to contaminants on the island. Responses from these requests indicated that no federally listed or proposed threatened or endangered species or critical habitat under the jurisdiction of these agencies are recorded to exist within the project investigation area.

According to RIGIS, there are no threatened or endangered species present on Gould Island. Based on field observations made at the island, there is low potential for habitation of federal threatened or endangered species there. The great blue heron (*Ardea herodias*) and the herring gull (*Larus argentatus*) are avian species that have been identified as target receptors of concern evaluated in the risk assessments; however, neither of these birds is identified on the federal or state endangered or threatened species list for Rhode Island (RIDEM, 1999). Additional detail on species observed and anticipated to visit at the site is provided in Appendix E of the Phase 1 RI report.

It is recognized that animals, particularly marine animals and migrating birds may visit the site, although there is no record of their presence in the standard reference lists investigated for this report. The site is a likely stopover location for migratory waterfowl, predatory birds, and other birds. Harbor seals are common in the area in winter, though they have not been observed on the island. Sea turtles are sighted in Narragansett Bay, but are highly mobile creatures and feed in the water column throughout a large area. However, special

consideration must be given to contaminants at the site that have the propensity to bioaccumulate or biomagnify in higher trophic-level animals. These contaminants include PCBs, pesticides, and accumulative metals such as mercury. The food chain model described in the ecological risk assessments evaluate the contaminants found in the different media sampled at the site, and the likelihood of their ability to affect higher trophic-level organisms.

3.1.3 Terrestrial Habitats

This section describes the terrestrial habitat features observed during the period of 2002 through 2005. This information is reprinted from the Phase 1 RI (Tetra Tech, 2006).

Gould Island was purchased from private landowners by the Navy in 1918 (Presidential Proclamation 1918). Prior to that date, the land was used agriculturally. Air photos taken in the early 1940s show that most of the vegetation was removed from the Island and the soils were nearly completely reworked.

Ownership of the southern three-fourths of the island has been transferred from the Navy to the State of Rhode Island. The southern portion of the island has not been maintained for many years and therefore a tangled succession of native and non-native plants have colonized the area, forming a dense scrub/shrub and medium sized tree cover across most of the property. Some foundations as well as intact buildings remain in various states of disrepair, hidden by undergrowth and dense vegetation. Naval Station Newport retains ownership of the northern end of the island, where Building 32 was located. A chain-link fence separates the two areas. The intertidal shoreline is subject to wave action and consists of a mixture of a deteriorated steel sheet pile marine retaining wall, rip-rap concrete blocks and debris, and a rocky beach face.

In 2001 and 2002, most of the buildings on the Navy-held portion of Gould Island were demolished to the existing grade, with the at-grade slab foundations left in place. Therefore, much of the ground surface remains as concrete cover. Roadways and some of the smaller building foundations were removed (Tetra Tech 2006, Appendix A). The former building foundation pads and the torpedo firing pier cover approximately 46 percent of the total Navy property on Gould Island. The only structure still remaining is Building 35, located on the firing pier, to the north of the former Building 32.

The north portion of the island is a weathered point of land, subject to prevailing wind exposure and currents, almost year-round. The habitat on this portion of the island consists primarily of open field vegetation consisting of grasses and forbs. The field habitat comprises approximately 37 percent of the Navy property and has an abundance of non-native volunteer and invasive species typical of recently disturbed sites in New England. Dominant plants include grasses and legumes from the hydroseed mix that was applied after building demolition was completed, such as perennial rye grass *(Lolium perenne)*, crown vetch (*Coronilla varia*), and birdsfoot trefoil (*Lotus corniculatus*). Other species that were probably present before the recent

disturbance include spotted knapweed (*Centaurea maculosa*), bittersweet (*Celastrus orbiculatus*), Multiflora rose (*Rosa multiflora*), and autumn olive (*Elaegnus umbellate*). Two narrow bands of scrub/shrub habitat are present above the upper shoreline on the east and west sides of the island. These scrub/shrub bands consist primarily of autumn olive and Japanese honeysuckle (*Lonicera japonica*) and cover approximately 17 percent of the Navy property. Many of these plants provide important bird nesting habitat. It is expected that through natural habitat succession, the Navy property will soon resemble the scrub/shrub and tree habitat on the southern portion of the island, which provides quality habitat for a variety of nesting birds.

Gould Island is an important location for colonial nesting birds. An annual colonial nesting bird count conducted by the RIDEM Division of Fish and Wildlife during spring/early summer has identified 22 bird species present on Gould Island. Some of the species reported present include Double-crested Cormorant (*Phalacrocorax auritus)*, Great Egret (*Ardea albus)*, Herring Gull (*Larus argentatus)*, Great Black-backed Gull (*Larus marinus),* and Black-crowned Night Heron (*Nycticorax nycticorax*). The great blue heron (*Ardea herodias*) and green heron (*Butorides striatus*) are both believed to be present, but have not been confirmed. A variety of songbirds also nest on Gould Island each year. Mammals observed or reported to be present on the Island include the eastern cottontail (*Sylvilagus floridanus)*, red fox (*Vulpes vulpes)*, and white-tailed deer (*Odocorleus viginianus)* (Tetra Tech, 2006, Appendix E-1). Raccoon (*Procyon lotor*) and feral cats (*Felis domesticus*) are both suspected but unconfirmed.

3.1.4 Marine Habitats

This section describes the marine habitat features found during the marine investigations and mapping conducted in the vicinity of the site in August and September 2005 updated with information gathered in 2009 and 2010 during the Phase 2 RI field work.

3.1.4.1 Primary Features

Shoreline features located at the north end of Gould Island include a pier and remnants of a piling structure (breakwater), which forms a "stillwater basin". The depth of the basin is approximately 21 feet MLW. The shoreline habitat along the northern sections of the island includes riprap, deteriorating sheet pilings, and block walls. Rocky gravel beaches are present along the eastern and western sides of the island. A section of exposed bedrock is present on the eastern shoreline. A sandy beach is located on the southern end of the island.

The Pier extending from the north end of the island is partially a solid structure, and partially a platform supported by pilings. The solid structure is comprised of fill held in place by steel sheeting driven into the sediment. The area where Building 35 is present is a concrete platform supported by concrete pilings. A

series of wooden pilings is also present extending east from Building 35, which once formed a breakwater and dock system. These pilings still remain though the breakwater and docks are no longer present. Refer to the photographs presented in Appendix C-3.

Primary currents at Gould Island are expected to be directly related to the tidal stage. Currents flow north during flood tides and south during ebb tides. Based on field observations, tidal current velocities around the island ranged from a minimum of 0 knots at slack low tide to between 0.5 and 1 knot at the southern end of the island. However, geomorphic evidence seems to indicate that there is a small net southern flow. This evidence consists of the presence of sand deposits in the intertidal and subtidal areas at the southern end of the Island. It is presumed that this sediment is transported along both sides of the island. Similar deposits were not observed at the northern end of the island. The absence of these deposits may also be a result of the type of shoreline, steep seawalls and revetments. Detailed evaluation of currents and possibility of sediment transport is currently under further evaluation, and a Tier 2 sediment transport model will be provided under a separate document in support of an FS for this site.

During collection of sediment cores as part of the Phase 2 RI field work, a series of submerged concrete blocks were discovered along the deteriorating wood pilings on the north side of the Stillwater Area. These concrete blocks are located 15 to 20 feet north of the piling structure at 17 to 18 feet of water depth. It is speculated that these concrete blocks were placed along the pilings as part of a submerged structure to protect the Stillwater Area. Currently, the only investigation of these concrete blocks has been from the surface of the water using a metal probing rod to estimate depth, hardness, and profile of the bottom. As the field team navigated approximately east to west following the piling structure probing the bottom a noticeable gap was detected approximately every 10 feet. It is believed that this reoccurring gap was space between two blocks in sequence. Similar blocks are present in the intertidal area of the north-west shoreline of the site.

The remainder of the sub-tidal marine habitat in the vicinity of Gould Island includes intertidal and subtidal environments, sand-or silt-substrate with small eelgrass beds. Intertidal areas and areas affected by wave wash are predominantly sand gravel mix as is typical for this area.

Habitat mapping efforts conducted in 2005 defined a narrow band of eelgrass, up to 90 feet at the widest, on both sides (east and west) of the northern end of the Gould Island (Figure 3-2). Both the east and west side eelgrass beds extend to the south of the study area. The west side eelgrass bed also extended north of the study area, although subtidal topography indicates it is not likely to extend very far in this direction. In the southern portion of Gould Island, where the full extent of eelgrass was not mapped, eelgrass was also observed more than 25 feet around sediment stations SD-301 and SD-311 (Figure 3-1). No eelgrass was observed at sediment stations SD-303 (eastern shoreline) or SD-314 (southeast end of island).

Eelgrass bed boundaries were distinct, and coverage was typically greater than 80 percent, as estimated visually using a Braun-Blanquet Cover Abundance Scale (Braun-Blanquet, 1932) and seagrass percentage cover photo guide (Short et al, 2002).

Species observed by the sampling team during the collection of sediment samples in 2005 included a variety of invertebrate and fish species. Invertebrate species included quahogs (Mercenaria mercenaria), mussels (Mytilus edulis), soft shell clam (Mya arenaria), hairy sea cucumbers (Sclerodactyla briareus), lobsters (Homarus americanus), purple sea urchins (Arbacia punctulata), and several species of crabs including the green crab (*Carcinus maenas*), spider crab (*Libinia emarginata*), and rock crab (*Cancer irroratus*). Fish species included cunner (Tautogolabrus adspersus), tautog (Tautog onitis), scup (Stenotomus chrysops), striped bass (Morone saxatilis), summer flounder (Paralichthys dentatus), winter flounder (Pleuronectes americanus), menhaden (Brevoorita tyrannus), and silversides (Menidia sp.). In addition, a tropical transient snowy grouper (Epinephelus niveatus) was also observed at one sediment station (SD-303).

3.1.4.2 Offshore Outfall Tracking/Underwater Imaging Field Measurements and Observations

During the Phase I RI field work sediment sampling effort, the subtidal environment was inspected by divers and bottom conditions were videotaped on transects along the shoreline. This section provides a summary of the observations made during this effort. Details on the habitat subtidal survey are provided in Tetra Tech (2006) Appendix E-2. Transects that were videotaped are shown on Figure 3-2 of this report.

East Side Offshore Transects

The 300-foot offshore transect's southern endpoint was located proximal to the former ferry slip, southeast of Building 32. At this point, the bottom substrate consisted of medium to fine sand with shell fragments interspersed with patches of macroalgae. Occasional isolated shoots of eelgrass were also encountered. Debris consisting of pilings and metal debris (potential remnants of the former ferry slip) were observed in the area of the former ferry slip. An abandoned lobster cage was observed north of the former ferry slip area. Habitat observed at the northern endpoint of the 300-foot offshore transect was similar to the southern endpoint. Biota observed along this transect included clams and cunner.

The southern endpoint of the 700-foot offshore transect segment was characterized by a gravelly sand/silt bottom substrate with little algae. In the area of the former dock, more macroalgae was observed. In addition, a circular structure overgrown with algae was observed in the southern former dock area and a flat metal structure was observed protruding at an angle from the bottom in the northern former dock area. Towards the northern endpoint, assorted metal and wood debris was observed. One piece of debris had what appeared to be a circular cut-out for a piling. A spider crab and a lobster residing under a piece of wood debris were observed in this area. Several areas containing patches of mussel and clam shells were also observed along

the transect line. Two sections of pipe were observed at the northern endpoint of the transect 100 feet east of the rigging platform area. To establish a sediment sampling location, the pipes were tracked towards the east until they terminated at broken sections.

East Side Inshore Transects

The southern endpoint of the 700-foot inshore transect was located 100 feet south of the former ferry slip area and the associated substrate was characterized by boulders and cobble with a thick cover of macroalgae and patches of silt and sand. Biota observed at this point included cunner, starfish, orange sponges, a spider crab, and purple sea urchins. Eelgrass beds were observed along the transect line 300 feet north of the southern endpoint. Spiral tufted bryozoan were also observed in this area. Towards the northern end of the 700-foot transect line, the eelgrass beds thinned out and the bottom was characterized by barren silt and sand. A juvenile winter flounder was observed in this area.

The 300-foot inshore transect line was characterized by a rocky bottom (boulders and cobble) with macroalgae and patches of silt and sand. A patch of mussel shells was observed at the northern endpoint of this transect. Biota observed included starfish, orange sponges, and cunner. A circular metal plate consisting of alternating dark- and light- colored materials was observed towards the southern endpoint of the transect.

West Side Offshore Transects

The southern endpoint of the 700-foot offshore transect was characterized by a barren bottom covered with mussel and clam shells. Biota observed included hermit crabs and a spider crab. The former seawater intake structure was observed at the 375 foot measurement tape increment. Debris observed adjacent to the intake structure included a large metal structure with a pipe or piling attached. Proceeding north along the transect, an isolated pipe fragment was observed 100 feet from the northern endpoint. This pipe fragment appeared to be similar in size to the pipe outfalls located at sediment stations SD-308F and SD-313F.

West Side Inshore Transects

The first 400 feet from the southern endpoint were characterized by eelgrass beds as well as boulders and cobbles covered with macroalgae. Biota observed in this area included purple sea urchins, starfish, and cunner. The saltwater intake structure was evident at the 375-foot mark. At the 400-foot mark eelgrass beds diminished in density to patches. Boulders and cobbles covered with macroalgae, and patches of sand and silt became more pronounced towards the northern end of the transect. Purple sea urchins were evident in this area.

Stillwater Basin Transects

Both stillwater basin transects encountered various types of scattered debris, including pieces of wood, granite blocks, concrete, metal rods, brick, and pilings. The bottom substrate was barren and silty, and lacked algae cover. Biota observed included mussel beds, starfish, spider crabs, cunner, and sponges.

3.1.5 Sediment Grain Size

Analysis of grain size distribution was conducted on aliquots of sediment samples collected during both the Phase 1 and Phase 2 RIs. Samples collected during the Phase 1 RI showed similar results as samples collected in the Phase 2 RI and are discussed in more detail in the *Phase 1 RI Report* (Tetra Tech, 2006). Results from the grain size analysis performed on samples collected during the Phase 2 RI are discussed below. As part of the Phase 2 RI, samples collected at reference stations during Step 1 were analyzed for grain size distribution, and site samples collected during the Step 2 sediment sampling were analyzed for grain size distribution. These analysis show that the sediment at the site is a mix of sand, gravel, clay, silt and cobbles, as well as shell debris. Sediment at the reference stations at Jamestown are more comprised of sand and fine sands and silts. Table 3-1 summarizes results of the grain size analysis conducted on samples collected at the site during the Phase 2 RI. Grain size data collected for the site is presented in Appendix C.

These results indicate that grain size differs based on the general location within the study area. Overall, along the northeast and northwest shorelines coarse-grained materials, sand or sand and gravel, are the predominant materials observed in sediment samples; in the Stillwater Area the sediment is comprised of more fine grained (silt and clay) material and sand, with much less gravel (Figure 3-3, and Appendix C).

The grain sizes along the Northeast and Northwest Shorelines are fairly coarse, with sand and gravel content ranging from around 75 to 99 percent of total sample material. Silt and clay in these areas were typically below 15 percent. The intertidal and subtidal zones of these areas are exposed to currents, tides, and wave action creating a poor depositional environment.

Within the Stillwater Basin fines ranged from around 20 percent to a maximum of 43.8 percent silt and clay. The Stillwater Basin was engineered to be protected from currents and waves. Although much of the infrastructure that was built to protect this area has deteriorated, it is still moderately protected from currents. With average depths ranging from 20 to 30 feet, much of the bottom is protected from normal wave action. These factors create an environment suited for deposition of fine sediment. Two stations, SD-401 and SD-402, located in the southwest corner of the Stillwater Area, had relatively low fines contents of 7.6 and 0.5 percent, respectively. Wave action in this area has been observed to be high at times and may not allow for deposition of fine grained sediments, or possibly may re-suspend fine grained sediment during storm events.

Samples were collected using either a Ponar dredge, a coring device, or a diver. It should be noted that large stones were removed during and after homogenization of sample material. Therefore, it is possible that gravel counts may be biased low.

A summary of the physical sediment conditions is provided in Appendix J of this report. This summary was prepared to support a Sediment Transport Model, which is anticipated to be published separately, but in support of the FS for this site.

3.2 GEOLOGY

According to the Soil Survey of Rhode Island, four soil map units occur on Gould Island: beaches (Ba), Newport silt loam (NeA and NeC), and Urban land (Ur). The northern end of the Island, where the site is located, is mapped as Urban land (Ur). Urban land is land that is mostly covered by urban structures such as streets, buildings, and parking lots. Presumably, the soils reworked during site development were originally Newport silt-loam with characteristics similar to that unit.

The overburden materials encountered at the site during the Phase 1 RI subsurface investigation were divided into three unconsolidated units: fill; silty sand and gravel; and glacial till. A full geological and hydrogeological evaluation of Site 17 is provided in the Phase 1 RI Report (Tetra Tech, 2006).

3.2.1 Southwest Corner of Building 32

Subsurface investigation activities performed at the site during the Phase 2 RI included the drilling and sampling of nine soil borings, in an area where 12 test pits were excavated south-west of former Building 32 in 2005. The locations of the soil borings, monitoring wells, and test pits are shown on Figure 2-1 of this report. Boring logs for the installations described in this section are presented in Appendix B.

Soil borings SB-401 through SB-409 were advanced during the Phase 2 RI field work to evaluate soils in the area southwest of former Building 32. All borings in this area first encountered a layer of topsoil that was from 6 inches to 1 foot thick. After topsoil there was a layer of fill that consisted of fine to medium grained sand with some silt and gravel. Till in this area was encountered at a minimum depth of 1 foot bgs in SB-401 and a maximum depth of 5 feet bgs in borings SB-405 and SB-409. Borings were intended to provide chemical and analytical samples of the shallow soils only, and no borings in this area were advanced to bedrock.

3.2.2 Former Building 41

Subsurface investigation activities performed at the site during the Phase 2 RI included the drilling and sampling of four soil borings in the area of former Building 41 and the remains of the rigging platform. The locations of soil borings are presented on Figure 2-1. Boring logs for the soil borings described are presented in Appendix B.

Soil borings SB-410 through SB-413 were advanced during the Phase 2 RI field work to identify if contaminants are present in the surface and subsurface soils in the former Building 41 area. Fill in this area was encountered at the ground surface and consisted mostly of a fine to medium grained silty sand with some gravel and occasional construction debris (concrete or brick). Till was encountered between 10 and 14 feet bgs. Borings were advanced through till to a depth of 22 to 25 feet bgs. Bedrock was not encountered in any borings. This area is on the northern most part of the island before the access pier to Building 35, and historical photos show a large amount of fill in this area. These findings support previous ecological evaluations conducted as a part of the Phase 1 RI and historical drawings showing previous shorelines and slopes.

4.0 NATURE AND EXTENT OF CONTAMINATION

This section of the report presents a discussion of the nature and extent of contamination based on the results of samples collected from soil, sediment, and biological tissue (biota) during the investigations described in Section 2.0.

Samples collected were analyzed in accordance with the *Final Sampling and Analysis Plan (SAP) for Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment (BERA), Site 17, Gould Island, Naval Station Newport, Jamestown, Rhode Island* prepared by Tetra Tech, Inc. in December 2009. Chemical classes evaluated included polycyclic aromatic hydrocarbons (PAHs) (EPA Method SW-846 8270C in the selective ion monitoring [SIM] mode); polychlorinated biphenyls (PCBs) (EPA Method SW-846 8082A and EPA Method 680); total petroleum hydrocarbons (TPH) including gasoline range organics (GRO, C-5 to C-12 range) and diesel range organics (DRO, C-9 to C-36 range [or extractable TPH]) (EPA Method SW-846 8015D); target analyte list (TAL) metals (EPA Methods SW-846 6010C/6020/7471B/7470A); total organic carbon (TOC) (Lloyd Kahn Method and EPA Method SW-846 9060); grain size distribution (ASTM D422); percent lipids (by solvent extraction and gravimetric procedures); and toxicity (ASTM E1367-03, reapproved 2008).

Tables providing the results from the chemical and physical analyses conducted on the samples collected during this effort are provided in Appendix D of this report.

Descriptive statistics were calculated for detected chemical analytes in sediment and biota samples collected so they could be better evaluated and compared with data collected in 2005. Statistics calculated include frequency of detections, minimum detections, maximum detections, the locations of the maximum detections, average concentrations, 95 percent upper confidence limit (95% UCL), the number of project action limit (PAL) exceedances, and the number of reference maximum detection exceedances. These are presented in Tables 4-1 through 4-5 (sediment) and 4-6 through 4010 (biota).

Comparisons in the statistics tables are made against project action levels established in the sampling and analysis plan. However, for biota tissue, the PALs were presented in the SAP on a dry weight basis, and not on a wet weight basis as reported by the laboratory. In order to compare the wet weight tissue data, to the PALs, the PALs were converted from those presented in the SAP assuming 85% moisture of the body tissue.

The statistics tables that contain 2005 data only present parameters which were analyzed for in 2009 and 2010. Statistical analysis was not conducted on grain size data described in Section 3. In cases where all reference concentrations were non-detect, the maximum reference concentration column is labeled "ND" (not detected) and the number of maximum reference concentration exceedances column contains the number of

detected samples. Samples were grouped for statistical calculations separated by the five areas of the site (i.e. Stillwater Area, Northwest Shoreline, etc.) as well as by timeframe in which the samples were collected (2005, 2009, and 2010). Descriptive statistics were not calculated for soil data because those data were used for specific evaluations described in Section 4.1.

All the sample data were validated according to established EPA Region 1 Data Validation Guidelines. A Tier II data validation was performed on the PAH, PCB, GRO, DRO, TAL metals, and TOC analyses. Tier II validation included evaluation of the following parameters:

- Data Completeness
- Preservation and Technical Holding Times
- Gas Chromatograph/Mass Spectrometer (GC/MS) Instrument Performance Check (Tuning) (PAHs)
- Initial and Continuing Calibrations
- Blanks
- Surrogate Standards (Organics)
- Internal Standards (PAHs)
- Laboratory Control Sample/Laboratory Control Sample Duplicate
- Field Duplicates
- Matrix Spike/Matrix Spike Duplicates
- Laboratory Duplicates (Metals)
- Inductively Coupled Plasma (ICP) interferences (Metals)
- ICP dilution analyses (Metals)
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
- System Performance

Based on this validation process, some analytical results were qualified due to limitations inherent to sample matrix interferences or to field and or laboratory problems. Sample results qualified with a "J" are considered approximate because of limitations identified during data validation. In general, data were acceptable for use in this RI for risk calculation and determination of extent of contamination. Qualifications on the reported data are documented in the data validation memoranda for each data package provided by the analytical laboratory. Data validation memoranda are presented in Appendices E.1 (Soils), E.2 (Sediments), and E.3 (Biota). Further discussion regarding data usability is provided by media in the subsections that follow.

A Tier I validation was conducted on percent lipids and grain size distribution analyses. The Tier I validation was limited to evaluation of the data completeness only.

Data validation was not performed on the toxicity testing results. Evaluation of toxicity data is discussed in Section 6 of this report.

Data discussions in this section focus on the maximum concentrations and concentration ranges of chemical constituents detected. The discussions in this section contain summaries of analytical results along with comparisons of detected contaminant levels to applicable standards, reference station data, and/or Phase 1 (2005) data.

Analytical results for field duplicate samples were averaged with the original sample results. Sample stations where this calculation was performed are identified with the suffix "-AVG". For field duplicate results where an analyte was detected in one of the duplicate sample but not the other, one-half the detection limit reported was used to represent the undetected concentration.

The Phase 2 RI analytical data are compared with the PALs (Worksheet 15 of the Final SAP). In this document, the PAL is a quantitative level to which the data must be reported to for the planned use of the data, usually a risk-based screening level. The PAL is not a remediation action limit. The PALs are set at the appropriate matrix-specific, risk-based, or regulatory screening criteria, as follows:

- Soil – Coal bed area– The RIDEM Method 1 Industrial/Commercial TPH Direct Exposure Criterion (DEC) (RIDEM, 2004).

- Soil – Former rigging platform area – The RIDEM Industrial/Commercial DEC (RIDEM, 2004) and ecological sediment criteria. A comparison to ecological sediment criteria (ER-L and ER-M sediment guidelines) was conducted under the assumption that soil from the rigging platform has, is, or will erode into the Stillwater Area.

- Sediment – Extent investigation (Step 1 - 2009) – The ecological risk-based criteria for marine sediment were used for screening the data in order to identify contaminants of potential concern (COPCs) for the BERA. As part of characterizing the extent of contamination, and for informational purposes, the sediment data was also plotted on a site map and labeled as to whether they exceed sediment guidelines. The guidelines used for this site are known as Effects Range – Low (ERL) (Long and Morgan, 1991 and Long et al., 1995), which were established as the Project Action Level (PAL) in the sampling and analysis plan for this site.

- Sediment – Ecological investigation (Step 2 - 2010) – Sediment samples were screened against ecological risk-based criteria for marine sediment and against concentrations measured in reference

samples. Reference samples were collected at three agreed-on stations located at Jamestown Potter Cove and Jamestown Cranston Cove, Jamestown, RI, during the Phase 2 RI.

- Biota – The calculated chemical concentration in the tissue samples that would result in an ecological effects quotient (EEQ) that is equal to one in the conservative food chain model. The calculations were based on exposure inputs and toxicity reference values.

PAHs are discussed individually and in groups. PAHs can be differentiated by high molecular weight (HMW) and low molecular weight (LMW) PAHs. High weight PAHs include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. LMW PAHs include acenaphthene, acenaphthylene, anthracene, fluoranthene, fluorene, 2-methylnaphthalene, naphthalene, phenanthrene, and pyrene. These groups are differentiated because they have different toxicological effects on organisms, and thus are evaluated separately in Section 6 of this report.

PCBs are discussed as total PCBs present in the sample results. PCBs were measured as Aroclors (Step 1 – 2009) and as homologs (Step 2 – 2010). Both analyses were used to represent a "total PCB" concentration for each sample. Section 4.2.3 presents a description of the differences in the analysis, and the similarities of the quantitative results.

4.1 SOILS

Soil samples were collected from borings advanced in two areas identified in the SAP: 1) in the southwest corner of former Building 32 in the area of the former coal pile and the former Building 33, and 2) in the area of former Building 52, the riggers house and adjacent riggers storage building (Building 41). Soil samples were collected for the specific purpose of determining the extent of specific contaminant groups found during the Phase 1 RI. Analytical results of samples collected from these borings are described below.

4.1.1 Southwest Corner of Building 32 (Former Coal Pile)

Nine borings were installed upgradient of the southwest corner of former Building 32 in order to determine if PAHs and petroleum present in soils and groundwater are a result of an upgradient release. Borings SB401 through SB409 were installed in two target areas as described in Section 2 of this report (Figure 2-1).

- Borings SB401, 406, 407, 408 and 409 were installed on the roadway between Building 33 and Building 32, and at the location of a reported former underground storage tank (UST) located at the southwest

corner of the former Building 33. This is also the location of a reported former sanitary leaching system for Building 33.

- Borings SB402, 403, 404, and 405 were installed on the hillside upgradient of the southwest corner of former Building 32, between former Building 32 and the former location of a coal storage area. Speculation was made during the Phase 1 RI that the coal in the pile may have been treated with fuel oil to improve ignition, and this oil could have migrated onto the Building 32 site.

Four samples were collected from each of these borings for analysis of PAHs, TAL metals, and TPH (DRO and GRO) as described in Section 2 and in accordance with the SAP. Samples were collected from predetermined depths in accordance with the SAP, and soil samples from other depth intervals within these borings were evaluated for potential contamination so that sample depths could be adjusted if needed. In addition, duplicate samples were collected in accordance with the SAP for quality control.

Data from these samples were combined with selected 2005 soil data from samples taken at surrounding borings and test pits and compared to RIDEM direct exposure criteria (Tables 4-11 and 4-12). These criteria were selected in accordance with the SAP as appropriate for the use of the data, which is to determine if there are currently contaminants present that would indicate past or continued contaminant contribution from these areas to the Building 32 area. In particular, the data were evaluated to determine if releases at Building 33 or at the former coal pile could be the source of petroleum contamination found in a remnant street drain located on the southwest corner of former Building 32 during the Phase 1 RI. The data are not used for risk calculation, although it can be used for comparison to remediation goals if they are calculated for soils in the future.

4.1.1.1 Building 32/Coal Pile Area

Table 4-11 presents data from the former Building 32/coal pile area. Samples collected from borings SB401 through 405 were collected from the area between the downgradient edge of the former coal pile and the street drain on the southwest corner of Building 32. The entire coal pile area was not characterized. Coal was found in SB404 (42-48 inches below ground surface) and SB405 (12-18 inches below ground surface).

PAHs were detected in almost all the 2010 soil samples; however, all were detected at trace concentrations, and did not exceed RIDEM residential or industrial criteria. All PAH concentrations are within or below concentrations previously measured during the Phase 1 RI. Such low measurable concentrations (and non-detections) of PAHs in the soil in these borings do not indicate the presence of a contaminant source (past or present) contributing to the downgradient areas.

Petroleum hydrocarbons were detected at trace concentrations in a hydrocarbon range of C-5 through C-36. Samples collected from boring SB404 at a depth of 2 to 2.5 feet bgs (below ground surface) and 3.5 to 4.0 feet bgs provided TPH results slightly above the residential DEC of 500 mg/kg, but below the industrial DEC of 2500 mg/kg.

Jar headspace readings showed higher concentrations of VOCs in samples from the 4-6 foot interval at both SB 402 and SB404 than the samples in the upper intervals. These intervals were not selected for laboratory analysis as the field geologist targeted the darker soil in the sample at 3.5 -4.0 feet, identified as fill. Although the samples from 4-6 feet were not analyzed for petroleum, the headspace data is indicative of possible petroleum bound within the natural soil below the fill on the surface.

However, because of the lower concentrations reported in the samples collected in the more shallow soils, it is speculated that this occurrence is petroleum intrusion from the immediately downgradient street drain found in the adjacent Test Pit TP09 installed as a part of the Phase 1 RI. Because the surface samples were relatively clean, the petroleum data from the borings conducted in this area do not indicate that the source of petroleum in this area is from the former upgradient coal pile.

Trace metals detected in surface and subsurface soils from borings SB402 through 409 are within concentrations previously measured in soil as a part of the Phase 1 RI, and did not exceed RIDEM DEC. Overall, data for trace metals in soil samples do not appear to indicate contribution of contaminants from the former coal pile area to downgradient soil or groundwater.

4.1.1.2 Building 33 Area

PAHs were detected in almost all the soil samples collected; however, almost all were at trace concentrations and did not exceed RIDEM residential or industrial DEC. All Phase 2 PAH concentrations are within or below Phase 1 concentrations. The one exception was the surface soil sample collected from boring SB407. At this location, concentrations of benzo(a)anthracene, benzo(b)fluoranthene, and chrysene all exceed the residential DEC, and the concentration of benzo(a)pyrene exceeds both the residential and the industrial DEC. SB407 is the boring closest to Building 33, however, low (and no) measurable concentrations of PAHs in the subsurface soil in other borings in this area indicate a possible incidental surface release at this location, and not a significant release nor the presence of a source to the downgradient areas.

Petroleum hydrocarbons were detected at trace concentrations as DRO compounds in a hydrocarbon range of C-5 through C-36. However, none of the detected concentrations exceed RIDEM residential DEC, and do not indicate a source in this area.

Trace metals that were detected in surface and subsurface soils did not exceed RIDEM DEC with one exception: Arsenic was detected in surface soil at SB409 at a concentration of 11.9 mg/kg, which is above the RIDEM DEC of 7 mg/kg. However, the average arsenic concentration is below 7 mg/kg. Even with this considered, trace metals concentrations were comparable to those measured during the Phase 1 RI. Overall, data for trace metals in soil do not indicate contribution of contaminants to downgradient soil or groundwater.

4.1.2 Building 52 (Former Riggers Storage Building)

Four borings (SB410 through 413) were installed in the vicinity of the former Building 52 near an area where a PCB removal was conducted in 2001 and 2002 (reference Section 1.4.4, 1.5.2 and Appendix I). These borings were installed in order to determine if PCBs, PAHs, and metals present in soils could be contributing to sediment contamination found in the adjacent marine sediments in the Stillwater Area (Figure 2-1). Two samples were collected from each of these borings for analysis of PCBs, PAHs, and TAL metals. In addition, duplicate samples were collected from the surface interval and the subsurface interval at SB413 in accordance with the SAP.

Data from these samples were compared with RIDEM DEC (Table 4-13). These criteria were selected in accordance with the SAP as appropriate for the use of the data, which is to determine if there is currently contamination present that would indicate past or continued contaminant contribution to the adjacent sediments. The data is not used for risk calculation, although it can be used for comparison to remediation goals if they are calculated for soils in the future.

PAHs were detected in soils taken from boring SB413, but not at concentrations exceeding RIDEM DEC. Concentrations of PAHs in the surface interval of borings SB410 and 411 exceed the residential DEC, and those measured in the surface interval of Boring SB412 exceed both residential and the industrial DEC. While these PAH concentrations can be considered elevated from a natural condition, the measured concentrations are within those previously measured in soil at the site.

PCBs were found in surface soil samples collected at SB410 through 412, and in subsurface soil collected from boring SB410 only. These concentrations are all below RIDEM DEC. However, the PCB concentration measured in the surface soil at SB412 (1,840 µg/kg total PCBs) is the highest concentration measured in the soil as part of the RI. Trace PCBs (82 µg/kg) were found in subsurface soil at boring SB410, but not in SB412. This information, combined with the historical knowledge of a PCB release at Building 52, substantiates the expectation that an overland release of PCBs occurred in this area, migrated off (or through) the timber and steel-constructed former rigging platform immediately north of the location, and that the release likely contributed to PCB contamination in the adjacent sediment (north). Residual PCBs in soil are below applicable state industrial criteria and do not pose a significant risk of continued PCB contribution to the marine sediments at this time.

Trace metals detected in surface and subsurface soils are within concentrations previously measured in soil as a part of the Phase 1 RI, did not exceed RIDEM DEC, and do not appear to indicate contribution of contaminants to the adjacent sediment.

4.1.3 Soil Data Usability

PAHs

The project goals with respect to accuracy were met for the soils PAH data set with the following exceptions:

The results for dibenzo(a,h)anthracene in select samples were qualified as estimated due to instrument calibration variability; and in sample GI-SB412-0012, due to high matrix spike (MS) and matrix spike duplicate (MSD) recoveries and high internal standard areas. Although specific method criteria were not met in these instances, the affected positive and non-detected results are usable as estimated values and estimated reporting limits which may have a minor impact on data usability.

In addition, the results for benzo(b)fluoranthene, benzo(a)anthracene, naphthalene, and benzo(k)fluoranthene were qualified as estimated in select samples due to calibration non-conformances. The positive benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, and benzo(g,h,i)perylene results in sample GI-SB412-0012 were qualified as estimated due to internal standard non-compliances. The positive results for 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, benzo(k)fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, and naphthalene were qualified as estimated in sample GI-SB412-0012 due to high MS/MSD recoveries. The positive results for phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, and chrysene are estimated in sample GI-SB405-0006 due to the high matrix spike recoveries. The non-detected results for benzo(a)pyrene and acenaphthylene are estimated in the rinsate and field blank samples due to low laboratory control sample (LCS) recovery. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The project goal with respect to precision were met for the soils PAH data set. The positive results for 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, benzo(k)fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, and naphthalene in sample GI-SB412-0012 were qualified as estimated due to poor MS/MSD precision. The non-detected results for benzo(a)pyrene, acenaphthylene, pyrene, indeno(1,2,3-cd)pyrene, and benzo(g,h,i)perylene are estimated in the rinsate and field blank samples due to exceeded relative percent difference (RPD) criteria for the LCS and laboratory control sample duplicate (LCSD) analyses. Although specific method criteria were not met in these instances, data usability is not

impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The project goals with respect sensitivity and completeness were met for the soils PAH data set. Data usability was not impacted with regards to sensitivity or completeness.

PCBs

The project goals with respect to accuracy were met for the soils PCBs data. The Aroclor-1248 result in sample GI-SB412-0006 was qualified as estimated due to analytical interferences detected in the dual column analysis. Although specific method criteria were not met in this instance, data usability is not impacted and the affected positive result is usable as an estimated value.

The project goals with respect to precision, sensitivity, and completeness were met for the soils PCBs data set. Data usability was not impacted with regards to accuracy, precision, and completeness.

GRO

The project goals with respect to accuracy, precision, sensitivity, and completeness were met for the soils GRO data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and completeness.

Extractable TPH

The project goals with respect to accuracy were met for the soils extractable TPH (ExTPH) data set. The non-detected ExTPH result in sample GI-SB408-4248 was qualified as estimated due to the low surrogate recovery. Although specific method criteria were not met in this instance, data usability is not impacted and the affected non-detected result is usable as an estimated quantitation limit.

The project goals with respect to precision, sensitivity, and completeness were met for the soils ExTPH data set. Data usability was not impacted with regards to precision, sensitivity, and completeness.

Metals

The project goals with respect to accuracy were met for the soils metals data set with the following exceptions:

Arsenic was qualified as estimated in select samples due to negative ICP interferences attributed to the high concentration of iron; results may be biased low. Although specific method criteria were not met in this instance, the affected positive and non-detected results are usable as estimated values and estimated reporting limits which may have a minor impact on data usability.

Additionally, antimony, arsenic, barium, cadmium, cobalt, selenium, silver, and sodium were qualified as estimated in select soil samples due to positive or negative ICP interferences attributed to the high concentration of iron, aluminum, and/or calcium. Antimony, lead, magnesium, zinc, and mercury were estimated in select samples due to high or low matrix spike recoveries. Barium, beryllium, cobalt, lead, nickel, and zinc were estimated in select soil samples due to a sample matrix suppressing effect detected in the ICP serial dilution. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The project goals with respect to precision were met for the soils metals data set. Sodium, copper, potassium, and mercury were estimated in select samples due to poor laboratory duplicate precision. Calcium was estimated in select samples due to poor field duplicate precision. Although specific method/QC criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The project goals with respect to sensitivity were met for the soils metals data set with the following exceptions. The laboratory-specific quantitation limits (QLs) listed in SAP worksheet 15a were met by the sample-specific (adjusted for sample preparation factors) laboratory limits of quantitation (LOQs) except for arsenic and chromium in one sample (GI-SB411-6072) due to percent moisture; calcium and iron in select samples due to dilution; and manganese and silver in select samples due to a slightly higher nominal (unadjusted) LOQ than the QL presented in the SAP. All PALs were achieved by the laboratory sample-specific LOQs and limits of detection (LODs).

The project goals with respect to completeness were met for the soils metals data set. Data usability is not impacted with regards to completeness.

4.1.4 Soil Summary

Data from the Building 33 area do not indicate presence of a source (past or present) of PAH or fuel contaminants in this area. The borings conducted between the former coal pile and the southwest corner of Building 32 do not indicate that the source of petroleum found adjacent to Building 32 is from the former upgradient coal pile. It is therefore concluded that the PAH contaminants found in the test pits in 2005 on the southwest corner of Building 32 most likely originated as releases from materials stored in this area or

discharged from the drainage system from this portion of the building. A complete discussion on the drainage systems from Building 32 is provided in the Phase 1 RI report.

Soil data from borings near the former riggers building (Building 52) and the adjacent storage building (Building 41) indicate that PCBs are present on the surface of the ground, and not at deeper intervals. This indicates that there was likely a surface release of PCBs at this area. The soil borings conducted at this location were intended to determine if PCBs were present at depth or at the ground surface, and if either could pose a continued PCB contribution to the sediments adjacent within the still water area. The concentrations (maximum of 1.8 mg/kg) measured at the surface interval, and low concentrations of PCBs at depth (maximum of 0.087 mg/kg) indicate that the soils in this area do not pose a significant threat of continued PCB contribution to these sediments.

4.2 SEDIMENTS

While sediments were collected in one round in 2005 for the Phase 1 RI, sediments were collected in two rounds/steps in 2009 and 2010 during the Phase 2 RI. "Step 1" sampling was performed in 2009 and was used to determine the extent of contamination in the sediments at the site. "Step 2" sampling was performed in 2010 and was used to support the BERA. Sediment sample locations for these two steps are presented on Figure 2-2. Depth intervals are presented on Figure 2-3.

To support the discussion of nature and extent of contamination, Figures 4-1 through 4-25 present the distribution of representative analytes measured in sediment samples collected in 2005, 2009, and 2010, as compared with PALs. Exceedances of PALs (ERL values were selected as PALs for these analytes in the SAP) are presented as an illustration only and do not necessarily indicate concern or need for remedy. Representative analytes were selected for mapping from the COPC list identified in the Screening Level Ecological Risk Assessment (Tetra Tech, 2006). These figures present data in five sediment depth intervals (0 to 6 inches, 6 to 12 inches, 12 to 24 inches, 24 to 36 inches, and 36 to 48 inches). As described in Section 2 of this report, some samples bridge the boundaries of the intervals mapped, and as such, a single result may be shown on two or even three maps – the results from a core sample collected between 0 and 18 inches will be presented on three maps that present portions of that interval – those maps showing the 0 to 6 inch, 6 to 12 inch, and 12 to 24 inch intervals.

Summary statistics for sediments are presented in Tables 4-1 through 4-5. Detected concentrations of all analytes measured during this phase of the RI are presented on Tables 4-14 through 4-22.

4.2.1 Step 1 (2009) Sample Results

The Step 1 sediment samples were collected by Tetra Tech in September and October 2009. The sediment sample locations are shown on Figure 3-1. The discussion of the sediment analytical results is organized by geographic areas and tidal zones. Geographic areas include the Stillwater Basin, the Northeast Shoreline, the Northwest Shoreline, and reference sample locations. All sediment samples collected in Step 1 were analyzed for PAHs, PCBs (Aroclors), and TAL metals in accordance with the SAP.

When comparing to reference location detections, the maximum detections from the reference samples collected in both 2009 and 2010 are used. Tables 4-1 through 4-3 and 4-5 present the site sediment summary statistics compared to the reference data. Table 4-4 presents a summary of the data from the six candidate reference samples collected in 2009 compared to the data from the three selected Step 2 reference samples collected in 2010. This comparison is provided only for informational purposes.

Data are also compared with previous results from sample analysis conducted in 2005. Differences in the results are expected because many different locations were sampled. The difference observed in samples which were designed to be co-located with previous stations may be attributed to heterogeneity in sediment sampling, and the dynamic nature of the changing shoreline.

4.2.1.1 Stillwater Basin

Sediment samples were collected from 20 locations (SD401 through SD420) in the Stillwater Basin in 2009. From each location, one or more samples were collected at varying depths resulting in the collection of 60 samples. Sample locations are presented on Figure 3-1. Summary statistics are presented in Table 4-1. Detected analytes are presented in Table 4-14. A complete data set is provided in Appendix D.

PAHs

PAHs were detected at all 20 locations and most of the 2009 samples collected in the Stillwater Basin. The maximum total PAHs (80,300 µg/kg) was found at SD406 from 0 to 2 feet. Fourteen of the individual maximum PAH detections in the area were detected in this sample. The minimum detected total PAHs (3.02 µg/kg) was found at SD415 from 3.5 to 4 feet. The average total PAHs for the Stillwater Basin was 4,880 µg/kg. PAHs were not detected at SD408 from 2.53 to 3.79 feet, SD409 from 0 to 0.5 feet, and at SD417 from 2.53 to 3.79 feet.

PAL exceedances are shown in Table 4-14. The maximum detections at reference locations were exceeded for all PAHs in one or more samples. The LMW PAHs in 33 Stillwater Basin samples exceeded the reference maximum detection, and 33 samples exceeded the reference maximum detection for HMW PAHs.

Changes since 2005: Samples were collected from only two locations in during the 2005 Phase 1 RI (SD312 and SD316). Two samples were collected at each location for a total of four samples. The maximum total PAH concentration (88,100 µg/kg) was found at SD312 from 0.5 to 1 foot. As such, the Phase 1 PAH concentrations measured in the Stillwater Basin sediments appear to be comparable to 2009 Phase 2 results. The maximum detections in 2009 exceed the maximum detections in 2005 only for the following PAHs: anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and naphthalene.

Figures 4-1 through 4-5 present the distribution of total PAHs measured in sediment samples collected in 2005, 2009, and 2010 at the site, as compared with the PALs. PAHs were mapped using total PAH concentrations, as compared to the ERL for this constituent group. Figure 4-1 presents total PAHs in surface sediment (samples that include sediments within the 0 to 6 inch interval). PAH distribution in the surface sediments indicates higher concentrations of PAHs in the southwest corner of the Stillwater Area. The source of the PAHs is not clear, and could be a result of fueling operations, releases from the staging areas at the north end of the island, a result of released cleaning solutions, or even as a result of carrier oil in the PCB transformers (RIDEM 2/14/11). PAHs are also provided via non-point sources in Narragansett bay, as there are industrialized areas upstream within the estuary system, and heavy ship traffic throughout the region.

Figures 4-2 through 4-5 present the total PAHs measured in subsurface sediment. These figures indicate that deeper sediments in the southwest corner of the Stillwater Area (up to 4 feet below the sediment) exceed the PAL up to that depth. The deepest samples with PAL exceedances and the highest concentrations of total PAHs were the samples located closest to the former rigging platform at the south portion of the Stillwater area. There are limitations on the precision of sample depths in this area, but such a pattern indicates past releases and contaminant deposition in this area over time.

PCBs (Aroclors)

See Section 4.2.3 for discussion of the comparing PCB Aroclors and PCB homologs.

PCBs, measured as Aroclors, were detected at 18 of the 20 locations sampled in the Stillwater Basin. PCB Aroclors were not detected in any samples from locations SD416 and SD417. The maximum total PCB concentration (55,000 µg/kg) was found at SD402 from 2 to 4 feet. The minimum detected total PCB concentration (34 µg/kg) was found at SD419 from 2.25 to 3 feet. The average total PCB concentration for the Stillwater Basin was calculated at 3,100 µg/kg.

Aroclors-1248, -1254, and -1260 were detected in one or more samples from the Stillwater Basin. Thirty-five samples had PAL exceedances for one or more of these Aroclors. The total PCB PAL (22.7 µg/kg) was exceeded in 41 of the 60 samples. All reference sample results were non-detect for PCB Aroclors.

Changes since 2005: Of the two samples collected during the 2005 Phase 1 effort, the maximum total PCB Aroclor concentration (41,000 µg/kg) was found at SD312 from 0.5 to 1 foot. This finding is confirmed by the 2009 and 2010 Phase 2 data, which showed higher concentrations of PCBs in the 0 to 0.5 foot and 0 to 1 foot intervals. Although there are limited data available from Phase 1, it would appear that Phase 1 PCB concentrations measured in the Stillwater Basin are comparable to Phase 2 results. The maximum detections in 2009 exceed the maximum detections in 2005 for the following Aroclors: Aroclor-1248, -1254, -1260, and total Aroclors. The exceedances were more than an order of magnitude difference for Aroclor-1248 and Aroclor-1254, because these Aroclors were non-detect in 2005.

Figures 4-6 through 4-10 present the distribution of total PCBs measured in sediment samples collected in 2005, 2009, and 2010 as compared to the PAL. Figure 4-6 presents total PCBs in surface sediment (samples that include sediments within the 0 to 6 inch interval). PCB distribution in the surface sediments indicates higher concentrations in the southern portion of the Stillwater Area. This pattern supports the Phase 1 RI finding that PCBs are likely to have originated at the former Building 52, previously located on the Rigging Platform, and a location of a PCB cleanup program (Tetra Tech 2006).

Figures 4-7 through 4-10 present the total PCBs measured in subsurface sediment. These figures indicate that the highest concentrations of PCBs are located in sediments that were collected from the southwest corner of the Stillwater Area. Elevated concentrations were detected in this area at up to four feet below the sediment surface. Although there are limitations on the precision of sample depths in this area, such a pattern indicates past releases and contaminant deposition over time.

TAL Metals

Metals were detected at all 20 locations sampled in the Stillwater Basin, and in all depths sampled (Table 4-14). PAL exceedances are shown in Table 4-14. PALs were not exceeded in samples collected from locations SD401, SD402, SD406, and SD408. Ten of the maximum metals detections were from samples collected at SD412. The maximum detections at reference locations were exceeded for all metals in one or more samples.

Changes since 2005: Of the two Phase 1 locations sampled, there were no PAL exceedances at location SD312. PALs were exceeded from samples collected at SD316 for copper, lead, and mercury. The copper, lead, and mercury detections in Phase 1 are within the range of detections found in Phase 2 (2009). The

maximum detections in 2009 exceed the maximum detections in 2005 for all metals. Cadmium, chromium and lead PAL exceedances were mapped as described below:

Figures 4-11 through 4-15 present the concentrations of cadmium in sediment. Cadmium was identified as a potential analyte of concern in the Phase 1 RI due to a high detected concentration at the Northeast Shoreline. Figures 4-11 through 4-15 show four locations in the surface sediment along the Northwest and Northeast Shorelines, and two locations at depth (three samples) at the Stillwater Area where the PAL was exceeded, and do not indicate a pattern that would support a widespread release of cadmium containing waste.

Figures 4-16 through 4-20 present the concentrations of chromium in sediment. Chromium was identified as a potential analyte of concern in the Phase 1 RI due to elevated concentrations detected near outfalls, and presumed use in the electroplating operations in Building 32. As shown in Figure 4-16, no stations exceeded the PAL for chromium in the Stillwater Basin.

Figures 4-21 through 4-24 present the distribution of lead in sediment. Lead was identified as a potential analyte of concern in the Phase 1 RI due to elevated concentrations detected near outfalls. As shown in Figure 4-21, only one surface sediment sample in the Stillwater Area was found to contain lead at concentrations above the PAL (in 2005). Three stations showed PAL exceedances in the subsurface sediment (one in 2005, two during step 1 sampling in 2009). These are all co-located at stations where PAHs and PCBs were also elevated.

4.2.1.2 Northeast Shoreline

Sediment samples were collected from 20 locations along the Northeast Shoreline in 2009. All samples were collected as surface grab samples, from a depth of 0 to 6 inches. One sample was collected from each location. Summary statistics are presented in Table 4-2. Detected analytical results can be found on Table 4-15. This area is closest to former Building 32, and is presumed to receive discharges from floor drains, storm drains, and waste handling systems in former Building 32.

PAHs

PAHs were detected at all locations sampled along the Northeast Shoreline except SD450. The maximum total PAHs (6,480 µg/kg) was found at SD432. Eleven of the maximum PAH detections were from this location. The minimum detected total PAHs (35.8 µg/kg) was found at SD423. The average total PAHs from this data group was 1,500 µg/kg.

PAL exceedances are shown in Table 4-15. Site concentrations exceed reference values for all PAHs in one or more samples. LMW PAH concentrations exceed the reference value at 12 locations and HMW PAH concentrations exceed the reference value at 8 locations.

Changes since 2005: Data were compared with samples that were collected from eight locations in this area during the 2005 Phase 1 effort. The maximum total PAH concentration at that time (20,200 µg/kg) was found at SD310 from 0 to 6 inches. The maximum detection for acenaphthylene in 2009 slightly exceeds the maximum detection in 2005. Overall the Phase 1 PAH concentrations along the Northeast Shoreline are higher than the 2009 Phase 2 results. It is likely that this difference is a result of targeted sample stations during the different efforts: Phase 1 samples were targeted to the outfalls of drains from the on-land structures. The Phase 2 samples were targeted between the Phase 1 stations that exhibited high concentrations (at the outfalls) and the Phase 1 stations where lower concentrations were detected, and beyond those locations to establish a limit (extent) of contamination.

Figures 4-1 through 4-5 present the distribution of total PAHs measured in sediment samples collected in 2005, 2009, and 2010 as compared to the ERL for total PAHs Figure 4-1 presents total PAHs in surface sediment (0 to 6 inches). PAH distribution in the surface sediments indicates slightly elevated concentrations of PAHs near former outfall locations on the Northeast Shoreline. Most other sample results do not show PAL exceedances. This pattern supports the Phase 1 RI finding of a potential PAH discharge to the marine sediment from the parts washing area in Building 32 and the "trench drain" a street storm drain that discharged runoff and groundwater from the southwest corner of Building 32 (Figure 2-1).

Figure 4-2 presents the total PAHs measured in subsurface sediment (6-12 inches only). Limited samples were collected from deeper intervals in this area due to the rocky nature of the substrate. The only subsurface sediment sample that was collected along the Northeast Shoreline that had elevated results was the sample collected from 304F which was collected south of the storm water discharge in 2005.

PCBs (Aroclors)

PCB Aroclors were detected at 11 of the 20 locations sampled along the Northeast Shoreline. The maximum total PCB concentration (890 µg/kg) was found at SD435 from 0 to 6 inches. The minimum detected total PCB concentration (42 µg/kg) was found at SD430 from 0 to 6 inches. The average of the total PCBs results was 282 µg/kg for this data set.

Aroclors-1248 (one sample) and -1260 (ten samples) were detected at the Northeast Shoreline. All detected results were above PALs for these Aroclors. Thus, the PAL for total PCBs (22.7 µg/kg) was exceeded in all 11 samples in which PCBs were detected. All reference sample results were non-detect for PCB Aroclors.

Changes since 2005: Data was compared with samples that were collected from eight locations in this area during the 2005 Phase 1 effort. During Phase 1, the maximum total PCB Aroclor concentration (3,800 µg/kg) was found at SD304 from 0 to 6 inches. The maximum detection for Aroclor-1248 in 2009 (340 µg/kg at SD449) exceeds the 2005 value by an order of magnitude. However, the maximum detections for Aroclor-1260 and total Aroclors in 2009 were more than an order of magnitude lower than the maximum detections in 2005. Aroclor-1260 appears to be present mostly in the southern portion of the Northeast Shoreline, where a PCB removal was conducted (Building 54).

In general, the 2005 Phase 1 PCB average concentrations along the Northeast Shoreline are higher than the 2009 Phase 2 results. It is likely that this difference is a result of targeted sample stations during the different efforts: Phase 1 samples were targeted to the outfalls of drains from the on-land structures. The Phase 2 samples were targeted between the Phase 1 stations that exhibited high concentrations (at the outfalls) and the Phase 1 stations where lower concentrations were detected, and beyond those locations to establish a limit (extent) of contamination. The difference observed in samples which were designed to be co-located may be attributed to heterogeneity in sediment sampling, and the dynamic nature of the changing shoreline.

Figures 4-6 through 4-10 present the distribution of total PCBs measured in sediment samples collected in 2005, 2009, and 2010 as compared to PALs. Figure 4-6 presents total PCBs in surface sediment (0 to 6 inches). PCB distribution in the surface sediments indicates elevated concentrations of PCBs on the southern portion of the Northeast Shoreline. This area is near the former location of Building 54, a transformer building which was a support structure for Building 32, and the location of a PCB removal project (Tetra Tech 2006). Other sample results do not indicate widespread elevated PCB concentrations.

Figures 4-7 through 4-10 present the total PCBs measured in subsurface sediment. Limited samples were collected from deeper intervals in this area due to the rocky nature of the substrate. PCBs above the PAL were detected in one sample subsurface station (SD304 collected in 2005), south of the storm water discharge described above.

TAL Metals

Select metals PALs were exceeded in all site samples. The maximum detections in the reference samples were exceeded for all metals except beryllium and mercury.

Changes since 2005: Most of the metals detections during Phase 1 are within the ranges of detections found during the 2009 Phase 2 effort. The maximum detections measured in 2009 exceed the maximum detections in 2005 for aluminum, arsenic, barium, calcium, cobalt, potassium, sodium, and zinc. Cadmium, chromium and lead PAL exceedances were mapped as described below:

Figures 4-11 through 4-15 present the concentrations of cadmium in sediment. Cadmium was identified as a potential analyte of concern in the Phase 1 RI due to a single elevated detection at the Northeast Shoreline. For Phase 2, additional samples were collected around this location. Figures 4-11 through 4-15 show PAL exceedances occurred at three locations in the surface sediment (all in Phase 1 only). These results do not indicate a pattern that would support a widespread release of cadmium containing waste. As such, the elevated concentrations at these locations are deemed to be incidental.

Figures 4-16 through 4-20 present the concentrations of chromium in sediment. Chromium was identified as a potential analyte of concern in the Phase 1 RI due to elevated detections near outfalls, and presumed use in the electroplating operations in Building 32. As shown in Figure 4-16, only one surface sediment samples was found to contain chromium at concentrations above the PAL at the Northeast shoreline at SD304F in 2005. There were no PAL exceedances in the subsurface sediment.

Figure 4-21 through 4-24 present the distribution of lead in sediment. Lead was identified as a potential analyte of concern in the Phase 1 RI due to elevated concentrations detected near outfalls. As shown in Figure 4-21, lead was detected above the PAL at ten locations at the Northeast Shoreline. The 2005 sample collected at SD304 remains the maximum concentration and is located near the storm drain outfall from the southwest corner of Building 32 (Figure 2-2).

4.2.1.3 Northwest Shoreline

Sediment samples were collected from seven locations along the Northwest Shoreline in 2009. All samples were collected as surface grab samples from a depth of 0 to 6 inches. One sample was collected from each location resulting in seven samples. Summary statistics are presented in Table 4-3. Data for detected analytes can be found on Table 4-16. There are outfalls in this area originating from Building 32 sewer systems.

PAHs

Select PAHs were detected at all locations sampled along the Northwest Shoreline. The maximum total PAHs (2,320 µg/kg) was found at SD442 from 0 to 6 inches. Fourteen of the maximum PAH detections were at this location. The minimum detected total PAHs (84.2 µg/kg) was found at SD440 from 0 to 6 inches. The average total PAHs was 1,180 µg/kg.

PALs were exceeded in select samples for the following compounds: acenaphthene, anthracene, fluorene, and phenanthrene. The maximum detections at reference locations were exceeded for all PAHs, except acenaphthylene, in one or more samples. LMW PAH concentrations exceed the reference value at six locations and HMW PAH concentrations exceed the reference value at four locations.

Changes since 2005: Eighteen samples were collected from the Northwest Shoreline during Phase 1. The maximum total PAH concentration (15,700 µg/kg) occurred at SD308 from 0 to 6 inches. Overall, the Phase 1 PAH concentrations along the Northwest Shoreline are higher than the 2009 Phase 2 results. This decrease between the data sets is likely due to the targeted sample stations during the different efforts: Phase 1 samples were targeted to the outfalls of drains from the on-land structures. The Phase 2 samples were targeted between the Phase 1 stations that exhibited high concentrations (at the outfalls) and the Phase 1 stations where lower concentrations were detected, and beyond those locations to establish a limit (extent) of contamination.

Figures 4-1 through 4-5 present the distribution of total PAHs measured in sediment samples collected in 2005, 2009, and 2010 at the site as compared to the ERL. Figure 4-1 presents total PAHs in surface sediment. PAH distribution in the surface sediments indicates slightly elevated concentrations of PAHs near former outfall locations on the Northwest Shoreline. This pattern supports the Phase 1 RI finding that PAHs likely were carried to the Northwest Shoreline via a re-routed septic outfall in this area.

PCBs (Aroclors)

Aroclors were not detected in the seven 2009 Phase 2 samples collected from along the Northwest Shoreline. Two of 18 samples collected during Phase 1 had detections and PAL exceedances for Aroclor-1260. The maximum total PCB concentration (46 µg/kg) was found at SD302 from 0 to 6 inches.

Changes since 2005: Overall, Phase 1 PCB concentrations along the Northwest Shoreline are higher than the Phase 2 results.

Figures 4-6 through 4-10 present the distribution of total PCBs measured in sediment samples collected in 2005, 2009, and 2010 at the site, as compared to the PAL. Figure 4-6 presents total PCBs in surface sediment. PCB distribution in the surface sediments indicates only one location (collected during Phase 1) on the Northwest Shoreline where PCBs exceeded the PAL. Overall distribution of PCBs does not indicate PCBs are of concern to the sediment in the Northwest Shoreline.

TAL Metals

Metals were detected at all seven locations sampled along the Northwest Shoreline. PAL exceedances occurred in select samples for antimony, copper, and lead (Table 4-16). The maximum reference detections were exceeded for all metals; except cobalt, magnesium, and silver; in one or more samples.

Changes since 2005: Of the 18 Phase 1 samples, there were PAL exceedances for cadmium, copper, manganese, and nickel. Overall, the metals detections in Phase 1 are within the range of detections found in

Phase 2. The maximum detections in 2009 exceed the maximum detections in 2005 for antimony, barium, beryllium, calcium, cobalt, lead, selenium, and silver.

Figure 4-11 presents the concentrations of cadmium in surface sediment at the Northwest Shoreline. Cadmium was identified as a potential analyte of concern in the Phase 1 RI due to a single elevated detection at the Northwest Shoreline (SD313). This location was not re-sampled during Phase 2. Overall, results do not indicate a pattern that would support a widespread release of cadmium containing waste in this area.

Figure 4-16 presents the concentrations of chromium in surface sediment at the Northwest Shoreline. Chromium was identified as a potential analyte of concern in the Phase 1 RI due to elevated concentrations detected near outfalls, and presumed use in the electroplating operations in Building 32. As shown in Figure 4-16, no surface sediment samples were found to contain chromium at concentrations above the PAL. Overall, concentrations appear to be low.

Figure 4-21 presents the distribution of lead in surface sediment at the Northwest Shoreline. Lead was identified as a potential analyte of concern in the Phase 1 RI due to elevated concentrations detected near outfalls. As shown in Figure 4-21, the PAL for lead was exceeded only at one location at the Northwest Shoreline. Such an occurrence does not indicate a significant release of lead to marine sediment at the Northwest Shoreline. Overall, concentrations appear to be low.

4.2.1.4 Reference Locations (Potters Cove and Cranston Cove)

Six surface sediment samples were collected from reference locations during the 2009 Phase 2 effort. All samples were collected as surface grabs from the 0 to 6 inches. Three samples were collected from Potters Cove and three were collected from Cranston Cove (Figure 2-2). Summary statistics are presented on Table 4-4. The analytical data can be found on Table 4-17. (Note: Reference samples were not collected during the Phase I RI). These six reference samples were collected to evaluate the candidate locations for the ecological risk assessment samples collected in 2010. Based on these results, three stations were selected for sampling in 2010.

PAHs

Select PAHs were detected in all six reference samples (Table 4-17). 2-Methylnaphthalene and acenaphthene were non-detect in all 2009 Phase 2reference samples.

The maximum total PAHs (620.4 µg/kg) was found at location JCC-01. All of the maximum PAH detections were from this location. The minimum detected total PAHs (109.3 µg/kg) was found at JPC-03 from 0 to 6 inches. The average total PAHs was 285 µg/kg.

PAH PALs were not exceeded in the reference samples, but the presence of PAHs in these reference areas is important to note as background levels of PAHs in marine sediment. Concentrations in areas unaffected by local releases will vary throughout Narragansett Bay based on depositional areas, bacterial processes that degrade PAHs, and new inputs of point and non-point sources throughout the watershed. Refer to the Watershed Contaminant Source information presented in the Phase 1 RI for this site.

PCBs (Aroclors)

Aroclors were not detected in the six reference samples.

TAL Metals

Metals were detected in all six reference samples (Table 4-17). Sixteen of the maximum metals detections were found at location JPC-02 from 0 to 6 inches. Silver and thallium were non-detect in all reference samples. PALs were not exceeded in the reference samples.

4.2.2 Step 2 (2010) Sample Results

The Step 2 sediment samples were collected by Tetra Tech in April and May 2010 after evaluating the Step 1 data. Locations selected for Step 2 sampling were agreed on by the project team during a teleconference on February 25, 2010, and documented in a Field Modification Request (No. 3, Appendix A of this report). Step 2 samples were collected only from the surface sediment (0 to 6 inches) as described in Section 2 of this report. The sediment sample locations are shown on Figure 3-1. Detections are presented in Tables 4-18 through 4-22. A complete set of data from Step 2 is provided in Appendix D.

The discussion of the sediment analytical results is organized by geographic areas, similar to the 2009 data assessment. Geographic areas include the Stillwater Basin, the Northeast Shoreline, the Northwest Shoreline, the south end of the island, and reference areas (Jamestown). All sediment samples collected during Step 2 were analyzed for PAHs, PCB homologs, TAL metals, TOC, toxicity, and grain size. The grain size data were discussed in Section 3.0. An evaluation of toxicity is presented in Section 6 of this report.

The subsections that follow present a general summary of Step 2 data. It is important to note that these discussions are geographic, and therefore refer to sediment sample locations, not sediment sample ID numbers. Samples collected in 2005 were numbered in the SD300 series, samples collected in 2009 were numbered in SD400 series, and samples collected in 2010 were numbered in SD500 series. Since many of the Step 2 samples were collected to target stations previously sampled, those stations could not be renumbered. Tables 4-18 through 4-22 present both the Sample ID and the Location ID for cross-reference.

When comparing to reference location detections, the maximum detections from the reference samples collected in both Step 1 (2009) and Step 2 (2010) are used. An evaluation of reference sample data is provided in Section 4.2.2.5.

Distribution of representative constituents (total PCBs, total PAHs, and selected metals) is presented in Figures 4-1 through 4-26.

4.2.2.1 Stillwater Basin

Sediment samples were collected as surface grabs from 11 locations (SD401, SD402, SD404, SD406, SD408, SD410, SD411, SD413, SD414, SD419, and SD508) in the Stillwater Basin in 2010. One sample was collected from each location resulting in the collection of 11 samples. Summary statistics are presented in Table 4-1. Detections are presented on Table 4-18. A full set of analytical data is presented in Appendix D.

PAHs

PAHs were detected at all 11 locations sampled in the Stillwater Basin. The maximum total PAHs (55,100 µg/kg) was found at SD406 from 0 to 6 inches (the same location of the total PAH maximum in 2009). Twelve of the highest PAH detections were from this location. The minimum detected total PAHs (1,800 µg/kg) was found at SD414. The average total PAHs for this data group was 15,700 µg/kg.

PAL exceedances are shown on Table 4-18. The highest concentrations were found in the southern area of the Stillwater Basin. The maximum detections at reference locations were exceeded for all PAHs in one or more samples. (2-Methylnaphthalene was not detected in the reference samples). PAH detections in the 11 Stillwater Basin samples exceed both the LMW PAHs and HMW PAHs reference samples maximum detections.

Changes since 2005: Samples were collected from only two locations during Phase 1: SD312 and SD316. The maximum total PAH concentration (88,100 µg/kg) was found in 2005 at SD312 from 0.5 to 1 foot. All of the maximum PAH detections were found at this same location during Phase 1. Phase 1 PAH concentrations in the Stillwater Basin are comparable to the 2010 Phase 2 results. The maximum detections in 2010 exceed the maximum detections in 2005 for the following PAHs: anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and total carcinogenic PAHs.

PCBs (Homologs)

See Section 4.2.3 for discussion of the comparing PCB Aroclors and PCB homologs.

PCB homologs were detected at 10 of the 11 locations sampled in the Stillwater Basin. PCB homologs were not detected at location SD419, the furthest east and north sample station. The maximum total PCB homologue concentration (2,720 µg/kg) was found at location SD406 from 0 to 6 inches. This 2010 maximum total PCB homologue concentration is significantly less than the total PCB concentration found in 2009 (55,000 µg/kg at SD402 from 2 to 4 feet); however, this location was not sampled in 2010, nor were sediments at these depths sampled during the Step 2 (2010) effort. The minimum detected total PCB homologue concentration (25.3 µg/kg) was found at SD414 from 0 to 6 inches. The average total PCB homologs was 1,070 µg/kg.

Tetrachlorobiphenyl, pentachlorobiphenyl, hexachlorobiphenyl, heptachlorobiphenyl, and octachlorobiphenyl were detected in one or more samples from the Stillwater Basin. Select samples had PAL exceedances for pentachlorobiphenyl, hexachlorobiphenyl, heptachlorobiphenyl, and octachlorobiphenyl. The total PCB homologue PAL (22.7 µg/kg) was exceeded at 10 of the 11 sample locations. All reference sample results were non-detect for PCB homologs.

Changes since 2005: Of the four samples (from two locations) collected during Phase 1, the maximum total PCB Aroclor concentration (41,000 µg/kg) was found at SD312 from 0.5 to 1 foot. Phase 1 PCB Aroclor concentrations in the Stillwater Basin are much higher than the Phase 2 PCB homologue results. The maximum detection for total PCB homologs in 2010 was an order of magnitude lower than the maximum detection for total PCB Aroclors in 2005. This is likely a result of the locations sampled in 2005 and 2010. The distribution pattern suggests a former source area at the southwest corner of the Stillwater Basin, and concentrations decreasing with distance from that location.

TAL Metals

Metals were detected at all 11 locations sampled in the Stillwater Basin, but there were no PAL exceedances. The maximum detections at reference locations were exceeded for all metals in one or more samples except aluminum, arsenic, beryllium, chromium, cobalt, nickel, potassium, selenium, and vanadium (Note: thallium was non-detect in all reference samples).

Changes since 2005: There were no PAL exceedances at location SD312 during Phase 1. PALs were exceeded from samples collected at SD316 for copper, lead, and mercury. The copper, lead, and mercury detections during Phase 1 are higher than the detections found during Phase 2. The maximum detections in

2010 exceed the maximum detections in 2005 for antimony, barium, cadmium, calcium, iron, magnesium, manganese, selenium, silver, sodium, and thallium.

TOC

TOC was detected in all samples, with the maximum (13,800 mg/kg) occurring at location SD404 from 0 to 6 inches. The minimum detected TOC detection (2,880 mg/kg) occurred at location SD508 from 0 to 6 inches. The average TOC concentration was 8,480 mg/kg.

High levels of TOC indicate the presence of natural organic materials (plant matter, etc) in the sediment which tend to bind with some organic contaminants. TOC concentrations above 5,000 mg/kg indicate the presence of organic carbon that could inhibit the transport of PAHs and PCBs. TOC concentrations exceed 5,000 mg/kg in samples from all locations except SD401.

Changes since 2005: TOC concentrations from all four Phase 1 samples (from 2 locations) exceed the maximum TOC concentrations in the reference samples. Overall, the Phase 1 TOC detections are higher than the detections found during Phase 2.

4.2.2.2 Northeast Shoreline

Sixteen sediment samples were collected as surface grab samples from 13 locations along the Northeast Shoreline in 2010. Detections are provided in Table 4-19. This area is closest to former Building 32, and is presumed to receive discharges from floor drains, storm drains, and waste handling systems in former Building 32.

PAHs

PAHs were detected at all locations sampled along the Northeast Shoreline during the 2010 Phase 2 Step 2 effort. The maximum concentration of total PAHs (11,200 µg/kg) was found at location SD432. This is the same location where the maximum total PAHs occurred during Step 1 in 2009 (6,480 µg/kg). Further, 15 of the highest individual PAH detections were from this location in 2010. The minimum detected concentration of total PAHs (321 µg/kg) was found at location SD309. The average concentration of total PAHs for this data group was 3,000 µg/kg.

PAL exceedances are shown in Table 4-19. PAH concentrations exceeded the maximum detections at reference locations for all PAHs in one or more samples. Thirteen Northeast Shoreline samples had exceedances of the reference sample maximum concentration of LMW PAHs. Eleven Northeast Shoreline samples had exceedances of the reference sample maximum concentration of HMW PAHs.

Changes since 2005: Samples were collected from eight locations during the 2005 Phase 1 effort (36 samples total). The maximum total PAH concentration (20,200 µg/kg) was found at SD310 from 0 to 6 inches in 2005. This location also was found to contain the highest concentration of PAHs measured in the northeast shoreline in 2005. The dominating PAHs were LMW PAHs, which may indicate the presence of fuel components at this location. Overall, the Phase 1 PAH concentrations along the Northeast Shoreline are higher than the Phase 2 results. The maximum detections in 2010 marginally exceeds the maximum detections in 2005 for acenaphthylene, benzo(g,h,i)perylene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. This difference is likely to be a function of locations sampled.

PCBs (Homologs)

PCB homologs were detected in 15 of the 16 samples collected along the Northeast Shoreline in 2010. The maximum total PCB concentration (1,340 µg/kg) was found at location SD304F from 0 to 6 inches. The minimum detected total PCB concentration (9.16 µg/kg) was found at SD309F from 0 to 6 inches. The average total PCB homologs was 191 µg/kg.

Dichlorobiphenyls, trichlorobiphenyls, tetrachlorobiphenyls, pentachlorobiphenyls, heptachlorobiphenyls, hexachlorobiphenyls, and octachlorobiphenyls were detected in one or more samples from along the northeast shoreline. PAL exceedances are shown in Table 4-19. The total PCB homologue PAL (22.7 µg/kg) was exceeded in nine samples. All reference sample results were non-detect for PCB homologs.

Changes since 2005: Of the 36 samples collected from the Northeast Shoreline during Phase 1, the maximum total PCB Aroclor concentration (3,800 µg/kg) was found at SD304 from 0 to 6 inches. The maximum total PCB homologue detection from 2010 (1,340 µg/kg at SD304) did not exceed the maximum total PCB Aroclor detection from 2005 (3,800 at SD304). Phase 1 PCB concentrations along the Northeast Shoreline are generally higher than Phase 2 concentrations, likely a result of focused samples in this area.

TAL Metals

Metals were detected in all 16 samples collected from along the Northeast Shoreline in 2010. PAL exceedances are shown in Table 4-19. Site metals concentrations were elevated above reference values. The maximum reference detections were exceeded for all metals; except beryllium, cobalt, potassium, and zinc; in one or more samples (Note: Thallium was non-detect in all reference samples).

Changes since 2005: Of the 36 Phase 1 samples in 2005, there were PAL exceedances for antimony, cadmium, chromium, copper, lead, manganese, mercury, and selenium. Overall, the metals detections during Phase 1 are within the range of detections found during Phase 2. The maximum detections in 2010 exceeds

the maximum detections in 2005 for aluminum, arsenic, calcium, cobalt, copper, nickel, silver, sodium, and thallium.

TOC

TOC was detected in all 16 samples collected from along the northeast shoreline. The maximum TOC detection (14,700 mg/kg) occurred at location SD434 from 0 to 6 inches. The minimum detected TOC detection (2,330 mg/kg) occurred at SD309F from 0 to 6 inches. The average TOC concentration was 7,060 mg/kg. TOC exceeded 5,000 mg/kg in samples from all locations except SD304F, SD306, SD309F, and SD310.

Changes since 2005: Overall, the TOC detections during Phase 1 are comparable with the detections found during Phase 2. The maximum TOC detection in 2010 is comparable to the maximum detection found in 2005.

4.2.2.3 Northwest Shoreline

Sediment samples were collected as surface grabs from four locations along the Northwest Shoreline in 2010. One sample was collected from each location resulting in 4 samples. Detections and PAL exceedances are shown in Table 4-20. Summary statistics are presented in Table 4-3. There were outfalls in this area that were found to originate from Building 32 sewer systems (Tetra Tech, 2006).

PAHs

Select PAHs were detected at all locations sampled along the Northwest Shoreline in 2010. The maximum total PAHs (17,900 µg/kg) was found at location SD308F from 0 to 6 inches. Sixteen of the maximum individual PAH detections occurred at this location. The minimum detected concentration of total PAHs (1,600 µg/kg) occurred at SD313 from 0 to 6 inches. The average concentration of total PAHs was 5,820 µg/kg. Site PAH concentrations exceeded corresponding reference sample values.

PAL exceedances are shown in Table 4-20. The maximum detections at reference locations were exceeded for all PAHs, except acenaphthylene, in one or more samples. (Note: 2-methylnaphthalene was non-detect in all reference samples). In addition, all four northwest shoreline samples exceeded the LMW PAHs and HMW PAHs reference samples maximum detections.

Changes since 2005: Eighteen samples were collected from the Northwest Shoreline during Phase 1. The maximum total PAH concentration (15,700 µg/kg) was found at SD308F from 0 to 6 inches. The maximum detections in 2010 exceeded the maximum detections in 2005 for benzo(g,h,i)perylene, benzo(k)fluoranthene,

dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, total carcinogenic PAHs, HMW PAHs, and total PAHs. PAH concentrations in 2009 were generally lower than in 2005, and the 2005 PAH concentrations were within the same range as the 2010 results. This temporal distribution of data is likely to be a result of the locations sampled during the different events.

PCBs (Homologs)

PCB homologs were detected in three of the four samples collected along the Northwest Shoreline. The maximum total PCB detection (6.7 µg/kg) occurred at location SD308 in 2010. The minimum total PCB detection (3.92 µg/kg) occurred at location SD313F. The average concentration of total PCB homologs was 5.67 µg/kg.

Trichlorobiphenyls and hexachlorobiphenyls were detected in one or more samples from along the Northwest Shoreline. PALs were not exceeded for any PCB homologs in any sample. In addition, the total PCB homologue PAL (22.7 µg/kg) was not exceeded in any sample. All reference sample results were non-detect for PCB homologs.

Changes since 2005: Two of 18 samples collected during Phase 1 had PAL exceedances for total PCB Aroclors. The maximum total PCB Aroclor concentration (46 µg/kg) occurred at SD302 from 0 to 6 inches. The maximum total PCB homologue detection in 2010 (16.7 µg/kg at SD308) did not exceed the maximum total PCB Aroclor detection in 2005 (46 µg/kg at SD302A). Overall, Phase 1 PCB concentrations along the Northwest Shoreline are higher than the Phase 2 results.

TAL Metals

Metals were detected at all four locations sampled along the Northwest Shoreline. PALs were exceeded in select samples for copper, manganese, and nickel. The maximum reference detections were exceeded for all metals; except aluminum, barium, cobalt, mercury, and potassium in one or more samples. (Note: Thallium was non-detect in all reference samples).

Changes since 2005: There were PAL exceedances for cadmium, copper, manganese, and nickel in the 18 Phase 1 sediment samples. Overall, the metals detections during Phase 1 are within the range of detections found during Phase 2.

TOC

TOC was detected in all four samples collected from along the Northwest Shoreline. The maximum TOC detection (11,900 mg/kg) occurred at location SD313 from 0 to 6 inches. The minimum detected TOC

detection (2,960 mg/kg) occurred at SD308F from 0 to 6 inches. The average TOC concentration was 5,700 mg/kg. TOC concentrations exceed 5,000 mg/kg only in the sample collected from SD313.

Changes since 2005: In general, the Phase 1 TOC detections are higher than the detections found during Phase 2.

4.2.2.4 South End of the Island

Sediment samples were collected as surface grabs from two locations at the south end of Gould Island in 2010 (SD314 and SD311). One sample was collected from each location resulting in two samples. Detections and PAL exceedances are shown in Table 4-21. Summary statistics are presented on Table 4-5. Samples were not collected from the South End in 2009.

PAHs

PAHs were detected at both locations sampled at the South End in 2010. The maximum concentration of total PAHs (2,350 µg/kg) occurred at location SD314. All of the individual maximum PAH detections also occurred at this location. The minimum detected total PAHs (1,050 µg/kg) occurred at location SD311 from 0 to 6 inches. The average total PAHs was 1,700 µg/kg.

PALs were exceeded in select samples for acenaphthene, anthracene, fluorene, and phenanthrene. The PAH concentrations at the South End exceed reference sample values for all individual PAHs except acenaphthylene in one or more samples. (Note: 2-Methylnaphthalene was non-detect in all reference samples). In addition, LMW and HMW PAH concentrations from both South End samples exceeded the reference sample values.

Changes since 2005: Eight samples were collected from areas south of the site during Phase 1. Though termed "south," these included locations along the west shoreline, the east shoreline, and the south shoreline, all located south of the site. The maximum total PAH concentration in 2005 (21,300 µg/kg) occurred at location SD303 (located on the east shoreline) from 0 to 6 inches. Only two samples were collected (two locations, both on the south shoreline) during Phase 2. Overall, the Phase 1 PAH concentrations at the South End are higher than the Phase 2 results. This is likely a result of the locations selected.

PCBs (Homologs)

PCB homologs were detected in one of the two 2010 samples collected at the South End. The detection occurred at location SD314 with a total PCB concentration of 16 µg/kg.

PALs were not exceeded for total PCBs or any individual PCB homologs. All reference sample results were non-detect for PCB homologs.

Changes since 2005: Three of the eight samples collected during Phase 1 had PAL exceedances for total PCBs (Aroclors). The maximum total PCB concentration (230 µg/kg) occurred at location SD314 from 0 to 6 inches. This is an order of magnitude higher than the 2010 total PCB concentration. Overall, Phase 1 PCB concentrations at the South End are higher than the Phase 2 results.

TAL Metals

Metals were detected at both locations sampled at the South End. PALs were not exceeded for any metal. Concentrations of copper and silver exceed the reference values. (Note: Thallium was non-detect in all reference samples).

Changes since 2005: The maximum detections in 2010 exceed the maximum detections in 2005 for cadmium, cobalt, and silver, but overall, the metals detections during Phase 1 are higher than the Phase 2 results. The exceedances were more than an order of magnitude difference for cadmium and silver which were not detected in 2005.

TOC

TOC was detected in both samples collected from the South End. The maximum TOC detection (8,300 mg/kg) occurred at location SD314 from 0 to 6 inches. The minimum detected TOC detection (5,570 mg/kg) was detected at SD311 from 0 to 6 inches. The average TOC concentration was 6,940 mg/kg.

Changes since 2005: Overall, the TOC detections during Phase 1 are comparable with the detections found during Phase 2.

4.2.2.5 Reference Locations (Potters Cove and Cranston Cove)

Six surface sediment samples were collected from reference locations in 2009 during Step 1. Three samples were collected from Potters Cove and three were collected from Cranston Cove (Figure 2-2). These locations were chosen by the project team in consultation with the regulatory oversight parties (Tetra Tech 2010, and FMR No. 3, Appendix A-2). Detections are shown in Table 4-22 and summary statistics are provided in Table 4-4. The three reference locations selected for the BERA (Step 2, 2010) were JPC-01, JPC-02, and JCC-04, where "PC" refers to Potters Cove and "CC" refers to Cranston Cove.

PAHs

Select PAHs were detected in all six reference samples (Table 4-22). 2-Methylnaphthalene and naphthalene were non-detect in all reference samples collected in 2010.

The maximum concentration of total PAHs (770 µg/kg) occurred at location JPC-02. All of the maximum individual PAH detections also occurred at this location. The minimum detected total PAH concentration of 184 µg/kg occurred at JCC-04. The average total PAH concentration was 405 µg/kg.

PAH PALs were not exceeded in the reference samples.

PCBs (Homologs)

PCB homologs were not detected in the three reference samples.

TAL Metals

Metals were detected in all three reference samples. Sixteen of the maximum metals detections occurred at JPC-02 from 0 to 6 inches. Antimony and thallium were non-detect in all reference samples.

Metals PALs were not exceeded in the reference samples.

TOC

TOC was detected in all reference samples. The maximum TOC concentration (11,600 mg/kg) was detected at location JPC-02 from 0 to 6 inches. The minimum detected TOC concentration (5,900 mg/kg) occurred at location JPC-01 from 0 to 6 inches. The average TOC concentration was 8,660 mg/kg.

4.2.3 Discussion of PCB Aroclors vs. PCB Homologs

In Step 1, the sediment samples were analyzed for PCB Aroclors (i.e., Aroclor-1221, -1232, -1016, -1242, -1248, -1254, and -1260) while the samples from Step 2 were analyzed for PCB homologs (monochlorobiphenyl through decachlorobiphenyl). The analysis methods from the two sampling rounds result in total PCB concentrations, one from the sum of the Aroclor detections and the other from the sum of the homologue detections. Despite the different analytical methods used, the calculated total concentrations can be compared to evaluate the extent of contamination in sediments at the site.

There are 209 individual PCB compounds, commonly referred to as "congeners." Aroclors are a mixture of PCB congeners which are identified by the percentage and weight of chlorine in the mixture. Homologs are mixtures of PCB congeners which all contain the same number of chlorines. The congeners present in Aroclors-1221, -1232, -1016, -1242, -1248, -1254, and -1260 almost completely overlap with the congeners present in the homologs monochlorobiphenyl through decachlorobiphenyl. The only discrepancies are that biphenyls (which contain no chlorines) are part of the composition of Aroclor-1221, and there are no decachlorobiphenyl compounds present in the Aroclors listed above. However, the sediment sampling results from Phase 2 did not contain any positive detections for Aroclor-1221 or for decachlorobiphenyls. Further, while biphenyl compounds were not part of the homologue analysis, the contribution of biphenyls to Aroclor-1221 is minimal at only 10 percent (Degrandchamp 2005). Therefore, the sum of the Aroclors from Step 1 can be compared to the sum of the homologs from Step 2 at total PCBs concentrations.

4.2.4 Sediment Data Usability

Analytical data from Step 1 of the sediment sampling was not validated as this data was not used for assessing risk. The Step 1 data was used to determine the extent of contamination present in the sediment and to determine the subset of stations which would be sampled during Step 2. Therefore, the following data usability assessment only includes an evaluation of the usability of the Step 2 results. The validated data from the Step 2 sampling is used in this Phase 2 RI report to provide a detailed chemistry analysis and support the BERA. The toxicity data from Step 2 was not validated.

PAHs

The project goals with respect to accuracy were met for the sediment PAH data set with the following exceptions:

All PAH results in samples GI-SD510-0006(RE), GI-SD515-0006(RE), GI-SD525-0006(RE), and GI-SD566-0006(RE) were qualified as estimated due to the exceeded extraction holding time criterion; results may be biased low. All PAH results in samples GI-SD502-0006, GI-SD511-0006, and GI-SD501-0006 were qualified as estimated due to low surrogate recoveries; results may be biased low. All PAH results in sample GI-SD514-0006 were qualified as estimated due to low MS/MSD recoveries; results may be biased low. The results for anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, chrysene, and phenanthrene in sample GI-SD-DUP02-050310 were qualified as estimated due to high MS/MSD recoveries; results may be biased high. All PAH results in samples GI-SD304-0006(RE), GI-SD311-0006(RE), GI-SD438-0006(RE), GI-SD512-0006(RE), GI-SD517-0006(RE), GI-SD520-0006(RE), GI-SD521-0006(RE), and GI-SD523-0006(RE) were qualified as estimated due to the exceeded extraction holding time criterion; results may be biased low. The results for benzo(a)pyrene, benzo(g,h,i)perylene, fluoranthene, phenanthrene, and

pyrene in sample GI-SD438-0006 were qualified as estimated due to low or high MS/MSD recoveries. Results for benzo(a)pyrene, benzo(g,h,i)perylene, and pyrene may be biased high; the result for phenanthrene may be biased low; and that for fluoranthene is indeterminate. The results for benzo(a)pyrene, benzo(g,h,i)perylene, and pyrene in affected samples were qualified as estimated due to low LCS and LCSD recoveries; results may be biased low. Although specific method criteria were not met in these instances, the affected positive and non-detected results are usable as estimated values and estimated quantitation limits which may have a minor impact on data usability. Additionally, the result for benzo(b)fluoranthene was qualified as estimated in sample GI-SD-DUP02-050310 due to the high MSD recovery; the result may be biased high. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive result is usable as an estimated value.

The project goals with respect to precision were met for the sediment PAH data set with the following exceptions. All PAH results in sample GI-SD514-0006 were qualified as estimated due to the exceeded MS/MSD RPD criteria. The results for anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, chrysene, and phenanthrene in sample GI-SD-DUP02-050310 were qualified as estimated due to the exceeded MS/MSD RPD criteria. The anthracene results in samples GI-SD509-0006/GI-SD-DUP01-043010 and GI-SD508-0006/GI-SD-DUP02-050310 were qualified as estimated due to poor field duplicate precision. The results for benzo(a)anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene and pyrene in sample GI-SD548-0006 were qualified as estimated due to poor MS/MSD precision. The results for 2-methylnaphthalene in affected samples were qualified as estimated due to poor LCS/LCSD precision. Although specific method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability. In addition, the result for benzo(b)fluoranthene in sample GI-SD-DUP02-050310 was qualified as estimated due to the exceeded MS/MSD RPD criterion. The result for benzo(b)fluoranthene in sample GI-SD438-0006 was qualified as estimated due to poor MS/MSD precision. Although specific method criteria were not met in this instance, data usability is not impacted and the affected positive result is usable as an estimated value.

The project goals with respect to sensitivity were met for the sediment PAH data set with the following exceptions:

Reporting limits for select samples were elevated due to the percent moisture content and/or required dilutions. The project action limit was not met for acenaphthylene, naphthalene, and 2-methylnaphthalene in select samples. Data usability may be impacted for the affected results. Additionally, results for anthracene, 2-methylnaphthalene, and naphthalene in select samples were changed to non-detected values above the project action limit due to laboratory blank contamination. Data usability may be impacted for the affected results.

The project goals with respect to completeness were met for the sediment PAH data set. Data usability was not impacted with regards to completeness.

PCBs (Homologs)

The project goals with respect to accuracy were met for the PCB homologue data set with the following exceptions:

Select PCB homologs in samples GI-SD502-0006, GI-SD511-0006, and GI-SD501-0006 were qualified as estimated due to the exceeded internal standard area criteria. The results for hexachlorobiphenyls, heptachlorobiphenyls, and octachlorobiphenyls in sample GI-SD438-0006 were qualified as estimated due to high MS and MSD recoveries; results may be biased high. Although specific method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability.

The project goals with respect to precision were met for the sediment PCB homologue data set with the following exceptions:

The results for hexachlorobiphenyls and heptachlorobiphenyls were estimated in sample GI-SD514-0006 due to the exceeded MS/MSD RPD criteria. The results for pentachlorobiphenyls, hexachlorobiphenyls, heptachlorobiphenyls, and octachlorobiphenyls in sample GI-SD438-0006 were estimated due to the exceeded MS/MSD RPD criteria. The results for pentachlorobiphenyls in samples GI-SD509-0006 and GI-SD-DUP01-043010; and the positive results for heptachlorobiphenyls, hexachlorobiphenyls, pentachlorobiphenyls, and octachlorobiphenyls in samples GI-SD508-0006 and GI-SD-DUP02-050310 were qualified as estimated due to poor field duplicate precision. The results for heptachlorobiphenyls, hexachlorobiphenyls, and trichlorobiphenyls in samples GI-SD517-0006 and GI-SD-DUP03-051310 were qualified as estimated due to poor field duplicate precision. Although QC criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability.

The project goals with respect to sensitivity were met for the sediment PCB homologue data set with the following exceptions:

All laboratory-specific QLs in worksheet 15c of the SAP were met by the laboratory's actual QLs with the exception of those in select samples for which QLs were elevated due to the percent moisture content of the samples. Data usability may be impacted for these select results.

The project goals with respect to completeness were met for the sediment PCB homologue data set. Data usability was not impacted with regards to completeness.

TOC

The project goals with respect to accuracy, sensitivity, and completeness were met for the sediment TOC data set. Data usability was not impacted with regards to accuracy, sensitivity, and completeness.

For select associated samples, parameters that monitor the precision data quality objectives were not analyzed for the sediment TOC data set; therefore, data usability may be impacted for the affected samples. For all other samples, the project goals with respect to precision were met for the sediment TOC data set. Data usability was not impacted with regards to precision for these samples.

Metals

The project goals with respect to accuracy were met for the sediments metals data set with the following exceptions:

Arsenic, copper, antimony, and zinc were qualified as estimated in select sediment samples due to low or high MS recoveries; results for arsenic and antimony may be biased low while those for copper and zinc may be biased high. Antimony was qualified as estimated in select sediment samples due to negative ICP interferences; the affected results may be biased low. Although specific method criteria were not met in these instances, the affected positive and non-detected results are usable as estimated values and estimated reporting limits which may have a minor impact on data usability. Additionally, arsenic, cobalt, potassium, barium, and thallium were qualified as estimated in select sediment samples due to negative ICP interferences. Cadmium, beryllium, and silver were qualified as estimated in select sediment samples due to positive ICP interferences. Beryllium was qualified as estimated in select sediment samples due to matrix enhancing effects. Arsenic, antimony, chromium, and copper were qualified as estimated in select sediment samples due to low or high MS recoveries; arsenic and antimony results may be biased low and chromium and copper results may be biased high. Arsenic was qualified as estimated in select sediment samples due to negative instrument drift; results may be biased low. Cobalt, chromium, beryllium, magnesium, manganese, nickel, lead, vanadium, and zinc were qualified as estimated in all sediment samples due to a sample matrix suppressing effect detected in the ICP serial dilution. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The project goals with respect to precision were met for the sediment metals data set with the following exceptions:

Lead, zinc, and copper were qualified as estimated in select sediment samples due to poor laboratory duplicate precision. Lead was also qualified as estimated in select sediment samples due to poor field duplicate precision. Although specific method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability. Additionally, arsenic and calcium were qualified as estimated in select sediment samples due to poor field duplicate precision. Calcium, potassium, and thallium were qualified as estimated in select sediment samples due to poor laboratory duplicate precision. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive results are usable as estimated values.

The project goals with respect to sensitivity were met for the sediment metals data set with the following exceptions:

The project action limits were achieved by the sample-specific laboratory reporting limits associated with the non-detected results with the exception of antimony and selenium for select samples. Data usability may be impacted for the affected results.

The project goals with respect to completeness were met for the sediment metals data set. Data usability is not impacted with regards to completeness.

4.2.5 Sediment Summary

Stillwater Basin

The presence of elevated concentrations of PCBs and PAHs in this area could be related to a number of factors. This has been a relatively protected area since the 1940s, with the breakwater providing a depositional zone for sediments in a down-bay transportation route. However, it was also constructed to be a loading-and-unloading area, and material was likely regularly lost over the side over the course of construction and operations of Gould Island facilities. A removal action for PCBs in concrete and soils was conducted at the former rigging storage building in 1999 to 2000, and the PCBs found in the southwest corner of the Stillwater Basin may be a result of a portion of this release. Finally, the rigging platform has failed overtime, the retaining seawall has released backfilled soil to the subtidal slope, and concrete and metal debris are present on the bottom of the Stillwater area. Regardless, the PCBs in the Stillwater basin appear to be somewhat isolated in this southwest corner of the basin, against the shoreline and sheet piling walls. Core samples indicate that the PCBs are present at depth in this area as well.

PAHs appear to follow a similar pattern, though there are some exceedances in the northern portion, behind the remnants of the protective piling structure to the north. These "outliers" are more likely to be deposited down-bay contaminant migration, and less likely to be a result of localized releases.

While PAHs found during the Phase 2 RI are comparable to Phase 1 results, the PCB, metals, and TOC results generally decreased from 2005 to 2010. It should be noted that there are several metals PAL exceedances in 2009, but there are no metals PAL exceedances in 2010 at the Stillwater Basin, and metals do not appear to be of concern in the Stillwater Area.

Northeastern Shoreline

Presence of PAHs in the shoreline sediment is minor, and not likely indicative of a release in this area. However, these PAHs and the metals in the area could likely be an artifact of former discharges, both via floor drain system and storm water carried through the storm "trench" drain from the area of the electroplating room, acid storage shed, and dust collector building at the southwest corner of Building 32.

The PCB release at former Building 54, a transformer shed at the southeast corner of former Building 32, may have contributed to the PCBs in the sediment at the Northeast Shoreline (Figure 3-1). These PCBs, while low in overall concentration, seem to indicate a source at the southeast corner of former Building 32.

While the Phase 2 metals and TOC results are comparable to Phase 1 results, the PAH and PCB results generally decreased from 2005 to 2010.

Northwestern Shoreline

The presence of PAHs and metals in samples collected along the northwestern shoreline indicates that wastes from the electroplating area may have been transported with the septic waste to discharge in this area, but with only minor impact to actual concentrations in the sediment. PCBs do not appear to have significantly impacted this area.

While Phase 2 PAHs and metals results are comparable to Phase 1 results; the PCB and TOC results generally decreased from 2005 to 2010.

South End of the Island

Chemical constituents in the samples collected from the South End indicate overall improved conditions from those detected in the northern areas. There were reports in historical records that electroplating wastes were

disposed of in this landfill. PAHs, PCBs, metals, and TOC in this area are more within the range of reference conditions.

While the TOC found in Phase II are comparable to Phase I results; the PAH, PCB, and metals results generally decreased from 2005 to 2010. An overall down-bay current flow from north to south may have moved contaminants released at the Building 32 area, but the sediments in the south portion of the island (South End) do not appear to have been significantly impacted.

Overall Summary

In the sediment samples collected in 2009 and 2010, the following constituents were found to exceed the PALs:

- PAHs
- PCBs
- Antimony
- Arsenic
- Cadmium
- Cobalt
- Copper
- Lead
- Manganese
- Mercury
- Nickel
- Selenium
- Silver
- Zinc

Sediment data collected indicate concentrations of elevated metals, PAHs, and PCBs at some sample locations along the shoreline. These are identified as the Stillwater Area to the north of the site, the Northeast Shoreline, which received waste discharges from Building 32 operations, and, to a lesser degree, the Northwest Shoreline, which also received waste discharges from Building 32 operations.

PCB concentrations were noted to be highest in the Stillwater Area, north of the site. Aroclors detected in the sediments at the site in 2009 included primarily Aroclor-1260, and to a lesser extent Aroclor-1254 and Aroclor-1248. Review of the *Draft Project Closeout Report for PCB-contaminated Soils and Concrete Remediation* (TtFW 2004) indicates that Aroclor-1260 was also the PCB mixture found in soil and concrete near Buildings 53, 54, 56, 59, 60, and 61. It is reasonable to conclude that the Aroclor-1260 present in the sediment is likely

a result of these on-shore releases. PCB homologs detected in sediments at the site in 2010 included primarily hexachlorobiphenyls.

Metals were found in sediment locations where outfalls once discharged to the subtidal shoreline. The elevated concentrations of heavy metals present in the sediment near existing and historic outfalls can be traced back through pipeline transport from the electroplating rooms and dust storage shed.

PAHs in sediment may be a result of former use and release of naphtha, oils, and general degreasing operations in the overhaul shop, or they may be a remnant of fuel piping and storage at Building 44. PAHs were found in sumps within the Building 32 foundation, and some of these sumps were previously noted to have floor drains that connected to the building drains exiting to the northeast shoreline. Contaminants near some outfall locations are likely a result of fuels present in soil at the southwest corner of Building 32, which were transported to the shoreline through pipelines and sewer systems.

4.3 BIOTA

Natural populations of hard clams, blue mussels, and crabs were collected as part of the marine sampling effort for the Gould Island RI. Hardshell Clam (*Mercenaria mercenaria*) or Blue Mussel (*Mytilus edulis*), and green crabs (*Carcinus maenas*) or spider crabs (*Libinia emarginata*) were collected from the biota sample stations. Biota tissue analyses included PCB homologs, metals, and percent lipids. Sample locations are shown on Figure 2-2.

Biota data collected during both 2005 and 2010 were compared to PALs for biota established in the SAP. Results for representative constituents (Total PCBs, cadmium, chromium, and lead) relative to PALs were mapped and results are presented on Figures 4-26 through 4-29, respectively. Summary statistics for biota samples collected are presented in Tables 4-6 through 4-10. The biota tissue PALs provided in the statistics tables, the summary tables, and on the figures 4-26 through 4-29 are presented on a wet weight basis, to match the data reported from the laboratory. PALs were converted from those presented in the SAP assuming a 85% moisture of the body tissue.

For the purposes of this discussion, the bivalve organisms (clams and mussels) are evaluated together, and the two crab species were evaluated together. Note that crabs are highly mobile animals and their presence within one area does not necessarily indicate their long term occupation of the area. However, clams and mussels are sessile animals and are not mobile.

4.3.1 Stillwater Basin

Biota samples were collected from six locations in the Stillwater Basin in 2010. One clam sample, two mussel samples, and three spider crab samples were collected. Detections and PAL exceedances are presented in Tables 4-23 and 4-24.

PCB Homologs

PCB homologs were detected in all three clam/mussel samples collected in the Stillwater Basin during Phase 2 in 2010. There were no PAL exceedances. Heptachlorobiphenyls, hexachlorobiphenyls, and pentachlorobiphenyls were detected in one or more clam/mussel samples from the Stillwater Basin. The maximum total PCB homologue concentration for clam/mussel (81 µg/kg) occurred at location SD402 (Table 4-23). The average total PCBs was 60.7 µg/kg. The reference sample maximums for hexachlorobiphenyl and total PCBs were exceeded in all three samples. (There were no reference sample detections for heptachlorobiphenyls and pentachlorobiphenyls). The one clam/mussel sample collected during Phase 1 exceeded the total PCBs PAL. The maximum total PCB Aroclor concentration during Phase 1 (440 µg/kg) occurred at location SD312. Overall, the Phase 1 PCB concentrations from the Stillwater Basin are higher than Phase 2 results.

PCB homologs were detected in all three spider crab samples collected in the Stillwater Basin during Phase 2 in 2010. There were no PAL exceedances. Heptachlorobiphenyls, hexachlorobiphenyls, and pentachlorobiphenyls were detected in all crab samples from the Stillwater Basin. The maximum total PCB homologue concentration for crabs (110 µg/kg) occurred at location SD411 (Table 4-24). The average total PCBs was 85.7 µg/kg. Several homologue concentrations exceeded reference sample values. Crab samples were not collected from the Stillwater Basin during Phase 1.

Metals

Select metals were detected in all six biota samples collected from the Stillwater Basin. PALs were exceeded for aluminum (three clam/mussel samples, and three crab samples), arsenic (two clam/mussel samples and three crab samples), copper (three crab samples), iron (three crab samples), mercury (three crab samples) selenium (three clam/mussel samples and three crab samples) and vanadium (three crab samples). The maximum reference detections were exceeded in one or more sample for lead, magnesium, and sodium in clam/mussel samples; and for beryllium and silver for crab samples. Overall, the metals detections in Phase 1 biota are lower than the Phase 2 values.

Percent Lipids

Percent lipids were not detected in the clam sample. The mussel samples had percent lipids ranging from 0.699-1.06%. Higher lipids may result in elevated PCB levels. The Phase 2 percent lipids results are slightly lower than the Phase 1 results. The crab samples were not analyzed for percent lipids.

4.3.2 Northeast Shoreline

Biota samples were collected from six locations along the Northeast Shoreline in 2010. Two clam samples (which were collected from the same location), three mussel samples, and two spider crab samples were collected. Detections and PAL exceedances are presented in Tables 4-25 and 4-26. This area is closest to former Building 32, and is presumed to receive discharges from floor drains, storm drains, and waste handling systems in former Building 32.

PCB Homologs

PCB homologs were detected in all five clam/mussel samples collected from along the northeast shoreline. The maximum total PCB homologue concentration for clam/mussel (62 µg/kg) occurred at location SD447. The average total PCBs was 46.4 µg/kg. Dichlorobiphenyls, tetrachlorobiphenyls, heptachlorobiphenyls, hexachlorobiphenyls, and pentachlorobiphenyls were detected in one or more clam/mussel samples from along the northeast shoreline. There were no PAL exceedances. The reference sample maximums for hexachlorobiphenyl and total PCBs were exceeded in all five samples. Three of the eleven clam/mussel samples collected from along the Northeast Shoreline during Phase 1 had detections for PCB Aroclors, and one Phase 1 samples exceed the PAL for total PCBs. The maximum total PCB Aroclor concentration during Phase 1 in 2005 (170 µg/kg) occurred at location SD304. Overall, the Phase 1 PCB detections from along the Northeast Shoreline are higher than the Phase 2 results. The maximum total PCB homologue detection in 2010 is an order of magnitude lower than the maximum total PCB Aroclor detection in 2005.

PCB homologs were detected in both spider crab samples collected along the Northeast Shoreline, all below PALs. The maximum total PCB homologue concentration for crabs (50.4 µg/kg) occurred at location SD432. The average total PCBs was 47.2 µg/kg. The reference sample maximums for heptachlorobiphenyls, hexachlorobiphenyls, pentachlorobiphenyls, and total PCBs were exceeded in one or more crab samples. Crab samples were not collected from along the Northeast Shoreline during Phase 1.

Metals

Metals were detected in all seven biota samples collected along the Northeast Shoreline. PALs were exceeded in clam/mussel samples for aluminum, arsenic, selenium, and thallium, and in crab samples for aluminum, arsenic, copper, iron, manganese, mercury, nickel, selenium, and vanadium. The maximum reference detections were exceeded in one or more samples for potassium and zinc in clam/mussel samples, and for calcium and silver for crab samples. (Thallium was not detected in the clam/mussel reference samples).

Three of the clam/mussel samples collected during Phase 1 exceeded the PAL for aluminum, and one sample exceeded the PAL for thallium. One or more samples exceeded the maximum reference detections for cadmium, calcium, chromium, vanadium, and zinc. (The reference sample is non-detect for beryllium and thallium). The maximum detections in 2010 exceeded the maximum detections in 2005 for aluminum, barium, cobalt, iron, magnesium, mercury, nickel, potassium, selenium, silver, and thallium.

Percent Lipids

Percent lipids were not detected for the clam samples. The mussel samples had percent lipids ranging from 0.702 – 0.891%. Higher lipids may result in elevated PCB levels. The Phase 2 percent lipids results are slightly lower than the Phase 1 results. The crab samples were not analyzed for percent lipids.

4.3.3 Northwest Shoreline

Biota samples were collected from two locations along the northwest shoreline in 2010. One clam sample and one green crab sample were collected. Detections and PAL exceedances are shown in Tables 4-27 and 4-28. There are outfalls in this area originating from Building 32 sewer systems.

PCB Homologs

One PCB homologue (hexachlorobiphenyl) was detected in the clam sample collected from along the Northwest Shoreline at location SD308E. The total PCB homologue concentration at is 6.9 µg/kg. There were no PAL exceedances. The reference sample maximums for hexachlorobiphenyl and total PCBs were exceeded. The six clam/mussel samples collected from along the Northwest Shoreline during Phase 1 had no detections for PCB Aroclors.

Three PCB homologs (heptachlorobiphenyls, hexachlorobiphenyls, and pentachlorobiphenyls) were detected in the green crab sample collected along the Northwest Shoreline at location SD313F. The total PCB homologue concentration is 120 µg/kg. There were no exceedances of PALs; however, the detections of all

three homologs and total PCBs exceeded reference sample values. Crab samples were not collected from along the Northwest Shoreline during Phase 1.

Metals

Metals were detected in both biota samples collected from along the Northwest Shoreline. PALs were exceeded for aluminum, arsenic, and selenium in the clam sample, and were exceeded for aluminum, arsenic, copper, iron, mercury, and selenium in the crab sample. The maximum reference detections were exceeded in the clam sample for calcium; and for cadmium, calcium, and silver for the crab sample.

The metals concentrations in the six clam/mussel samples collected during Phase 1 exceeded the PALs for arsenic, chromium and thallium. One sample exceeded the maximum reference detections for chromium, vanadium, and zinc. (The reference sample is non-detect for beryllium and thallium). Overall, the metals detections during Phase 1 are within the range of the metals detections found during Phase 2.

Crab samples were not collected from along the Northwest Shoreline during Phase 1.

Percent Lipids

The clam sample had percent lipids of 5.43%. Higher lipids may result in elevated PCB levels. The clam sample collected during Phase 2 has a much higher percent lipids than the clam/mussel samples collected in Phase I. The crab sample was not analyzed for percent lipids.

4.3.4 South End of the Island

One clam sample was collected from the South End in 2010. Detections and PAL exceedances are shown in Table 4-29.

PCB Homologs

Four PCB homologs were detected in the clam sample collected from the South End at location SD314. The total PCB homologue concentration is 16.9 µg/kg. There were no PAL exceedances. The heptachlorobiphenyls and total PCBs reference values were exceeded. (There were no reference sample detections for tetrachlorobiphenyls, heptachlorobiphenyls, and pentachlorobiphenyls).

There were no PCB Aroclor detections in the three clams/mussels samples collected from the South End during Phase 1. Overall, the Phase 1 PCB detections are slightly lower than the Phase 2 results.

Metals

All TAL metals were detected in the sample collected from location SD314 at the South End. The PALs for aluminum, arsenic and selenium were exceeded in this clam sample. There were no exceedances of reference values.

Within the three clam/mussel samples collected during Phase 1, one exceeded the PAL for arsenic. Concentrations in one Phase 1 sample exceeded the maximum reference detections for chromium, manganese, and vanadium. (The reference sample is non-detect for beryllium). Overall, the metals detections from Phase 1 are within the range of the metals detections in Phase 2.

Percent Lipids

The clam sample percent lipids value at location SD314 is 4.02%. . The clam sample collected during Phase 2 has a much higher percent lipids than the clam/mussel samples collected in Phase I.

4.3.5 Reference Locations (Potters Cove and Cranston Cove)

Reference biota samples were collected from three locations in Potters Cove and Cranston Cove in 2010. The three reference locations that were chosen for the BERA were JPC-01, JPC-02, and JCC-04, where "PC" refers to Potters Cove and "CC" refers to Cranston Cove (Figure 2-2). Three clam samples, two spider crab samples, and one green crab sample were collected. Detections and PAL exceedances are presented in Tables 4-30 and 4-31.

PCB Homologs

One PCB homologue (hexachlorobiphenyl) was detected in all three clam reference samples. The maximum detection (6.2 µg/kg) occurred at location JCC-04. There were no exceedances of PALs.

Three PCB homologs (heptachlorobiphenyls, hexachlorobiphenyls, and pentachlorobiphenyls) were detected in all three crab reference samples. The maximum detection (hexachlorobiphenyl at 22 µg/kg) occurred at location JCC-04. There were no exceedances of PALs.

Metals

Almost all TAL metals were detected in all six biota reference samples.

PAL exceedances were noted in select clam samples for aluminum, arsenic, mercury and selenium. PAL exceedances were also noted in crab samples for aluminum, arsenic, chromium, copper, iron, manganese, mercury, nickel, selenium, and vanadium.

Percent Lipids

The lipids in the clam samples range from 2.99 to 4.23 percent. The crab sample lipids from location JPC-01 are 0.687%. No lipids were detected in remaining samples. Higher lipids may result in elevated PCB levels.

4.3.6 Biota Data Usability

PCB Homologs

The project goals with respect to accuracy were met for the biota PCB homologue data set. Select PCB homologs in several samples were qualified as estimated due to instrument calibration variability. All PCB homologs in samples GI-ET566-0510-A(RE), GI-ET525-0610, and GI-ET529-0610(RE) were qualified as estimated due to low surrogate recoveries; results may be biased low. Although specific method criteria were not met in these instances, the affected positive and non-detected results are usable as estimated values and estimated quantitation limits which do not impact data usability.

The project goals with respect to precision were met for the biota PCB homologue data set. The results for pentachlorobiphenyls in samples GI-ET518-0510 and GI-ET-DUP02-052710 were qualified as estimated due to poor field duplicate precision. The results for hexachlorobiphenyls in samples GI-ET509-0510 and GI-ET-DUP01-060410 were qualified as estimated due to poor field duplicate precision. Although specific QC criteria were not met in this instance, the affected positive results are usable as estimated values which do not impact data usability.

The project goals with respect to sensitivity were met for the biota PCB homologue data set with the following exceptions:

All laboratory-specific QLs in worksheet 15d of the SAP were met by the laboratory's actual QLs with the exception of those in select samples for which QLs were elevated due to the dilution performed on the samples. Data usability may be impacted for these select results.

The project goals with respect to completeness were met for the biota PCB homologue data set. Data usability was not impacted with regards to completeness.

Metals

The project goals with respect to accuracy were met for the biota metals data set with the following exceptions:

Antimony was qualified as estimated in select tissue samples due to negative ICP interferences attributed to the high concentration of calcium in the samples; results may be biased low. Arsenic was qualified as estimated in select tissue samples due to a matrix suppressing effect; results may be biased low. Although specific method criteria were not met in these instances, the affected positive and non-detected results are usable as estimated values and estimated reporting limits which may have a minor impact on data usability. Additionally, mercury was qualified as estimated in select samples due to the low continuing calibration verification standard recovery. Cobalt and selenium were qualified as estimated in select tissue samples due to negative ICP interferences attributed to the high concentration of calcium in the samples. Beryllium and vanadium were qualified as estimated in select tissue samples due to positive ICP interferences attributed to the high concentration of calcium in the samples. Potassium and silver were qualified as estimated in select tissue samples due to exceeded MS spike recoveries. Iron was qualified as estimated in select tissue samples due to low MS recoveries. Calcium, sodium, and silver in select tissue samples were qualified as estimated due to a matrix suppressing effect. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive results are usable as estimated values.

The project goals with respect to precision were met for the biota metals data set with the following exception:

Aluminum was qualified as estimated in select tissue samples due to poor field duplicate precision. Although specific method criteria were not met in this instance, the affected results are usable as estimated values which may have a minor impact on data usability. Additionally, calcium and iron were qualified as estimated in select tissue samples due to poor field duplicate precision. Lead was qualified as estimated in select tissue samples due to poor laboratory duplicate precision. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive results are usable as estimated values.

The project goals with respect to sensitivity were met for the biota metals data set with the following exception:

The sample-specific reporting limits did not meet the project action limits for antimony, beryllium, and thallium in select samples. Data usability may be impacted for these metals.

The project goals with respect to completeness were met for the biota metals data set. Data usability is not impacted with regards to completeness.

4.3.7 Biota Summary

Stillwater Basin

The biota samples from the Stillwater Basin had some of the highest concentrations of PCB homologs and metals in comparison to other biota samples collected as part of the Gould Island RI. The presence of PCB homologs in tissue samples collected from this area indicates that the shellfish may be taking up PCBs found in the sediment in this area.

PALs were not exceeded for the PCB homologs in Phase 2. Elevated PCBs in tissue samples are co-located with elevated PCBs in sediment samples. Slightly higher PCB concentrations are evident in the Stillwater areas, where PCBs in sediment are also higher than other areas. This indicates that PCBs may be taken up into the tissue from the local sediment. PALs were exceeded for aluminum (three clam/mussel samples, and three crab samples), arsenic (two clam/mussel samples and three crab samples), copper (three crab samples), iron (three crab samples), mercury (three crab samples) selenium (three clam/mussel samples and three crab samples) and vanadium (three crab samples).

Northeast Shoreline

Tissue samples collected from the Northeast Shoreline contained PCB homologs at concentrations elevated in comparison to other biota samples collected at Gould Island. PCB homologs detected in clam, mussels, and crabs from this area were approximately one order of magnitude higher than those in reference samples. The PCBs are thought to result from discharges from a floor drain system and storm water carried through the storm "trench" drain from the area of the electroplating room, acid storage shed, and dust collector building at the southwest corner of Building 32.

PALs were not exceeded for the PCB homologs in Phase 2. PALs were exceeded in clam/mussel samples for aluminum, arsenic, selenium, and thallium, and in crab samples for aluminum, arsenic, copper, iron, manganese, mercury, nickel, selenium, and vanadium.

Northwest Shoreline

Heavy metals were detected in sediment samples collected along the Northwest Shoreline indicating that wastes from the electroplating area may have been transported with the septic waste to discharge in this area. PCBs do not appear to have significantly impacted the sediments in this area.

However, the single crab sample collected from this area was found to contain PCB homolog concentrations similar to those measured in crabs from the Stillwater area. Since the PCB concentrations in the sediment

from this area are relatively low, the elevated concentration in this one crab sample can be attributed to the mobility of the animals and should not be attributed to a local condition at this portion of the site. The low levels of PCB homologs and metals in the clam sample from the Northwest Shoreline indicate these contaminants are not being taken up by clams in this area.

PALs were not exceeded for PCBs in the clam and crab samples. PALs were exceeded for aluminum, arsenic, and selenium in the clam sample, and were exceeded for aluminum, arsenic, copper, iron, mercury, and selenium in the crab sample. The metals in these tissue samples could be naturally occurring, but some, including chromium could be a result or an artifact of former discharges, and correspond to slightly elevated levels of chromium in the sediment.

South End of the Island

Low concentrations of PCBs and metals in the clam sample from the South End indicate that contaminant uptake in clams is not taking place in this area. Sediment samples in this area were found to be generally in the range of reference samples.

PALs were not exceeded for PCBs in the clam sample. The PALs for aluminum, arsenic and selenium were exceeded in the clam sample.

Overall Summary

In the biota samples collected in 2010, the following constituents were found to exceed the PALs:

- Aluminum
- Arsenic
- Chromium
- Copper
- Iron
- Manganese
- Mercury
- Nickel
- Selenium
- Thallium
- Vanadium

Overall, tissue samples from clams, mussels, and crabs collected in 2010 appear to have slightly elevated PCBs and metals in areas were PCB and metal concentrations in sediment are elevated. Sediment data collected indicate concentrations of elevated metals and PCBs at some sample locations along the northeast shoreline. These are identified as the Stillwater Area to the north of the site, the Northeast Shoreline, which received waste discharges from Building 32 operations, and, to a lesser degree, the Northwest Shoreline, which also received waste discharges from Building 32 operations.

5.0 CONTAMINANT FATE AND TRANSPORT

Activities associated with former site operations have resulted in the presence of polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and metals in site soils and adjacent marine sediments.

The transport and ultimate fate of the contaminants detected onsite are governed by a variety of physical, chemical, and biological processes that are dependent upon the properties of both the contaminants and the media into which they are released. A qualitative evaluation of contaminant fate and transport was presented in the *Phase 1 Remedial Investigation (RI) Report* (Tetra Tech, 2006) based on the existing site conditions, interpretations of chemicals presence in the environmental media, physical state of sediment contaminants, and the interpretation of the site's geologic and hydrogeologic conditions. Those findings are updated as needed using new information found during the Phase 2 RI.

Section 5.1 presents a summary of the contaminants present at the site. Section 5.2 summarizes the general fate and transport processes and contaminant properties that influence fate and transport. The probable contaminant fate and transport of each group of contaminants found at the site are discussed in some detail in Sections 5.3 through 5.5. Section 5.6 presents a summary of these evaluations.

5.1 OVERVIEW OF CONTAMINANTS AT SITE 17

5.1.1 Summary of Phase I Contaminants at Site 17

During Phase 1, contaminants were found in soil under the former Building 32 foundation, in sumps and vaults within the foundation, near the foundation on the southwest corner, and in a former tank location north of Building 32. From these locations, evidence showed that contaminants were transported via building drainage systems to the bay. There was little evidence of widespread soil and groundwater contamination, and these drainage systems appeared to have been effective at directing chemical disposal to the ocean. Contamination in the sumps and vaults within the former Building 32 foundation appeared to be largely isolated from the soils underneath. Soil borings advanced through these vaults were abandoned by backfill with a cement–grout mixture, which should continue to provide a barrier to any possible migration of contamination from the vaults to the subsurface materials.

PAHs, PCBs, and metals are the predominant contaminants. Low concentrations of volatile organic compounds were detected in soil gas (during prior studies), soil, and groundwater, but these generally did not exceed screening values. Pesticides were also detected, but the elevated concentrations were

limited to waste material (residual debris, sediments, and soil) remaining in sumps and sub-slab vaults, and are not thought to be representative of site conditions in the surrounding media.

There was evidence of a fuel release in the soil at the southwest corner of former Building 32. Fuels were found in the soils outside the footprint of the building, as well as within the vault under the former sandblast booth, and within the manhole MH-01 (Figure 2-1). The associated contaminants (PAHs and total petroleum hydrocarbons [TPH]) appear to have followed separate transportation routes to the surrounding media. Contaminants outside the building could have been transported to the south and east to the shoreline via the "trench drain," which was believed to discharge at sediment sample station SD304F. Sheens were noted on pooled water inside some of the test pits excavated adjacent to this drain at the southwest corner of former Building 32. Contaminants inside the building were controlled to a larger extent by the drainage systems for the building (through floor drains and sewer drains both to the east and to the northwest via sewer disposal systems). Light non-aqueous phase liquid (LNAPL) was observed on the standing water surface in manhole MH-01. MH-01 was found to connect to a sewer discharge at the Northwest Shoreline (Figure 2-1).

Non-aqueous phase liquid (NAPL) was not encountered in any of the monitoring wells during the Phase 1 investigation. Sheens were evident in test pits that were excavated into the former storm drain (identified as the trench drain) outside the southwest corner of Building 32 during phase 1. Prior to the remedial investigation, NAPL was found in the foundation excavation of former transformer building 54, prior to removal actions as described in Sections 1.4.4 and 1.5.2 of this report.

The distribution of the PCBs found in soil and sediment correlates to areas where PCBs were removed from the site in 1999 through 2002. As detailed in Section 1.5.2, the PCB removals were conducted to address transformer buildings and other structures and locations where PCB releases were found during demolitions. Removal actions were terminated for these areas once the cleanup objectives for that project (10 mg/kg PCB in soil and 1 mg/kg PCB in sediment) were obtained. During those removals the cleanup goals were achieved, and those actions pursued the PCBs into the intertidal area downgradient of former Building 54 only, and shoreline sands and gravel were excavated accordingly. PCBs (less than 1.0 mg/L) were found in pooled water in excavations conducted at PCB removal area for Building 54 also. However, PCBs were not detected in groundwater collected from monitoring wells.

Metals and cyanide were found in soil and sediment at the southwest corner of Building 32, in drainage systems from the electroplating areas of Building 32, and at the locations where these systems discharge to the bay. Metals were presumed to have originated from electroplating operations, as well as from sandblast dust storage, and acid use and storage in the same areas.

5.1.2 Summary of Phase 2 Contaminants at Site 17

Soils

Phase 2 soils collected from between the former coal pile and the southwest corner of Building 32 do not indicate that the source of petroleum found adjacent to Building 32 is from the former upgradient coal pile. The data suggests that the PAH contaminants found in the test pits on the southwest corner of Building 32 most likely originated as releases from materials stored in this area or discharged from the drainage system from this portion of the building. In addition, data from the Building 33 area do not indicate presence of a source (past or present) of PAH or fuel contaminants in this area.

Soils collected at the former riggers storage building (Building 42) indicate that PCBs are present on the ground surface, but not at deeper intervals. This indicates that there was likely a surface release of PCBs at this area. The concentrations measured at the surface (maximum concentration of 1840 µg/kg at location SB412) and at depth (maximum 82 µg/kg at location SB410) indicate that the surface soils may be impacted and may pose a continued PCB contribution to sediments near this portion of the Stillwater Area.

PAHs and trace metals detected in surface and subsurface soils are within the range of concentrations previously measured in soil as a part of the Phase 1 RI. The PAHs in the surface soil near the former rigging platform also can be considered elevated relative to project action limits (PALs), and although the impacted area is small, those small amounts of soil may continue to be contributing to sediment PAH concentrations in this portion of the Stillwater Area.

Sediments

Phase 2 PAHs, PCBs, and metals were generally detected in sediments within the range of or lower than concentrations previously measured as part of the Phase 1 RI. However, silver, antimony, selenium, cadmium, and thallium were detected in select areas during Phase 2 that had no detections during Phase 1. Of these detections, PALs were exceeded for silver (1 exceedance) and selenium (1 exceedance) at the Northeast Shoreline; for antimony (1 exceedance) at the Northwest Shoreline, and for antimony (3 exceedances), cadmium (3 exceedances), selenium (16 exceedances), and silver (2 exceedances) at the Stillwater Area. These metals concentrations will be evaluated in Section 6. In addition, Aroclors-1248 and -1254 were non-detect at the Stillwater Area during Phase 1, but were detected at levels above the PALs during Phase 2. The elevated metals and PCB concentrations at the Stillwater Area were found during the 2009 (Phase 2 Step 1) sampling round in which samples were collected at depth (the 2005 [Phase 1] and 2010 [Phase 2 Step 2] sampling rounds included surface sediment samples only).

Sediment data collected indicate concentrations of elevated metals, PAHs, and PCBs at some sample locations along the shoreline including the Stillwater Area to the north of the site, the Northeast Shoreline, and, to a lesser degree, the Northwest Shoreline. PCB concentrations were noted to be highest in the Stillwater Area, north of the site. Aroclors detected in the sediments at the site in 2009 (Phase 2 Step 1) included primarily Aroclor-1260, and to a lesser extent, Aroclors-1254 and -1248. PCB homologs detected in sediments at the site in 2010 (Phase 2 Step 2) included primarily hexachlorobiphenyls.

Biota

Several metals were detected in clam and mussel samples during Phase 2 that were not detected during Phase 1, including aluminum, barium, selenium, silver, lead, cobalt, copper, iron, mercury, nickel, and cadmium. However, there were no PAL exceedances for these metals except for aluminum and mercury. PCB homologs were detected in clam and mussel samples from the Northwest Shoreline and the South End during Phase 2, but were not detected during Phase 1. These detections were all below the PALs. The biota at the site are not likely to be impacted by these metals and PCBs as they were below PALs (except aluminum and mercury) and were found in only a few samples. Tissue data is further evaluated in Section 6 of this report.

5.2 FATE AND TRANSPORT PROCESSES

A generalized discussion of fate and transport processes is provided in the *Phase 1 RI Report* (Tetra Tech, 2006). The general fate and transport processes of chemicals in marine sediment include: point source discharge, groundwater flow, dissolution, erosion and transport, encapsulation, biological degradation, chemical change, and biological uptake. The information from the *Phase 1 RI Report* provides a basis of the understanding of the behavior of contaminant groups detected in the different media, and since no new information about contaminant groups or affected media were uncovered during this Phase 2 RI, this information is still considered applicable as previously published and is not repeated in this section.

5.3 FATE AND TRANSPORT OF SELECTED PAHs

PAHs were found at concentrations exceeding the PALs in many of the sediment samples. These compounds have low solubility in water and have strong affinities to sorb to soil and sediment particles. Elevated levels of organic carbon in the sediments will enhance the adsorption of PAHs.

It appears that PAHs have been discharged from open channel flow via the underground waste discharge system. It is possible that, to a lesser extent PAHs, may have been released as a result of wind and

water erosion of shoreline structures and fill, which is evident on the entire north and east shorelines of the site. In addition, it is anticipated that there has been some influence from offsite sources, such as fuel leaks and spills from past vessel activities attending the island, as well as past and current vessel activities in the bay.

PAHs released to the marine sediment with overland flow and pipe discharges are expected to bind to organic sediments and settle out of the water column in areas where depositional sediments accumulate. Therefore, deposition and movement is dependent on physical transport processes that are available to the sediments both bedded over time, and new discharges. To address the possibility of sediment scouring, exposure, and movement; sediment transport modeling is being conducted as a separate effort to this Phase 2 RI and will be published as a separate document.

The low molecular weight (LMW) PAHs (benzene to phenanthrene) are removed primarily by evaporation and microbial activity. High molecular weight (HMW) PAHs are removed mainly by sedimentation and photo-oxidation. Degradation of PAHs by animals in the water column is of minor importance. In nutrient rich, biologically active, aerobic sediments, the degradation of PAHs is dramatically increased by healthy bacterial and fungal communities. However, in anaerobic sediments, the HMW PAHs (four through seven benzene rings) may persist for years (Brooks 2004). Therefore, degradation in the oxygenated sediments will occur. However, if buried in anaerobic sediments, this degradation of PAHs is less likely.

PAHs found in soil appear to be isolated and movement of these contaminants through groundwater flow is unlikely, as evidenced by the lack of such constituents in groundwater monitoring wells. PAHs in very localized areas, such as the water carried by the street drain on the southwest corner of Building 32 ("trench drain") may be carried through groundwater flow via preferential pathways offered by the former drain itself and the bedding material around it. Association of PAHs with PCB releases is a possibility, in that PAHs are sometimes (but not in every situation) co-located with PCBs, But it is more likely that the releases of the two materials occurred in the same locales.

5.4 FATE AND TRANSPORT OF PCBs

Similar to the PAHs, PCBs are relatively non-volatile and relatively insoluble in water and are, therefore, expected to be relatively immobile in the bedded sediment. As such, these contaminants are also subject to the physical transport processes that are available to the sediments both bedded over time, and new discharges.

Low concentrations of PCBs in soil are not likely to mobilize and be transported via groundwater. In the case of the PCB release that occurred at Building 54 and the free product found and removed from that

location, PCBs did apparently migrate to the shoreline, although PCBs were found in standing water in the excavation during removal, follow-up investigations did not find PCBs in groundwater, and it was not identified as a likely pathway. Regardless, these have been addressed, and follow-up groundwater sampling did not detect PCBs in groundwater down-gradient from the release area.

Biodegradation of PCBs does occur, but usually the degradation rate is very low. The presence of PCBs in sediment at the site is likely a result of open channel flow from the underground waste discharge system, and/or overland runoff from release areas.

In the Stillwater Area, samples were collected at depth in 2009 (Phase 2 Step 1) and surface samples were collected in 2010 (Phase 2 Step 2). In many cases, PCBs were found at higher concentrations in sediments at depth than in sediments collected at the surface. PCB homologue concentrations in clam and mussel samples are much lower than the PCBs detected in sediments in 2009 and 2010. Therefore, the sediments with the highest PCB concentrations may be encapsulated under other sediments, and few PCBs may be available for biological uptake.

PCBs propensity to adsorb to organic matter is high and therefore are expected to remain adhered to the sediment particles, and, if left in depositional areas with no outside forces, are likely to be covered as continuing sedimentation occurs. Disturbance of this sediment could result in conveyance of contaminants through sediment transport processes such as mixing and advection. Because of their adhesion, PCBs are taken up from biotic zones (where browsing organisms feed) and are subject to accumulation in fatty tissues of predatory animals through the food chain. In deeper sediments that are below this biotic zone, they are less likely to be introduced to the food chain. However, erosional events (storms and wave action) can re-expose the contaminated sediment and make them available again.

To address the possibility of sediment scouring, exposure, and movement; sediment transport modeling is being conducted as a separate effort to this Phase 2 RI and will be published as a separate document. The effect of bioaccumulation is addressed in Section 6 of this report.

5.5 FATE AND TRANSPORT OF SELECTED METALS

The metals detected in site soils may be the result of past site operations, but also may, in part, represent those that occur naturally as components of soil minerals. When subjected to precipitation events, infiltrating metals can be leached from the soils and conveyed into the underlying groundwater. Metals may also be leached from the soils into groundwater through the seasonal rise and fall of the water table.

Once metals are leached from the surface soils into the vadose zone and into the saturated soils (i.e., the groundwater aquifer), the dissolved-phase metals will continue to migrate with groundwater flow. Other natural reactions (i.e., sorption, oxidation-reduction reactions, etc.) may occur that retard the rate at which the metals migrate in the subsurface.

Once in the aqueous phase, the metals will be conveyed via groundwater flow. As groundwater migrates through the site, some of the metals will undergo transformation processes that result in their return to an insoluble state. Oxidation-reduction, precipitation, and adsorption reactions can cause the dissolved-phase ions to leave the aqueous phase. As dissolved metals are discharged to the sediments, some of the metals will likely be adsorbed and removed from the aqueous phase because of interactions with organic materials, sulfides, or oxyhydroxides.

Dissolved metals that discharge to sediments undergo various transformation processes. The metal ions may be adsorbed to the organic-rich sediments or to the fine-grained particles in sediments. Metals bound to sediments will be buried over time beneath the benthic surface or will be conveyed with current flow through sediment transport processes such as mixing and advection.

In sediment samples collected in 2009 and 2010, antimony, arsenic, cadmium, cobalt, copper, lead, manganese, mercury, nickel, selenium, silver, and zinc were found at concentrations exceeding the PALs. The presence of some of these likely is a result of the industrial processes including electroplating operations and the cleaning and sandblasting of parts during the site operations. Some, however, are likely to be incidental, and their low frequency of detection above PALs (i.e. antimony, cobalt, manganese, nickel, selenium, and silver) does not warrant further discussion (although additional evaluation of contaminants of potential concern (COPCs) is conducted in Section 6 of this document).

During Phase 1, chromium, which can be associated with electroplating operations, was detected in a sediment sample exceeding the Long et. al. Effects Range Median (ERM) criteria. An inferred "hot spot" (Phase 1 location SD304F) was attributed to open channel flow from the waste discharge "trench drain" line taking street drainage from the southwest corner of former Building 32 to the intertidal area. Mercury was also detected exceeding the ERM during Phase 1, but was not suspected to be related to site activities.

In the Stillwater Area, where surface and subsurface sediment samples were collected at most locations, metals were found at higher concentrations in sediments at depth than at the surface, indicating past releases and sediment deposition covering those releases. However, such data is not available to support such a finding for the Northeast shoreline where a less depositional environment is present. Therefore, concentrations of metals at the site may increase or decrease with depth depending on location and physical forces acting on the sediment. Some sediments with elevated metals concentrations appear to be encapsulated under other sediments and these constituents may not be available for biological uptake unless there is some sediment disturbance in the area.

The chemical processes that affect the behavior of the several representative metals in the marine environment are described below.

5.5.1 Arsenic

Arsenic can occur in the +5, +3, +1, 0, and –3 valence states. However, under oxidizing to mildly reducing conditions in the pH range of 4 to 9, the dominant species has the +5 valence state (As[V]). Dissolved arsenic concentrations in oxidizing environments usually are not controlled by arsenic mineral solubility. Instead, the mobility of As(V) is controlled by adsorption onto iron, manganese, and aluminum oxyhydroxide surfaces. Iron, manganese, and aluminum oxyhydroxides are common mineral weathering products that occur as colloids, soil particles, and mineral coatings in fresh water systems. If the adsorption capacity of these oxyhydroxide surfaces is not surpassed, arsenic movement will be strongly retarded by the high affinity of these surfaces for As(V). The affinity for As(V) increases as the pH of the system decreases.

Under more reducing conditions, As(III) is the dominant species. Although ferric oxyhydroxides are stable over a wide range of pH and oxidation-reduction potentials, and they limit the mobility of both arsenic species, As(III) sorbs less strongly to metal oxyhydroxides than does As(V), so it is more mobile. If the redox potential is low enough, oxyhydroxides may no longer be stable and As(III) mobility may be even greater. However, if hydrogen sulfide is present in a strong reducing environment (such as would exist in anoxic subtidal sediment), the precipitation of arsenic sulfides will limit dissolved arsenic concentrations. Arsenic mobility is greatest when the system is mildly reducing and hydrogen sulfide is absent. Under these conditions iron would be in the soluble +2 valence state (Fe[II]), arsenic would be in the mobile As(III) form, and arsenic mineral solubility would not limit the concentrations of dissolved arsenic in solution.

Arsenic concentrations in sediments were generally comparable to those found in the site's soils. Potential sources of sediment contamination include the following: outflow from the underground waste

discharge lines, wind and water erosion of arsenic-laden soil particles, and other offsite sources. Regardless, further evaluation of arsenic is conducted in Section 6.

5.5.2 Cadmium

Cadmium occurs only in the +2 valence state (Cd^{2+}), and it is one of the most mobile metal contaminants. The mobility of cadmium is significantly reduced at a pH of 7 or higher. Because Cd^{2+} is a cation, adsorption increases with pH as the surface sites on organic matter, oxyhydroxide, and pH-dependent clay minerals become more negatively charged.

Cadmium concentrations exceeded the PAL slightly only in the Stillwater Area (in three samples which were collected at depth). Phase 1 results suggest that cadmium is a signature component of material released from the electroplating rooms. Further evaluation of cadmium is conducted in Section 6.

5.5.3 Copper

In general, the cupric ion (+2 valence state) of copper (Cu[II]) is most commonly found in water. Cu(II) can bind to inorganic and organic material in sediments. Binding depends of pH, oxidation-reduction potential (or red-ox conditions), tidal flux, and other metals present. In general, anaerobic conditions reduce cupric salts to insoluble and highly stable cuprous salts (commonly, cuprous sulfide). Therefore, anaerobic sediments tend to retain and accumulate copper (ATSDR, 2010).

The PAL for copper was exceeded in samples from the Northeast Shoreline (2 samples), the Northwest Shoreline (3 samples), and the Stillwater Area (12 samples). The most significant exceedances were found in samples collected at depth in the Stillwater Area. Further evaluation of copper is conducted in Section 6.

5.5.4 Lead

Lead only occurs in the +2 valence state (Pb^{2+}), and it is one of the least mobile metal contaminants. The mobility of Pb^{2+} is limited in most soil and groundwater systems because: 1) several insoluble lead minerals can control its solubility over a broad range of pH and solution compositions, and 2) Pb^{2+} has a strong affinity for clay, organic matter, and oxyhydroxide surfaces. Since Pb^{2+} is a cation, adsorption increases with pH as the surface sites on organic matter, oxyhydroxide, and pH-dependent clay minerals become more negatively charged. The mobility of lead is greater in low pH environments because most lead minerals are more soluble under acidic conditions, and the net charges on pH-dependent surfaces

are positive. Although lead is relatively immobile under most environmental conditions, it can be mobile in any system if the amount entering the environment exceeds the immobilization capacity of the system.

During Phase 1, an inferred hotspot of lead was noted in the intertidal sediments at location SD304F, where the NOAA ERM screening value was exceeded. This apparent hot spot is attributed to open channel flow from the waste discharge "trench drain" line taking street drainage from the southwest corner of former Building 32 to the intertidal area. Elevated concentrations were also noted in subtidal sediments at locations SD304 through SD306, all likely influenced by discharges from waste drains from the electroplating room, sewer system, and trench drain. Other areas where lead exceeded the PAL in sediments include subtidal sediments in the Stillwater Area to the north of the site and in the northeast portion of the site.

Lead concentrations exceeded the PAL (46.7 mg/kg) at four locations along the Northeast Shoreline during Phase 2, one location along the Northwest Shoreline, and five locations (at depth) at the Stillwater Area. The maximum detection (407 mg/kg) occurred at location SD404 from 2.1 to 2.8 feet. This pattern could indicate that lead is part of the past overland discharges from the rigging platform area (in SD404 at depth), and is collocated with PCBs and PAHs in this area.

Lead was found above the PAL at SD438 (108 mg/kg), downgradient from the Phase 1 hotspot location SD304F. However, elevated (above the PAL) detections were not found at SD304F during Phase 2, indicating that the previous finding could have been a result of a fragment of lead in the analytical sample. As such, lead concentrations in that area could be a result of more stable and less toxic lead metal fragments. As described in Section 4, lead in sediment exceeds ERL and ERM values in many sediment samples. Further evaluation of lead is conducted in Section 6.

5.5.5 Mercury

Inorganic mercury occurs in the +1 (Hg^{1+}) and +2 (Hg^{2+}) valence states. These ions strongly adsorb to sediments. Mobilization of sorbed mercury can occur through reduction to elemental mercury or conversion to volatile organic forms of mercury. Anaerobic microbes (mostly sulfur-reducing bacteria) in subsurface sediments with high concentrations of organic matter can form toxic methylmercury. When oxygen is limited, methylmercury formation increases. Methylmercury is soluble and tends to bioaccumulate (ATSDR, 2010).

Mercury was detected above the PAL in two samples collected from along the Northeast Shoreline and in eight samples collected from the Stillwater Basin. The highest PAL exceedances occurred in samples collected from the Stillwater Area at locations SD404 (at depth), SD407 (at depth), SD412 (at depth), and

SD420 (at the surface). This pattern could indicate that mercury is present as a result of, down-bay contaminant migration and settling in depositional areas.

5.5.6 Zinc

Zinc most commonly occurs in the environment in the +2 valence state (Zn^{2+}). Zinc readily sorbs to suspended particles and sediments. In sediment, zinc can undergo precipitation/dissolution, complexation/dissociation, and adsorption/desorption. These reactions are affected by the pH, red-ox conditions, salinity, the presences of organic matter, the concentration of zinc ions and other ions, the number and type of adsorption sites, and the organic ligands present. The formation of zinc sulfide and zinc hydroxide species in anaerobic conditions decreases the mobility of zinc (ATSDR, 2010).

Zinc was detected above the PAL in one sample from the Northeast Shoreline and six samples from the Stillwater Area. The highest PAL exceedances occurred at depth at locations SD404, SD412, and SD413 in the Stillwater Area. This pattern could indicate that zinc is part of the general overland discharges from the rigging platform area, but also could be related to down-bay contaminant migration. Regardless, zinc does appear to be co-located with the PCBs and PAHs in the Stillwater Area and further evaluation of zinc is conducted in Section 6.

5.6 SUMMARY

Activities associated with former site operations have resulted in the presence of PAHs, PCBs, and metals in site soils and adjacent sediments.

As described in the *Phase 1 RI Report*, since activities at the site have ceased, most of the volatile and soluble petroleum hydrocarbons apparently have partitioned to the vapor phase or dissolved phase and have been degraded or transported offsite.

The much less soluble and less volatile PAHs are still present at high concentrations in the soils associated with the storm drain outside the southwestern portion of the former Building 32, which appears to be associated with petroleum contamination. These contaminants may leach into the groundwater, but the solubility and adsorptive properties of these contaminants prevent this from occurring at a very high rate. Groundwater PAH concentrations were not significant during Phase 1 and are anticipated to remain low. New information from the Phase 2 investigation did not change this previous finding. The source of the PAHs is believed to be petroleum released from former Building 32, and not from offsite upgradient sources.

PCBs and metals in soils are relatively non-volatile organic compounds and are relatively insoluble in water. However, their transport either through erosion of soil to the sediment, or erosion of sediment in high energy areas at the shoreline to lower energy areas, will cause continued transportation of these materials to and within the marine environment, where they can be made available to ecological receptors under the proper conditions. A sediment transport analysis and model is currently under development using physical data collected in 2010. The transport model will be published as a separate document, and should be considered carefully in the development of remedial alternatives (if any are required).

The high concentrations of PCBs in the Stillwater area appear to be present in deeper sediments and, thus, are likely to remain in this area until the physical properties of the shoreline change, which would disturb the bedding properties of the sediments in this area. The breakwater located to the north that is protecting this shoreline has deteriorated, but underwater portions are substantial and are likely to remain stable even if the timber structures continue to deteriorate. However, some hydraulic forces will change if this barrier degrades. In addition, the rigging platform at the northern shoreline has also partially collapsed, allowing soils with some contaminants within them to erode into this area, further impacting the sediment. Continued short-term erosion from the shoreline will continue to cover the contaminated sediments and debris from the rigging platform unless it is repaired. If the breakwater and shoreline improvements are not maintained in the long-term, the fill areas at the north end of the island will sustain continued erosion.

6.0 ECOLOGICAL RISK ASSESSMENT

This section presents the BERA that was conducted to determine whether adverse ecological impacts are potentially occurring as a result of exposure to chemicals released to the environment through historical activities at Site 17, on Gould Island in Jamestown, Rhode Island.

6.1 INTRODUCTION

This ERA follows guidance presented in the following documents:

- Final Guidelines for Ecological Risk Assessment (USEPA, 1998).
- Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments (USEPA 1997).
- Navy Policy for Conducting Ecological Risk Assessments [Department of Navy (DON), 1999] and the Navy Guidance for Conducting Ecological Risk Assessments (http://web.ead.anl.gov/ecorisk/index.cfm).

A screening-level ERA (Steps 1, 2, and 3a) was prepared for Site 17 as part of the Phase 1 RI Report (Tetra Tech, December 2006). Several chemicals were detected at concentrations that exceeded screening levels and were retained as COPCs after the Step 3a refinement. The need for site-specific data (i.e., toxicity testing data, additional shellfish tissue data) was identified to better evaluate risks to ecological receptors and prepare a BERA. The results of the screening-level ERA were used to determine which site-specific data needed to be collected as part of the BERA. This BERA begins with the refined problem formulation (Section 6.2), continues with a preliminary evaluation of the data to select COPCs (Section 6.3), and ends with the baseline risk characterization (Section 6.4). Based upon the results of the BERA, the list of COPCs from the Phase 1 RI Report could be expanded or reduced.

6.2 REFINED PROBLEM FORMULATION

The problem formulation initially presented in the screening-level ERA in the Phase 1 RI Report (Tetra Tech, December 2006) was refined in this BERA.

The screening-level ERA evaluated potential risks to the terrestrial and marine receptors exposed to chemicals associated with the site. Several chemicals were identified as COPCs after Steps 1 and 2 of the screening-level ERA for risks to ecological receptors from exposure to soil and sediment. However,

no chemicals were retained as COPCs for plants, soil invertebrates, or terrestrial receptors after the Step 3a refinement. Therefore, ecological impacts from chemicals in the soil were not evaluated in this BERA. The screening-level ERA retained the following chemicals as COPCs at the site, after the Step 3a refinement, for risk to sediment invertebrates:

- Two SVOCs (carbazole and dibenzofuran)
- PAHs
- PCBs
- Three pesticides (beta-BHC, endosulfan sulfate, and gamma-chlordane)
- Several inorganics (antimony, cadmium, chromium, lead, manganese, and selenium).

Risks to sediment invertebrates are further evaluated in this BERA.

Finally, a food chain model was used to estimate chemical uptake into piscivorous wildlife such as herring gulls and raccoons. Although risks to these receptors were found to be acceptable in the screening-level ERA, this pathway was evaluated in the BERA to determine whether risks to those receptors are still acceptable using the additional sediment and tissue samples that were collected.

Based on the completed screening level ecological risk assessment, the following COPCs were identified:

- PAHs
- Pesticides
- PCBs
- 4-Methylphenol
- Phenol
- Carbazole
- dibenzofuran
- Antimony
- Cadmium
- Chromium
- Lead
- Manganese
- Selenium

During development of the Sampling and Analysis Plan for the BERA, additional data evaluation was conducted, and based on site history, frequency of detection, and toxicity of some of the COPCs identified

above, it was determined that the BERA would focus on PAHs, PCBs, and metals. The investigation described herein is focused on these analyte groups.

6.2.1 Environmental Setting

A detailed description of the terrestrial and marine habitats present at Site 17 is included in the Phase 1 RI Report (Tetra Tech, December 2006). The following presents a summary of that information.

The southern portion of the island has not been maintained for many years and, therefore, a tangled succession of native and non-native plants have colonized the area, forming a scrub/shrub and medium sized tree cover across most of the property. NAVSTA retains ownership of the northern end of the island, where Building 32 was located. Most of the buildings on the Navy-held portion of Gould Island were demolished to the existing grade, with the at-grade slab foundations left in place. Roadways and some of the smaller building foundations were removed. The former building foundation pads and the torpedo firing pier cover approximately 46 percent of the total Navy property on Gould Island.

The habitat on the northern portion of the island consists primarily of open field vegetation consisting of grasses and forbs. The field habitat comprises approximately 37 percent of the Navy property and has an abundance of non-native volunteer and invasive species typical of recently disturbed sites in New England. Two narrow bands of scrub/shrub habitat are present above the upper shoreline on the east and west sides of the island. These scrub/shrub bands cover approximately 17 percent of the Navy property. Many of these plants provide important bird nesting habitat. It is expected that through natural habitat succession the Navy property will soon resemble the scrub/shrub and tree habitat on the southern portion of the island that provides quality habitat for a variety of nesting birds.

Gould Island is an important location for colonial nesting birds. An annual colonial nesting bird count conducted by the RIDEM Division of Fish and Wildlife during spring/early summer identified 22 bird species present on Gould Island. A variety of songbirds also nest on Gould Island each year. Mammals observed or reported to be present on the island include the eastern cottontail (*Sylvilagus floridanus)*, red fox (*Vulpes vulpes)*, and white-tailed deer (*Odocorleus viginianus)*.

The marine habitat in the vicinity of Gould Island includes intertidal and subtidal environments with sand- or silt-substrate with small eelgrass beds. Mapping efforts defined a narrow band of eelgrass, 70 to 90 feet at the widest, on both sides (east and west) of the northern end of the island. Eelgrass beds were also observed extending 25 feet around sediment stations SD301 and SD311, located on the southwestern end of the island and the western shoreline, respectively. No eelgrass was observed at sediment stations SD303 (eastern shoreline) or SD314 (southeast end of the island). A variety of

invertebrate and fish species were observed by the sampling team during the collection of sediment samples.

6.2.2 Potential Sources of Contamination

A detailed description of the potential sources of contamination at the site is included in the Phase 1 RI Report (Tetra Tech, December 2006). This section provides a brief summary of that information.

Site 17 is centered on the former Building 32, which was a torpedo overhaul shop. Building 32 contained an electroplating shop, machine shops, degreasing shops, grinding and buffing shops, and other workshops used for torpedo service and maintenance during and after the World War II. Past industrial activities apparently resulted in the presence of chlorinated solvents, fuel-related chemicals, and metals in the soil, groundwater, and marine sediment at the site, and PCBs in the soil and marine sediments at the site.

Chemical contaminants were found in soil both under the Building 32 foundation, near the foundation on the southwest corner of former Building 32, in a former tank location north of Building 32, and in sumps and vaults within the foundation of Building 32. From these locations, chemicals likely have been transported via building drainage systems to the marine sediment. Also, chemicals in soil that were not associated with a drainage system appear to have been transported to the marine sediment via overland runoff.

There is evidence of a fuel release in the soil at the southwest corner of former Building 32. Fuels were found in the soils outside the footprint of the building, as well as within the vault under the former sandblast booth, and within manhole MH-01. The associated chemicals (PAHs and TPH) have followed separate transportation routes to the surrounding media. Chemicals outside the building are available for transport to the south and east via the "trench drain," and chemicals inside the building are controlled to a larger extent by the drainage systems for the building through floor drains and toilet drains both to the east and to the northwest via sewer disposal systems.

At the Northeast Shoreline, and near the Stillwater Basin, PCBs were detected in soil onsite at low concentrations following the soil and concrete removal actions described in Section 1 of this report. During the RI, PCBs were detected in sediments near the shoreline at somewhat elevated concentrations. The distribution of the PCBs correlates to areas where PCBs were removed from the site in 1999 through 2002. The PCB removals were conducted to address transformer buildings and former releases from those buildings. However, once the cleanup goals for that project were met, the efforts were terminated. It is expected that the PCBs in the sediment originated in these transformer building release areas.

Metals and cyanide were found in soil and sediment at the southwest corner of former Building 32, in drainage systems from the electroplating areas of Building 32, and at the locations where these systems discharge to the bay. Metals are presumed to have originated from electroplating spoils disposed through the building systems, as well as from sandblast dust storage and acid use and storage in the same areas.

6.2.3 Potential Exposure Pathways

Marine ecological receptors, such as shellfish and benthic invertebrates (including gastropods, bivalves, crustaceans, etc.) can be exposed to sediment contamination through direct contact and incidental sediment ingestion. Mammals and birds may also be exposed to the sediment, although to a lesser degree through direct contact and incidental sediment ingestion, or through the ingestion of food items (i.e., clams, mussels, crabs) that have accumulated chemicals. Finally, marine plants such as eelgrass may be exposed to chemicals in the sediment through direct exposure.

6.2.4 Endpoints

This section presents the assessment and measurement endpoints that were selected in the SAP (Tetra Tech, December 2009) for evaluation in the BERA.

6.2.4.1 Assessment Endpoints

Assessment endpoints are explicit expressions of the environmental value that is to be protected (EPA, 1997). The selection of these endpoints is based on the habitats present, the migration pathways of probable chemicals, and the routes that chemicals may take to enter receptors. Based on the habitat description at Site 17, preliminary assessment endpoints for the ERA were selected and are presented on Table 6-1. The following paragraphs discuss why the assessment endpoints were selected for the ERA.

Piscivorous Birds and Mammals – Piscivorous birds and mammals consume shellfish and marine invertebrates. They are present along the shoreline at the site and are exposed to and can accumulate chemicals that are present in their food source.

Benthic Invertebrates - Benthic invertebrates, including gastropods, bivalves, shellfish, crustaceans, as well as smaller invertebrates (i.e., worms, smaller arthropods, etc.), serve as a food source for higher trophic level organisms (i.e., shellfish, birds, mammals). They also can accumulate chemicals, which are then transferred to higher trophic level organisms that consume invertebrates. Benthic macroinvertebrates are present in Narragansett Bay adjacent to the site.

Aquatic Biota: Marine organisms such as mussels, clams, and crabs are present in Narragansett Bay adjacent to the site. These biota feed on invertebrates and are exposed to and can accumulate chemicals from the food items they consume or from the surface water/sediment in which they live.

EPA (1997) states that "it is not practical or possible to directly evaluate risks to all of the individual components of the ecosystem at a site. Instead, assessment endpoints focus the risk assessment on particular components of the ecosystem that could be adversely affected by chemicals from the site." Therefore, this BERA focuses on the endpoints tending to yield the highest risks, which should account for endpoints that have lower risks.

6.2.4.2 Measurement Endpoints

Measurement endpoints are estimates of biological impacts (e.g., mortality, growth, reproduction) that are used to evaluate the assessment endpoints. Table 6-1 presents a summary of the assessment endpoints along with the corresponding measurement endpoint.

6.2.4.3 Selection of Receptor Species

Many receptors in the marine environments at the site are adequately described in general categories such as benthic invertebrates and shellfish. This is due to the nature of the threshold values, effects values, or criteria that are typically used to characterize risk for such organisms. For vertebrate receptors, selection of a particular species is required so that intake through eating and drinking can be estimated. To be conservative, chosen representative species have small home ranges. The availability of exposure parameters such as body mass, feeding rate, and drinking rate also are factors in selecting surrogate species. The following surrogate species were used for the food chain modeling, which is discussed in Section 6.3.2:

- Piscivorous mammal: raccoon
- Piscivorous bird: herring gull

Receptor profiles for the above species are presented in Appendix G.1.

6.2.5 Conceptual Site Model

The Conceptual Site Model (CSM) is presented and discussed in Section 7 of this report. The CSM gathers contaminant concentration and transport information and combines it into a graphic depiction of the manner in which receptors can be exposed to chemical contaminants present at the site, and

summarizes the effects from those exposures. The effects measured and estimated are defined elsewhere in this section.

6.3 PRELIMINARY EXPOSURE ESTIMATE AND RISK QUOTIENTS

This section presents the preliminary evaluation of the data to select COPCs and determine which chemicals will be evaluated in more detail in the baseline risk characterization (Section 6.4). Chemicals that were eliminated as COPCs in the screening-level ERA, and were not analyzed for in samples collected in 2009 or 2010, were included on the COPC selection table in this report for informational purposes, but were noted as being eliminated as COPCs based on the screening-level ERA. Therefore, those chemicals were not evaluated in this BERA. A comparison of site data to background data is presented in Section 6.4.

6.3.1 Preliminary Ecological Effects Evaluation

The ecological effects evaluation is an investigation of the relationship between the exposure to a chemical and the potential for adverse effects resulting from exposure. In this step, conservative screening levels for evaluating toxicity to ecological receptors from detected levels of chemicals at the site were compiled.

6.3.1.1 Sediment

Table 6-2 presents the literature-based sediment screening levels that were used in this evaluation. Primarily, the screening levels were marine values because the surface water surrounding Gould Island is saline. However, freshwater values were used for chemicals that did not have marine values published. The following paragraphs briefly describe each of the sources of the screening levels.

Long and Morgan (1991) developed sediment screening levels using freshwater, marine, and estuarine studies. These values were further refined by Long et al. (1995) using additional data, but only included marine and estuarine studies. Long et al. (1995) established three effects levels as follows:

- Below Effects Range-Low (ER-L): Minimal-effects range (adverse effects would be rarely observed).
- Between ER-L and Effects Range-Median (ER-M): Possible-effects range (adverse effects would occasionally occur).
- Above the ER-M: Probable-effects range (adverse effects would probably occur).

The Florida Department of Environmental Protection (MacDonald, 1994) developed screening values in a manner similar to Long et al. (1995), except that the Florida values also incorporate chemical concentrations observed or predicted to be associated with no adverse biological effects (no effects data). Both sets of screening values were developed for estuarine and marine waters to protect aquatic organisms, including benthic macroinvertebrates, fish, and shellfish. These guidelines establish the following two effects levels:

- Threshold Effects Level (TEL): The TEL is the geometric mean of the 15th percentile in the effects data set and the 50th percentile in the no effects data set. It represents the upper limit of the range of sediment chemical concentrations that are dominated by no effects data.

- Probable Effects Level (PEL): The PEL is the geometric mean of the 50th percentile in the effects data set and the 85th percentile in the no effects data set. It represents the lower limit of the range of sediment chemical concentrations that are usually or always associated with adverse biological effects.

Buchman (2008) tabulated sediment screening levels from various sources, both freshwater and saltwater. The sources include Long and Morgan (1991), Long et al. (1995), and McDonald (1994) values, which are discussed above. In addition, Buchman presented Apparent Effects Threshold (AET) values, which are generally defined as the concentration of a given chemical above which statistically significant biological effects are always expected to occur. AETs have been developed as part of several studies, but the specific studies that were selected for the chemicals were not identified in Buchman (2006).

EPA (2003) developed freshwater and saltwater sediment quality benchmarks for dieldrin to protect benthic organisms. The values were calculated using equilibrium partitioning. A TOC value of 1 percent was used to calculate the saltwater value for dieldrin in Table 6-2.

The publication "ECO Update-Ecotox Thresholds" was prepared by EPA for use as benchmark screening values in the first step of a baseline risk assessment (EPA, 1996). The sediment Ecotox Thresholds include Sediment Quality Benchmarks (SQBs) that have been established using equilibrium partitioning. The SQBs are based on an assumption of 1 percent organic carbon [10,000 mg/kg TOC]. The SQBs calculated in EPA (1996) are based on freshwater data.

Jones et al. (1997) developed SQBs using equilibrium partitioning, similar to what was done for the Ecotox SQBs described above. They termed the values secondary chronic values (SCVs) (Table 3 in Jones et al., 1997). The SCVs are based on an assumption of 1 percent organic carbon, using various surface water screening levels. As footnoted on the table in Jones et al. (1997), some of the values are polar non-

ionic organic compounds, for which the equilibrium partitioning model is likely to provide a conservative estimate of exposure.

The Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario (Persaud et al., 1993) are based on freshwater studies. OMOE (1993) establishes three effects levels as follows:

- No Effect Level (NEL): Sediment will not affect fish or sediment-dwelling organisms. In addition, no transfer through the food chain and no effect on water quality are expected.

- Lowest Effect Level (LEL): Sediment is considered marginally polluted but will not affect the majority of sediment-dwelling organisms.

- Severe Effect Level (SEL): Sediment is considered highly polluted and likely to affect the health of sediment-dwelling organisms.

Table 6-2 presents the source for each of the screening levels, and the order of preference that each of the sources was used. For example, the sediment quality benchmarks and ER-Ls were used first and the SCVs and LELs were used last for chemicals that did not have other screening levels.

6.3.1.2 Mammals and Birds

The potential for risks to piscivorous wildlife from exposure to chemicals in sediment were determined by estimating the Chronic Daily Intake (CDI) for each receptor and comparing the CDI to toxicity reference values (TRVs) representing acceptable daily doses in milligrams per kilogram per day (mg/kg-day). The TRVs were developed from no-observed-adverse-effects-levels (NOAELs) and lowest-observed-adverse-effects levels (LOAELs) obtained from wildlife studies, when available. The majority of the TRVs were obtained from the *ORNL Toxicological Benchmarks for Wildlife: 1996 Revision* (Sample et al., 1996) and the EPA (Eco SSL) documents for the individual chemicals (http://www.epa.gov/ecotox/ecossl/), and were supplemented with other toxicity information when necessary. The chemical-specific Eco-SSL documents provide NOAELs and LOAELs from many studies, but TRVs were only calculated for NOAELs in the referenced documents because Eco-SSLs are meant to be conservative screening levels. The geometric mean of growth and reproduction LOAELs from the chemical-specific Eco-SSL documents were used as the LOAEL TRVs. Appendix G.2 presents the mammal and bird TRVs used in this ERA and the source of the TRVs.

6.3.2 Preliminary Exposure Characterization

To determine whether a chemical has the potential to impact an ecological receptor, a chemical concentration or dose must first be determined. That concentration/dose is then compared to the ecological effects data described above. The following paragraphs describe the concentrations/doses used for each set of ecological receptors.

Aquatic receptors (such as invertebrates) are exposed to chemicals in sediment through direct contact and/or ingestion. Maximum detected chemical concentrations in site samples were used in this step to select COPCs (see Section 6.3.4).

The CDI values in mg/kg-day were estimated for piscivorous mammals and birds using exposure dose equations. All chemicals, except those that were eliminated as COPCs in the screening-level ERA were carried through the food chain model for the complete exposure pathways (i.e., uptake into shellfish and subsequently ingested by wildlife). For food chain modeling, selection of a particular species is required so that intake through eating can be estimated. The raccoon and herring gull were selected as the surrogate species for evaluation in the BERA.

The ingestion rates for incidental sediment ingestion were on a dry-weight basis to be consistent with sediment concentrations, which were reported on a dry-weight basis. However, shellfish tissue concentrations were reported on a wet-weight basis. Therefore, the food ingestion rate used to determine the dose from consuming shellfish tissue was based on a wet-weight ingestion rate.

The following equation was used to calculate CDIs for piscivorous wildlife from exposure to chemicals in sediment and food items (i.e., clams, mussels, and crabs):

$$CDI = \frac{[(C_f * I_f) + (C_s * I_s)] * H}{BW}$$

Where:

CDI	=	chronic daily intake (mg/kg-day)
C_f	=	chemical concentration in food (mg/kg) (see discussion below)
C_s	=	chemical concentration in sediment (mg/kg)
If	=	food ingestion rate (kilograms per day [kg/day])
Is	=	incidental sediment ingestion rate (kg/day)
H	=	portion of food intake from the contaminated area (unitless)
BW	=	body weight (kg)

Table 6-3 summarizes the exposure factors used for the food-chain model, and Appendix G.3 presents the derivation of those parameters. The exposure assumptions (e.g., ingestion rate, body weight) were obtained primarily from the Wildlife Exposure Factors Handbook (EPA, 1993a), and Energetics of Free-Ranging Mammals, Reptiles, and Birds (Nagy, et al., 1999).

Clams, mussels, and crab (whole body samples) samples were collected from the site for chemical analysis, and the chemical concentrations in these tissue samples were used as the "C_f" values in the food chain model. If a chemical was detected in sediment but was not detected in the corresponding tissue sample, the chemical concentration in tissue for that chemical was set as zero in the food chain model as specified in the SAP. Likewise, if a chemical was detected in tissue but was not detected in the corresponding sediment sample, the chemical concentration in sediment for that chemical was set as zero in the food chain model.

The following input parameters were used in the preliminary CDI equation for the surrogate species:

- Maximum sediment and tissue concentrations
- Conservative receptor body weights and ingestion rate

6.3.3 Preliminary-Level Risk Characterization

The risk characterization is the final phase of an ERA that compares exposure to ecological effects. It is at this phase that the likelihood of adverse effects occurring as a result of exposure to a stressor was evaluated. An ecological effects quotient (EEQ) approach was used to characterize the potential risk to ecological receptors. This approach characterizes the potential effects by comparing exposure concentrations/doses to effects data. When EEQ values exceed 1.0, it is an indication that ecological receptors are potentially at risk. Additional evaluation or data may be necessary to confirm with greater certainty whether ecological receptors are actually at risk, especially since most benchmarks are developed using conservative exposure assumptions and/or studies. The EEQ value should not be construed as being probabilistic; rather, it is a numerical indicator of the extent to which an exposure point concentration exceeds or is less than a benchmark.

The EEQs for marine receptors were calculated as follows:

$$EEQ = \frac{Csd}{SdSL}$$

where:

EEQ	=	Ecological Effects Quotient (unitless)
Csd	=	Chemical concentration in sediment (µg/kg or mg/kg)
SdSL	=	Sediment screening level (µg/kg or mg/kg)

The EEQs for piscivorous wildlife were calculated as follows:

$$EEQ = \frac{CDI}{TRV}$$

where:

EEQ	=	Ecological effects quotient (unitless)
CDI	=	Chronic daily intake dose (mg/kg-day)
TRV	=	Toxicity reference value (NOAEL or LOAEL) (mg/kg-day)

6.3.4 Selection of Chemicals of Potential Concern

The final part of this evaluation includes the initial selection of ecological COPCs. Chemicals not retained as COPCs are assumed to pose negligible risk to ecological receptors and were not evaluated further in the ERA. Chemicals retained as COPCs were further evaluated in this ERA.

6.3.4.1 Sediment COPCs

This section presents the selection of COPCs in sediment based on risks to benthic invertebrates from direct exposure. To be conservative, all sediment data (2005, 2009, and 2010) were used in the ERA for the initial section of chemicals as COPCs, even though some locations were sampled more than once. Section 1.0 describes the previous investigations. The initial ecological COPCs were selected using the following procedures:

- Chemicals with maximum concentrations greater than screening levels were retained as COPCs because they have a potential to cause risk to ecological receptors.

- Chemicals with EEQs greater than 1.0 based on the conservative food chain model were retained as COPCs because they have the potential to cause risks to mammals and birds.

- Chemicals without screening values were retained as COPCs but were only evaluated qualitatively in the ERA if no other toxicity data were found for those chemicals.

- Calcium, magnesium, potassium, and sodium were not retained as COPCs because they are essential nutrients that can be tolerated by living systems even at high concentrations. No evidence indicates that these inorganics are related to site operations, and they are not considered hazardous chemicals.

Table 6-4 presents a summary of the occurrence, distribution, and selection of ecological COPCs in sediment. This table also presents the maximum detected concentration of chemicals in the reference samples. The following summarizes the results of sediment COPC selection:

- One SVOC (dibenzofuran), seventeen PAHs (plus HMW and LMW PAH values), three PCBs (plus total PCBs), four PCB homologs (plus total PCB homologs), four pesticides (beta-BHC, endosulfan sulfate, gamma-chlordane, and total chlordane) and thirteen metals were retained as COPCs because the maximum concentrations exceeded sediment screening levels.

- One SVOC (carbazole) and two metals (beryllium and thallium) were retained as COPCs because no sediment screening levels were available.

- Other chemicals were eliminated as COPCs in the screening-level ERA and were not resampled for during this recent investigation so they were not re-evaluated in this BERA.

6.3.4.2 Tissue COPCs

This section presents the selection of COPCs in tissue based on risks to biota from chemicals in their tissue. This section also presents the chemicals in tissue that are retained for further evaluation in the food chain model to evaluate risks to piscivorous wildlife (Section 6.3.4.3).

All tissue data (from 2005 and 2010) were used in the ERA for the initial section of COPCs. Tables 6-5 and 6-6 present the maximum chemical concentrations in clams/mussels and crabs, respectively, in site samples and their frequency of detection. The tables also include a comparison of maximum chemical concentrations in site samples to the maximum chemical concentration in the reference samples. An evaluation of chemical concentrations in site samples compared to reference samples is discussed in Section 6.4.3. The following summarizes the chemicals that were detected infrequently (in one to three samples out of the data set) and were eliminated from further evaluation:

- Four SVOCs, PAHs, pesticides, and thallium for clams/mussels.
- No chemicals were eliminated based on frequency of detection for crabs.

In accordance with the SAP, the tissue data were collected for two purposes: 1) to evaluate risks to piscivorous wildlife in the food chain model and 2) to evaluate risks to the shellfish, themselves. Because of this, an additional screening was conducted for chemicals retained for further evaluation in Tables 6-7 and 6-8 for clams/mussels and crabs, respectively.

To determine whether the chemicals indicated a potential risk to shellfish, the chemical concentrations in the tissue samples were compared to critical tissue levels (CTLs). CTLs are tissue concentrations that are protective of the aquatic organisms, themselves. CTLs are not available for many chemicals, because more research needs to be conducted for this endpoint. The CTLs used to evaluate the tissue samples at this site were marine values from *Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment* (Oregon Department of Environmental Quality [ORDEQ], 2007). These CTLs represent concentrations in tissue at or below which approximately 95 percent of aquatic organisms bearing this residue would be highly unlikely to experience adverse health effects (ORDEQ, 2007).

The maximum tissue concentrations in each of the same four sub-areas of the site were compared to CTLs. If a biota chemical concentration was below the CTL, the organism is not likely to be impacted by the chemical concentration in its tissue. If a biota chemical concentration was greater than the CTL, the organism may be impacted by the chemical concentration in its tissue. CTLs were available only for a few chemicals, so the risks from other chemicals could not be evaluated. Potential risk to aquatic organisms from chemicals for which CTLs were not available are discussed later in this ERA. Because this endpoint was not evaluated in the screening-level ERA, chemicals analyzed in 2005 are included in this evaluation unless they were eliminated from further evaluation in Tables 6-5 or 6-6. Tables 6-7 and 6-8 present the results of the comparison to CTLs for clams/mussels and crabs, respectively. The following summarizes the results of this comparison:

- None of the PCB detections exceeded its CTL.
- Detections of arsenic, cadmium, and selenium in clams/mussels exceeded their CTLs in all areas.
- Detections of lead in clams/mussels exceeded its CTL in the northeast area and Stillwater area.
- Detections of arsenic, lead, and selenium in crabs exceeded their CTLs in all areas.
- Detections of cadmium in crabs exceeded its CTL in the northwest area.
- CTLs were not available for 2-methylphenol, benzaldehyde, and several inorganics (aluminum, barium, beryllium, chromium, cobalt, copper, iron, manganese, nickel, silver, thallium, vanadium, or zinc).

6.3.4.3 Piscivorous Wildlife COPCs

This section presents the selection of COPCs in sediment and tissue based on risks to piscivorous wildlife consuming prey items and sediment. All chemicals retained for further evaluation in Tables 6-5 and 6-6 for clams/mussels and crabs were included in the tissue component of the food chain model. Project action levels which are based on risks to wildlife from consumption of tissue were not used to eliminate chemicals from further evaluation in the food chain model because they do not include the incidental ingestion of sediment component. The food chain model evaluates risks to wildlife from both the consumption of tissue and incidental ingestion of sediment. Therefore, COPCs for wildlife were selected based on the results of the conservative food chain models as describe below.

Tables 6-9 and 6-10 summarize the results of the food chain modeling for piscivorous receptors consuming clams/mussels and incidental ingestion of sediment. Tables 6-11 and 6-12 summarize the results of the food chain modeling for piscivorous receptors consuming crabs and incidental ingestion of sediment. Tables 6-9 and 6-11 present the results of the food chain modeling using conservative exposure assumption and maximum chemical concentrations. Tables 6-10 and 6-12, which present the results of the food chain modeling using less conservative exposure assumptions, are discussed in section 6.4.3. The results of the food chain modeling are presented as NOAEL EEQs and LOAELs EEQs for piscivorous mammals and birds at the site. Appendix G.4 presents the calculation worksheets.

The following summarizes the results of the food chain modeling including clam/mussel tissue data:

- Total Aroclors and nine inorganics were retained as COPCs for piscivorous mammals including clam/mussel tissue data.
- Total Aroclors and five inorganics were retained as COPCs for piscivorous birds including clam/mussel tissue data.
- Avian TRVs were not available for two SVOCs and three inorganics.
- A mammal TRV was not available for dibenzofuran.

The following summarizes the results of the food chain modeling including crab tissue data:

- Total Aroclors and thirteen inorganics were retained as COPCs for piscivorous mammals including crab tissue data.
- Eight inorganics were retained as COPCs for piscivorous birds including crab tissue data.
- Avian TRVs were not available for three inorganics.
- A mammal TRV was not available for dibenzofuran.

6.4 BASELINE ERA RISK CHARACTERIZATION

Table 6-13 lists the chemicals that were retained as COPCs in sediment and tissue after the preliminary evaluation for each endpoint conducted in Section 6.3.4.

This step of the ERA further evaluates the chemicals retained as COPCs and endpoints at risk using the results of the toxicity testing along with other refinement steps typically conducted as part of the risk characterization. This is done as three categories: 1) Benthic invertebrates, which are evaluated through toxicity testing, and then through development of no effects concentrations and lowest effects concentrations; 2) Biota, which are evaluated through tissue residue values; and 3) through a refined food chain model step, which utilizes less conservative exposure assumptions average chemical concentrations.

6.4.1 Benthic Invertebrates

Several of the sediment risk screening levels used to select COPCs are conservative and exceedances of them do not necessarily mean that adverse impacts to the benthic community are occurring. Because of this, site-specific toxicity tests were conducted to determine whether the sediment at the site is toxic to invertebrates, and if so, at what concentrations.

6.4.1.1 Summary of Sediment Toxicity Testing

Twenty-eight-day estuarine amphipod toxicity tests were conducted to evaluate risks from contaminants in sediment to aquatic invertebrates. The toxicity tests were conducted as outlined in *Standard Test Method for Measuring the Toxicity of Sediment-Associated Contaminants with Estuarine and Marine Invertebrates* (ASTM, 2009), *Methods for Assessing the Chronic Toxicity of Marine and Estuarine Sediment-associated Contaminants with the Amphipod, Leptocheirus plumulosus* (EPA, 2001), *Methods for Assessing the Toxicity of Sediment-Associated Contaminants with Estuarine and Marine Amphipods* (EPA, 1994), and *Standard Methods for the Examination of Water and Wastewater, 20th Edition* (APHA, 1998). Three endpoints are evaluated through this testing process, which include 1) mortality as measured by survival of the amphipods, 2) growth as measured by weight and biomass, and 3) reproduction as measured by overall juvenile production and juvenile production per survival female.

The toxicity tests were conducted on 29 sediment samples (plus one duplicate) collected from various locations around Gould Island as described in Section 2.2.2. In addition, samples were collected from three reference locations consisting of local sediment presumed not to be affected by releases at the site.

Appendix G.5 includes a copy of the amphipod toxicity test laboratory report. The only deviation noted was that more than 20 amphipods were added to some of the test vessels at the start of the assay. The deviation is not expected to have impacted the outcome of the toxicity test. Based on regulatory comments on the draft report, the following information is provided to provide more details on the toxicity test laboratory report provided in Appendix G.5. The type of statistical test, parametric or non-parametric, for each analysis is included in the first summary box at the top of each statistical analysis report page. With the exception of the evaluation of normality, where the alpha value for reject or acceptance of the null hypothesis is set *a priori*, the critical value for each statistical analysis is also provided in each statistical analysis report page. With respect to the Sharpio Wilkes Test for normality; there is no critical value that is generated as part of the analysis. The acceptance or rejection of the null hypothesis of a data set as normally distributed is based on the chosen alpha level. When the computed p Level from the Sharpio Wilkes Test is greater than the chosen alpha, the null hypothesis is accepted and the data is considered to be normally distributed. The alpha level is determined "*a priori*", and is generally set at a standard level of 0.01.

Table 6-14 presents a summary of amphipod toxicity test results. Mean survival was 80 to 84 percent in the reference samples, and 50 to 93 percent in the site samples. Mean dry weight was 1.402 to 1.516 mg per amphipod in the reference samples, and 0.48 to 2.14 mg per amphipod in the site samples. Mean dry biomass was 1.120 to 1.356 mg per amphipod in the reference samples, and 0.392 to 1.794 mg per amphipod in the site samples. Mean overall juvenile production was 5.67 to 6.02 amphipods in the reference samples, and 1.4 to 8.52 amphipods in the site samples. Mean juvenile production per surviving female was 11.50 to 13.73 amphipods in the reference samples, and 2.39 to 29.48 amphipods in the site samples.

The survival, growth, and reproduction rates of the amphipods in each sample were statistically compared to the survival, growth, and reproduction rates in each reference sample [analysis of variance (ANOVA) p value less than 0.05, which presents the probability that the statistical results incorrectly rejected the null hypothesis (i.e., specifying that an endpoint is statistically significant when it is not)] to determine whether the survival, growth, or reproduction rates of the amphipods in any of the site samples were lower than the survival, growth, or reproduction rates in the reference samples. The statistical comparison is presented in the laboratory report (Appendix G.5), and the results are summarized in Table 6-15. Table 6-16 summarizes the samples with potentially unacceptable site-related risk. This information is also presented in Figures 6-3B and 6-3C.

Three samples had lower survival, six samples indicated lower growth (as measured by dry weight), four samples indicated lower growth (as measured by lower biomass), five samples had lower overall juvenile production, and three samples had lower juvenile production per surviving female compared to at least two of three reference samples. The decision rules from the SAP used to evaluate the results of the

toxicity tests are presented below. Section 6.5.2 in the uncertainty analysis contains an evaluation of the toxicity test data using a different set of decision rules.

Site Sample Survival:

- If mean survival in any site sample is not statistically different than the mean survival in at least two of the three reference samples, then that location will be classified as "No unacceptable site-related risk to sediment invertebrates" (i.e., risk not different than regional conditions).

    - Twenty six locations (27 samples, including one duplicate) were classified as "No unacceptable site-related survival risk to sediment invertebrates."

- If mean survival in any Site sample is statistically different from the mean survival in at least two of the three reference samples, then that location will be classified as "Potentially unacceptable site-related risk to sediment invertebrates."

    - Three locations (SD566, SD509 [SD-DUP01], and SD520) were assigned this classification.

Site Sample Growth:

- If mean growth in any site sample is not statistically different than the mean growth in at least two of the three reference sample, then that location will be classified as "No unacceptable site-related risk" (i.e., risk not different than regional conditions).

    - Twenty-four locations were classified as "No unacceptable site-related survival risk to sediment invertebrates" based on dry weight.

    - Twenty-six locations were classified as "No unacceptable site-related survival risk to sediment invertebrates" based on dry biomass.

- If mean growth in any site sample is statistically different from the mean growth in at least two of the three reference samples, then that location will be classified as "Potentially unacceptable site-related risk".

- Five locations (six samples, including the duplicate) were classified as "Potentially unacceptable site-related survival risk to sediment invertebrates" based on dry weight.

- Three locations (four samples, including the duplicate) were classified as "Potentially unacceptable site-related survival risk to sediment invertebrates" based on dry biomass.

Site Sample Reproduction:

- If mean reproduction in any site sample is not statistically different than the mean reproduction in at least two of the three reference samples, then that location will be classified as "No unacceptable site-related risk" (i.e., risk not different than regional conditions).

  - Twenty-four locations (twenty five samples, including the duplicate) were classified as "No unacceptable site-related survival risk to sediment invertebrates" based on overall juvenile production.

  - Twenty-six locations (twenty seven samples, including the duplicate) were classified as "No unacceptable site-related survival risk to sediment invertebrates" based on juvenile production per surviving female.

- If mean reproduction in any Site sample is statistically different from the mean reproduction in at least two of the three reference samples, then that location will be classified as "Potentially unacceptable site-related risk."

  - Five locations were classified as "Potentially unacceptable site-related survival risk to sediment invertebrates" based on overall juvenile production.

  - Three locations were classified as "Potentially unacceptable site-related survival risk to sediment invertebrates" based on juvenile production per surviving female.

Table 6-16 summarizes the samples with potentially unacceptable site-related risk based on the results of the toxicity testing endpoints described above.

6.4.1.2 Development of Dose-response Plots

Because at least one Site sample was classified as "potentially unacceptable site-related risk" (based on survival, growth, or reproduction described above), concentration plots were generated for each end point

for the chemicals detected in the sediment samples. The plots were generated for select metals (antimony, copper, lead, mercury, nickel, and silver), HMW PAHs, LMW PAHs, total PAHs, and total PCBs. These chemicals and values were selected because the chemical concentration in one or more samples exceeded its ER-L sediment quality guideline (see Table 6-17). ER-Ls are conservative sediment risk screening levels because chemicals detected at concentrations below these levels are not expected to cause any adverse impacts to the benthic community. In addition, for the organic chemicals, plots were generated for normalized results (bulk chemistry concentrations divided by percent TOC) to determine whether the amount of organic carbon in the sediment impacted the bioavailability of the chemicals. Concentration plots were also generated with the overall average ER-M quotient (ERM-Q), which was calculated using the following procedure identified in the SAP:

> The ERM-Q was calculated by dividing the concentration of a parameter in each sample by the ER-M for that specific parameter (Table 6-18). For non-detected results, one-half the detection limit was used to calculate the ERM-Q.

ERM-Qs were calculated for HMW PAHs, LMW PAHs, Total PCBs, and individual metals (arsenic, cadmium, chromium, copper, lead, nickel, and zinc) in each sample as specified in the SAP. The ERM-Qs for these ten analytes were averaged to obtain an overall average ERM-Q for each sample station.

The concentration plots consist of the chemical concentration along the x-axis and survival (percent), growth (mg), or reproduction (number of amphipods) along the y-axis (see Appendix G.6). The plots were visually inspected to determine whether there was a relationship between chemical concentrations and toxicity (i.e., dose-response relationship). No dose-response relationship could be discerned for any parameter, and there was no correlation between any endpoint tested and the chemical concentrations (see Appendix G.6).

6.4.1.3 Development of NOECs and LOECs

Although a dose-response relationship was not observed, no observed effects concentrations (NOECs) and lowest observed effects concentrations (LOECs) were determined for select chemicals when possible. The NOEC is the highest concentration of a chemical in a sample that was not classified as "potentially unacceptable site-related risk." The LOEC is the lowest concentration of a chemical, greater than the NOEC, in a sample that was classified as "potentially unacceptable site-related risk". The LOEC must be greater than the NOEC for the same endpoint and the same chemical. However, LOECs for one endpoint can be lower than a NOEC for another endpoint. Because NOECS and LOECs are chemical and endpoint-specific, a LOEC cannot be lower than an NOEC for the same chemical and endpoint. That is based on the assumption that the toxicity in a sample with a lower chemical concentration than the concentration of the same chemical in a non-toxic sample is caused by another chemical. Risks from

individual PAHs and PCBs were evaluated by determining risks from total PAHs and total PCB homologs, respectively.

NOECs and LOECs were determined for antimony, copper, lead, mercury, nickel, silver, HMW PAHs, LMW PAHs, total PAHs, total PCB homologs, and average ERM-Q, when possible. These parameters were selected because these were the only chemicals that exceeded the ER-L in one or more samples selected for toxicity testing.

The development of NOECs and LOECs was done by grouping the data into toxic (classified as "potentially unacceptable site-related survival risk to sediment invertebrates") and non-toxic (classified as "no unacceptable site-related survival risk to sediment invertebrates") samples for each endpoint (see Tables 6-19 to 6-30). The data were grouped in two ways for each endpoint: 1) data from all of the stations combined and 2) data from the Stillwater Basin as a subgroup and data from both the Northeast/Northwest Shorelines as a second subgroup, evaluated separately. This was done to determine whether there were any differences in area-specific NOECs or LOECs based on differences in chemical concentrations or habitats. The Northeast and Northwest Shorelines have similar rocky shoreline habitats, whereas the Stillwater Basin has a different habitat structure. Tables 6-19 to 6-30 present the NOECs and LOECs for each of the endpoints. In addition, the data were grouped using data from all of the stations and all of the endpoints combined. A summary of the resulting NOECs and LOECs is presented in Table 6-31.

The maximum detected concentrations were in the non-toxic samples for many endpoints and data set groupings as discussed in the next paragraph, so only a NOEC could be calculated. In those cases, the NOEC was the maximum detected concentration in the samples selected for toxicity testing. This occurred for the survival endpoint and most chemicals for the growth endpoints (dry weight and dry biomass).

Although NOECs and LOECs were developed for several of the metals, there is considerable uncertainty in the LOECs, so they will not be used to evaluate the data. The primary reason is that elevated levels of metals were not found across the site; elevated levels were only found in a few locations. Although several of these locations were re-sampled for toxicity testing, the elevated concentrations were not found. This indicates that the elevated concentrations are not wide-spread in those areas, and as such are not likely to present a significant concern for ecological receptors.

For the growth endpoint (biomass), the only LOEC that could be generated was for nickel. However, the difference in concentration between the NOEC (32.8 mg/kg) and LOEC (33.4 mg/kg) is well within the range of field and laboratory error. Also, both values are only slightly greater that the ER-L of 20.9 mg/kg. Therefore, it is not likely that nickel was responsible for the decreased growth in the one site sample.

NOECs and LOECs were also generated for several metals (copper, lead, and mercury) using only the Stillwater Basin data for the reproduction endpoints and the "all endpoints." Similar to what occurred for nickel, the difference between the NOECs and LOECs for these metals was generally very small. Also, all of the LOECs were less than the screening levels, indicating it is not likely that these metals were responsible for any of the observed toxicity. It is more likely that other chemicals in the sediment, as discussed below, are responsible for the toxicity. Therefore, for metals, the site data will not be compared to the LOECs to determine whether the sample is potentially impacted.

A better distinction was observed between the NOECs and LOECs for PAHs, PCBs, and the average ERM-Q than for metals. The NOECs and LOECs were the same whether all the data were used or the Stillwater Basin data only were used, and were the same between both reproduction endpoints and the all endpoints. These NOECs and LOECs are summarized below:

Parameter	NOEC	LOEC
HMW PAHs	32,000	48,600
LMW PAHs	7,750	NA
Total PAHs	38,700	55,100
Total PCBs	2,590	2,720
Average ERM-Q	1.59	2.29

A LOEC was not generated for LMW PAHs because the maximum detected concentration was found in a non-toxic sample.

Figures 6-1 to 6-3 indicate the samples that exceed the calculated NOECs and LOECs for total PAHs, total PCBs, and the average ERM-Q. These samples include all of the surface sediment samples that were collected in 2005, 2009, and 2010, including all samples from locations that were sampled during multiple sampling events. These surface sediment samples include samples from 0 to 6 inches (2005 and 2010) and samples from 0 to below 12 inches (2009). Refer to Figure 2-3 for surface sediment intervals collected in 2009.

At one location, total PAH concentrations were found to be greater than the associated NOEC and LOEC (see Figure 6-1). Two samples were collected at this one location during different sampling events. The total PAH concentration in one of the samples exceeded its NOEC, but not the LOEC; the total PAH concentration in the other sample exceeded its NOEC and LOEC.

In the Stillwater Basin, total PCB concentrations were found at eight locations greater than the associated NOEC and LOEC; one location had a total PCB concentration greater than its NOEC and LOEC along the

Northeast Shoreline (see Figure 6-2). At four of the Stillwater Basin locations, two samples were collected during different sampling events. The PCB concentrations varied between the two events, which may have been a result of samples collected at slightly different depths during these different sampling events.

Eight locations in the Stillwater Basin and three locations along the Northeast Shoreline had average ERM-Q values greater than its NOEC (see Figure 6-3). Of these, six locations in the Stillwater Basin and two locations in along the Northeast Shoreline had average ERM-Q values greater than its LOEC (see Figure 6-3). These same results are depicted on Figures 6-3B and 6-3C with a summary of toxicity test results. However, at four of the Stillwater Basin locations and two locations along the Northeast Shoreline, two samples were collected during different sampling events. At two of the locations in the Stillwater Basin, the ERM-Q in the second sample was less than its NOEC, and at the other two locations, the ERM-Q in the second sample was between the NOEC and LOEC. At the two locations along the Northeast Shoreline, the ERM-Q in the second sample was less than its NOEC.

Finally, some metals (arsenic, cadmium, chromium, cobalt, manganese, selenium, and zinc) selected as COPCs for benthic invertebrates were only detected at concentrations exceeding screening levels in samples that were not selected for toxicity testing. Maximum detected concentrations of arsenic, cobalt, and manganese were just slightly greater than their respective screening levels, so they are not likely to significantly impact benthic invertebrates. Also, beryllium and thallium were detected at relatively low concentrations (0.79 mg/kg and 4.9 mg/kg, respectively) and are not expected to significantly impact benthic invertebrates. Samples were collected for toxicity testing from locations with elevated concentrations of cadmium, chromium, selenium, and zinc (see Appendix A1), but the concentrations in the samples collected for toxicity testing were less than their respective screening levels. For that reason, NOECs and LOECs were not developed for these metals. This likely occurred because the concentrations of metals in sediment are often heterogeneous. As seen in Figures 4-11 though 4-25, the locations with elevated concentrations of representative metals in sediment related to site activities are isolated and well-bounded. Therefore, for all the chemicals discussed in this paragraph, risks to benthic invertebrates from metals in the sediment do not appear to be significant across the site and are not considered risk drivers at the site. Also, note that most of these metals were included in the ERM-Q calculation so they are accounted for in those NOECs and LOECs.

Two SVOCs (carbazole and dibenzofuran) and pesticides (beta-BHC, endosulfan sulfate, gamma-chlordane, and total chlordane) were selected as COPCs for benthic invertebrates; however, additional sediment data collected for the BERA was not analyzed for these chemicals. The locations with elevated levels of carbazole and dibenzofuran generally corresponded to the same locations where concentrations of PAHs were elevated; therefore, risks from these SVOCs are considered by evaluating risks from PAHs. The greatest concentrations of pesticides (i.e., >100 µg/kg) were at locations SD312 and SD316, where the concentrations of PAHs and/or PCBs also were elevated; therefore, risks from these pesticides at

these locations are considered by evaluating risks from PCBs and PAHs. The detected concentrations of the pesticides at other locations are all less than 100 µg/kg and although those concentrations exceed sediment screening levels, they are more indicative of typical application activities and not from a release. Therefore, pesticides are eliminated from further evaluation in the BERA.

6.4.2 Biota

As indicated in Section 6.3.4.2, the tissue data were collected for two purposes: 1) to evaluate risks to piscivorous wildlife in the food chain model and 2) to evaluate risks from the contaminants present to the shellfish themselves. The further evaluation of risks to piscivorous wildlife is discussed below in Section 6.4.3. This section presents the further evaluation of risks to the shellfish themselves. This is done by comparison of detected analytes within the tissue samples to reference concentrations, CTLs, No Observed Effects Doses (NOEDs) and other available criteria.

At each sample location where biota chemistry data was obtained, the maximum chemical concentrations in the site samples were compared to the maximum chemical concentrations in the reference samples to determine whether the chemical were bioaccumulating in the site tissue samples. If the maximum chemical concentration in the site sample was less than the maximum chemical concentration in the reference samples, it was determined that the chemical was not site related in the organism. If the chemical concentration in the biota sample was greater than maximum chemical concentration in the reference samples, the chemical was further evaluated using CTLs and NOEDs.

Detections of arsenic, cadmium, lead, and selenium in clams/mussels and crabs exceeded their CTLs. However, concentrations of arsenic and selenium in clams/mussels and concentrations of arsenic, lead and selenium in crabs were less than the reference concentration. CTLs were not available for 2-methylphenol, benzaldehyde, and several inorganics. However, concentrations of aluminum, barium, cobalt, copper, iron, nickel, and silver in clams/mussels and concentrations of aluminum, barium, chromium, cobalt, copper, iron, manganese, mercury, nickel, thallium, vanadium, and zinc in crabs were less than the reference concentration. Therefore, the following chemicals which exceeded reference concentrations or did not have reference concentrations will be further discussed:

- 2-methylphenol, benzaldehyde, beryllium, cadmium, chromium, lead, manganese, vanadium in clams/mussels.
- Beryllium, cadmium, and silver in crabs.

Two databases which provide additional tissue residue values are the *U.S. Army Corps of Engineers (USACE) Environmental Residue Effects Database (ERED)* (USACE, 2005) and the *EPA Office of*

Research and Development's effects residue database (Jarvinen and Ankley, 1999). Tissue residue values for shellfish from the ERED are summarized in Appendix G.7. Values from the EPA database for shellfish are discussed below, as applicable. For benzaldehyde and beryllium, only finfish data were available in the ERED, and no shellfish data were available in the EPA database. Therefore, finfish data for these two chemicals are presented in Appendix G.7.

The CTL for cadmium (0.15 mg/kg wet weight) is a conservative value meant to protect 95 percent of all aquatic organisms (ORDEQ, 2007). As seen in Appendix G.7, there are a lot of tissue residue data for cadmium for a variety of shellfish species including oysters, mussels, clams, crayfish, etc. Most of the values, including many of the no effects values are much greater than the CTL of 0.15 mg/kg. This is consistent with the comparison done in Section C.3.4 of the ORDEQ (2007) document, which states that the CTLs, by definition, are at the lower end of the tissue residue values. The average clam/mussel cadmium concentrations are 0.21 mg/kg and 0.18 mg/kg for the 2005 and 2010 samples in the Northeast Shoreline area, respectively. These average concentrations are just slightly greater than the conservative CTL but are much lower than most of the tissue residue values. Also, the cadmium concentration in the crab sample from the Northwest Shoreline area (0.29 mg/kg) is slightly greater than the conservative CTL, but much lower than most of the tissue residue values. Therefore, significant risks to the shellfish from cadmium at the site are not expected.

The CTL for lead (0.40 mg/kg wet weight) is a conservative value meant to protect 95 percent of all aquatic organisms (ORDEQ, 2007). As seen in Appendix G.7, there are tissue residue data for lead for the Eastern oyster and Zebra mussel. All of the values including no effects values are much greater than the CTL of 0.40 mg/kg. This is consistent with the comparison done in Section C.3.4 of the ORDEQ (2007) document, which states that the CTLs, by definition, are at the lower end of the tissue residue values. The lead concentration in only one clam/mussel sample (1.4 mg/kg) from the Stillwater area in 2010 slightly exceeded the reference concentration of 1.1 mg/kg. The average concentration for the Stillwater area clam/mussel samples in 2010 was 0.67 mg/kg which is just slightly greater than the conservative CTL. Therefore, significant risks to the shellfish from lead at the site are not expected.

Tissue residue values for some of the other chemicals that did not have CTLs available were found in ERED (USACE, 2005) and the EPA effects residue database (Jarvinen and Ankley, 1999) as follows:

- The only tissue residue value found for benzaldehyde was for a freshwater fish species (rainbow trout). The value was a lowest observed effects dose (LOED) of 1,400 mg/kg. This value is much greater than the maximum detected concentration of 37 mg/kg in the site samples. Benzaldehyde was not analyzed for in the reference samples, but it is not suspected to be site-related for several reasons. It was not detected in any of the sediment samples. Also, the highest concentrations were found in shellfish from the south area, which is the area that is least impacted by any site activities.

Therefore, it is not likely that benzaldehyde is impacting shellfish at the site, but even if it were, the impacts are not likely to be site-related.

- The only tissue residue value found for beryllium was for a freshwater fish (bluegill). The value was a no observed effects dose (NOED) of 5.13 mg/kg. The greatest beryllium concentration was 0.0081 mg/kg in the clam/mussel data set and 0.072 mg/kg in the crab dataset. Beryllium was not detected in the reference clam/mussel samples, but it is not suspected to be site-related for several reasons. The concentration of beryllium in the sample from the South End (0.0077 mg/kg), which is the area that is least impacted by any site activities, was similar to the concentration of 0.0081 mg/kg found in the Northwest Shoreline area. Also, the average beryllium concentration in the site samples is lower than or similar to the average reference concentration. For crabs, the maximum site concentration of 0.072 mg/kg is similar to the beryllium concentration in the reference crabs of 0.063 mg/kg. Finally, the maximum site concentration of beryllium is much lower than the tissue residue value, but it is based on only one study, which is for a freshwater fish species.

- The only shellfish tissue effects data for chromium was in the EPA database for growth effects on sand crabs. The no effects levels ranged from 1.0 mg/kg and 3.2 mg/kg for instar stage juvenile crabs, and lowest effects levels ranged from 3.2 mg/kg and 6.3 mg/kg. Only the maximum chromium concentrations in mussels/clams from the Northeast and Northwest Shoreline areas exceeded 1.0 mg/kg (see Table 6-7). However, only the average concentration from the 2005 clam/mussel samples from the Northwest Shoreline area exceeded 1.0 mg/kg, with an average concentration of 2.2 mg/kg. This level is between the two no effects levels discussed above, so it is not likely that significant effects to shellfish will occur from chromium at the site.

- For manganese, the NOED was 9.6 mg/kg in the ERED (see Appendix G.7). Manganese concentrations in clam/mussel samples from the Northwest Shoreline, Northeast Shoreline, and Stillwater Basin were less than the maximum reference sample concentration (20.6 mg/kg) (see Table 6-5). The only concentration of manganese that exceeded the reference concentration was in a sample from the South End (38.6 mg/kg), which is the area that is believed to be least impacted by any site activities. Therefore, because this concentration only exceeded a no-effects level, and because manganese is not likely to be related to site-activities, significant site-related effects to shellfish are not expected to occur from manganese at the site.

- For vanadium, the NOED was 0.6 mg/kg in the ERED (see Appendix G.7). Clam/mussel concentrations in the Stillwater Basin samples were less than the maximum reference sample concentration (0.58 mg/kg) (see Table 6-5). The highest concentration on vanadium was found in

shellfish from the South End, which is the area that is least impacted by any site activities. Therefore, even if vanadium is impacting shellfish at the site, the impacts are not likely to be site-related.

- The concentrations of silver in crabs at the site (0.246 to 0.296 mg/kg) were much lower than all the effects values for shellfish in the ERED (see Appendix G.7). Therefore, impacts to crabs from silver are not likely.

- There was a large range of tissue residue values for zinc in shellfish in the ERED. Clam/mussel concentrations in the Stillwater Basin and South End samples were less than the maximum reference sample concentration (18.5 mg/kg) (see Table 6-5). The average concentrations of zinc in clams/mussels in the northwest northeast areas were less than 20 mg/kg. Most of the effects values for shellfish in the ERED (see Appendix G.7) were greater, and oftentimes much greater than 20 mg/kg. Therefore, impacts to shellfish from zinc are not likely.

Tissue residue values for 2-methylphenol were not available in ERED (USACE, 2005) or the EPA effects residue database (Jarvinen and Ankley, 1999). The source of 2-methylphenol in the tissue samples is not known; however, it could be naturally occurring as both anthropogenic and natural sources of cresols exist in the environment. Also, few data are available describing the food chain bioaccumulation of cresols. according to the ATSDR Toxicological Profile for Cresols (ATSDR, September 2008) the available experimental data (Freitag et al. 1985) are consistent with estimated values obtained from regression equations which suggest that it will not bioconcentrate to any significant extent (Thomas 1982). Information concerning the potential for biomagnification has not been described, although the log Kow values are low and biomagnification is expected to be insignificant. Based on this information, it is not likely that the 2-methylphenol site-related

6.4.3 Birds and Mammals

The EEQs from the food chain modeling calculated and presented in Tables 6-9 and 6-11 were greater than 1.0 for several chemicals using maximum chemical concentrations and conservative exposure assumptions (see Section 6.3.4.3). Therefore, as part of the baseline risk characterization, risks for this pathway were recalculated using average chemical concentrations in sediment and less conservative exposure assumptions (i.e., average ingestion rates, average body weights, etc.; see Table 6-3).

As mentioned in Section 4.2.2.5, sediment samples were collected from three background locations. Also, concentrations in site tissue data were compared to reference samples to determine whether the chemical were bioaccumulating in the site tissue samples. None of the chemicals in the background sediment samples were detected at greater concentrations than they were found in the site sediment samples. However, maximum concentrations of several chemicals in the reference tissue samples were

detected at greater concentrations than they were found in the site tissue samples. Therefore, those chemicals not considered to be site-related. Tables 6-5 and 6-6 present the results of the comparison of site tissue concentrations to reference tissue concentrations for clams/mussels and crabs, respectively. The following chemicals which were included in the tissue component of the food chain model are not site related:

- Aluminum, arsenic, barium, cobalt, copper, iron, mercury, nickel, selenium, and silver for clam/mussels; and
- Aluminum, arsenic, barium, chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, thallium, vanadium, and zinc for crabs.

Therefore the EEQs calculated for these chemicals are conservative because they include risks from exposure to chemicals which are similar to background for the consumption of tissue.

Table 6-10 summarizes the results of the less conservative inputs food chain modeling for piscivorous receptors including clam/mussel tissue. This table highlights the chemicals with calculated EEQs greater than 1.0 based on the conservative food chain model. Appendix G.4 presents the calculation worksheets. A discussion of the risks to mammal and birds are presented below.

- Aluminum, iron had EEQs greater than 1.0 using the NOAEL as the TRV for piscivorous mammals; however, these metals had EEQs less than 1.0 using the LOAEL as the TRV for piscivorous mammals. The maximum site tissue concentrations of aluminum and iron were less than maximum reference tissue concentrations so neither metal are site-related in the tissue samples. As seen in the food chain model in Appendix G.4, the risks are really being driven by the incidental sediment ingestion component of the food chain model. The average aluminum (5,410 mg/kg) and iron (17,000 mg/kg) concentrations used in the food chain model are within the range of or just slightly greater than the concentrations of the metals in the reference samples. Also, the forms of aluminum and iron in sediment are unlikely to be as bioavailable as the forms used to in the studies conducted to develop the TRVs. Therefore, neither metal is likely to significantly impact piscivorous mammals, and any impacts would be similar to background impacts.

- No chemicals had EEQs greater than 1.0 using the NOAEL as the TRV for piscivorous birds.

Table 6-12 summarizes the results of the less conservative inputs food chain modeling for piscivorous receptors including crab tissue. This table highlights the chemicals with calculated EEQs greater than 1.0 based on the conservative food chain model. Appendix G.4 presents the calculation worksheets. A discussion of the risks to mammal and birds are presented below.

- Arsenic, copper, iron, and selenium had EEQs greater than 1.0 using the NOAEL as the TRV for piscivorous mammals. Copper, iron, and mercury had EEQs greater than 1.0 using the NOAEL as the TRV for piscivorous birds. However, none of the EEQs for these chemicals were greater than 1.0 using the LOAEL as the TRV. Arsenic (1.7), copper (1.2), and selenium (1.8) had EEQs only slightly greater than 1.0 in the piscivorous mammals FCM using the NOAEL as the TRV. Copper (1.6), iron (1.9), and mercury (1.4) had EEQs only slightly greater than 1.0 in the piscivorous birds food chain model using the NOAEL as the TRV. As seen in the food chain model in Appendix G.4, the risks from arsenic, copper, mercury, and selenium are really being driven by the tissue ingestion component of the food chain model. However, as presented on Table 6-6, the reference concentrations for all four metals are greater than the site concentrations so they are not related to site activities. Therefore, there four metals are not retained for further evaluation for piscivorous birds or mammals. Iron is not retained for further evaluation for piscivorous birds or mammals for reasons discussed above.

- Aluminum (4.9) and thallium (7.5) had EEQs greater than 1.0 using the LOAEL as the TRV for piscivorous mammals. Aluminum is not retained for further evaluation for piscivorous birds or mammals for reasons discussed above. Similar to the metals discussed in the paragraph above, the risks from thallium are really being driven by the tissue ingestion component of the food chain model. However, the reference concentration for thallium is greater than the site concentrations so they are not related to site activities. Therefore, thallium is not retained for further evaluation for piscivorous birds or mammals.

6.5 UNCERTAINTY ANALYSIS

This section presents general uncertainties associated with the ERA.

6.5.1 Uncertainty in Measurement and Assessment Endpoints

Measurement endpoints were used to evaluate the assessment endpoints that were selected for this ERA, but the measures of effects were not the same as the assessment endpoints. Instead, the measures were used to predict effects to the assessment endpoints by using surrogate species. For example, mortality of a herring gull was used to assess mortality of the piscivorous bird population. However, predicting mortality to a herring gull may either under or overprotect the overall piscivorous bird population, resulting from differences in ingestion rates, toxicity, and food preferences, etc. of the different species.

6.5.2 Uncertainty in Exposure Characterization

The chemical dose to piscivorous wildlife is estimated using an equation that incorporates ingestion rates, body weights, bioaccumulation factors, and other exposure factors for representative target species. These exposure factors are obtained from literature studies or predicted using various equations. Ingestion rates and body weights vary between species, especially between species inhabiting different areas.

Bioaccumulation of chemicals into tissue of various species (i.e., clams, mussels, crabs) depends on characteristics of the tissue itself such as pH, organic carbon, lipid content, etc. These uncertainties were reduced by collecting site-specific clams, mussels, and crab tissue samples for incorporation into the food chain model. However, there are always uncertainties in the tissue data because levels in the samples, themselves, can be affected by factors other than the contaminants from the site in question. In addition, some animals used for tissue sampling are highly mobile, and the associated tissues may include materials from other sources that are unknown.

There is uncertainty in the use of toxicity test data, especially when sediments are manipulated and exposed to oxygen. Chemicals that are not bioavailable under field conditions may become bioavailable when sediments are collected and transported, conversely chemicals that are bioavailable under field conditions may become non-bioavailable when removed from the field. Also, samples can be toxic to parameters that are not measured, or for reasons that cannot be determined. In this study, there was a poor dose-response relationship between the chemical concentrations in the sediment and the observed toxicity, so there is uncertainty in whether the chemicals are responsible for the toxicity. This likely is partially due to the low concentrations of chemicals in some of the sediment samples considered to be toxic. However, to be conservative, NOECs and LOECs were still developed for several target chemicals as presented in Section 6.4.1. For some chemicals, only NOECs could be developed because the maximum detected concentrations were in non-toxic samples. For those chemicals, there is more uncertainty in evaluating risks because the NOEC is not bounded by a LOEC, and an exceedance of a NOEC only does not indicate that an impact will occur.

There was considerable uncertainty in the sediment toxicity test results for a few reasons: 1) There was little correlation between chemical concentrations in the sediment and toxic responses; 2) A few samples with less than 70 percent survival did not have statistically lower survival than the reference samples; and, 3) There was a lot of variability in the number of surviving organisms in different replicates within the same sample The high sample variation can influence whether a result was considered statistically lower from the reference samples (i.e., toxic). For example, on Table 6-15, the percent survival (63 percent) in sample GI-SD509-0006 was statistically lower than the percent survival in the reference samples, but the

percent survival in sample GI-SD519-0006, also 63 percent was not statistically lower than the percent survival in the reference samples.

Because of the uncertainties in the toxicity test results as discussed above, Table 6-29 was revised to include the samples with the following results in the group of "toxic samples:" 1) Any sample that had lower survival, growth, or reproduction versus the laboratory control, and 2) Any sample that had less than 70% survival. The results of this evaluation are presented on Table 6-32. NOECs and LOECs are the same for the chemicals presented on Table 6-29, except for lead, total PCB homologs, and average ERM-Q. The results from this re-evaluation may be used to help develop preliminary remediation goals for the feasibility study.

The sample with the greatest lead concentration in the data set (GI-SD531-0006) was re-classified as a toxic sample because it had slightly lower growth (dry weight) as compared to the laboratory control. There is uncertainty in the NOEC and LOEC because the sample responsible for the LOEC (GI-SD528-0006) had 81 percent survival and only lower growth (dry biomass) compared to the laboratory control. Therefore, using typical toxicity test evaluation protocol (i.e., comparison to reference samples) these samples would not be considered toxic.

The NOECs and LOECs for total PCB homologs and the ERM-Q changed based on re-classifying sample GI-SD507-0006 as a toxic sample because it had a percent survival result of less than 70 percent. This changed the ERM-Q NOEC and LOEC from 1.59 and 2.29, respectively, to 1.27 and 1.59, respectively. The geometric mean between the NOEC and LOEC for the re-classified samples was 1.42, while it was 1.91 for the original data set. The re-classification changed the total PCB homolog NOEC and LOEC from 2,590 µg/kg and 2,720 µg/kg, respectively, to 1,240 µg/kg and 2,590 µg/kg, respectively. The geometric mean between the NOEC and LOEC for the re-classified samples was 1,792 µg/kg, while it was 2,654 µg/kg for the original data set.

Table 6-32 also presents NOECs and LOECs for individual PAHs. The distribution in concentrations for individual PAHs follow the same pattern for the total PAH groupings; therefore risks from individual PAHs were evaluated by determining risks from total PAHs.

Although the sediment samples were well homogenized before they were sub-divided, there may be differences between the chemical concentrations in the samples sent for toxicity testing and the samples analyzed by the laboratory. There are several analytes that had elevated detections in the 2005 samples that were not replicated in the samples collected for toxicity analysis. Therefore, although samples from these locations were selected for toxicity testing, the elevated concentrations of those chemicals were not found in the collected samples. In fact, for some of those analytes (i.e. cadmium and chromium), the concentrations of in samples used in the toxicity testing were less than screening levels, so NOECs and

LOECs were not developed for them. In all cases, however, the areas where metals concentrations were elevated are small areas, so the lack of firm NOECs and LOECs for those chemicals should not impact the overall decisions for the site.

6.5.3 Uncertainty in Ecological Effects Data

Uncertainty exists in the ecological effects data, including the screening levels and wildlife TRVs. Several of the screening levels are very conservative, and typically are based on studies where the bioavailability of the chemical is much greater than it is in the environment. Also, toxicity data was not available or was limited for some chemicals.

The NOAELs/LOAELs used for the wildlife endpoints species are based on species other than the endpoint species (e.g., rats and mice). Uncertainty exists in the application of toxicity data across species because the chemical may be more or less toxic to the endpoint species than it was to the test study species.

There is a lot of uncertainty in several of the tissue residue values, because some of them are based on only a few studies. Also, for benzaldehyde and beryllium, only finfish data were available in the ERED, and no shellfish data were available in the EPA database.

6.5.4 Uncertainty in Risk Characterization

The potential for adverse risks may be anticipated if an EEQ is greater than or equal to 1.0 regardless of the magnitude of the EEQ. Although the relationship between the magnitude of an EEQ and toxicity is not necessarily linear, the magnitude of an EEQ can be used as rough approximation of the extent of potential risks, especially if there is sufficient confidence in the screening level used. Uncertainty exists in how the predicted risks to a species at the sites translate into risk to the population in the area as a whole.

6.6 SUMMARY AND CONCLUSIONS

Site-specific sediment toxicity tests were conducted and shellfish tissue data were collected to better evaluate risks to ecological receptors and aid in the development of site-specific NOECs and LOECs. These data, in combination with sediment chemistry data, were used to evaluate potential risks to the following three ecological endpoints:

- Benthic invertebrates
- Biota (clams, mussels, and shellfish)

- Piscivorous birds and mammals

The following sections summarize the potential risk to those receptors.

6.6.1 Risks to Benthic Invertebrates

Risks to benthic invertebrates were determined by collecting 29 sediment samples from various locations around Gould Island and three reference locations consisting of local sediment presumed not to be affected by releases at the site, for chemistry and toxicity testing. Three endpoints were evaluated through this testing process, which included 1) mortality as measured by survival of the amphipods, 2) growth as measured by weight and biomass, and 3) reproduction as measured by overall juvenile production and juvenile production per survival female. Samples from ten of the site locations were determined to have lower survival, reproduction, or growth compared to that found in at least two of the three reference samples. The results of the toxicity testing in combination with the sediment chemistry data were used to determine NOECs and LOECs for antimony, copper, lead, mercury, nickel, silver, HMW PAHs, LMW PAHs, total PAHs, total PCB homologs, and average ERM-Q, when possible.

The NOECs and LOECs for HMW PAHs, LMW PAHs, total PAHs, total PCB homologs, and average ERM-Q are presented in Section 6.4.1.3. Total PAH concentrations were found to be greater than its NOEC and LOEC at one location in the Stillwater Basin. Also, in the Stillwater Basin, total PCB concentrations were found at eight locations greater than the associated NOEC and LOEC; one location had a total PCB concentration greater than its NOEC and LOEC along the Northeast Shoreline. Eight locations in the Stillwater Basin and three locations along the Northeast Shoreline had average ERM-Q values greater than its NOEC. Of these, six locations in the Stillwater Basin and two locations in along the Northeast Shoreline had average ERM-Q values greater than its LOEC.

At several locations, two samples were collected during different sampling events. The chemical concentrations varied between the two events, which may have been a result of samples collected at slightly different depths during these different sampling events. In some cases, chemical concentrations in one sample were greater than the NOECs and LOECs, while concentrations in the other sample were not.

Although NOECs and LOECs were developed for several of the metals, there is considerable uncertainty in the LOECs, so they will not be used to evaluate the data. Elevated metals are not widespread across the site and the areas with high concentrations of metals could not be verified with subsequent sampling results. Therefore, metals are not likely presenting a significant concern for ecological receptors across the site, with the possible exception of a few small areas. Also, note that many of the metals were included in the ERM-Q calculation so they are accounted for in those NOECs and LOECs.

6.6.2 Risks to Biota

Risks to biota were evaluated using tissue residue values, such as the CTL (ORDEQ, 2007) or other values from the literature. Detections of cadmium in clams/mussels and crabs exceeded its CTL and reference concentration in the Northeast and Northwest Shoreline areas, respectively. Detections of lead in clam/mussels slightly exceeded its CTL and reference concentration in the Stillwater area. CTLs were not available for 2-methylphenol, benzaldehyde, beryllium, chromium, manganese, silver, vanadium, or zinc. Based on further evaluation of the data in the baseline risk characterization, it was determined that impacts to shellfish (including clams, mussels, and crabs) were not likely.

6.6.3 Risks to Birds and Mammals

Risks to birds and mammals were evaluated using food chain models. Based on the refined food chain model step, which utilizes less conservative exposure assumptions average chemical concentrations, risks to piscivorous birds and mammals are not occurring.

7.0 SUMMARY AND CONCLUSIONS

This section provides a summary of the Site 17 Phase 2 RI activities, findings, and conclusions, as well as overall RI findings and recommendations.

7.1 SUMMARY OF THE REMEDIAL INVESTIGATION

This section summarizes the findings of the Phase 2 RI and BERA, and presents an update of the conceptual site model for the site based on those findings.

7.1.1 Objectives

The general objectives of the Phase 2 RI and BERA were developed in the SAP, and refined as follows:

1) Resolve the nature and extent of contamination in marine sediment associated with the past use and disposal of chemicals and chemical wastes at Site 17.

2) Provide and interpret exposure data and develop a BERA in accordance with EPA and Navy policy and guidance.

3) Resolve the source and extent of fuel contamination in soil at the southwest corner of former Building 32.

4) Determine if there is residual soil contamination at the former rigging building.

All objectives were met through the Phase 2 RI effort.

7.1.2 Site Description and History

Site 17 includes former Building 32, located at the northern end of Gould Island, and the immediate surroundings. The site occupies approximately 6 acres, is bordered by State property to the south, and is surrounded by a portion of the East Passage of Narragansett Bay to the east, north, and west. The site buildings have been demolished, and the island is generally unoccupied, but used by trespassers occasionally. The site was home to a Navy torpedo overhaul shop from World War II, which ceased major operations in the 1950s. During that time, operations included degreasing, parts washing, electroplating, sandblasting, testing, and other operations.

The site topography is generally flat, with surface elevations ranging from 8 to 15 feet above Navy MLW. With the exception of the remaining building slab foundations, the site is entirely vegetated, and this vegetation is not anticipated to be cultivated or maintained in the near future.

The following historical investigations and actions occurred prior to the RI at Site 17. These are also summarized in Appendix A and Appendix B of the Phase 1 RI Report (Tetra Tech, December 2006).

- Initial Assessment Study and Verification Step (IAS) – 1986 to 1987: Found heavy metals in the sediment and bivalve tissues at the northeast shoreline where electroplating wastes were presumed to have discharged.

- Study Area Screening Evaluation (SASE) – 1999 to 2000: Found TCE and PAHs in soil gas under Building 32. Found metals in surface soil in the southwest corner of Building 32.

- Other investigations of one former UST at the south end of Building 32: Addressed through the UST program. A release of diesel fuel from the UST resulted in removal of the tank and associated contaminated soil.

- Building 44:

  - TPH contamination from a series of seven fuel tanks (Building 44 and Building 32) led to removal of approximately 9,000 cubic yards of petroleum-contaminated soil, and subsequent groundwater monitoring program in this area (also addressed through the UST program).

  - Soil gas study conducted at former Building 44 area showed fuel components and one location where TCE was detected (Q3G, January 1997).

  - Found traces of TCE in groundwater samples during monitoring at wells installed for Building 44.

- PCB Investigations and Removal Actions: Conducted for former transformer buildings under TSCA.

  - PCB sampling was conducted at the transformer locations and surrounding roadways under TSCA regulations.

  - Oil containing 430,000 mg/kg of PCBs was found beneath transformer Building 54 and free product containing PCBs was found on the water table. PCBs were found in concrete and soil in, under, and near transformer buildings, which were demolished in 2001 and 2002.

- Approximately 5,000 cubic yards of contaminated soil, concrete and sediment were removed from these locations under actions carried out under TSCA and RIDEM regulations.

- Although PCBs were not found in groundwater collected from wells installed downgradient of the former building foundation (Tetra Tech, 2001), PCBs (0.229 to 0.324 mg/L) were found in pooled groundwater in excavations completed in September 2003 (TtFW, 2004).

- Sediment sampling and analysis: Conducted by EPA in 2003 at the eastern subtidal slope near Gould Island.

- In addition, RIDEM reports that TPH and free product were found near Building 33, to the west of Building 32 (RIDEM, 2006).

7.1.3 Remedial Investigation Field Efforts

The Phase 1 RI field activities conducted in 2005 included the collection of 87 soil samples from borings and test pits, 14 groundwater samples from monitoring wells, 9 groundwater "discrete zone samples" from bedrock fracture zones, 66 sediment samples from intertidal and subtidal areas around Gould Island, 21 biota samples (clams and mussels as were available at sample stations), 9 aqueous samples from standing water in test pits and in underground utilities, 2 samples of soil and sludge from these utilities, and 2 samples of concrete. In addition, data gathered for the Phase 1 RI included groundwater flow information, information on ecological receptors present and likely to be present, geotechnical information on soils and bedrock pertinent to groundwater and contaminant movement, information on sediment characterization, and over 300 soil samples for headspace screening analysis and soil characterization.

The Phase 2 RI field activities conducted in 2009 and 2010 included collection of 45 soil samples from soil borings, 128 surface and subsurface sediment samples from the intertidal and subtidal zones around the island, and 23 biota samples consisting of clams, mussels, green crabs or spider crabs. Other data gathered during the Phase 2 RI field activities included a sediment bathymetric survey; ocean current, flow, and wave height data gathered throughout an entire tidal cycle; as well as information on sediment characteristics in the Stillwater Basin area.

7.1.4 Geology and Hydrogeology

The geologic and hydrogeologic conditions at the site were determined using data developed during the Phase 1 RI (Tetra Tech 2006). This information was not updated as a result of the Phase 2 RI, and the former findings are considered unchanged.

7.1.5 Nature and Extent of Contamination

The Phase 1 RI Report concluded that activities associated with former site operations have resulted in the presence of VOCs, SVOCs, pesticides, PCBs, petroleum hydrocarbons, metals, and cyanide in site soils and adjacent sediments. Additionally, VOCs, SVOCs, petroleum hydrocarbons, and metals were detected in site groundwater at low concentrations. The Phase 1 findings are augmented with Phase 2 data as described in this section.

Soil

During Phase 1 (2005), elevated concentrations of contaminants were found to be present in surface and subsurface soil at specific, definable locations. Maximum concentrations of metals associated with electroplating operations (cadmium, copper, chromium, lead, nickel, and zinc), as well as a trace level of cyanide, were found in samples from along the southeast wall of former Building 32, or in fill placed in the sumps and equipment trenches. Maximum concentrations of SVOCs including PAHs were found within sumps or equipment boxes within the Building 32 foundation, isolated from the surrounding soils by the building foundation. The area of the former dust collection building, located outside the foundation, was a single exception. Elevated concentrations of metals and PAHs were found in this area, but a source for the PAHs in this area was not certain.

Because of this finding, Phase 2 (2009) borings were focused on two possible sources: an upgradient coal pile and an upgradient fuel tank and sanitary leaching system near former Building 33. Subsurface soil data from these borings did not show the presence of PAHs or petroleum in the area of the leach field, Building 33, or the coal pile upgradient of the roadway where the PAHs were found in the Phase 1 RI. Therefore, it is concluded that these PAHs are a result of fuel releases from the vicinity of the acid storage areas, the electroplating rooms, and other activities in the southwest corner of Building 32 during or after its operations.

Phase 2 borings also were installed at former Building 41 and the Rigging Platform, north of Building 32. These borings were installed to determine if there is a continuing source of PCBs and PAHs to the Stillwater Basin from former operations in this area. The data indicates that residual PCBs and PAHs are

present in surface soil, but not at concentrations that would pose a significant threat to the adjacent sediment.

Sediment

Sediment data from the Phase 1 RI indicated elevated concentrations of metals, PAHs, and PCBs at some sample locations along the shoreline and in the subtidal sediment. These are identified as the Stillwater Basin area to the north of the site, the Northeast Shoreline area, which received waste discharges from Building 32 operations, and, to a lesser degree, the Northwest Shoreline area, which also received waste discharges from Building 32 operations. In addition, trace levels of VOCs were found along the Northeast Shoreline.

During Phase 2, sample stations were positioned specifically to bound and/or confirm the locations where elevated concentrations were found during Phase 1. The sediment data as presented in Section 4 of this report, combined with the findings from the Phase 1 RI, indicate the following:

1) PCBs are present in sediments in the Stillwater Basin area, north of the site at concentrations up to 55 mg/kg. PCBs appear to be highest in the sediment just below the surface interval (6 to 24 inches below the sediment surface). This indicates a past release and the beginnings of depositional material covering over the most affected sediment. The elevated PCB concentrations appear to be bound within the Stillwater Basin, and the highest concentrations are in the southern most portion of the basin, where a former release was addressed onshore at the area of the former Rigging House.

2) Elevated concentrations of metals and cyanide were found in sediment locations where outfalls once discharged to the subtidal shoreline, and the highest concentrations occur in the area east of the southeast corner of former Building 32. The elevated concentrations of heavy metals and cyanide present in the sediment near existing and historic outfalls can be traced back through pipeline transport from the electroplating rooms and dust storage shed, where high concentrations of heavy metals were found in soil samples.

3) Slightly elevated concentrations of PCBs are present in surface sediment at the Northeast Shoreline. The locations of the elevated PCBs indicate that the source is likely the former transformer building (Building 54), where a large PCB oil release and removal action was conducted.

4) PAHs in sediment may be a result of former use and release from general degreasing operations in the overhaul shop, or they may be a remnant of fuel storage at Building 44. PAHs were found

in sumps and vaults within the Building 32 foundation, and some of these sumps were previously noted to have floor drains that connected to the drains exiting to the Northeast Shoreline. PAHs present in sediments near outfall locations at the southeast corner of former Building 32 are likely a result of fuel-contaminated soil at the southwest corner of Building 32 that was transported to the shoreline through pipelines and sewer systems. PAHs in sediment at the Stillwater Basin are likely to be a result of a combination of fueling operations, ship operations, overland spills, and down-bay contaminant migration. Regardless, the highest concentrations of PAHs in sediment are collocated with the PCBs found within the Stillwater Basin, and any action to address PCBs would address PAHs.

Biota

Elevated PCB concentrations found in bivalve tissues collected in 2005 correlated with sediment stations where PCB concentrations also were most elevated. However, the 2010 biota and sediment data did not show the same correlation, possibly due to improved conditions in the surface sediment, or due to heterogeneity in tissue samples collected between the two periods. Traces of heavy metals (chromium and cadmium) were found in some tissue samples. However, metals do not appear to be particularly elevated in site biota samples as compared to reference biota tissue samples. Most notably, arsenic in reference clam and crab tissue samples was found to be above concentrations measured in site tissue samples for the respective species, even in comparison to data from 2005.

Groundwater

Although MCLs were exceeded in groundwater during the Phase 1 investigation, additional groundwater data was not collected during Phase 2, and interpretation of the groundwater data from the Phase 1 report is not revised.

7.1.6 Fate and Transport

Section 5 of this report presents in detail the fate and transport processes that are likely to affect contaminants found at the site. The following is a summary of that information.

Physical Fate and Transport: Disposal Routes

Contaminants appear to have been released to the sumps and equipment trenches in former Building 32, as well as through drains and waste discharge systems at the site. For the most part, the building systems appear to have caught and routed these waste materials from the source locations to the

sediments near the shorelines of the site. These systems include floor drains, sump drains, sanitary systems, and stormwater drainage systems.

Three primary pathways of contaminant transport from Building 32 operations to the marine environment were identified. The first is the storm drainage system and "trench drain" that gathered groundwater and runoff from the roadway and storage areas (acid storage shed, dust collection building) outside the southwestern corner of Building 32, and discharged that water to the shoreline near the southeast corner of Building 32 at station SD304F. The second contaminant transport pathway is a system of original sanitary and waste drains from lavatories and the electroplating room that appear to have gravity-drained wastes from the building to the shoreline to the east. The third pathway is the sanitary waste system upgrade constructed in 1956 and 1957. At that time, sewer system upgrades were installed to provide collection chambers and pumps to route sanitary waste to discharge at the northwest shoreline. The redirection of the waste flow was confirmed through the Phase 1 RI: wastes from the southwest lavatory were routed to manhole MH-01, and pumped to the northwest to a junction box and dry well constructed at the Northwest Shoreline.

In addition, an overland release of PCBs to sediments appears to have occurred to the north of Building 32, near the former rigging platform. This is evidenced by the high concentrations of PCBs in the sediments in this portion of the Stillwater Basin, and remnant PCBs in surface soils near the failed rigging platform where a PCB removal action was conducted in 1999 to 2001. A breakwater consisting of wooden pilings and a subtidal stone barrier is present that protects this shoreline. However, above-ground portions have deteriorated, and will continue to deteriorate unless repaired. As such, hydraulic forces that might mobilize these sediments will increase if the wooden pilings further degrade. In addition, the rigging platform at the north shoreline has also partially collapsed, allowing soils behind the former sheet piling to erode and re-deposit as sediments in this area. Such erosion from the shoreline may initially cover the contaminated sediments and debris from the rigging platform. Sediment transport modeling may assist to determine the stability of the sediments in this area under various conditions.

PCBs are also present in the marine sediment southeast of Building 32. These PCBs could have originated from an overland release at the former Building 54 area; however, a high concentration found during 2010 sampling was located adjacent to the outfall at station SD304F. Regardless, elevated PCBs are present in this area (maximum concentration 1.3 mg/kg in 2010, and 3.8 mg/kg in 2005).

Chemical Fate and Transport

Regarding VOCs, chlorinated solvents (most notably tetrachloroethene, maximum concentration 6 µg/L, and pentachlorophenol, maximum concentration of 7 µg/L) were detected at the site, and no breakdown products were detected during Phase 1. This indicates that very minor releases of these contaminants to the soil and groundwater have occurred at the site. Fuel-related VOCs were also detected, although their concentrations indicate older releases that have degraded over time (Tetra Tech, December 2006).

The much less soluble and less volatile PAHs are still present at high concentrations in the soil-debris within small equipment trenches within the building foundation and along the southwestern corner of Building 32, where petroleum was found. These contaminants may leach into the groundwater, but the low solubility and adsorptive properties of PAHs prevent this from occurring at a very high rate. Additionally, the trenches themselves are concrete which serve to isolate these contaminants. Groundwater PAH concentrations measured in 2005 were low and the Phase 1 RI report stated that they are anticipated to remain low. However, when test pits are excavated into petroleum/PAH-contaminated areas, PAHs and petroleum contaminants bound within the soil may be liberated into standing shallow waters that collect in the excavations.

Cyanide was detected during Phase 1 but only infrequently, and at trace concentrations (less than 1 mg/kg), in surface and subsurface soils, and in intertidal and subtidal sediments. Cyanide was not detected in groundwater samples.

Pesticides, PCBs, and metals found in soils are non-volatile or relatively non-volatile compounds and are generally insoluble in water. Therefore, they are stable and there is very limited leaching of these chemicals from soils into groundwater. However, through erosion and migration of contaminated soils, these compounds could be transported from soils to marine sediments, and could also migrate with sediment within the marine environment, particularly in disturbed or high energy areas at the shoreline.

Transport of Sediment

The PCBs in subtidal sediments of the Stillwater Basin are likely to remain in this area until the physical properties of the shoreline change. Chemically, the PCBs are bound within the sediment and are not likely to break down or degrade; however, they are subject to physical erosion under the right conditions. A full evaluation of the potential for sediment transport at this site will be published as a separate document.

7.1.7 Human Health Risk Assessment

Cancer and noncancer risks to human receptors were evaluated in the Phase 1 RI, and the findings are summarized below:

Based on the findings of the Phase 1 RI, there is a potential for human health risk at Site 17 from:

- PCBs, PAHs, arsenic, cadmium and chromium in limited soil areas that pose a slight potential for risk to future industrial and construction workers: These constituents provide a total incremental cancer risk of 1E-5, and a Hazard Index (HI) of 1. There is no HI >1 for any single target organ;

- PCBs, PAHs, and pentachlorophenol in shallow groundwater that pose risk to future industrial and construction workers via exposure under a conservative model for exposure to air in a restrictive excavation trench;

- chromium in intertidal sediment that poses risk to future recreational visitor; and

- PCBs, PAHs, arsenic* and thallium in shellfish.

The data from Phase 2 investigations were considered for revision of the human health risk assessment. Data from the Phase 2 investigations include two media that were evaluated for the human health risk assessment: soil (surface soil and subsurface soil) and biota (clam/mussel), Groundwater and intertidal sediment data were not collected during this Phase 2 RI, and subtidal sediment was determined to not be available for exposure to human receptors (Tetra Tech, 2006). Tables 7-1 through 7-3 present a summary of descriptive statistics comparing Phase 1 surface soil (Table 7-1) subsurface soil (Table 7-2) and biota (Table 7-3) data to Phase 2 data. The 95% UCL values from Phase 2 that exceed 95% UCL values from Phase 1 are highlighted in yellow. For most of the data, 95% UCL values calculated for Phase 2 were below the 95% UCL values calculated for Phase 1, or they were so close that differences would be inconsequential to the calculated risk.

Those Phase 2 UCLs that are more than 2x the Phase 1 UCLs are highlighted in orange on the tables, and are discussed below:

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* New shellfish reference data from 2010 indicate that arsenic is not a site specific contaminant for shellfish, as discussed in Section 7.3.1 of this report.

- Cadmium in surface soil - one sample collected during Phase 2 at SB412 from the 0-1 foot interval provided a cadmium concentration of 31.5 mg/kg, and the Phase 2 95% UCL was well above the Phase 1 95%UCL. Human health risk from cadmium in surface soil was not previously measured because the Phase 1 95% UCL was below the screening criteria of 3.7 mg/kg. Given the other values (ranges and averages) presented on Table 7-1, it is not believed that Inclusion of the new data into the surface soil risk calculation would increase the overall risk for surface soil. Additionally, risk for all soil (0-10 feet) was measured using an exposure point concentration of 1090 mg/kg, and the resulting cancer risk was above 1E-4 and cadmium was considered to pose unacceptable risk to receptors exposed to this soil. Inclusion of the new results into that data set would not change this conclusion, and a PRG for cadmium in soil will be required for the FS.

- Total Aroclor in surface soil – one sample collected during Phase 2 at SB412 from the 0-1 foot interval provided a total Aroclor concentration of 1840 µg/kg, which is slightly more than twice the previously detected maximum concentration in surface soil. Risk from PCBs in surface soil was not previously measured because the Phase 1 95% UCL was below the screening criteria of 220 µg/kg. However the risk for all soil (0-10 feet) was measured using an exposure point concentration of 86 µg/kg and the highest resulting associated cancer risk was that for industrial workers at 1.2 E-7. Overall, PCBs were not considered to pose unacceptable risk to receptors exposed to soil. Inclusion of this new result or recalculating risk from PCBs using new 95% UCLs may change this conclusion. To assure protectiveness, a PRG can be calculated for PCBs for surface and for subsurface soil during the FS, without recalculating risk for this one constituent.

- Iron in biota – iron was previously detected in clams and mussels, but screened out of the human health risk assessment because iron is not thought to be toxic (Tetra Tech, 2006, Appendix G, Table 2-7). This outcome would not change based on a revised 95% UCL using the Phase 2 data.

All the data (Phase 1 and Phase 2) will be included and used as appropriate for the development of PRGs during the initial stages of the FS.

If soil contaminants that are found in the FS to be above PRGs and are co-mingled with petroleum hydrocarbons above RIDEM direct exposure criteria (DECs), the petroleum will be addressed with the action selected for the other contaminants. However, if they are not co-mingled, a separate effort will be developed to address the petroleum under RIDEM UST regulations.

Although two constituents exceeded MCLs in groundwater, there is currently no exposure to groundwater available at the site. The calculated risk for groundwater is not reevaluated in this report.

7.1.8 BERA

Site-specific sediment toxicity tests were conducted and shellfish tissue data were collected to better evaluate risks to ecological receptors and aid in the development of site-specific NOECs and LOECs. These data, in combination with sediment chemistry data, were used to evaluate potential risks to the following three ecological endpoints:

- Benthic invertebrates
- Biota (clams, mussels, and shellfish)
- Piscivorous birds and mammals

The following sections summarize the potential risk to those receptors.

7.1.8.1 Risks to Benthic Invertebrates

Risks to benthic invertebrates were determined by collecting sediment samples around Gould Island and three reference locations for chemistry and toxicity testing. Three endpoints were evaluated through this testing process, which included: 1) mortality, as measured by survival of the amphipods; 2) growth, as measured by weight and biomass; and 3) reproduction, as measured by overall juvenile production and juvenile production per survival female.

Samples from ten of the site locations were determined to have lower survival, reproduction, or growth, compared to that found in at least two of the three reference samples. The results of the toxicity testing, in combination with the sediment chemistry data, were used to determine NOECs and LOECs for antimony, copper, lead, mercury, nickel, silver, HMW PAHs, LMW PAHs, total PAHs, total PCB homologs, and average ERM-Q, when possible.

The NOECs and LOECs were calculated for HMW PAHs, LMW PAHs, total PAHs, total PCB homologs, and average ERM-Q. Total PAH concentrations were found to be greater than its NOEC and LOEC at one location in the Stillwater Basin. Total PCB concentrations were found at eight locations greater than the associated NOEC and LOEC; one location had a total PCB concentration greater than its NOEC and LOEC along the Northeast Shoreline. Eight locations in the Stillwater Basin and three locations along the Northeast Shoreline had average ERM-Q values greater than its NOEC. Of these, six locations in the Stillwater Basin and two locations in along the Northeast Shoreline had average ERM-Q values greater than its LOEC.

At several locations, two samples were collected during different sampling events. The chemical concentrations varied between the two events, which may have been a result of samples collected at slightly different depths during these different sampling events. In some cases, chemical concentrations in one sample were greater than the NOECs and LOECs, while concentrations in the other sample were not.

Although NOECs and LOECs were developed for several of the metals, there is considerable uncertainty in the LOECs, so they were not used to evaluate the data. Elevated metals are not widespread across the site and the areas with high concentrations of metals could not be verified with subsequent sampling results. Therefore, metals are not likely presenting a significant concern for ecological receptors across the site, with the possible exception of a few small areas. Also, note that many of the metals were included in the ERM-Q calculation, so they are accounted for in those NOECs and LOECs.

7.1.8.2 Risks to Biota

Risks to biota were evaluated using tissue residue values, such as the CTL (ORDEQ, 2007) or other literature values. Detections of cadmium in clams/mussels and crabs exceeded the CTL and reference concentrations in the Northeast and Northwest Shoreline areas, respectively. CTLs were not available for 2-methylphenol, benzaldehyde, beryllium, chromium, manganese, silver, vanadium, or zinc. Based on further evaluation of the data in the baseline risk characterization, it was determined that impacts to shellfish (including clams, mussels, and crabs) are not likely.

7.1.8.3 Risks to Birds and Mammals

Risks to birds and mammals were evaluated using a food chain model. Based on the refined food chain model step, which utilizes less conservative exposure assumptions average chemical concentrations, risks to piscivorous birds and mammals are not occurring.

7.1.8.4 Ecological COCs

In conclusion, there is risk to ecological receptors from PCBs and total PAHs in sediment in the Stillwater Basin to benthic invertebrates. Additionally, there is risk to ecological receptors based on the ERM-Q exceedances noted also in the Stillwater Basin. As a result the following constituents are identified as COCs that will need to have preliminary remediation goals (PRGs) calculated in an FS:

- PCBs in sediment
- Total PAHs in sediment
- ERM-Q using arsenic, cadmium, chromium, copper, lead, nickel, zinc, PAHs, and PCBs in sediment.

While the metals noted above are each identified as COCs, they do not individually need to have PRGs calculated for them. Only taken collectively do they pose a risk as determined by the ERM-Q. Therefore, the PRG should be calculated for the ERM-Q.

7.2 CONCEPTUAL SITE MODEL

The conceptual site model has been updated based on the information developed during the Phase 2 RI and BERA. The conceptual site model is a living document that requires review and update as data is collected and as risk management decisions are made. The conceptual site model as presented in the Phase 1 RI and the SAP for Phase 2 RI and BERA is revised and provided in Appendix H of this report.

Pertinent information specific to the chemical constituents found and the predicted risks they pose to the different receptors is presented in Table H-1. This table provides the third tier (fate and transport of contaminants) and fourth tier (predicted risks to receptors) of the conceptual site model. Predicted human health risks and risk drivers are presented for each medium in Table H-2, to complete the portion of the fourth tier conceptual site model for the human receptors. This table defines COPCs and receptors at risk. Table H-3 completes the fourth tier of the conceptual site model for ecological receptors.

It is noted that surface sediment and biota contaminant concentrations measured as a part of the Phase 2 RI and BERA are within the ranges of those measured during the Phase 1 RI and used for human health risk assessment. Therefore, revision of the human health risk assessment is not required, and the findings of the assessment published in the Phase 1 RI remain the same (Tetra Tech, December 2006).

The findings of the BERA are incorporated into the conceptual site model as Table H-3. As this table indicates, ecological risk is predicted in the form of toxic effects to invertebrates in the Stillwater Basin, most likely from the presence of high concentrations of PCBs in this area, although PAHs are co-located with the PCBs. As stated in Section 7.1.6, these contaminants appear to be present as a result of overland discharges from the rigging platform and possibly the former Building 41 area. A low potential for ecological risk is predicted for the Northeast and Northwest Shoreline, demonstrated by ERM-Q compared to NOEC and LOEC values (Figure 6-3), though results of individual toxicity tests did not correlate that well with the locations where elevated concentrations of contaminants were present. Regardless, some of the contaminants at the Northeast and Northwest Shorelines do appear to be present as a result of direct

discharges through drain lines originating in the electroplating room, the other areas of the overhaul shop, and the storage areas around it.

7.3 DATA LIMITATIONS AND UNCERTAINTIES

This section identifies site characterization data limitations and risk assessment uncertainties associated with the Site 17 RI.

7.3.1 Site Characterization Data Limitations

Site characterization data limitations and uncertainties for the site are discussed below. Although the soil and sediment sample data sets are considered representative of the site conditions, a review of the sample data and the distribution of sample locations indicates that potential data limitations exist.

Soil

Although samples were collected across the site during different phases of the investigations, the horizontal distribution of sample locations is not completely uniform. Because the investigation focused on the locations of former activities at the site, sampling focused on the southwest corner of Building 32 and the discharge areas to the shoreline. The collection of samples focused in areas associated with disposal locations tends to bias the sample database and hence receptor risks, to better represent areas of higher contamination. The activity patterns of receptors such as trespassers and recreational visitors at the site would vary from event to event and would result in an integrated exposure to soil locations that is essentially averaged over a larger portion of the site, rather than an exposure to specific selected locations. The overall result is that such sampling tends to bias risks high, in favor of areas of contamination, while long-term receptors would actually incur a lesser degree of exposure as a result of frequenting other, less impacted areas of the site.

No site-specific soil background study was conducted, so background comparison tests were limited to the available upgradient soil and groundwater sample data. Soil background comparisons were conducted in the Phase 1 RI Report and are not continued as part of this Phase 2 RI Report.

Sediment and Biota

Sediment contaminant concentrations were compared to reference concentrations measured at sample stations on the shoreline of Jamestown Island. Although a detailed statistical background evaluation was not conducted between the site data sets and reference data set, a clear signature of elevated

concentrations of metals and PCBs, and to a lesser extent, PAHs, was noted in locations that received waste discharges and overland releases from the site, as compared to reference data/background.

The sample distribution was improved during this second phase of the investigation, showing limits of the extent of contamination near the suspected discharge areas. These improvements do provide adequate data to support extent of contamination. However, there are some limitations on precision of the vertical thickness of contaminants as a result of debris in the matrix and compaction during sampling.

There are uncertainties associated with some contaminants detected in shellfish tissue, particularly metals. It is noted that crab tissue contains higher concentrations of metals than clam and mussel tissue, and this is likely to be simple variation in the species. Use of species-specific reference data collected during Phase 2 activities helps to resolve tissue concentrations at the site that are above what would normally be present in clam, mussel, and crab tissues.

7.3.2 Risk Characterization Uncertainties

At this site, the distribution of sampling locations in some media of interest affects whether the data set is considered representative of potential site conditions for exposed human receptors, and thus impacts the uncertainty for risk estimation. Significant uncertainties associated with the HHRA are discussed in the Phase 1 Report (Tetra Tech, December 2006).

Significant uncertainties associated with the BERA are detailed in Section 6, and include the following:

- Measurement endpoints used in the ERA used surrogate species. For example, mortality of a herring gull was used to assess mortality of the whole piscivorous bird population. However, predicting mortality to a herring gull may either under or overprotect the overall population, resulting from differences in ingestion rates, toxicity, food preferences, etc. of the different species.

- The chemical dose to terrestrial wildlife is estimated using an equation that incorporates ingestion rates, body weights, bioaccumulation factors, and other exposure factors for representative target species. These exposure factors are obtained from literature studies or predicted using various equations. Ingestion rates and body weights vary between species, especially between species inhabiting different areas.

- Bioaccumulation of chemicals into tissue of various species (i.e., clams, mussels, crabs) depends on characteristics of the tissue itself. These uncertainties were reduced by collecting tissue samples for incorporation into the food chain model.

- There is uncertainty in the use of toxicity test data, especially when sediments are manipulated and exposed to oxygen.

- In this study, there was a poor dose-response relationship between the chemical concentrations in the sediment and the observed toxicity. This results in uncertainty of whether the chemicals are responsible for the toxicity. This is likely partially due to the low concentrations of chemicals in the sediment samples taken with the toxicity samples.

- There are several chemicals that had elevated detections in the 2005 samples that were not replicated in the samples collected for toxicity analysis, and high concentrations detected in 2009 were not replicated in 2010. This indicates high heterogeneity in the sediment itself.

- Uncertainty exists in the ecological effects data, including the screening levels and wildlife TRVs. Several of the screening levels are very conservative, and typically are based on studies where the bioavailability of the chemical is much greater than it is in the natural environment or are based on species other than the endpoint species at the site.

- Uncertainty exists in how the predicted risks to a species at the sites translate into risk to the population in the area as a whole.

7.4 CONCLUSIONS

This section provides conclusions from the Phase 1 RI as augmented by the Phase 2 RI findings.

Soil

Elevated concentrations of PAHs and metals are present within vaults and sumps in the foundation of former Building 32 found during the Phase 1 RI. These soils are confined, and can be easily obtained through excavation.

Soils with elevated concentrations of metals and petroleum in soil are present in the southwest corner of Building 32, near the former locations of the dust collection storage building and acid storage shed. This area is limited in extent, and the source of the petroleum is presumed to be a result of localized releases from these materials storage areas. The source of the metals is presumed to be the former dust collection building associated with the sandblasting booth adjacent to the electroplating rooms.

Very localized areas of surface soils near the former riggers storage house (Former Building 41) appear to be impacted with PAHs (maximum concentration of 104 mg/kg) and PCBs (maximum concentration 1.8 mg/kg). PAHs and PCBs are likely a result of former releases in this area. Remaining impacted soils are limited and located very close to the rigging platform, which is structurally unsound. Additionally, these soils are not expected to impact the adjacent marine sediments in the Stillwater Basin: the adjacent sediments already contain PCBs and PAHs above the concentrations measured in the soil.

Residual contaminants may also be present in underground utilities present at the site, including the sewer systems, the trench drain, and other drainage systems under and around Building 32 (Tetra Tech, December 2006).

There is a predicted elevated risk to the current industrial worker, as the result of the presence of PAHs and arsenic in surface soil at the site. There is a predicted risk to future industrial workers and future construction workers, posed by PAHs and metals in subsurface soil described above.

The screening level ERA conducted in 2006 on the terrestrial invertebrates identified possibility for mortality of soil invertebrates from metals and PAHs, and possibility for the uptake of zinc by insectivorous birds. However, during the planning meetings for the BERA in 2008, this was revisited, and it was recognized that most of the high PAHs and metals in surface soil were limited to small areas of fill within former sumps at the former Building 32, and in the south west corner of Building 32. It was determined at that time that based on the limitations of the affected area; the BERA did not need to investigate the surface soils further.

Groundwater

Overall, groundwater contaminant levels do not exceed the federal MCLs, with the exception of two contaminants, pentachlorophenol and tetrachloroethene, both found in the shallow overburden groundwater at low concentrations. Based on the estimated local hydraulic gradient of the shallow overburden aquifer, it is likely that these contaminants are moving toward the northeast shoreline with groundwater flow. As the contaminants move with groundwater to the northeast, they will degrade and eventually discharge to the bay, and be lost through dilution upon discharge to the surface water (Tetra Tech 2006).

There are no known current groundwater exposure pathways that are predicted to pose a risk to human receptors. Past use of groundwater for potable use is limited. Production wells were installed but the yield was inadequate for the planned use, and while they are still in place, they are not operational. There are currently no groundwater drinking water supplies at the island, and no such future use is planned for groundwater at the site; therefore, there is no current or anticipated exposure via a potable water source.

Potential future exposures to volatiles in groundwater through vapor intrusion into indoor air spaces were eliminated as a complete exposure pathway because all buildings on site have been demolished and there is no plan for reuse of the site. Human health risks from groundwater are limited to future construction workers digging within the shallow water table containing PAHs, PCBs, and pentachlorophenol (Tetra Tech, December 2006).

Sediment

High concentrations of PCBs and PAHs were noted in the sediment in the Stillwater Basin, particularly adjacent to the former rigging platform. Toxicity appears to be associated with some of the stations where these higher concentrations of PCBs and PAHs are present in sediment in the Stillwater Basin. It is noted that toxicity was also measured at stations where PAHs and PCBs are present in intertidal sediment at the Northeast Shoreline, and at two stations at the Northwest Shoreline; however, these were not correlated to elevated contaminant concentrations. Sediment concentrations compared to the LOEC and NOEC values developed from the toxicity data indicated that toxic effects are associated with sediment in the Stillwater Basin, close to the former rigging platform.

Toxicity was not found to be correlated with concentrations of metals in sediment, and data generally do not show metals to be highly concentrated in the surface sediment. As such, metals in sediment are not likely to present a significant concern for ecological receptors at this site

Based on the human health risk assessment, chromium in the intertidal sediment is predicted to pose a human health risk from potential future recreational use of the site by children. However, chromium contamination in the sediment (Figures 4-16 though 4-20) seems to be intermittent and limited to the areas immediately adjacent to the former pipe discharge (SD304F).

The unstable shoreline and deteriorated structures to the north of the site pose the possibility of future disturbance, covering, or mobilization of these sediments. The possibility of movement of sediment under different conditions is evaluated in the sediment transport model included in the FS report (Tetra Tech, 2011).

Shellfish

PCBs were found in clams, mussels, and crabs near the site. In regards to human health, concentrations measured were below FDA standards for food sources. Application of recreational and subsistence fishing ingestion scenarios suggests a possible risk of health effects to these receptors from repeatedly eating shellfish collected from this area due to PCBs, PAHs, arsenic, and thallium found in shellfish

samples collected. However reference clam and crab tissue data collected in 2010 now shows that arsenic concentrations at the site are below reference concentrations. If arsenic was thus eliminated from the risks calculated for shellfish ingestion, most of these shellfish ingestion risks would be dismissed. In conclusion, PCBs in shellfish tissue may be of concern to human health, and PAHs and thallium are likely to be less so.

In regards to ecological risk, tissue samples indicated the presence of PCBs that are likely originating from the site. Cadmium, chromium, manganese, vanadium and zinc were also found within tissue samples that exceeded literature-based ecological "no effects" concentrations. However, as noted above, most concentrations measured in tissue at the site were within ranges measured in tissue reference samples. Other site tissue concentrations were below most literature-based effects values, indicating a low potential for site related risk.

7.5 RECOMMENDATIONS

Based on the findings of the Phase 1 RI, and the findings of the Phase 2 RI and BERA, there is a potential for human health risk at Site 17 from:

- PCBs, PAHs, and pentachlorophenol in water trapped within soil-debris in sumps that pose risk to future industrial and construction workers under a conservative trench-air modeling scenario.
- Chromium in intertidal sediment, that poses risk to future recreational visitors.
- PCBs, PAHs, and thallium in shellfish.

In addition, because MCLs for pentachlorophenol and tetrachloroethene are each exceeded in one well at the site, there is presumed, but not measured risk to human receptors who might utilize the overburden groundwater as a potable source.

There is a potential for ecological risk from:

- Total PCBs in sediment.
- Total PAHs in sediment.
- Combined exposure to arsenic, cadmium, chromium, copper, lead, nickel, zinc, PAHs, and PCBs in sediment, measured as ERM-Q (risk is not measured for individual constituents).

It is recommended that a FS be developed to evaluate remedial alternatives to address these risks, and to refine the COPCs and develop a list of COCs, as follows:

As stated in the Phase 1 RI report and the screening level ecological risk assessment, no COPCs were retained for further evaluation based on ecological receptors' exposure to constituents in surface soil samples collected.

PCBs should be considered COPCs for sediment, measured either as Aroclors or homologs, in total or individually.

PAHs are evaluated for human health risk separately, and a refinement step may be appropriate to determine those which can be the focal point for a remedy within each medium. However, it is understood that the PAHs in sediment at this site are commingled with one another. The PAHs in sediment can be addressed as a group using total PAHs as the measurement endpoint, because ecological risk is based on the total PAH value.

Pentachlorophenol is a COPC for construction worker exposure to water trapped within a confined trench.

Actions that are appropriate to address the risks stated above and to address ARARs (such as MCLs and RIDEM direct exposure criteria for contaminants to which risk was not measured) will need to be considered as appropriate in the FS.

The possibility of movement of sediment under different conditions is evaluated in the sediment transport model included in the FS report (Tetra Tech, 2011).

TABLES

TABLE 2-1
RATIONALE FOR SELECTION OF SOIL BORING LOCATIONS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Boring/ Well ID	Location	Justification
GI-SB401	Southwest corner of site, northeast of former coal pile	Determine presence and type of petroleum contamination in soils upgradient of the southwest corner of former Building 32, and determine presence of elevated metals at the upgradient boundary of the site near the former dust collection building and former acid storage shed.
GI-SB402	Southwest corner of site, east of former coal pile	
GI-SB403		
GI-SB404		
GI-SB405	Southwest corner of site, southeast of former coal pile	
GI-SB406	Southwest corner of site, south of former Building 33 (Power Plant) and north of the former coal pile	
GI-SB407	Southwest corner of site, west of the former Building 33 (Power Plant)	
GI-SB408	Southwest corner of site, south of former Building 33 (Power Plant) and north of the former coal pile	
GI-SB409	Southwest corner of site, west of former Building 33 (Power Plant) and north of the former coal pile	
GI-SB410	Northern end of site, adjacent to the former rigging platform	Determine if remnant PCBs, as well as PAHs and metals, are present in surface or subsurface soil in the vicinity of the former PCB release area near the former rigging platform, and to help determine if any residual PCBs were present in soil at the location following the removal action conducted in 2004.
GI-SB411		
GI-SB412		
GI-SB413		

TABLE 2-2
SOIL BORING AND SOIL SAMPLE SUMMARY
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

BORING LOCATION	DEPTH INTERVAL	SPLIT BARREL SCREENING	HEADSPACE SCREENING	LABORATORY SAMPLE ID
SB401	0-2	0.0	0.0	GI-SB401-0006, GI-SB401-1218
	2-4	0.0	0.0	GI-SB401-2430, GI-SB401-4248
	4-6	0.0	0.0	
	6-8	0.0	0.0	
	8-10	0.0	0.0	
	10-12	0.0	0.0	
	12-14	0.0	0.0	
	14-16	0.0	0.0	
	16-18	0.0	0.0	
SB402	0-2	0.0	0.0	GI-SB402-0006, GI-SB402-1218
	2-4	1.5	30.0	GI-SB402-2430, GI-SB402-4248
	4-6	10.0	333.0	
	6-8	0.5	129.0	
	8-10	0.0	60.7	
	10-12	0.0	6.1	
	12-14	0.0	3.8	
SB403	0-2	0.0	0.0	GI-SB403-0006, GI-SB403-1218
	2-4	0.0	0.0	GI-SB403-2430, GI-SB403-4248
	4-6	0.0	0.0	
	6-8	0.0	0.0	
	8-10	0.0	0.0	
	10-12	0.0	0.0	
	12-14	0.0	0.0	
SB404	0-2	0.0	1.7	GI-SB404-0006, GI-SB404-1218
	2-4	4.4	135.0	GI-SB404-2430, GI-SB404-4248
	4-6	46.0	800.0	
	6-8	0.0	2.0	
	8-10	0.0	0.0	
	10-12	0.0	0.0	
SB405	0-2	0.0	0.0	GI-SB405-0006, GI-SB405-1218
	2-4	0.0	0.0	GI-SB405-2430, GI-SB405-4248
	4-6	0.0	0.0	
	6-8	0.0	0.0	
	8-10	0.0	0.0	
	10-12	0.0	0.0	
SB406	0-2	0.0	0.0	GI-SB406-0006, GI-SB406-1218
	2-4	0.0	0.0	GI-SB406-2430, GI-SB406-4248
	4-6	NO RECOVERY		
	6-8	0.0	0.0	
	8-10	0.0	0.0	
	10-13	0.0	0.0	
	13-15	0.0	0.0	
	15-17	0.0	0.0	
	18-20	0.0	0.0	
	20-22	0.0	0.0	

TABLE 2-2
SOIL BORING AND SOIL SAMPLE SUMMARY
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

BORING LOCATION	DEPTH INTERVAL	SPLIT BARREL SCREENING	HEADSPACE SCREENING	LABORATORY SAMPLE ID
SB407	0-2	0.0	0.0	GI-SB407-0006, GI-SB407-1218
	2-4	0.0	0.0	GI-SB407-2430, GI-SB407-4248
	4-6	0.0	0.0	
	6-8	0.0	0.0	
	8-10	0.0	0.0	
	10-12	0.0	0.0	
	12-14	0.0	0.0	
	14-16	0.0	0.0	
	16-18	0.0	0.0	
SB408	0-2	0.0	0.0	GI-SB408-0006, GI-SB408-1218
	2-4	0.0	0.0	GI-SB408-2430, GI-SB408-4248
	4-6	0.0	0.0	
	6-8	0.0	0.0	
	8-10	0.0	0.0	
	10-11	0.0	0.0	
	11-13	0.0	0.0	
	13-15	0.0	0.0	
	15-17	0.0	0.0	
	17-19	0.0	0.0	
SB409	0-2	0.0	0.0	GI-SB409-0006, GI-SB409-1218
	2-4	0.0	0.0	GI-SB409-2430
	4-6	0.0	0.0	GI-SB409-4854
	6-9	0.0	0.0	
	9-11	0.0	0.0	
	11-13	0.0	0.0	
	13-15	0.0	0.0	
	15-17	0.0	0.0	
SB410	0-2	0.0	0.0	GI-SB410-0012
	2-4	0.0	0.0	
	4-6	0.0	0.0	GI-SB410-6072
	6-8	0.0	0.0	
	8-10	0.0	0.0	
	10-12	0.0	0.0	
	12-14	0.0	0.0	
	14-16	0.0	0.0	
	16-18	0.0	0.0	
	18-20	0.0	0.0	
	20-22	0.0	0.0	
SB411	0-2	0.0	0.0	GI-SB411-0012
	2-4	0.0	0.0	
	4-6	0.0	1.6	GI-SB411-3648
	6-8	0.0	0.1	
	8-10	0.0	0.1	
	10-12	0.0	0.0	
	12-14	0.0	0.1	
	14-16	0.0	0.1	
	16-18	0.0	0.0	
	18-20	0.0	0.0	
	20-22	0.0	0.0	

TABLE 2-2
SOIL BORING AND SOIL SAMPLE SUMMARY
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

BORING LOCATION	DEPTH INTERVAL	SPLIT BARREL SCREENING	HEADSPACE SCREENING	LABORATORY SAMPLE ID
SB412	0-2	0.0	0.1	GI-SB412-0012
	2-4	0.0	0.0	
	4-6	0.0	0.0	
	6-8	0.0	0.0	GI-SB412-7296
	8-10	0.0	0.0	
	10-12	0.0	0.0	
	12-14	0.0	0.0	GI-SB412-144156
	14-16	0.0	0.1	
	16-18	0.0	0.0	
	18-20	0.0	0.0	
	20-22	0.0	0.0	
	22-23	0.0	0.0	
	23-25	0.0	0.0	
SB413	0-2	0.0	0.0	GI-SB413-0012
	2-4	0.0	0.0	
	4-6	0.0	0.0	
	6-8	0.0	0.0	GI-SB413-7296
	8-10	0.0	0.0	
	10-12	0.0	0.0	
	12-14	0.0	0.0	
	14-16	0.0	0.0	
	16-18	0.0	0.0	
	18-20	0.0	0.1	
	20-22	0.0	0.0	

TABLE 2-3
RATIONALE FOR SEDIMENT SAMPLE LOCATIONS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

EXTENT OF CONTAMINATION SAMPLES

Stillwater Area		
Sample ID	**Location**	**Justification**
GI-SD401	Stillwater Area, adjacent to the former rigging platform. These locations are all part of a 60 foot grid.	Determine the extent of previously detected PAHs, PCBs, and metals in the Stillwater Area. All samples are part of a series of samples that are arranged into a grid to determine the extent of contamination in sediment where rigging and heavy boat traffic operations formerly occurred.
GI-SD402		
GI-SD403		
GI-SD404		
GI-SD405		
GI-SD406		
GI-SD407		
GI-SD408		
GI-SD409		
GI-SD410		
GI-SD411		
GI-SD412		
GI-SD413	Stillwater Area. This location is part of a 120 foot grid.	This location is one of a series of samples that are arranged into a grid to determine the extent of potential contamination in sediment throughout the Stillwater Area.
GI-SD414		
GI-SD415		
GI-SD416		
GI-SD417		
GI-SD418		
GI-SD419		
GI-SD420		

TABLE 2-3
RATIONALE FOR SEDIMENT SAMPLE LOCATIONS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

EXTENT OF CONTAMINATION SAMPLES

Northeast Shoreline		
Sample ID	**Location**	**Justification**
GI-SD421	Northeast shoreline, adjacent to Phase 1 RI sediment location SD317	To determine the extent of cadmium contamination previously detected at location SD317
GI-SD422	Northeast shoreline, adjacent to Phase 1 RI sediment location SD317	
GI-SD423	Northeast shoreline, adjacent to Phase 1 RI sediment location SD317	
GI-SD424	Northeast shoreline, adjacent to Phase 1 RI sediment location SD310	To resolve the extent of PAH, PCB, and metals contamination at a former outfall areas as well as off-shore of and between Phase 1 sediment sample stations on the northeast shoreline.
GI-SD425	Northeast shoreline, offshore from the Phase 1 RI sediment location SD310	
GI-SD426	Northeast shoreline, between Phase 1 RI sediment locations SD310 and SD309.	
GI-SD427	Northeast shoreline, between Phase 1 RI sediment locations SD310 and SD309.	
GI-SD428	Northeast shoreline, between Phase 1 RI sediment locations SD310 and SD309.	
GI-SD429	Northeast shoreline, offshore from the Phase 1 RI sediment location SD309.	
GI-SD430	Northeast shoreline, between Phase 1 RI sediment locations SD309 and SD306.	
GI-SD431	Northeast shoreline, between Phase 1 RI sediment locations SD309 and SD306.	
GI-SD432	Northeast shoreline, offshore from Phase 1 RI sediment locations SD306 and SD305.	
GI-SD433	Northeast shoreline, offshore from Phase 1 RI sediment location SD305.	
GI-SD434	Northeast shoreline, between Phase 1 RI sediment locations SD305 and SD304.	
GI-SD435	Northeast shoreline, offshore from Phase 1 RI sediment location SD304.	
GI-SD436	Northeast shoreline, south of Phase 1 RI sediment location SD304.	
GI-SD437	Northeast shoreline, south of Phase 1 RI sediment location SD304.	
GI-SD438	Northeast shoreline, south of Phase 1 RI sediment location SD304.	

TABLE 2-3
RATIONALE FOR SEDIMENT SAMPLE LOCATIONS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

EXTENT OF CONTAMINATION SAMPLES

GI-SD446	Northeast shoreline, east of former outfall area	To resolve the nearshore extent of PAH and metals contamination at a suspected former source area on the northeast shoreline.
GI-SD447	Northeast shoreline, east of the former Bldg 54	
GI-SD448	Northeast shoreline, east of former Bldg 38	
GI-SD449	Northeast shoreline, east of former Bldg 50	
GI-SD450	Northeast shoreline, east of former Riggers Storage Bldg	
Northwest Shoreline		
Sample ID	**Location**	**Justification**
GI-SD439	Northwest shoreline between Phase 1 RI	To resolve the extent of PAH and metals contamination at a former outfall areas as well as offshore of, and between Phase 1 sediment sample locations on the northwest shoreline.
GI-SD440	Northwest shoreline, offshore from Phase 1 RI sediment location SD313.	
GI-SD441	Northwest shoreline, south of Phase 1 RI sediment location SD313.	
GI-SD442	Northwest shoreline, south of Phase 1 RI sediment location SD302F.	
GI-SD443	Northwest shoreline, south of Phase 1 RI sediment location SD308.	
GI-SD444	Northwest shoreline, south of Phase 1 RI sediment location SD302.	
GI-SD445	Northwest shoreline, offshore from Phase 1 RI sediment location SD302.	
Reference Locations		
Sample ID	**Location**	**Justification**
GI-JCC-01	Cranston Cove, Jamestown	Candidate Reference Location
GI-JCC-02	Cranston Cove, Jamestown	Candidate Reference Location
GI-JCC-04	Cranston Cove, Jamestown	Candidate Reference Location
GI-JPC-01	Potter Cove, Jamestown	Candidate Reference Location
GI-JPC-02	Potter Cove, Jamestown	Candidate Reference Location
GI-JPC-03	Potter Cove, Jamestown	Candidate Reference Location

TABLE 2-3
RATIONALE FOR SEDIMENT SAMPLE LOCATIONS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

EXTENT OF CONTAMINATION SAMPLES

Other Locations		
Sample ID	**Location**	**Justification**
GI-SD304	Northeast Shoreline	Deep core sample to establish vertical extent by regulatory request – anticipate four samples at six inch vertical intervals
GI-SD311	South Area	Deep core sample to establish vertical extent by regulatory request – anticipate four samples at six inch vertical intervals
ECOLOGICAL SEDIMENT SAMPLES		
Stillwater Area		
Sample ID	**Location**	**Justification**
GI-SD501	GI-SD406	To be used in the Baseline Ecological Risk Assessment
GI-SD502	GI-SD402	
GI-SD503	GI-SD419	
GISD504	GI-SD413	
GI-SD505	GI-SD404	
GI-SD506	GI-SD408	
GI-SD507	GI-SD410	
GI-SD508	GI-SD508	
GI-SD509	GI-SD411	
GI-SD527	GI-SD414	
GI-SD532	GI-SD401	
Northeast Shoreline		
Sample ID	**Location**	**Justification**
GI-SD510	GI-SD310D	To be used in the Baseline Ecological Risk Assessment
GI-SD511	GI-SD304F	
GI-SD512	GI-SD309F	
GI-SD513	GI-SD309A	
GI-SD514	GI-SD432	
GI-SD515	GI-SD434	
GI-SD517	GI-SD437	
GI-SD518	GI-SD447	
GI-SD519	GI-SD519	
GI-SD566	GI-SD435	
GI-SD530	GI-SD317	
GI-SD528	GI-SD306B	
GI-SD531	GI-SD306F	

TABLE 2-3
RATIONALE FOR SEDIMENT SAMPLE LOCATIONS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

EXTENT OF CONTAMINATION SAMPLES

Northwest Shoreline		
Sample ID	**Location**	**Justification**
GI-SD520	GI-SD308E	To be used in the Baseline Ecological Risk Assessment
GI-SD521	GI-SD308F	
GI-SD522	GI-SD313D	
GI-SD523	GI-SD313F	
South end of Island		
Sample ID	**Location**	**Justification**
GI-SD529	GI-SD314	To be used in the Baseline Ecological Risk Assessment
Potter Cove or Cranston Cove, Jamestown		
Sample ID	**Location**	**Justification**
GI-SD524	GI-JPC01	To be used in the Baseline Ecological Risk Assessment as a reference condition, see Figure 11-4.
GI-SD525	GI-JPC02	
GI-SD526	GI-JCC04	

TABLE 2-4
SEDIMENT SAMPLE SUMMARY
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

LOCATION	ASSOCIATED SAMPLES	COLLECTION DATE	MEDIA	COMMENTS
STILLWATER AREA				
SD401	GI-SD401-0006	10/9/2009	SEDIMENT	depth interval 0-16 inches
	GI-SD401-0612	10/9/2009	SEDIMENT	depth interval 16-32 inches
	GI-SD401-1218	10/9/2009	SEDIMENT	depth interval 32-48 inches
	GI-SD532-0006	5/3/2010	SEDIMENT	depth interval 0-6 inches
SD402	GI-SD402-0006	10/9/2009	SEDIMENT	depth interval 0-24 inches
	GI-SD402-0612	10/9/2009	SEDIMENT	depth interval 24-48 inches
	GI-SD502-0006	5/3/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET502-0510	5/26/2010	BIOTA	mussels
SD403	GI-SD403-0006	10/9/2009	SEDIMENT	depth interval 0-48 inches
SD404	GI-SD404-0006	10/9/2009	SEDIMENT	depth interval 0-8.5 inches
	GI-SD404-0612	10/9/2009	SEDIMENT	depth interval 8.5-17 inches
	GI-SD404-1824	10/9/2009	SEDIMENT	depth interval 25.5-34 inches
	GI-SD404-2834	10/9/2009	SEDIMENT	depth interval 39.5-48 inches
	GI-SD505-0006	5/4/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET505-0510	5/26/2010	BIOTA	mussels
SD405	GI-SD405-0006	10/9/2009	SEDIMENT	depth interval 0-16 inches
	GI-SD405-0612	10/9/2009	SEDIMENT	depth interval 16-32 inches
	GI-SD405-1218	10/9/2009	SEDIMENT	depth interval 32-48 inches
SD406	GI-SD406-0006	10/9/2009	SEDIMENT	depth interval 0-24 inches
	GI-SD406-0612	10/9/2009	SEDIMENT	depth interval 24-48 inches
	GI-SD501-0006	4/30/2010	SEDIMENT	depth interval 0-6 inches
SD407	GI-SD407-0006	10/9/2009	SEDIMENT	depth interval 0-24 inches
	GI-SD407-0612	10/9/2009	SEDIMENT	depth interval 24-48 inches
SD408	GI-SD408-0006	10/13/2009	SEDIMENT	depth interval 0-15.2 inches
	GI-SD408-0612	10/13/2009	SEDIMENT	depth interval 15.2-30.4 inches
	GI-SD408-1218	10/13/2009	SEDIMENT	depth interval 30.4-45.5 inches
	GI-SD506-0006	5/4/2010	SEDIMENT	depth interval 0-6 inches
SD409	GI-SD409-0006	10/13/2009	SEDIMENT	depth interval 0-6 inches
	GI-SD409-0612	10/13/2009	SEDIMENT	depth interval 6-12 inches
	GI-SD409-1824	10/13/2009	SEDIMENT	depth interval 18-24 inches
	GI-SD409-4248	10/13/2009	SEDIMENT	depth interval 42-48 inches
SD410	GI-SD410-0006	10/13/2009	SEDIMENT	depth interval 0-9 inches
	GI-SD410-0612	10/13/2009	SEDIMENT	depth interval 9-18 inches
	GI-SD410-1824	10/13/2009	SEDIMENT	depth interval 27-36 inches
	GI-SD410-2632	10/13/2009	SEDIMENT	depth interval 39-48 inches
	GI-SD507-0006	4/30/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET507-0610	6/4/2010	BIOTA	spider crabs
SD411	GI-SD411-0006	10/13/2009	SEDIMENT	depth interval 0-10.3 inches
	GI-SD411-0612	10/13/2009	SEDIMENT	depth interval 10.3-20.6 inches
	GI-SD411-1218	10/13/2009	SEDIMENT	depth interval 20.6-30.9 inches
	GI-SD411-1824	10/13/2009	SEDIMENT	depth interval 30.9-41.1 inches
	GI-ET509-0610	6/4/2010	BIOTA	spider crabs
	GI-SD509-0006	4/30/2010	SEDIMENT	depth interval 0-6 inches
SD412	GI-SD412-0006	10/9/2009	SEDIMENT	depth interval 0-12 inches
	GI-SD412-0612	10/9/2009	SEDIMENT	depth interval 12-24 inches
	GI-SD412-1218	10/9/2009	SEDIMENT	depth interval 24-36 inches
	GI-SD412-1824	10/9/2009	SEDIMENT	depth interval 36-48 inches

TABLE 2-4
SEDIMENT SAMPLE SUMMARY
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

LOCATION	ASSOCIATED SAMPLES	COLLECTION DATE	MEDIA	COMMENTS
SD413	GI-SD413-0006	10/6/2009	SEDIMENT	depth interval 0-24 inches
	GI-SD413-0612	10/6/2009	SEDIMENT	depth interval 24-48 inches
	GI-SD504-0006	4/30/2010	SEDIMENT	depth interval -06 inches
	GI-ET504-0510	5/26/2010	BIOTA	hardshell clams
SD414	GI-SD414-0006	10/12/2009	SEDIMENT	depth interval 0-11.1 inches
	GI-SD414-0612	10/12/2009	SEDIMENT	depth interval 11.1-22.2 inches
	GI-SD414-1218	10/12/2009	SEDIMENT	depth interval 22.2-33.2 inches
	GI-SD414-1824	10/12/2009	SEDIMENT	depth interval 33.2-44.3 inches
	GI-ET527-0610	6/4/2010	BIOTA	spider crabs
	GI-SD527-0006	4/30/2010	SEDIMENT	depth interval 0-6 inches
SD415	GI-SD415-0006	10/12/2009	SEDIMENT	depth interval 0-6 inches
	GI-SD415-0612	10/12/2009	SEDIMENT	depth interval 6-12 inches
	GI-SD415-1824	10/12/2009	SEDIMENT	depth interval 18-24 inches
	GI-SD415-4248	10/12/2009	SEDIMENT	depth interval 42-48 inches
SD416	GI-SD416-0006	10/12/2009	SEDIMENT	depth interval 0-18 inches
	GI-SD416-0612	10/12/2009	SEDIMENT	depth interval 18-36 inches
	GI-SD416-1218	10/12/2009	SEDIMENT	depth interval 36-48 inches
SD417	GI-SD417-0006	10/12/2009	SEDIMENT	depth interval 0-15.2 inches
	GI-SD417-0612	10/12/2009	SEDIMENT	depth interval 15.2-30.4 inches
	GI-SD417-1218	10/12/2009	SEDIMENT	depth interval 30.4-45.5 inches
SD418	GI-SD418-0006	10/13/2009	SEDIMENT	depth interval 0-22.2 inches
	GI-SD418-0612	10/13/2009	SEDIMENT	depth interval 22.2-44.3 inches
SD419	GI-SD419-0006	10/13/2009	SEDIMENT	depth interval 0-9 inches
	GI-SD419-0612	10/13/2009	SEDIMENT	depth interval 9-19 inches
	GI-SD419-1824	10/13/2009	SEDIMENT	depth interval 27-36 inches
	GI-SD419-2632	10/13/2009	SEDIMENT	depth interval 39-48 inches
	GI-SD503-0006	4/30/2010	SEDIMENT	depth interval 0-6 inches
SD420	GI-SD420-0006	10/13/2009	SEDIMENT	depth interval 0-19.2 inches
	GI-SD420-0612	10/13/2009	SEDIMENT	depth interval 19.2-38.4 inches
SD508	GI-SD508-0006	5/3/2010	SEDIMENT	depth interval 0-6 inches
NORTHEAST SHORELINE				
SD304	GI-SD304-0006	5/13/2010	SEDIMENT	depth interval 0-6 inches
SD304F	GI-SD511-0006	4/30/2010	SEDIMENT	depth interval 0-6 inches
SD306B	GI-SD528-0006	5/13/2010	SEDIMENT	depth interval 0-6 inches
SD306F	GI-SD531-0006	5/13/2010	SEDIMENT	depth interval 0-6 inches
SD309A	GI-SD513-0006	5/13/2010	SEDIMENT	depth interval 0-6 inches
SD309F	GI-SD512-0006	5/13/2010	SEDIMENT	depth interval 0-6 inches
SD310D	GI-SD510-0006	4/30/2010	SEDIMENT	depth interval 0-6 inches
SD317	GI-SD530-0006	5/13/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET530-0510	5/26/2010	BIOTA	mussels
SD421	GI-SD421-0006	10/5/2009	SEDIMENT	depth interval 0-6 inches
SD422	GI-SD422-0006	9/21/2009	SEDIMENT	depth interval 0-6 inches
SD423	GI-SD423-0006	10/5/2009	SEDIMENT	depth interval 0-6 inches
SD424	GI-SD424-0006	10/5/2009	SEDIMENT	depth interval 0-6 inches
SD425	GI-SD425-0006	9/21/2009	SEDIMENT	depth interval 0-6 inches
SD426	GI-SD426-0006	10/5/2009	SEDIMENT	depth interval 0-6 inches
SD427	GI-SD427-0006	9/21/2009	SEDIMENT	depth interval 0-6 inches
SD428	GI-SD428-0006	9/21/2009	SEDIMENT	depth interval 0-6 inches
SD429	GI-SD429-0006	5/4/2010	SEDIMENT	depth interval 0-6 inches
SD430	GI-SD430-0006	9/21/2009	SEDIMENT	depth interval 0-6 inches
SD431	GI-SD431-0006	10/5/2009	SEDIMENT	depth interval 0-6 inches

TABLE 2-4
SEDIMENT SAMPLE SUMMARY
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

LOCATION	ASSOCIATED SAMPLES	COLLECTION DATE	MEDIA	COMMENTS
SD432	GI-SD432-0006	9/21/2009	SEDIMENT	depth interval 0-6 inches
	GI-ET514-0610	6/4/2010	BIOTA	spider crabs
	GI-SD514-0006	4/30/2010	SEDIMENT	depth interval 0-6 inches
SD433	GI-SD433-0006	9/21/2009	SEDIMENT	depth interval 0-6 inches
SD434	GI-SD434-0006	9/21/2009	SEDIMENT	depth interval 0-6 inches
	GI-SD515-0006	4/30/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET515-0610	6/4/2010	BIOTA	spider crabs
SD435	GI-SD435-0006	9/21/2009	SEDIMENT	depth interval 0-6 inches
	GI-SD566-0006	4/30/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET566-0510-A	5/27/2010	BIOTA	hardshell clams (small)
	GI-ET566-0510-B	5/27/2010	BIOTA	hardshell clams (large)
SD436	GI-SD436-0006	9/21/2009	SEDIMENT	depth interval 0-6 inches
SD437	GI-SD437-0006	9/21/2009	SEDIMENT	depth interval 0-6 inches
	GI-SD517-0006	5/13/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET517-0510	5/27/2010	BIOTA	mussels
SD438	GI-SD438-0006	5/13/2010	SEDIMENT	depth interval 0-6 inches
SD446	GI-SD446-0006	9/22/2009	SEDIMENT	depth interval 0-6 inches
SD447	GI-SD447-0006	9/22/2009	SEDIMENT	depth interval 0-6 inches
	GI-SD518-0006	5/3/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET518-0510	5/27/2010	BIOTA	mussels
SD448	NO SEDIMENT AVAILABLE			
SD449	GI-SD449-0006	9/22/2009	SEDIMENT	depth interval 0-6 inches
SD450	GI-SD450-0006	9/22/2009	SEDIMENT	depth interval 0-6 inches
SD519	GI-SD519-0006	5/4/2010	SEDIMENT	depth interval 0-6 inches
NW SHORELINE				
SD308E	GI-SD520-0006	5/13/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET520-0610	6/2/2010	BIOTA	hardshell clams
SD308F	GI-SD521-0006	5/13/2010	SEDIMENT	depth interval 0-6 inches
SD313D	GI-SD522-0006	5/13/2010	SEDIMENT	depth interval 0-6 inches
SD313F	GI-SD523-0006	5/13/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET523-0610	6/4/2010	BIOTA	green crabs
SD439	GI-SD439-0006	10/5/2009	SEDIMENT	depth interval 0-6 inches
SD440	GI-SD440-0006	10/5/2009	SEDIMENT	depth interval 0-6 inches
SD441	GI-SD441-0006	10/5/2009	SEDIMENT	depth interval 0-6 inches
SD442	GI-SD442-0006	10/5/2009	SEDIMENT	depth interval 0-6 inches
SD443	GI-SD443-0006	9/22/2009	SEDIMENT	depth interval 0-6 inches
SD444	GI-SD444-0006	9/22/2009	SEDIMENT	depth interval 0-6 inches
SD445	GI-SD445-0006	9/22/2009	SEDIMENT	depth interval 0-6 inches
REFERENCE				
JPC01	GI-JPC01-0006	9/23/2009	SEDIMENT	depth interval 0-6 inches
	GI-SD524-0006	5/3/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET524-0610 (2)	6/2/2010 & 6/4/2010	BIOTA	hardshell clams, spider crabs
JPC02	GI-JPC02-0006	9/23/2009	SEDIMENT	depth interval 0-6 inches
	GI-SD525-0006	5/3/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET525-0610 (2)	6/2/2010 & 6/4/2010	BIOTA	hardshell clams, green crabs
JPC03	GI-JPC03-0006	9/23/2009	SEDIMENT	depth interval 0-6 inches
JCC01	GI-JCC01-0006	9/23/2009	SEDIMENT	depth interval 0-6 inches
JCC02	GI-JCC02-0006	9/23/2009	SEDIMENT	depth interval 0-6 inches
JCC04	GI-JCC04-0006	9/23/2009	SEDIMENT	depth interval 0-6 inches
	GI-SD526-0006	5/3/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET526-0610 (2)	6/2/2010 & 6/4/2010	BIOTA	hardshell clams, spider crabs

TABLE 2-4
SEDIMENT SAMPLE SUMMARY
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

LOCATION	ASSOCIATED SAMPLES	COLLECTION DATE	MEDIA	COMMENTS
SOUTH				
SD314	GI-SD529-0006	5/4/2010	SEDIMENT	depth interval 0-6 inches
	GI-ET529-0610	6/2/2010	BIOTA	hardshell clams
SD311	GI-SD311-0006	5/13/2010	SEDIMENT	depth interval 0-6 inches

TABLE 2-5
STILLWATER AREA CORE SAMPLE PENETRATION AND RECOVERY
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVAL STATION, NEWPORT RI

LOCATION	PENETRATION (in)	RECOVERY (in)	*DEPTHS SAMPLED (in)
SD401	48	18	0-16 16-32 32-48
SD402	48	12	0-24 24-48
SD403	48	6	0-48
SD404	48	34	0-8.5 8.5-17 25.5-34 39.5-48
SD405	48	18	0-16 16-32 32-48
SD406	48	12	0-24 24-48
SD407	48	12	0-24 24-48
SD408	48	19	0-15.2 15.2-30.4 30.4-45.5
SD409	48	48	0-6 6-12 18-24 42-48
SD410	48	32	0-9 9-18 27-36 39-48
SD411	48	28	0-10.3 10.3-20.6 20.6-30.9 30.9-41.1
SD412	48	24	0-12 12-24 24-36 36-48
SD413	48	12	0-24 24-48
SD414	48	26	0-11.1 11.1-22.2 22.2-33.2 33.2-44.3
SD415	48	48	0-6 6-12 18-24 42-48
SD416	48	16	0-18 18-36 36-48
SD417	48	19	0-15.2 15.2-30.3 30.3-45.5
SD418	48	13	0-22.2 22.2-44.3
SD419	48	32	0-9 9-19 27-36 39-48
SD420	48	15	0-19.2 19.2-38.4

* Depths represent actual depth sampled calculated as described in the text.

TABLE 2-6
SUMMARY OF BIOTA SAMPLES
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	LOCATION	SPECIES			
		HARDSHELL CLAMS	MUSSELS	SPIDER CRABS	GREEN CRABS
Stillwater Area					
GI-SD502	GI-SD402		X		
GISD504	GI-SD413	X			
GI-SD505	GI-SD404		X		
GI-SD507	GI-SD410			X	
GI-SD509	GI-SD411			X	
GI-SD527	GI-SD414			X	
Northeast Shoreline					
GI-SD514	GI-SD432			X	
GI-SD515	GI-SD434			X	
GI-SD517	GI-SD437		X		
GI-SD518	GI-SD447		X		
GI-SD566	GI-SD435	X (2)			
GI-SD530	GI-SD317		X		
Northwest Shoreline					
GI-SD520	GI-SD308E	X			
GI-SD523	GI-SD313F				X
South end of Island					
GI-SD529	GI-SD314	X			
Potter Cove or Cranston Cove, Jamestown					
GI-SD524	GI-JPC01	X		X	
GI-SD525	GI-JPC02	X			X
GI-SD526	GI-JCC04	X		X	

TABLE 3-1
SUMMARY OF GRAIN SIZE ANALYSIS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

LOCATION		SAMPLE ID		GRAVEL	SAND	SILT/CLAY
NORTHEAST		SD429	GI-SD429-0006	2.1	88.9	9.0
	AVG	SD310D	GI-SD510-0006	24.8	74.3	0.9
GRAVEL	11.6	SD304F	GI-SD511-0006	1.5	90.5	8.0
SAND	77.0	SD309F	GI-SD512-0006	23.4	75.7	0.9
SILT/CLAY	11.4	SD309A	GI-SD513-0006	19.6	73.6	6.8
		SD432	GI-SD514-0006	13.8	46.3	39.9
		SD434	GI-SD515-0006	6.1	67.1	26.8
		SD437	GI-SD517-0006	0.7	80.3	19.0
		SD437	GI-SD-DUP03 (SD517)	1.6	92.2	6.2
		SD447	GI-SD518-0006	29.0	50.6	20.4
		SD519	GI-SD519-0006	2.2	93.6	4.2
		SD306B	GI-SD528-0006	3.4	89.4	7.2
		SD317	GI-SD530-0006	45.7	53.5	0.8
		SD306F	GI-SD531-0006	0.0	91.9	8.1
		SD435	GI-SD566-0006	0.0	86.9	13.1
STILLWATER		SD406	GI-SD501-0006	2.1	54.1	43.8
	AVG	SD402	GI-SD502-0006	11.9	87.6	0.5
GRAVEL	7.7	SD419	GI-SD503-0006	12.9	75.3	11.8
SAND	69.4	SD413	GI-SD504-0006	12.9	52.3	20.8
SILT/CLAY	21.8	SD404	GI-SD505-0006	0.2	61.6	38.2
		SD408	GI-SD506-0006	0.0	70.6	29.4
		SD410	GI-SD507-0006	0.0	58.5	41.5
		SD508	GI-SD508-0006	6.7	87.9	5.4
		SD508	GI-SD-DUP02 (SD508)	16.8	80.1	3.1
		SD411	GI-SD509-0006	1.7	72.1	26.2
		SD411	GI-SD-DUP01 (SD509)	0.5	74.3	25.2
		SD414	GI-SD527-0006	13.2	56.5	30.3
		SD401	GI-SD532-0006	21.2	71.2	7.6
NORTHWEST		SD308E	GI-SD520-0006	26.4	72.9	0.7
	AVG	SD308F	GI-SD521-0006	11.7	83.1	5.2
GRAVEL	18.4	SD313D	GI-SD522-0006	5.2	82.9	11.9
SAND	75.5	SD313F	GI-SD523-0006	30.3	63.2	6.5
SILT/CLAY	6.1					
SOUTH		SD314	GI-SD529-0006	4.6	86.8	8.6
REFERENCE		JPC01	GI-SD524-0006	0.8	79.3	19.9
	AVG	JPC02	GI-SD525-0006	3.8	55.0	41.2
GRAVEL	2.5	JCC04	GI-SD525-0006	2.9	83.8	13.3
SAND	72.7					
SILT/CLAY	24.8					

TABLE 4-1
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED WITHIN THE STILLWATER AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2005												
SEMIVOLATILES (UG/KG)												
2-METHYLNAPHTHALENE	4/4	6.8		59		26.7	G32-SD312-0.51.0	70	0	ND	4	NC
4-METHYLPHENOL	1/4	35	J	35	J	35	G32-SD312-0.51.0	NONE		NA		NC
ACENAPHTHENE	4/4	20		400		171	G32-SD312-0.51.0	16	4	3.9	4	NC
ACENAPHTHYLENE	4/4	52		810		309	G32-SD312-0.51.0	44	4	15	4	NC
ANTHRACENE	4/4	140		3000		1080	G32-SD312-0.51.0	85.3	4	18	4	NC
BENZO(A)ANTHRACENE	4/4	200		4900		1920	G32-SD312-0.51.0	261	3	61	4	NC
BENZO(A)PYRENE	4/4	300		2300		1070	G32-SD312-0.51.0	430	3	73	4	NC
BENZO(B)FLUORANTHENE	4/4	490		4900		2100	G32-SD312-0.51.0	1800	2	58	4	NC
BENZO(G,H,I)PERYLENE	4/4	99		1100		425	G32-SD312-0.51.0	670	1	48	4	NC
BENZO(K)FLUORANTHENE	4/4	210		2300		1150	G32-SD312-0.51.0	1800	1	52	4	NC
CARBAZOLE	4/4	64	J	1400		531	G32-SD312-0.51.0	NONE		NA		NC
CHRYSENE	4/4	300		8700		3590	G32-SD312-0.51.0	384	3	71	4	NC
DIBENZO(A,H)ANTHRACENE	4/4	35		250		112	G32-SD312-0.51.0	63.4	2	15	4	NC
DIBENZOFURAN	3/4	37	J	260	J	142	G32-SD312-0.51.0	NONE		NA		NC
FLUORANTHENE	4/4	700		28000		10200	G32-SD312-0.51.0	600	4	130	4	NC
FLUORENE	4/4	31		800		291	G32-SD312-0.51.0	19	4	7.2	4	NC
HIGH MOLECULAR WEIGHT PAHS	4/4	4040		75800		29700	G32-SD312-0.51.0	NONE		673	4	NC
INDENO(1,2,3-CD)PYRENE	4/4	110		1300		490	G32-SD312-0.51.0	600	1	45	4	NC
LOW MOLECULAR WEIGHT PAHS	4/4	540		12400		4940	G32-SD312-0.51.0	NONE		103.3	4	NC
NAPHTHALENE	4/4	10		100		46.8	G32-SD312-0.51.0	160	0	6.1	4	NC
PHENANTHRENE	4/4	280		7200		3010	G32-SD312-0.51.0	240	4	58	4	NC
PHENOL	1/4	35	J	35	J	35	G32-SD312-0.51.0	NONE		NA		NC
PYRENE	4/4	1600		22000		8600	G32-SD312-0.51.0	665	4	120	4	NC
TOTAL CARCINOGENIC PAHS-HALFND	4/4	1640		24600		10400	G32-SD312-0.51.0	NONE		375	4	NC
TOTAL CARCINOGENIC PAHS-POS	4/4	1640		24600		10400	G32-SD312-0.51.0	NONE		375	4	NC
TOTAL PAHS	4/4	4580		88100		34600	G32-SD312-0.51.0	NONE		770	4	NC
PCBS (UG/KG)												
AROCLOR-1260	4/4	8900		41000		23500	G32-SD312-0.51.0	22.7	4	ND	4	NC
TOTAL AROCLOR	4/4	8900		41000		23500	G32-SD312-0.51.0	22.7	4	ND	4	NC
METALS (MG/KG)												
ALUMINUM	4/4	5080		7780		6210	G32-SD316-0.51.0	18000	0	7460	1	NC
ARSENIC	4/4	3.8	J	6.1	J	4.68	G32-SD316-0.51.0	8.2	0	2.7	4	NC
BARIUM	4/4	17	J	25.3	J	21	G32-SD316-0.51.0	48	0	15.7	4	NC
BERYLLIUM	4/4	0.35		0.59		0.458	G32-SD316-0.51.0	NONE		0.405	3	NC
CALCIUM	4/4	10200	J	70800	J	42400	G32-SD312-0.51.0	NONE		32500	2	NC
CHROMIUM	4/4	14.8		31.5		21	G32-SD316-0.51.0	81	0	19.8	2	NC

TABLE 4-1
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED WITHIN THE STILLWATER AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
COBALT	4/4	2.4	J	3.8	J	3.02	G32-SD316-0.51.0	10	0	6	0	NC
COPPER	4/4	25.2		92.5		46.4	G32-SD316-0.51.0	34	2	15	4	NC
IRON	4/4	12100	J	17200	J	13700	G32-SD316-0.51.0	220000	0	16700	1	NC
LEAD	4/4	18.3	J	90.6	--	55.7	G32-SD316-0.51.0, G32-SD316-000.5	46.7	2	20.6	3	NC
MAGNESIUM	4/4	3160		3760		3370	G32-SD316-0.51.0	NONE		3810	0	NC
MANGANESE	4/4	115	J	155	J	130	G32-SD316-0.51.0	260	0	139	1	NC
MERCURY	4/4	0.042	J	0.22	J	0.126	G32-SD316-0.51.0	0.15	2	0.083	2	NC
NICKEL	4/4	7.7	J	12.5	J	9.88	G32-SD316-0.51.0	20.9	0	11.7	1	NC
POTASSIUM	4/4	1140	J	1690	J	1410	G32-SD316-0.51.0	NONE		1590	1	NC
SODIUM	4/4	5410	J	6700	J	6310	G32-SD312-0.51.0	NONE		6310	3	NC
VANADIUM	4/4	15.1	J	25.6	J	19.7	G32-SD316-0.51.0	57	0	20	2	NC
ZINC	4/4	55.6	J	144	J	90.7	G32-SD316-0.51.0	150	0	61.8	3	NC
TOC (MG/KG)												
TOTAL ORGANIC CARBON	4/4	14000	J	20000	J	16800	G32-SD316-000.5	NONE		11600	4	NC
							2009					
SEMIVOLATILES (UG/KG)												
2-METHYLNAPHTHALENE	35/60	2.78		41		13	GI-SD412-0006	70	0	ND	35	10.80689
ACENAPHTHENE	38/60	3.4	--	210		36.2	GI-SD416-0612	16	22	3.9	34	47.48917
ACENAPHTHYLENE	44/60	3.6		590	E	66.3	GI-SD406-0006	44	19	15	32	101.4914
ANTHRACENE	47/60	4.3		3400	D	209	GI-SD406-0006	85.3	23	18	35	426.9608
BENZO(A)ANTHRACENE	53/60	2.58		5400	D	344	GI-SD406-0006	261	18	61	33	718.6107
BENZO(A)PYRENE	50/60	3.92		2700	D	274	GI-SD406-0006	430	9	73	31	463.1937
BENZO(B)FLUORANTHENE	54/60	3.38		4800	D	447	GI-SD406-0006	1800	2	58	35	829.0684
BENZO(G,H,I)PERYLENE	48/60	3.3		1100	D	138	GI-SD406-0006	670	1	48	28	215.506
BENZO(K)FLUORANTHENE	49/60	3.4		2500	D	191	GI-SD406-0006	1800	1	52	31	352.6456
CHRYSENE	52/60	2.98		7600	D	485	GI-SD406-0006	384	17	71	32	1020.631
DIBENZO(A,H)ANTHRACENE	43/60	4.2		480	E	57.2	GI-SD406-0006	63.4	12	15	30	83.92229
FLUORANTHENE	53/60	2.92		27000	D	1330	GI-SD406-0006	600	16	130	31	4323.825
FLUORENE	41/60	3.3		240		47.9	GI-SD406-0006	19	24	7.2	32	45.68333
HIGH MOLECULAR WEIGHT PAHS	56/60	4	--	73700		4420	GI-SD406-0006	NONE		673	33	10087.51
INDENO(1,2,3-CD)PYRENE	47/60	3.8		1100	D	140	GI-SD406-0006	600	1	45	30	213.9673
LOW MOLECULAR WEIGHT PAHS	49/60	3.02		6620		624	GI-SD406-0006	NONE		103.3	33	1066.819
NAPHTHALENE	33/60	3.8		190		27.9	GI-SD411-0006	160	1	6.1	29	24.43167
PHENANTHRENE	49/60	3.02		2200	D	267	GI-SD406-0006	240	14	58	31	443.5309
PYRENE	55/60	4		21000	D	1290	GI-SD406-0006	665	21	120	34	2934.572
TOTAL CARCINOGENIC PAHS-HALFND	54/60	12.8		24600		1850	GI-SD406-0006	NONE		375	32	3649.929
TOTAL CARCINOGENIC PAHS-POS	54/60	4		24600		1850	GI-SD406-0006	NONE		375	32	3648.709

TABLE 4-1
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED WITHIN THE STILLWATER AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
TOTAL PAHS	57/60	3.02		80300		4880	GI-SD406-0006	NONE		770	33	11096.77
PCBS (UG/KG)												
AROCLOR-1248	1/60	1400		1400		1400	GI-SD412-1218	22.7	1	ND	1	NC
AROCLOR-1254	9/60	35	P	320		90.4	GI-SD409-4248	22.7	9	ND	9	57.85741
AROCLOR-1260	35/60	34	P	55000		3670	GI-SD402-0612	22.7	35	ND	35	8298.142
TOTAL AROCLOR	41/60	34		55000		3180	GI-SD402-0612	22.7	41	ND	41	8313.284
METALS (MG/KG)												
ALUMINUM	60/60	2680	*E	7810	E	5150	GI-SD412-1824	18000	0	7460	1	5408.607
ANTIMONY	50/60	0.081	BN	8.9	N	0.646	GI-SD412-1218	2	3	0.2	24	1.361661
ARSENIC	60/60	1.5	E	11.3	E	3.98	GI-SD412-1218	8.2	5	2.7	34	5.307478
BARIUM	60/60	4.6	*E	29.8	NE	14.8	GI-SD412-1824	48	0	15.7	21	15.96871
BERYLLIUM	60/60	0.175	NE	0.63	E	0.329	GI-SD418-0006	NONE		0.405	11	0.34874
CADMIUM	60/60	0.008	B	2.1		0.294	GI-SD404-1824	1.2	3	0.367	13	0.471117
CALCIUM	60/60	722	*	1E+05		26900	GI-SD404-0612	NONE		32500	15	49104.3
CHROMIUM	60/60	6	E	62.3	NE	15.7	GI-SD407-0612	81	0	19.8	13	22.13781
COBALT	60/60	2.2	E	6.4	NE	3.91	GI-SD412-1824	10	0	6	1	4.112828
COPPER	60/60	7.3	--	497	NE	33.3	GI-SD404-1824	34	12	15	28	71.90953
IRON	60/60	6220	*	41600		17200	GI-SD412-1824	220000	0	16700	21	18821.54
LEAD	60/60	3.7	NE	407	NE	31.3	GI-SD404-1824	46.7	5	20.6	18	71.27516
MAGNESIUM	60/60	1340	E	4980	*E	2660	GI-SD413-0612	NONE		3810	4	2835.909
MANGANESE	60/60	51.3	*E	365	E	128	GI-SD419-0006	260	2	139	19	139.9088
MERCURY	57/60	0.004	B	0.94		0.0974	GI-SD412-1218	0.15	8	0.083	15	0.184226
NICKEL	60/60	4.6	E	30.1	NE	9.37	GI-SD407-0612	20.9	1	11.7	12	10.2722
POTASSIUM	60/60	448		2250		1040	GI-SD412-1218	NONE		1590	10	1143.687
SELENIUM	44/60	0.33	B	1.5	--	0.94	GI-SD416-0006, GI-SD418-0006	1	16	0.73	34	0.876083
SILVER	17/60	0.055	B	0.608	N	0.248	GI-SD405-0006-AVG	0.5	2	0.19	9	0.141833
SODIUM	60/60	1130		13500		4350	GI-SD413-0612	NONE		6310	14	6190.839
THALLIUM	48/60	0.072	BN	0.92	N	0.301	GI-SD404-1824	NONE		ND	48	0.31132
VANADIUM	60/60	7	E	27.2	NE	14.4	GI-SD412-0612	57	0	20	10	15.58241
ZINC	60/60	13.6	*E	1160	NE	85.8	GI-SD412-0612	150	6	61.8	15	188.1143
						2010						
SEMIVOLATILES (UG/KG)												
2-METHYLNAPHTHALENE	1/11	17.8	J	17.8	J	17.8	GI-SD509-0006-AVG	70	0	ND	1	NC
ACENAPHTHENE	11/11	13	J	230	J	82.4	GI-SD532-0006	16	10	3.9	11	144.6459
ACENAPHTHYLENE	11/11	12	J	210	J	58.7	GI-SD501-0006	44	5	15	10	100.4445
ANTHRACENE	11/11	57		4400		957	GI-SD501-0006	85.3	10	18	11	2845.555
BENZO(A)ANTHRACENE	11/11	160		5200		1290	GI-SD501-0006	261	9	61	11	2538.746

TABLE 4-1
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED WITHIN THE STILLWATER AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
BENZO(A)PYRENE	11/11	118	J	3800		992	GI-SD501-0006	430	7	73	11	1856.008
BENZO(B)FLUORANTHENE	11/11	145	J	4100		1080	GI-SD501-0006	1800	2	58	11	2069.259
BENZO(G,H,I)PERYLENE	11/11	61.5		1600		452	GI-SD501-0006	670	2	48	11	798.4095
BENZO(K)FLUORANTHENE	11/11	125	J	3900		932	GI-SD501-0006	1800	2	52	11	1794.673
CHRYSENE	11/11	240		6900		1890	GI-SD501-0006	384	9	71	11	3754.175
DIBENZO(A,H)ANTHRACENE	11/11	20.5	J	580		165	GI-SD501-0006	63.4	7	15	11	297.3829
FLUORANTHENE	11/11	260		12000		3440	GI-SD501-0006	600	10	130	11	7204.37
FLUORENE	11/11	16	J	440		121	GI-SD502-0006	19	10	7.2	11	236.2599
HIGH MOLECULAR WEIGHT PAHS	11/11	1570		48600		13200	GI-SD501-0006	NONE		673	11	25966.61
INDENO(1,2,3-CD)PYRENE	11/11	56.5		1600		452	GI-SD501-0006	600	3	45	11	812.6611
LOW MOLECULAR WEIGHT PAHS	11/11	233	J	7750	J	2420	GI-SD502-0006	NONE		103.3	11	6313.033
NAPHTHALENE	2/11	7	J	67	J	37	GI-SD507-0006	160	0	6.1	2	113.7924
PHENANTHRENE	11/11	130		4700		1200	GI-SD502-0006	240	9	58	11	2405.737
PYRENE	11/11	230		8900		2550	GI-SD501-0006	665	8	120	11	5115.783
TOTAL CARCINOGENIC PAHS-HALFND	11/11	920	J	26100		6800	GI-SD501-0006	NONE		375	11	13062.04
TOTAL CARCINOGENIC PAHS-POS	11/11	920	J	26100		6800	GI-SD501-0006	NONE		375	11	13062.04
TOTAL PAHS	11/11	1800	J	55100	J	15700	GI-SD501-0006	NONE		770	11	30908.81
PCBS (UG/KG)												
HEPTACHLOROBIPHENYLS	10/11	8.3		970		406	GI-SD507-0006	22.7	9	ND	10	545.4678
HEXACHLOROBIPHENYL	10/11	17		1400	J	539	GI-SD501-0006	22.7	9	ND	10	1106.092
PENTACHLOROBIPHENYLS	6/11	35	J	300	J	122	GI-SD501-0006	22.7	6	ND	6	134.501
TETRACHLOROBIPHENYLS	3/11	1.98	J	22	J	10.1	GI-SD502-0006	22.7	0	ND	3	22
TOTAL OCTACHLOROBIPHENYLS	9/11	14	J	130	J	52.8	GI-SD501-0006	22.7	7	ND	9	66.66302
TOTAL PCB HOMOLOGS	10/11	25.3		2720	J	1070	GI-SD501-0006	22.7	10	ND	10	1474.878
TOTAL PCB HOMOLOGS-HALFND	10/11	29.9		2740	J	1090	GI-SD501-0006	22.7	10	ND	10	1494.809
METALS (MG/KG)												
ALUMINUM	11/11	3770		5510		4580	GI-SD527-0006	18000	0	7460	0	4872.961
ANTIMONY	2/11	0.208	J	0.81	J	0.509	GI-SD502-0006	2	0	0.2	2	0.81
ARSENIC	10/11	0.795	J	2.7	J	1.42	GI-SD502-0006	8.2	0	2.7	0	1.700285
BARIUM	11/11	7.4	J	32.5	J	15.4	GI-SD501-0006	48	0	15.7	3	20.884
BERYLLIUM	11/11	0.206	J	0.359	J	0.273	GI-SD505-0006	NONE		0.405	0	0.301173
CADMIUM	11/11	0.103	J	0.507	J	0.272	GI-SD502-0006	1.2	0	0.367	2	0.33921
CALCIUM	11/11	3810	J	2E+05	J	49600	GI-SD505-0006	NONE		32500	5	94146.36
CHROMIUM	11/11	9.8	J	18.8	J	12.6	GI-SD501-0006	81	0	19.8	0	14.06183
COBALT	11/11	2.7	J	3.7	J	3.21	GI-SD502-0006	10	0	6	0	3.376708
COPPER	11/11	9.6	J	28.7	J	16.2	GI-SD501-0006	34	0	15	4	19.62481
IRON	11/11	8860		20100		12700	GI-SD502-0006	220000	0	16700	2	14727.77
LEAD	11/11	7.1	J	35.2	J	15.4	GI-SD501-0006	46.7	0	20.6	2	20.00266

TABLE 4-1
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED WITHIN THE STILLWATER AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
MAGNESIUM	11/11	2000	J	3990	J	2710	GI-SD502-0006	NONE		3810	1	3024.075
MANGANESE	11/11	75		203	J	113	GI-SD502-0006	260	0	139	2	133.2894
MERCURY	11/11	0.02	J	0.107		0.0503	GI-SD501-0006	0.15	0	0.083	1	0.066249
NICKEL	11/11	5.85	J	10	J	7.45	GI-SD502-0006	20.9	0	11.7	0	8.126508
POTASSIUM	11/11	770		1290		1020	GI-SD501-0006	NONE		1590	0	1135.052
SELENIUM	1/11	0.322	J	0.322	J	0.322	GI-SD527-0006	1	0	0.73	0	NC
SILVER	5/11	0.044	J	0.223	J	0.132	GI-SD504-0006	0.5	0	0.19	1	0.185065
SODIUM	11/11	3440		7690		4890	GI-SD505-0006	NONE		6310	2	5652.316
THALLIUM	5/11	0.136	J	4.5	J	1.75	GI-SD505-0006	NONE		ND	5	2.051636
VANADIUM	11/11	10.8	--	17.3	J	13.7	GI-SD501-0006	57	0	20	0	15.07328
ZINC	11/11	30.6	J	76.9	J	44.9	GI-SD504-0006	150	0	61.8	1	52.08888
TOC (MG/KG)												
TOTAL ORGANIC CARBON	11/11	2880		13800		8480	GI-SD505-0006	NONE		11600	2	10327.07

Notes:
ND = Not detectec
NC = Not calculated.
NONE = No PAL has been established
NA = Not analyzed for this paramete

TABLE 4-2
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2005												
SEMIVOLATILES (UG/KG)												
1,1-BIPHENYL	2/36	41	J	68	J	54.5	G32-SD310D-000.5	NONE		NA		77.30923
2-METHYLNAPHTHALENE	18/36	3.32		220		24.9	G32-SD310D-000.5	70	2	ND	18	27.77833
4-METHYLPHENOL	10/36	43	J	1700		493	G32-SD310F-000.5	NONE		NA		351.9219
ACENAPHTHENE	30/36	3.8		1300		84.4	G32-SD310D-000.5	16	17	3.9	29	307.3197
ACENAPHTHYLENE	30/36	3.4		26		8.56	G32-SD304F-000.5	44	0	15	3	9.452778
ANTHRACENE	36/36	7.5		1300		125	G32-SD310D-000.5	85.3	9	18	26	190.2313
BENZO(A)ANTHRACENE	36/36	16		1400		194	G32-SD310D-000.5	261	7	61	21	306.2315
BENZO(A)PYRENE	36/36	15		980		156	G32-SD310D-000.5	430	3	73	18	215.1774
BENZO(B)FLUORANTHENE	36/36	24		1200		204	G32-SD310D-000.5	1800	0	58	22	300.8035
BENZO(G,H,I)PERYLENE	36/36	7.2		410	J	85.3	G32-SD310D-000.5	670	0	48	18	131.6149
BENZO(K)FLUORANTHENE	36/36	8.6		760		82.2	G32-SD310D-000.5	1800	0	52	13	117.2656
BIS(2-ETHYLHEXYL)PHTHALATE	19/36	34	J	62	--	47.4	G32-SD304D-000.5-AVG, G32-SD309F-000.5-AVG	NONE		NA		50.61455
CARBAZOLE	8/36	59	J	910		259	G32-SD310D-000.5	NONE		NA		188.6111
CHRYSENE	36/36	18	--	1200		173	G32-SD310D-000.5	384	4	71	18	370.4128
DIBENZO(A,H)ANTHRACENE	34/36	3.6	--	150		28.6	G32-SD306C-000.5	63.4	4	15	17	53.33076
DIBENZOFURAN	6/36	43	J	510		186	G32-SD310D-000.5	NONE		NA		211.8
FLUORANTHENE	36/36	34		3400		434	G32-SD310D-000.5	600	7	130	20	690.1372
FLUORENE	32/36	3.7		820		60.8	G32-SD310D-000.5	19	15	7.2	24	207.6309
HIGH MOLECULAR WEIGHT PAHS	36/36	175		12500	J	1800	G32-SD310D-000.5	NONE		673	21	2759.264
INDENO(1,2,3-CD)PYRENE	36/36	6.4		400	J	78.1	G32-SD310D-000.5	600	0	45	18	119.3979
LOW MOLECULAR WEIGHT PAHS	36/36	26.6		7680		624	G32-SD310D-000.5	NONE		103.3	23	1002.455
NAPHTHALENE	27/36	3.7		730		47.5	G32-SD310D-000.5	160	2	6.1	18	170.3935
PHENANTHRENE	36/36	16		3300		320	G32-SD310D-000.5	240	9	58	22	542.7354
PHENOL	13/36	36	--	820		220	G32-SD310F-000.5	NONE		NA		217.8825
PYRENE	36/36	29		2600		364	G32-SD310D-000.5	665	5	120	20	600.9408
TOTAL CARCINOGENIC PAHS-HALFND	36/36	94.6		6080	J	914	G32-SD310D-000.5	NONE		375	21	1369.589
TOTAL CARCINOGENIC PAHS-POS	36/36	93		6080	J	914	G32-SD310D-000.5	NONE		375	21	1371.694
TOTAL PAHS	36/36	202		20200	J	2420	G32-SD310D-000.5	NONE		770	21	3711.13
PCBS (UG/KG)												
AROCLOR-1248	2/36	39	J	93.2		66.1	G32-SD309F-000.5-AVG	22.7	2	ND	2	44.67709
AROCLOR-1260	22/36	41		3800	J	834	G32-SD304C-000.5	22.7	22	ND	22	1590.165
TOTAL AROCLOR	23/36	41		3800	J	804	G32-SD304C-000.5	22.7	23	ND	23	1590.626
METALS (MG/KG)												
ALUMINUM	36/36	4290	J	7640	J	5710	G32-SD306A-000.5	18000	0	7460	1	6028.158
ANTIMONY	17/36	1.9	J	43.5	J	5.17	G32-SD304F-000.5	2	15	0.2	17	5.754167
ARSENIC	35/36	1.6	J	5.2	J	2.58	G32-SD310F-000.5	8.2	0	2.7	10	3.246546
BARIUM	36/36	7.5	J	27	J	11.8	G32-SD306B-000.5	48	0	15.7	5	12.84965
BERYLLIUM	36/36	0.13		0.79		0.371	G32-SD310C-000.5	NONE		0.405	16	0.407595
CADMIUM	7/36	0.097	J	398		57.9	G32-SD317-000.5	1.2	3	0.367	6	128.4055
CALCIUM	36/36	5630	J	55200	J	26800	G32-SD309E-000.5	NONE		32500	14	30433.31
CHROMIUM	36/36	8.8	J	3910		123	G32-SD304F-000.5	81	1	19.8	4	595.0961
COBALT	36/36	2	J	5	J	2.95	G32-SD310B-000.5	10	0	6	0	3.127041
COPPER	36/36	11.3		77.8		23.2	G32-SD305F-000.5	34	4	15	29	26.33106
CYANIDE	2/36	0.1	J	0.14	J	0.12	G32-SD304E-000.5	NONE		NA		0.14
IRON	36/36	9470		71800	J	18000	G32-SD317-000.5	220000	0	16700	11	21778.25
LEAD	36/36	9.3	J	21200		658	G32-SD304F-000.5	46.7	12	20.6	24	3218.25

TABLE 4-2
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
MAGNESIUM	36/36	2390	J	6340		3420	G32-SD305F-000.5	NONE		3810	7	3599.687
MANGANESE	36/36	86	J	418	J	150	G32-SD305F-000.5	260	2	139	13	168.7625
MERCURY	30/36	0.0099	J	0.74		0.0637	G32-SD306F-000.5	0.15	1	0.083	1	0.141913
NICKEL	36/36	5.9	J	19	J	8.87	G32-SD305F-000.5	20.9	0	11.7	2	9.584279
POTASSIUM	36/36	654	J	1430		913	G32-SD310F-000.5	NONE		1590	0	959.4005
SELENIUM	16/36	4.4	J	7.9	J	6.07	G32-SD309A-000.5	1	16	0.73	16	5.704167
SODIUM	36/36	2200	J	5820		3600	G32-SD306F-000.5	NONE		6310	0	3833.105
THALLIUM	17/36	0.13	J	1.7	J	0.945	G32-SD304F-000.5	NONE				0.758854
VANADIUM	36/36	13	J	24.1	J	17.3	G32-SD306A-000.5	57	0	20	5	18.0801
ZINC	36/36	30.9	J	145	J	54.1	G32-SD317-000.5	150	0	61.8	8	62.13457
TOC (MG/KG)												
TOTAL ORGANIC CARBON	36/36	3000	--	15000	--	8660	G32-SD306F-000.5, G32-SD310D-000.5	NONE		11600	8	9570.583
							2009					
SEMIVOLATILES (UG/KG)												
2-METHYLNAPHTHALENE	5/20	5.2		24		13.9	GI-SD432-0006	70	0	ND	5	16.1
ACENAPHTHENE	14/20	3.9		130		40.5	GI-SD434-0006	16	8	3.9	13	87.65009
ACENAPHTHYLENE	9/20	3.9		31		9.52	GI-SD449-0006	44	0	15	1	8.893164
ANTHRACENE	17/20	5.9		220		64.2	GI-SD433-0006	85.3	4	18	12	122.2546
BENZO(A)ANTHRACENE	19/20	4.4		540	D	118	GI-SD432-0006	261	3	61	9	263.0456
BENZO(A)PYRENE	19/20	2.72		480	D	99.6	GI-SD432-0006	430	1	73	8	218.0189
BENZO(B)FLUORANTHENE	19/20	4.9		590	D	133	GI-SD432-0006	1800	0	58	10	288.9391
BENZO(G,H,I)PERYLENE	18/20	4.3		290		63.3	GI-SD432-0006	670	0	48	8	131.5924
BENZO(K)FLUORANTHENE	19/20	2.62		240		58.6	GI-SD432-0006	1800	0	52	5	122.5788
CHRYSENE	19/20	4		450	D	105	GI-SD432-0006	384	1	71	8	226.2988
DIBENZO(A,H)ANTHRACENE	14/20	3.3		110		29.3	GI-SD432-0006	63.4	3	15	8	34.035
FLUORANTHENE	19/20	5.85		1300	D	283	GI-SD432-0006	600	4	130	10	633.9732
FLUORENE	15/20	3.5		100		34.2	GI-SD449-0006	19	6	7.2	12	58.60749
HIGH MOLECULAR WEIGHT PAHS	19/20	27.8		5250		1160	GI-SD432-0006	NONE		673	8	2547.929
INDENO(1,2,3-CD)PYRENE	18/20	4.3		250		57.5	GI-SD432-0006	600	0	45	8	117.9531
LOW MOLECULAR WEIGHT PAHS	19/20	3.4		1290		337	GI-SD433-0006	NONE		103.3	12	717.3797
NAPHTHALENE	15/20	3.5		110		25.1	GI-SD449-0006	160	0	6.1	9	60.6922
PHENANTHRENE	19/20	3.4		790	D	195	GI-SD433-0006	240	4	58	12	421.1995
PYRENE	19/20	4.95		1000	D	228	GI-SD432-0006	665	2	120	9	502.6267
TOTAL CARCINOGENIC PAHS-HALFND	19/20	22		2660		592	GI-SD432-0006	NONE		375	8	1284.422
TOTAL CARCINOGENIC PAHS-POS	19/20	17		2660		591	GI-SD432-0006	NONE		375	8	1284.204
TOTAL PAHS	19/20	35.8		6480		1500	GI-SD432-0006	NONE		770	10	3246.632
PCBS (UG/KG)												
AROCLOR-1248	1/20	340		340		340	GI-SD449-0006	22.7	1	ND	1	NC
AROCLOR-1260	10/20	42		890		277	GI-SD435-0006	22.7	10	ND	10	241.4196
TOTAL AROCLOR	11/20	42		890		282	GI-SD435-0006	22.7	11	ND	11	256.6312
METALS (MG/KG)												
ALUMINUM	20/20	3220	E	7800	E	5400	GI-SD446-0006	18000	0	7460	2	6028.158
ANTIMONY	15/20	0.089	BN	0.39	BN	0.208	GI-SD424-0006	2	0	0.2	9	0.214
ARSENIC	20/20	1.7	*	7.6	*	2.91	GI-SD434-0006	8.2	0	2.7	7	3.449972
BARIUM	20/20	5.4	E	26.7	E	12.8	GI-SD446-0006	48	0	15.7	5	15.61054
BERYLLIUM	20/20	0.065	BE	0.37	E	0.175	GI-SD431-0006	NONE		0.405	0	0.222673
CADMIUM	18/20	0.011	B*	0.615		0.186	GI-SD423-0006-AVG	1.2	0	0.367	2	0.345289
CALCIUM	20/20	414	*	140000	*	32500	GI-SD433-0006	NONE		32500	8	52718.95

TABLE 4-2
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
CHROMIUM	20/20	6.2	E	25.8	E	11.2	GI-SD434-0006	81	0	19.8	1	12.98025
COBALT	20/20	1.8	E	10.8	E	3.93	GI-SD449-0006	10	1	6	2	4.78267
COPPER	20/20	7.2	E	28.2	E	14.9	GI-SD428-0006	34	0	15	8	17.61045
IRON	20/20	6220	*	42500	*	16400	GI-SD434-0006	220000	0	16700	8	19561.01
LEAD	20/20	6.4	NE	138	N*E	20.5	GI-SD421-0006	46.7	1	20.6	4	48.54042
MAGNESIUM	20/20	1920	E	4410	E	2790	GI-SD446-0006	NONE		3810	3	3068.872
MANGANESE	20/20	84.6	*E	261	*E	131	GI-SD446-0006	260	1	139	7	146.3786
MERCURY	19/20	0.0047	B	0.068		0.0246	GI-SD436-0006	0.15	0	0.083	0	0.030005
NICKEL	20/20	3.8	E	15.4	E	7.99	GI-SD434-0006	20.9	0	11.7	2	9.220676
POTASSIUM	20/20	522	*	1800	*	914	GI-SD431-0006	NONE		1590	1	1026.511
SELENIUM	8/20	0.29	B	1.2		0.746	GI-SD426-0006	1	1	0.73	5	0.767
SODIUM	20/20	1650		10900	E	3610	GI-SD433-0006	NONE		6310	1	4346.444
THALLIUM	6/20	0.145	B	0.89		0.361	GI-SD433-0006	NONE		ND	6	0.281621
VANADIUM	20/20	7.8	E	23.3	*E	13.4	GI-SD431-0006	57	0	20	2	14.9455
ZINC	20/20	19.3	E	164	E	41.1	GI-SD424-0006	150	1	61.8	3	73.23937
2010												
SEMIVOLATILES (UG/KG)												
2-METHYLNAPHTHALENE	12/16	1.4	J	42	J	11.3	GI-SD512-0006	70	0	ND	12	23.33
ACENAPHTHENE	15/16	2.75	J	220	J	69.9	GI-SD514-0006	16	9	3.9	14	143.4742
ACENAPHTHYLENE	12/16	1.9	J	47	J	10.6	GI-SD514-0006	44	1	15	1	14.9575
ANTHRACENE	13/16	11		500	J	147	GI-SD514-0006	85.3	7	18	12	281.0999
BENZO(A)ANTHRACENE	16/16	25		910	J	242	GI-SD514-0006	261	6	61	12	399.8106
BENZO(A)PYRENE	16/16	28		890	J	241	GI-SD514-0006	430	3	73	10	391.6872
BENZO(B)FLUORANTHENE	16/16	22		700	J	193	GI-SD514-0006	1800	0	58	12	307.1442
BENZO(G,H,I)PERYLENE	16/16	21		490	J	138	GI-SD514-0006	670	0	48	10	215.855
BENZO(K)FLUORANTHENE	16/16	24	--	630	J	169	GI-SD514-0006	1800	0	52	11	267.7958
CHRYSENE	16/16	31	--	940	J	247	GI-SD514-0006	384	3	71	12	396.3735
DIBENZO(A,H)ANTHRACENE	16/16	6.8	J	170	J	48.4	GI-SD514-0006	63.4	6	15	10	76.95927
FLUORANTHENE	16/16	48		2000	J	520	GI-SD514-0006	600	6	130	11	881.0002
FLUORENE	15/16	3.75	J	200	J	56.3	GI-SD514-0006	19	9	7.2	12	118.3682
HIGH MOLECULAR WEIGHT PAHS	16/16	271	J	8700	J	2340	GI-SD514-0006	NONE		673	11	3814.988
INDENO(1,2,3-CD)PYRENE	16/16	16		470	J	134	GI-SD514-0006	600	0	45	10	215.0903
LOW MOLECULAR WEIGHT PAHS	16/16	37.2	J	2470	J	657	GI-SD514-0006	NONE		103.3	13	1165.627
NAPHTHALENE	6/16	2.7	J	130	J	42.3	GI-SD512-0006	160	0	6.1	5	42.2
PHENANTHRENE	16/16	25	--	1500	J	387	GI-SD514-0006	240	8	58	13	684.0823
PYRENE	16/16	43		1500	J	410	GI-SD514-0006	665	4	120	10	679.3205
TOTAL CARCINOGENIC PAHS-HALFND	16/16	158	J	4710	J	1270	GI-SD514-0006	NONE		375	11	2050.524
TOTAL CARCINOGENIC PAHS-POS	16/16	158	J	4710	J	1270	GI-SD514-0006	NONE		375	11	2050.524
TOTAL PAHS	16/16	321	J	11200	J	3000	GI-SD514-0006	NONE		770	11	4958.802
PCBS (UG/KG)												
DICHLOROBIPHENYLS	1/16	0.432	J	0.432	J	0.432	GI-SD517-0006-AVG	22.7	0	ND	1	NC
HEPTACHLOROBIPHENYLS	11/16	4.1	J	410		85.8	GI-SD304-0006	22.7	9	ND	11	110.1063
HEXACHLOROBIPHENYL	15/16	3.2	J	650		98.6	GI-SD304-0006	22.7	9	ND	15	265.9424
PENTACHLOROBIPHENYLS	5/16	11	J	190		54	GI-SD304-0006	22.7	3	ND	5	45.59603
TETRACHLOROBIPHENYLS	1/16	11		11		11	GI-SD304-0006	22.7	0	ND	1	NC
TOTAL OCTACHLOROBIPHENYLS	9/16	1.4	J	74		14.5	GI-SD304-0006	22.7	1	ND	9	37.31659
TOTAL PCB HOMOLOGS	15/16	3.2	J	1340		191	GI-SD304-0006	22.7	9	ND	15	536.3858
TOTAL PCB HOMOLOGS-HALFND	15/16	9.16	J	1340		201	GI-SD304-0006	22.7	11	ND	15	543.9471
TOTAL TRICHLOROBIPHENYLS	1/16	21.6	J	21.6	J	21.6	GI-SD517-0006-AVG	22.7	0	ND	1	NC

TABLE 4-2
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
METALS (MG/KG)												
ALUMINUM	16/16	3860		8070		5140	GI-SD510-0006	18000	0	7460	1	5608.211
ANTIMONY	1/16	0.253	J	0.253	J	0.253	GI-SD515-0006	2	0	0.2	1	NC
ARSENIC	14/16	0.278	J	5.6	J	1.66	GI-SD530-0006	8.2	0	2.7	2	2.096938
BARIUM	16/16	7.6		19.3	J	11.3	GI-SD518-0006	48	0	15.7	2	12.7403
BERYLLIUM	16/16	0.204	J	0.333	J	0.246	GI-SD514-0006	NONE		0.405	0	0.261115
CADMIUM	15/16	0.166	J	0.724		0.32	GI-SD530-0006	1.2	0	0.367	4	0.376268
CALCIUM	16/16	1390	J	206000	J	48400	GI-SD514-0006	NONE		32500	8	108982.4
CHROMIUM	16/16	8.4	J	28.1	J	13.8	GI-SD530-0006	81	0	19.8	3	16.20067
COBALT	16/16	2.6	--	6		3.89	GI-SD512-0006	10	0	6	0	4.350727
COPPER	16/16	6.8	J	186	J	31.1	GI-SD530-0006	34	2	15	9	82.30415
IRON	16/16	9830		37400		17000	GI-SD530-0006	220000	0	16700	6	20504.01
LEAD	16/16	7.3	J	199	J	39.8	GI-SD531-0006	46.7	3	20.6	8	96.34373
MAGNESIUM	16/16	2530	J	4220	J	3080	GI-SD510-0006	NONE		3810	1	3276.459
MANGANESE	16/16	107		230		154	GI-SD530-0006	260	0	139	9	170.4376
MERCURY	15/16	0.006	J	0.239		0.0542	GI-SD515-0006	0.15	2	0.083	3	0.166798
NICKEL	16/16	6		33.4		11.3	GI-SD512-0006	20.9	2	11.7	2	20.69584
POTASSIUM	16/16	709		1390	J	907	GI-SD514-0006	NONE		1590	0	990.0902
SILVER	1/16	0.524		0.524		0.524	GI-SD513-0006	0.5	1	0.19	1	NC
SODIUM	16/16	810		9070		4300	GI-SD514-0006	NONE		6310	2	5219.379
THALLIUM	4/16	0.123	J	4.9	J	2.73	GI-SD514-0006	NONE		ND	4	3.675
VANADIUM	16/16	11.2	J	23.8		15.4	GI-SD531-0006	57	0	20	2	17.00646
ZINC	16/16	27.6	J	47.2	--	38.4	GI-SD514-0006, GI-SD531-0006	150	0	61.8	0	40.81428
TOC (MG/KG)												
TOTAL ORGANIC CARBON	16/16	2330		14700		7060	GI-SD515-0006	NONE		11600	2	8761.87

Notes:
ND = Not detected
NC = Not calculated.
NONE = No PAL has been established
NA = Not analyzed for this parameter

TABLE 4-3
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHWEST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2005												
SEMIVOLATILES (UG/KG)												
1,1-BIPHENYL	1/18	54	J	54	J	54	G32-SD308E-000.5	NONE		NA		NC
2-METHYLNAPHTHALENE	16/18	3.4		280		27.1	G32-SD308E-000.5	70	1	ND	16	120.2289
4-METHYLPHENOL	6/18	43	J	480		185	G32-SD308A-000.5	NONE		NA		210.6146
ACENAPHTHENE	18/18	9.1		620		72.9	G32-SD308E-000.5	16	13	3.9	18	221.4495
ACENAPHTHYLENE	14/18	3.2	J	42		9.92	G32-SD313F-000.5	44	0	15	2	12.94444
ANTHRACENE	18/18	28		880		159	G32-SD308E-000.5	85.3	8	18	18	264.9269
BENZO(A)ANTHRACENE	18/18	72	--	1600		353	G32-SD313F-000.5	261	7	61	18	557.9187
BENZO(A)PYRENE	18/18	63		960		244	G32-SD308E-000.5	430	3	73	14	405.7173
BENZO(B)FLUORANTHENE	18/18	73	J	1200		298	G32-SD313F-000.5	1800	0	58	18	445.1271
BENZO(G,H,I)PERYLENE	18/18	42		300	J	112	G32-SD308E-000.5	670	0	48	14	147.753
BENZO(K)FLUORANTHENE	18/18	24		910		161	G32-SD313F-000.5	1800	0	52	9	428.4857
BIS(2-ETHYLHEXYL)PHTHALATE	3/18	46	J	56	J	51	G32-SD302F-000.5	NONE		NA		56.02181
CARBAZOLE	9/18	35	J	710	J	164	G32-SD308E-000.5	NONE		NA		199.5546
CHRYSENE	18/18	47		1500		304	G32-SD313F-000.5	384	3	71	13	757.4905
DIBENZO(A,H)ANTHRACENE	18/18	12		190		41.4	G32-SD308E-000.5	63.4	2	15	14	62.65234
DIBENZOFURAN	4/18	36	J	350		147	G32-SD308E-000.5	NONE		NA		163.3333
FLUORANTHENE	18/18	140		3400		764	G32-SD313F-000.5	600	4	130	18	1837.649
FLUORENE	18/18	9.5		510		71.7	G32-SD308E-000.5	19	10	7.2	18	197.9856
HIGH MOLECULAR WEIGHT PAHS	18/18	620	J	12800		3020	G32-SD313F-000.5	NONE		673	16	4757.794
INDENO(1,2,3-CD)PYRENE	18/18	36	--	320	J	107	G32-SD308E-000.5	600	0	45	13	159.6545
LOW MOLECULAR WEIGHT PAHS	18/18	133		4920		831	G32-SD308E-000.5	NONE		103.3	18	2071.693
NAPHTHALENE	18/18	4.4		220		26.9	G32-SD308E-000.5	160	1	6.1	13	82.32909
PHENANTHRENE	18/18	81		2400		469	G32-SD308E-000.5	240	8	58	18	841.0124
PHENOL	6/18	39	--	1400		326	G32-SD308A-000.5	NONE		NA		333.2354
PYRENE	18/18	93		2800		637	G32-SD313F-000.5	665	4	120	16	1523.68
TOTAL CARCINOGENIC PAHS-HALFND	18/18	330	J	6350		1510	G32-SD313F-000.5	NONE		375	14	3395.55
TOTAL CARCINOGENIC PAHS-POS	18/18	330	J	6350		1510	G32-SD313F-000.5	NONE		375	14	3395.55
TOTAL PAHS	18/18	788		15700	J	3860	G32-SD308E-000.5	NONE		770	18	8850.819
PCBS (UG/KG)												
AROCLOR-1260	2/18	33	J	46		39.5	G32-SD302A-000.5	22.7	2	ND	2	35.44896
TOTAL AROCLOR	2/18	33	J	46		39.5	G32-SD302A-000.5	22.7	2	ND	2	35.44896
METALS (MG/KG)												
ALUMINUM	18/18	3880		9100		5860	G32-SD302A-000.5	18000	0	7460	1	6350.566
ARSENIC	18/18	2.1	J	7.3	J	4.08	G32-SD313F-000.5	8.2	0	2.7	15	4.733349
BARIUM	18/18	9.2	J	24.9	J	13.1	G32-SD302A-000.5	48	0	15.7	2	14.58694
BERYLLIUM	18/18	0.11		0.45		0.205	G32-SD302A-000.5	NONE		0.405	1	0.243523
CADMIUM	7/18	0.5	J	12.3	J	2.32	G32-SD313D-000.5-AVG	1.2	1	0.367	7	2.597917
CALCIUM	18/18	8860	J	39200	J	25000	G32-SD308F-000.5	NONE		32500	5	28881
CHROMIUM	18/18	9.3	J	37.7	J	15.8	G32-SD313F-000.5	81	0	19.8	4	18.95439
COBALT	18/18	1.8	J	4.5	J	3.27	G32-SD302A-000.5	10	0	6	0	3.500314

TABLE 4-3
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHWEST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
COPPER	18/18	9	J	64.4		21.1	G32-SD313F-000.5	34	3	15	10	27.44514
CYANIDE	1/18	0.35	J	0.35	J	0.35	G32-SD313F-000.5	NONE		NA		NC
IRON	18/18	10600	--	72100		17900	G32-SD313F-000.5	220000	0	16700	5	24187.86
LEAD	18/18	11.8	J	40.3	J	18.4	G32-SD302D-000.5	46.7	0	20.6	5	21.47759
MAGNESIUM	18/18	2770	--	4760		3440	G32-SD302A-000.5	NONE		3810	4	3660.626
MANGANESE	18/18	114		306	J	163	G32-SD313F-000.5	260	1	139	11	183.2711
MERCURY	6/18	0.04		0.13		0.0742	G32-SD302A-000.5	0.15	0	0.083	2	0.068667
NICKEL	18/18	6.4	J	47.4	J	11.8	G32-SD313F-000.5	20.9	2	11.7	4	21.8331
POTASSIUM	18/18	742		2400	J	1040	G32-SD302A-000.5	NONE		1590	1	1203.619
SODIUM	18/18	2380		9580		3960	G32-SD302A-000.5	NONE		6310	1	4528.401
THALLIUM	1/18	2.5	J	2.5	J	2.5	G32-SD313F-000.5	NONE		ND	1	NC
VANADIUM	18/18	10.8	J	28.4	J	16.5	G32-SD302A-000.5	57	0	20	2	18.21306
ZINC	18/18	32	J	72.3		42.4	G32-SD302A-000.5	150	0	61.8	2	47.02329
TOC (MG/KG)												
TOTAL ORGANIC CARBON	18/18	2300	J	29000	J	7360	G32-SD308F-000.5	NONE		11600	2	9999.993
2009												
SEMIVOLATILES (UG/KG)												
2-METHYLNAPHTHALENE	4/7	3.38		17		7.47	GI-SD442-0006	70	0	ND	4	11.16286
ACENAPHTHENE	6/7	12		84		31	GI-SD442-0006	16	4	3.9	6	48.85714
ACENAPHTHYLENE	4/7	3.02		8.3		6.26	GI-SD445-0006	44	0	15	0	8.128571
ANTHRACENE	7/7	3.6		130		50.8	GI-SD442-0006	85.3	1	18	6	80.72462
BENZO(A)ANTHRACENE	7/7	7.6		190		97.5	GI-SD442-0006	261	0	61	5	142.8044
BENZO(A)PYRENE	7/7	8.6		150		82.9	GI-SD442-0006	430	0	73	4	120.1197
BENZO(B)FLUORANTHENE	7/7	11		170		102	GI-SD442-0006	1800	0	58	5	148.4026
BENZO(G,H,I)PERYLENE	7/7	5.1		77		47.8	GI-SD442-0006	670	0	48	4	68.72521
BENZO(K)FLUORANTHENE	7/7	6.5		130		57.6	GI-SD442-0006	1800	0	52	3	85.83788
CHRYSENE	7/7	8.8		150		88.3	GI-SD442-0006	384	0	71	4	128.2643
DIBENZO(A,H)ANTHRACENE	6/7	9.1		29		20.3	GI-SD442-0006	63.4	0	15	4	25.58252
FLUORANTHENE	7/7	11		350	D	187	GI-SD444-0006-AVG	600	0	130	4	280.9388
FLUORENE	6/7	11		75		27	GI-SD442-0006	19	2	7.2	6	62.32744
HIGH MOLECULAR WEIGHT PAHS	7/7	73.3		1530		885	GI-SD442-0006	NONE		673	4	1293.66
INDENO(1,2,3-CD)PYRENE	7/7	4.7		75		43.3	GI-SD442-0006	600	0	45	3	62.65438
LOW MOLECULAR WEIGHT PAHS	7/7	10.9		787		291	GI-SD442-0006	NONE		103.3	6	468.5351
NAPHTHALENE	6/7	4.4		55		17.9	GI-SD442-0006	160	0	6.1	5	46.595
PHENANTHRENE	7/7	7.3		420	D	167	GI-SD442-0006	240	1	58	6	262.3484
PYRENE	7/7	10		290	D	162	GI-SD444-0006-AVG	665	0	120	4	239.4481
TOTAL CARCINOGENIC PAHS-HALFND	7/7	48.8		894		490	GI-SD442-0006	NONE		375	4	709.6982
TOTAL CARCINOGENIC PAHS-POS	7/7	47.2		894		489	GI-SD442-0006	NONE		375	4	709.7581
TOTAL PAHS	7/7	84.2		2320		1180	GI-SD442-0006	NONE		770	4	1738.404
METALS (MG/KG)												
ALUMINUM	7/7	4010	E	7870	*E	5520	GI-SD439-0006	18000	0	7460	1	6419.581

TABLE 4-3
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHWEST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
ANTIMONY	6/7	0.076	BN	2.6	N	0.653	GI-SD439-0006	2	1	0.2	4	2.090074
ARSENIC	7/7	1.7		6.8		3.42	GI-SD439-0006	8.2	0	2.7	3	4.812996
BARIUM	7/7	9.35	E	25.3	E	13.8	GI-SD439-0006	48	0	15.7	1	18.20373
BERYLLIUM	7/7	0.061	BE	0.73	E	0.305	GI-SD439-0006	NONE		0.405	1	0.468169
CADMIUM	7/7	0.052	B*	0.9		0.344	GI-SD439-0006	1.2	0	0.367	3	0.57826
CALCIUM	7/7	9000	*	57800	*	33200	GI-SD442-0006	NONE		32500	3	45363.43
CHROMIUM	7/7	9.7	E	21.8	E	17	GI-SD439-0006	81	0	19.8	2	20.42229
COBALT	7/7	2.2	E	5.7	*E	3.43	GI-SD439-0006	10	0	6	0	4.259201
COPPER	7/7	6.9	E	42	N	17.9	GI-SD442-0006	34	1	15	3	28.30846
IRON	7/7	10300	*	34100	*	19000	GI-SD439-0006	220000	0	16700	3	25298.48
LEAD	7/7	8.6	NE	51.4	N*E	21	GI-SD439-0006	46.7	1	20.6	4	36.10143
MAGNESIUM	7/7	2310	E	3810	*E	3070	GI-SD439-0006	NONE		3810	0	3427.63
MANGANESE	7/7	98.8	*E	185	*E	135	GI-SD439-0006	260	0	139	3	160.9044
MERCURY	7/7	0.024		0.084		0.0385	GI-SD445-0006	0.15	0	0.083	1	0.056303
NICKEL	7/7	5.35	E	16.9	*E	9.64	GI-SD439-0006	20.9	0	11.7	2	12.64732
POTASSIUM	7/7	974	*	1860	*	1340	GI-SD445-0006	NONE		1590	2	1628.414
SELENIUM	3/7	0.47	B	0.97		0.673	GI-SD440-0006	1	0	0.73	1	0.97
SILVER	2/7	0.045	B	0.14	B	0.0925	GI-SD445-0006	0.5	0	0.19	0	0.14
SODIUM	7/7	2840		8830	E	4680	GI-SD445-0006	NONE		6310	1	6286.671
THALLIUM	5/7	0.12	B	0.46	B	0.226	GI-SD442-0006	NONE		ND	5	0.290904
VANADIUM	7/7	11.3	E	21.8	*E	16.6	GI-SD439-0006	57	0	20	1	19.11802
ZINC	7/7	24.8	E	67.5	E	40.5	GI-SD439-0006	150	0	61.8	1	51.40937
2010												
SEMIVOLATILES (UG/KG)												
2-METHYLNAPHTHALENE	4/4	2.9	J	31	J	11.9	GI-SD521-0006	70	0	ND	4	NC
ACENAPHTHENE	4/4	7.5	J	290	J	87.1	GI-SD521-0006	16	3	3.9	4	NC
ACENAPHTHYLENE	4/4	2	J	12	--	7.8	GI-SD520-0006, GI-SD521-0006	44	0	15	0	NC
ANTHRACENE	4/4	25		780	J	235	GI-SD521-0006	85.3	1	18	4	NC
BENZO(A)ANTHRACENE	4/4	130		1600	J	508	GI-SD521-0006	261	1	61	4	NC
BENZO(A)PYRENE	4/4	81	J	1400	J	445	GI-SD521-0006	430	1	73	4	NC
BENZO(B)FLUORANTHENE	4/4	76		990	J	322	GI-SD521-0006	1800	0	58	4	NC
BENZO(G,H,I)PERYLENE	4/4	43	J	680	J	226	GI-SD521-0006	670	1	48	3	NC
BENZO(K)FLUORANTHENE	4/4	89		1100	J	352	GI-SD521-0006	1800	0	52	4	NC
CHRYSENE	4/4	150		1500	J	492	GI-SD521-0006	384	1	71	4	NC
DIBENZO(A,H)ANTHRACENE	4/4	15		270	J	86	GI-SD521-0006	63.4	1	15	3	NC
FLUORANTHENE	4/4	320		3300	J	1120	GI-SD521-0006	600	1	130	4	NC
FLUORENE	4/4	6.9	J	290	J	89.7	GI-SD521-0006	19	3	7.2	3	NC
HIGH MOLECULAR WEIGHT PAHS	4/4	1450	J	14100	J	4640	GI-SD521-0006	NONE		673	4	NC
INDENO(1,2,3-CD)PYRENE	4/4	42		690	J	224	GI-SD521-0006	600	1	45	3	NC
LOW MOLECULAR WEIGHT PAHS	4/4	116	J	3800	J	1180	GI-SD521-0006	NONE		103.3	4	NC

TABLE 4-3
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHWEST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
NAPHTHALENE	1/4	19	J	19	J	19	GI-SD520-0006	160	0	6.1	1	NC
PHENANTHRENE	4/4	69		2400	J	740	GI-SD521-0006	240	2	58	4	NC
PYRENE	4/4	260	J	2600	J	875	GI-SD521-0006	665	1	120	4	NC
TOTAL CARCINOGENIC PAHS-HALFND	4/4	593	J	7550	J	2430	GI-SD521-0006	NONE		375	4	NC
TOTAL CARCINOGENIC PAHS-POS	4/4	593	J	7550	J	2430	GI-SD521-0006	NONE		375	4	NC
TOTAL PAHS	4/4	1600	J	17900	J	5820	GI-SD521-0006	NONE		770	4	NC
PCBS (UG/KG)												
HEXACHLOROBIPHENYL	3/4	3.2		6.4	J	4.9	GI-SD522-0006	22.7	0	ND	3	NC
TOTAL PCB HOMOLOGS	3/4	3.92	J	6.7	J	5.67	GI-SD520-0006	22.7	0	ND	3	NC
TOTAL PCB HOMOLOGS-HALFND	3/4	8.42	J	16.6	J	13.4	GI-SD522-0006	22.7	0	ND	3	NC
TOTAL TRICHLOROBIPHENYLS	2/4	0.72	J	1.6	J	1.16	GI-SD520-0006	22.7	0	ND	2	NC
METALS (MG/KG)												
ALUMINUM	4/4	4210		6990		5260	GI-SD522-0006	18000	0	7460	0	NC
ARSENIC	4/4	0.193	J	5.3	J	2.5	GI-SD522-0006	8.2	0	2.7	2	NC
BARIUM	4/4	7.4		13.1		10.4	GI-SD523-0006	48	0	15.7	0	NC
BERYLLIUM	4/4	0.188	--	0.495		0.266	GI-SD522-0006	NONE		0.405	1	NC
CADMIUM	4/4	0.15	J	1		0.536	GI-SD522-0006	1.2	0	0.367	2	NC
CALCIUM	4/4	8220		45500		21100	GI-SD520-0006	NONE		32500	1	NC
CHROMIUM	4/4	8.2	J	24.7	J	15.2	GI-SD522-0006	81	0	19.8	1	NC
COBALT	4/4	3		5.7		4.2	GI-SD522-0006	10	0	6	0	NC
COPPER	4/4	6.5	J	40.6	J	26.9	GI-SD522-0006	34	2	15	3	NC
IRON	4/4	11000		46500		26600	GI-SD522-0006	220000	0	16700	2	NC
LEAD	4/4	9.3	J	35.9	J	20.2	GI-SD523-0006	46.7	0	20.6	2	NC
MAGNESIUM	4/4	2550		4450		3350	GI-SD522-0006	NONE		3810	1	NC
MANGANESE	4/4	136		281		200	GI-SD522-0006	260	1	139	3	NC
MERCURY	4/4	0.005	J	0.039		0.0195	GI-SD522-0006	0.15	0	0.083	0	NC
NICKEL	4/4	6.7		21.6		13.7	GI-SD522-0006	20.9	1	11.7	2	NC
POTASSIUM	4/4	742	J	1190	J	920	GI-SD522-0006	NONE		1590	0	NC
SILVER	2/4	0.435	J	0.492	J	0.464	GI-SD522-0006	0.5	0	0.19	2	NC
SODIUM	4/4	2710		6610		4220	GI-SD522-0006	NONE		6310	1	NC
THALLIUM	1/4	0.107	J	0.107	J	0.107	GI-SD520-0006	NONE		ND	1	NC
VANADIUM	4/4	11		21.4		14.4	GI-SD522-0006	57	0	20	1	NC
ZINC	4/4	26.8	J	65.4	J	44.2	GI-SD522-0006	150	0	61.8	1	NC
TOC (MG/KG)												
TOTAL ORGANIC CARBON	4/4	2960		11900		5700	GI-SD522-0006	NONE		11600	1	NC

Notes:
ND = Not detected
NC = Not calculated.
NONE = No PAL has been established
NA = Not analyzed for this parameter

TABLE 4-4
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED AT REFERENCE STATIONS
PHASE 2 REMEDIAL INVESTIGAION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2009												
SEMIVOLATILES (UG/KG)												
ACENAPHTHYLENE	5/6	3.6		15		7.85	GI-JCC01-0006	44	0	15	0	10.93054
ANTHRACENE	5/6	4.4		18		9.54	GI-JCC01-0006	85.3	0	18	0	13.041
BENZO(A)ANTHRACENE	6/6	9.8		55		24.4	GI-JCC01-0006	261	0	61	0	38.61392
BENZO(A)PYRENE	6/6	8.8		45		21.8	GI-JCC01-0006	430	0	73	0	33.05066
BENZO(B)FLUORANTHENE	6/6	11		52		25.8	GI-JCC01-0006	1800	0	58	0	38.47543
BENZO(G,H,I)PERYLENE	6/6	7.1	--	31		15.4	GI-JCC01-0006	670	0	48	0	22.94222
BENZO(K)FLUORANTHENE	6/6	6.8		33		16.2	GI-JCC01-0006	1800	0	52	0	24.45318
CHRYSENE	6/6	11		44		22.7	GI-JCC01-0006	384	0	71	0	32.77767
DIBENZO(A,H)ANTHRACENE	4/6	3.9		9.1		5.8	GI-JCC01-0006	63.4	0	15	0	6.944336
FLUORANTHENE	6/6	19	--	120		51.6	GI-JCC01-0006	600	0	130	0	82.51768
FLUORENE	3/6	3.8		7.2		5.07	GI-JCC01-0006	19	0	7.2	0	7.2
HIGH MOLECULAR WEIGHT PAHS	6/6	99		517.1		241	GI-JCC01-0006	NONE		673	0	370.6137
INDENO(1,2,3-CD)PYRENE	6/6	6		28		13.6	GI-JCC01-0006	600	0	45	0	20.40388
LOW MOLECULAR WEIGHT PAHS	6/6	10.3		103.3		43.9	GI-JCC01-0006	NONE		103.3	0	72.68579
NAPHTHALENE	2/6	4.5		6.1		5.3	GI-JCC01-0006	160	0	6.1	0	5.460378
PHENANTHRENE	6/6	6.7		57		25.1	GI-JCC01-0006	240	0	58	0	40.49388
PYRENE	6/6	17		100		45.9	GI-JCC01-0006	665	0	120	0	71.11205
TOTAL CARCINOGENIC PAHS-HALFND	6/6	57		266		129	GI-JCC01-0006	NONE		375	0	194.2207
TOTAL CARCINOGENIC PAHS-POS	6/6	55.4		266		128	GI-JCC01-0006	NONE		375	0	194.1603
TOTAL PAHS	6/6	109.3		620.4		285	GI-JCC01-0006	NONE		770	0	443.1728
METALS (MG/KG)												
ALUMINUM	6/6	3500	E	5290	E	4450	GI-JCC04-0006	18000	0	7460	0	5022.177
ANTIMONY	4/6	0.108	BNI	0.2	BN	0.167	GI-JPC02-0006	2	0	0.2	0	0.193333
ARSENIC	6/6	1.1		2.7		1.96	GI-JPC02-0006	8.2	0	2.7	0	2.478888
BARIUM	6/6	6	E	11	E	8.18	GI-JPC02-0006	48	0	15.7	0	9.544084
BERYLLIUM	6/6	0.11	BE	0.24	--	0.183	GI-JCC02-0006, GI-JPC02-0006	NONE		0.405	0	0.226447
CADMIUM	6/6	0.048	B	0.18		0.0775	GI-JPC02-0006	1.2	0	0.367	0	0.12238
CALCIUM	6/6	633	*	12500	*	3560	GI-JPC02-0006	NONE		32500	0	9860.586
CHROMIUM	6/6	7.8	E	13.5	E	11.1	GI-JPC02-0006	81	0	19.8	0	12.78359
COBALT	6/6	2.2	E	4.1	E	3.01	GI-JCC04-0006	10	0	6	0	3.561657
COPPER	6/6	4.4	E	11.3	E	7.46	GI-JPC02-0006	34	0	15	0	9.312181
IRON	6/6	6250		12900		10400	GI-JCC02-0006	220000	0	16700	0	12587.15
LEAD	6/6	5.4	E	13.7	E	9.07	GI-JPC02-0006	46.7	0	20.6	0	11.28302
MAGNESIUM	6/6	1980	E	2820	E	2520	GI-JPC02-0006	NONE		3810	0	2817.47
MANGANESE	6/6	66.6	E	107.25	E	94.6	GI-JPC01-0006-AVG	260	0	139	0	106.5389
MERCURY	6/6	0.013	B	0.058		0.0288	GI-JPC02-0006	0.15	0	0.083	0	0.041593
NICKEL	6/6	5.3	E	8.2	E	6.7	GI-JCC04-0006	20.9	0	11.7	0	7.604156
POTASSIUM	6/6	566		1150		856	GI-JPC02-0006	NONE		1590	0	1045.025
SELENIUM	6/6	0.54	B	0.73	--	0.653	GI-JCC02-0006, GI-JPC02-0006	1	0	0.73	0	0.726667
SODIUM	6/6	3080	E	5440	E	4120	GI-JPC02-0006	NONE		6310	0	4867.369
VANADIUM	6/6	7.2	E	13.3	E	10.5	GI-JPC02-0006	57	0	20	0	12.30603

TABLE 4-4
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED AT REFERENCE STATIONS
PHASE 2 REMEDIAL INVESTIGAION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
ZINC	6/6	21.1	E	46	E	32.4	GI-JPC02-0006	150	0	61.8	0	39.21381
2010												
SEMIVOLATILES (UG/KG)												
ACENAPHTHENE	1/3	3.9	J	3.9	J	3.9	GI-SD525-0006	16	0	3.9	0	NC
ACENAPHTHYLENE	3/3	3.6	J	13	J	7.07	GI-SD525-0006	44	0	15	0	NC
ANTHRACENE	3/3	4.1	J	15	J	8.03	GI-SD525-0006	85.3	0	18	0	NC
BENZO(A)ANTHRACENE	3/3	15		61	J	32.7	GI-SD525-0006	261	0	61	0	NC
BENZO(A)PYRENE	3/3	18		73	J	38.3	GI-SD525-0006	430	0	73	0	NC
BENZO(B)FLUORANTHENE	3/3	15		58	J	30.7	GI-SD525-0006	1800	0	58	0	NC
BENZO(G,H,I)PERYLENE	3/3	14		48	J	27.3	GI-SD525-0006	670	0	48	0	NC
BENZO(K)FLUORANTHENE	3/3	13		52	J	27.7	GI-SD525-0006	1800	0	52	0	NC
CHRYSENE	3/3	17		71	J	38.3	GI-SD525-0006	384	0	71	0	NC
DIBENZO(A,H)ANTHRACENE	3/3	3.2	J	15	J	7.43	GI-SD525-0006	63.4	0	15	0	NC
FLUORANTHENE	3/3	36		130	J	68.7	GI-SD525-0006	600	0	130	0	NC
FLUORENE	3/3	1.8	J	6.7	J	3.6	GI-SD525-0006	19	0	7.2	0	NC
HIGH MOLECULAR WEIGHT PAHS	3/3	173	J	673	J	358	GI-SD525-0006	NONE		673	0	NC
INDENO(1,2,3-CD)PYRENE	3/3	12		45	J	24	GI-SD525-0006	600	0	45	0	NC
LOW MOLECULAR WEIGHT PAHS	3/3	10.4	J	96.6	J	46	GI-SD525-0006	NONE		103.3	0	NC
PHENANTHRENE	2/3	20		58	J	39	GI-SD525-0006	240	0	58	0	NC
PYRENE	3/3	30		120	J	63.3	GI-SD525-0006	665	0	120	0	NC
TOTAL CARCINOGENIC PAHS-HALFND	3/3	93.2	J	375	J	199	GI-SD525-0006	NONE		375	0	NC
TOTAL CARCINOGENIC PAHS-POS	3/3	93.2	J	375	J	199	GI-SD525-0006	NONE		375	0	NC
TOTAL PAHS	3/3	184	J	770	J	405	GI-SD525-0006	NONE		770	0	NC
METALS (MG/KG)												
ALUMINUM	3/3	4550		7460		6290	GI-SD526-0006	18000	0	7460	0	NC
ARSENIC	3/3	0.273	J	1.6	J	0.765	GI-SD525-0006	8.2	0	2.7	0	NC
BARIUM	3/3	7.7	J	15.7	J	11	GI-SD525-0006	48	0	15.7	0	NC
BERYLLIUM	3/3	0.216	J	0.405		0.339	GI-SD525-0006	NONE		0.405	0	NC
CADMIUM	3/3	0.132	J	0.367	J	0.256	GI-SD525-0006	1.2	0	0.367	0	NC
CALCIUM	3/3	2490	J	32500	J	13200	GI-SD525-0006	NONE		32500	0	NC
CHROMIUM	3/3	11.1	J	19.8	J	15.8	GI-SD525-0006	81	0	19.8	0	NC
COBALT	3/3	3.2	J	6	J	4.53	GI-SD526-0006	10	0	6	0	NC
COPPER	3/3	6.2	J	15	J	10.4	GI-SD525-0006	34	0	15	0	NC
IRON	3/3	9200		16700		13100	GI-SD526-0006	220000	0	16700	0	NC
LEAD	3/3	9.2	J	20.6	J	13.5	GI-SD525-0006	46.7	0	20.6	0	NC
MAGNESIUM	3/3	2560	J	3810	J	3330	GI-SD525-0006	NONE		3810	0	NC
MANGANESE	3/3	112	J	139	J	126	GI-SD525-0006	260	0	139	0	NC
MERCURY	3/3	0.028		0.083		0.05	GI-SD525-0006	0.15	0	0.083	0	NC
NICKEL	3/3	7	J	11.7	J	9.63	GI-SD526-0006	20.9	0	11.7	0	NC
POTASSIUM	3/3	802		1590		1130	GI-SD525-0006	NONE		1590	0	NC
SELENIUM	1/3	0.341	J	0.341	J	0.341	GI-SD524-0006	1	0	0.73	0	NC
SILVER	3/3	0.097	J	0.19	J	0.144	GI-SD525-0006	0.5	0	0.19	0	NC
SODIUM	3/3	2880		6310		4230	GI-SD525-0006	NONE		6310	0	NC
VANADIUM	3/3	10.3	J	20	J	16	GI-SD525-0006	57	0	20	0	NC
ZINC	3/3	30.7	J	61.8	J	45.1	GI-SD525-0006	150	0	61.8	0	NC

TABLE 4-4
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED AT REFERENCE STATIONS
PHASE 2 REMEDIAL INVESTIGAION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT	MAX. DETECT	AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
TOC (MG/KG)										
TOTAL ORGANIC CARBON	3/3	5900	11600	8660	GI-SD525-0006	NONE		11600	0	NC

Notes:
ND = Not detected
NC = Not calculated.
NONE = No PAL has been established
NA = Not analyzed for this parameter

TABLE 4-5
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED ALONG THE SOUTH SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2005												
SEMIVOLATILES (UG/KG)												
1,1-BIPHENYL	1/8	44	J	44	J	44	G32-SD303-000.5	NONE		NA		NC
2-METHYLNAPHTHALENE	5/8	7.7		130		33.7	G32-SD303-000.5	70	1	ND	5	122.94085
4-METHYLPHENOL	2/8	438	J	2100	J	1270	G32-SD301-000.5	NONE		NA		NC
ACENAPHTHENE	8/8	6.6		1000		161	G32-SD303-000.5	16	5	3.9	8	1357.4398
ACENAPHTHYLENE	7/8	3.3		11		6.64	G32-SD303-000.5	44	0	15	0	8.1069726
ANTHRACENE	8/8	14		1200		232	G32-SD303-000.5	85.3	5	18	7	655.34364
BENZO(A)ANTHRACENE	8/8	34		1700		392	G32-SD303-000.5	261	3	61	7	958.65031
BENZO(A)PYRENE	8/8	36		1400		323	G32-SD303-000.5	430	1	73	6	766.64528
BENZO(B)FLUORANTHENE	8/8	50		1200		325	G32-SD303-000.5	1800	0	58	7	672.641
BENZO(G,H,I)PERYLENE	8/8	24		850		180	G32-SD303-000.5	670	1	48	5	450.78135
BENZO(K)FLUORANTHENE	8/8	18		1200		227	G32-SD303-000.5	1800	0	52	6	837.78195
BIS(2-ETHYLHEXYL)PHTHALATE	7/8	39.5	J	100	J	55.5	G32-SD303-0.51.0	NONE		NA		88.828988
CARBAZOLE	5/8	43	J	600		187	G32-SD303-000.5	NONE		NA		276.875
CHRYSENE	8/8	34	EB	1600		361	G32-SD303-000.5	384	1	71	7	866.05973
DIBENZO(A,H)ANTHRACENE	8/8	5.9		190		44.9	G32-SD303-000.5	63.4	1	15	5	104.39662
DIBENZOFURAN	4/8	37	J	350		133	G32-SD303-000.5	NONE		NA		178.89098
FLUORANTHENE	8/8	80		3100		844	G32-SD303-000.5	600	4	130	7	1897.0194
FLUORENE	8/8	5.4		690		121	G32-SD303-000.5	19	5	7.2	7	383.30049
HIGH MOLECULAR WEIGHT PAHS	8/8	370		14900		3580	G32-SD303-000.5	NONE		673	7	8320.8552
INDENO(1,2,3-CD)PYRENE	8/8	20		850		176	G32-SD303-000.5	600	1	45	5	450.19502
LOW MOLECULAR WEIGHT PAHS	8/8	72.3		6380		1270	G32-SD303-000.5	NONE		103.3	7	3553.1532
NAPHTHALENE	6/8	3.6		350		70.2	G32-SD303-000.5	160	1	6.1	5	486.05734
PHENANTHRENE	8/8	43		3000		678	G32-SD303-000.5	240	5	58	7	1743.5644
PHENOL	3/8	38	J	110	J	77	G32-SD314-000.5-AVG	NONE		NA		116.78615
PYRENE	8/8	68		2800		708	G32-SD303-000.5	665	3	120	7	1618.8451
TOTAL CARCINOGENIC PAHS-HALFND	8/8	198		8140		1850	G32-SD303-000.5	NONE		375	6	4407.3454
TOTAL CARCINOGENIC PAHS-POS	8/8	198		8140		1850	G32-SD303-000.5	NONE		375	6	4407.3454
TOTAL PAHS	8/8	442		21300		4860	G32-SD303-000.5	NONE		770	7	11768.019
PCBS (UG/KG)												
AROCLOR-1260	3/8	85		230		145	G32-SD314-000.5-AVG	22.7	3	ND	3	230
TOTAL AROCLOR	3/8	85		230		145	G32-SD314-000.5-AVG	22.7	3	ND	3	230
METALS (MG/KG)												
ALUMINUM	8/8	4710		8520		6180	G32-SD303-000.5	18000	0	7460	2	7174.6923
ANTIMONY	1/8	33.8	J	33.8	J	33.8	G32-SD311-0.51.0	2	1	0.2	1	NC
ARSENIC	8/8	1.2	--	2.6	--	1.8	G32-SD303-000.5, G32-SD311-0.51.0	8.2	0	2.7	0	2.3403066
BARIUM	8/8	5.5	J	18	J	9.87	G32-SD303-0.51.0	48	0	15.7	1	12.811176
BERYLLIUM	8/8	0.23	--	0.4		0.299	G32-SD311-000.5	NONE		0.405	0	0.3394228
CALCIUM	8/8	1410	J	35000	J	14900	G32-SD303-0.51.0	NONE		32500	1	23683.925
CHROMIUM	8/8	10.1	J	18.2	J	13.3	G32-SD303-000.5	81	0	19.8	0	15.361462

TABLE 4-5
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED ALONG THE SOUTH SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
COBALT	8/8	2.2	--	3.2	--	2.74	G32-SD303-0.51.0, G32-SD303-000.5	10	0	6	0	3.0219172
COPPER	8/8	9.3		20.7		14.6	G32-SD311-0.51.0	34	0	15	3	17.012171
CYANIDE	2/8	0.3	J	0.31	J	0.305	G32-SD311-0.51.0	NONE		NA		0.3043829
IRON	8/8	9520		18700		13400	G32-SD303-000.5	220000	0	16700	1	15476.909
LEAD	8/8	9.5	J	27.2		17.1	G32-SD311-0.51.0	46.7	0	20.6	2	21.432427
MAGNESIUM	8/8	2570		4430		3300	G32-SD303-000.5	NONE		3810	2	3757.7342
MANGANESE	8/8	101	J	177	J	130	G32-SD303-000.5	260	0	139	3	148.1121
NICKEL	8/8	6.2	J	10.9	J	8.69	G32-SD314-0.51.0	20.9	0	11.7	0	9.7690215
POTASSIUM	8/8	644		1220		841	G32-SD303-000.5	NONE		1590	0	986.25644
SODIUM	8/8	2250		3670		2960	G32-SD303-0.51.0	NONE		6310	0	3320.7487
THALLIUM	1/8	0.17	J	0.17	J	0.17	G32-SD303-000.5	NONE		ND	1	NC
VANADIUM	8/8	13.8	J	24.1	J	17.5	G32-SD303-000.5	57	0	20	2	20.12216
ZINC	8/8	28.2	J	57.9	J	41.1	G32-SD303-000.5	150	0	61.8	0	47.585696
TOC (MG/KG)												
TOTAL ORGANIC CARBON	8/8	5000	J	10000	--	7790	G32-SD303-0.51.0, G32-SD303-000.5	NONE		11600	0	9104.703
							2010					
SEMIVOLATILES (UG/KG)												
2-METHYLNAPHTHALENE	2/2	6	J	13		9.5	GI-SD529-0006	70	0	ND	2	NC
ACENAPHTHENE	2/2	32	J	57		44.5	GI-SD529-0006	16	2	3.9	2	NC
ACENAPHTHYLENE	1/2	2.4	J	2.4	J	2.4	GI-SD529-0006	44	0	15	0	NC
ANTHRACENE	1/2	98		98		98	GI-SD529-0006	85.3	1	18	1	NC
BENZO(A)ANTHRACENE	2/2	77	J	180		128	GI-SD529-0006	261	0	61	2	NC
BENZO(A)PYRENE	2/2	62	J	180		121	GI-SD529-0006	430	0	73	1	NC
BENZO(B)FLUORANTHENE	2/2	58	J	140		99	GI-SD529-0006	1800	0	58	1	NC
BENZO(G,H,I)PERYLENE	2/2	18	J	110		64	GI-SD529-0006	670	0	48	1	NC
BENZO(K)FLUORANTHENE	2/2	56	J	150		103	GI-SD529-0006	1800	0	52	2	NC
CHRYSENE	2/2	81	J	180		130	GI-SD529-0006	384	0	71	2	NC
DIBENZO(A,H)ANTHRACENE	2/2	20	J	36		28	GI-SD529-0006	63.4	0	15	2	NC
FLUORANTHENE	2/2	240	J	400		320	GI-SD529-0006	600	0	130	2	NC
FLUORENE	2/2	24	J	47		35.5	GI-SD529-0006	19	2	7.2	2	NC
HIGH MOLECULAR WEIGHT PAHS	2/2	812	J	1780		1300	GI-SD529-0006	NONE		673	2	NC
INDENO(1,2,3-CD)PYRENE	2/2	40	J	98		69	GI-SD529-0006	600	0	45	1	NC
LOW MOLECULAR WEIGHT PAHS	2/2	242	J	567	J	404	GI-SD529-0006	NONE		103.3	2	NC
NAPHTHALENE	1/2	30		30		30	GI-SD529-0006	160	0	6.1	1	NC
PHENANTHRENE	2/2	180	J	320		250	GI-SD529-0006	240	1	58	2	NC
PYRENE	2/2	160	J	310		235	GI-SD529-0006	665	0	120	2	NC
TOTAL CARCINOGENIC PAHS-HALFND	2/2	394	J	964		679	GI-SD529-0006	NONE		375	2	NC
TOTAL CARCINOGENIC PAHS-POS	2/2	394	J	964		679	GI-SD529-0006	NONE		375	2	NC
TOTAL PAHS	2/2	1050	J	2350	J	1700	GI-SD529-0006	NONE		770	2	NC
PCBS (UG/KG)												

TABLE 4-5
SUMMARY OF STATISTICS FOR SEDIMENT SAMPLES COLLECTED ALONG THE SOUTH SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
HEXACHLOROBIPHENYL	1/2	16		16		16	GI-SD529-0006	22.7	0	ND	1	NC
TOTAL PCB HOMOLOGS	1/2	16		16		16	GI-SD529-0006	22.7	0	ND	1	NC
TOTAL PCB HOMOLOGS-HALFND	1/2	29.2		29.2		29.2	GI-SD529-0006	22.7	1	ND	1	NC
METALS (MG/KG)												
ALUMINUM	2/2	4280		6250		5260	GI-SD529-0006	18000	0	7460	0	NC
ARSENIC	2/2	0.293	J	0.49	J	0.392	GI-SD529-0006	8.2	0	2.7	0	NC
BARIUM	2/2	7.4		10.1		8.75	GI-SD529-0006	48	0	15.7	0	NC
BERYLLIUM	2/2	0.203		0.213	J	0.208	GI-SD529-0006	NONE		0.405	0	NC
CADMIUM	2/2	0.205	J	0.22		0.212	GI-SD311-0006	1.2	0	0.367	0	NC
CALCIUM	2/2	14700		31100		22900	GI-SD529-0006	NONE		32500	0	NC
CHROMIUM	2/2	8.3	J	11.3		9.8	GI-SD529-0006	81	0	19.8	0	NC
COBALT	2/2	2.8		3.6		3.2	GI-SD529-0006	10	0	6	0	NC
COPPER	2/2	8.1	J	17	J	12.6	GI-SD311-0006	34	0	15	1	NC
IRON	2/2	10200		13200		11700	GI-SD529-0006	220000	0	16700	0	NC
LEAD	2/2	12.7		14.1	J	13.4	GI-SD311-0006	46.7	0	20.6	0	NC
MAGNESIUM	2/2	2450		3230		2840	GI-SD529-0006	NONE		3810	0	NC
MANGANESE	2/2	102		129		116	GI-SD529-0006	260	0	139	0	NC
MERCURY	2/2	0.011	J	0.027	J	0.019	GI-SD529-0006	0.15	0	0.083	0	NC
NICKEL	2/2	6.4		8.4		7.4	GI-SD529-0006	20.9	0	11.7	0	NC
POTASSIUM	2/2	809	J	867		838	GI-SD529-0006	NONE		1590	0	NC
SILVER	1/2	0.331	J	0.331	J	0.331	GI-SD311-0006	0.5	0	0.19	1	NC
SODIUM	2/2	3020		4830		3920	GI-SD529-0006	NONE		6310	0	NC
VANADIUM	2/2	13.2		13.4		13.3	GI-SD529-0006	57	0	20	0	NC
ZINC	2/2	29.8	J	35.2	J	32.5	GI-SD529-0006	150	0	61.8	0	NC
TOC (MG/KG)												
TOTAL ORGANIC CARBON	2/2	5570		8300		6940	GI-SD529-0006	NONE		11600	0	NC

Notes:
ND = Not detected
NC = Not calculated.
NONE = No PAL has been established
NA = Not analyzed for this parameter

TABLE 4-6
SUMMARY OF STATISTICS FOR BIOTA SAMPLES COLLECTED IN THE STILLWATER AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2005 (CLAMS AND MUSSELS)												
SEMIVOLATILES (UG/KG)												
ANTHRACENE	1/1	27		27		27	G32-ET312-082905	NONE		NA		NC
BENZALDEHYDE	1/1	820	JEB	820	JEB	820	G32-ET312-082905	NONE		NA		NC
BENZO(A)ANTHRACENE	1/1	66		66		66	G32-ET312-082905	NONE		NA		NC
BENZO(A)PYRENE	1/1	33		33		33	G32-ET312-082905	NONE		NA		NC
BENZO(B)FLUORANTHENE	1/1	43		43		43	G32-ET312-082905	NONE		NA		NC
CHRYSENE	1/1	66		66		66	G32-ET312-082905	NONE		NA		NC
FLUORANTHENE	1/1	210		210		210	G32-ET312-082905	NONE		NA		NC
HIGH MOLECULAR WEIGHT PAHS	1/1	538		538		538	G32-ET312-082905	NONE		NA		NC
LOW MOLECULAR WEIGHT PAHS	1/1	73		73		73	G32-ET312-082905	NONE		NA		NC
PHENANTHRENE	1/1	46		46		46	G32-ET312-082905	NONE		NA		NC
PYRENE	1/1	120		120		120	G32-ET312-082905	NONE		NA		NC
TOTAL CARCINOGENIC PAHS-HALFND	1/1	236		236		236	G32-ET312-082905	NONE		NA		NC
TOTAL CARCINOGENIC PAHS-POS	1/1	208		208		208	G32-ET312-082905	NONE		NA		NC
TOTAL PAHS	1/1	611		611		611	G32-ET312-082905	NONE		NA		NC
PCBS (UG/KG)												
AROCLOR-1260	1/1	440		440		440	G32-ET312-082905	NONE		NA		NC
TOTAL AROCLOR	1/1	440		440		440	G32-ET312-082905	160	1	NA		NC
METALS (MG/KG)												
ARSENIC	1/1	1.8	J	1.8	J	1.8	G32-ET312-082905	2.41	0	7.2	0	NC
CALCIUM	1/1	322	J	322	J	322	G32-ET312-082905	NONE		3690	0	NC
CHROMIUM	1/1	0.29	J	0.29	J	0.29	G32-ET312-082905	5.57	0	0.546	0	NC
COBALT	1/1	0.032	J	0.032	J	0.032	G32-ET312-082905	17.02	0	0.235	0	NC
COPPER	1/1	0.95	J	0.95	J	0.95	G32-ET312-082905	13.51	0	4	0	NC
MAGNESIUM	1/1	733	J	733	J	733	G32-ET312-082905	NONE		828	0	NC
MANGANESE	1/1	1.5	J	1.5	J	1.5	G32-ET312-082905	119.6	0	20.6	0	NC
MERCURY	1/1	0.022		0.022		0.022	G32-ET312-082905	0.03	0	0.042	0	NC
POTASSIUM	1/1	2120		2120		2120	G32-ET312-082905	NONE		3110	0	NC
SODIUM	1/1	4870	J	4870	J	4870	G32-ET312-082905	NONE		4860	1	NC
VANADIUM	1/1	0.24	J	0.24	J	0.24	G32-ET312-082905	1.43	0	0.58	0	NC
ZINC	1/1	9.1	J	9.1	J	9.1	G32-ET312-082905	175	0	18.5	0	NC
LIPIDS (%)												
LIPIDS	1/1	1.2		1.2		1.2	G32-ET312-082905	NONE		4.23	0	NC

TABLE 4-6
SUMMARY OF STATISTICS FOR BIOTA SAMPLES COLLECTED IN THE STILLWATER AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2010 (CLAMS AND MUSSELS)												
PCBS (UG/KG)												
HEPTACHLOROBIPHENYLS	2/3	6.75	J	15	J	10.9	GI-ET504-0510	NONE		ND	2	NC
HEXACHLOROBIPHENYL	3/3	25		81		48.3	GI-ET502-0510	NONE		6.2	3	NC
PENTACHLOROBIPHENYLS	1/3	16.5	J	16.5	J	16.5	GI-ET505-0510-AVG	NONE		ND	1	NC
TOTAL PCB HOMOLOGS	3/3	40	J	81	J	60.7	GI-ET502-0510	160	0	6.2	3	NC
TOTAL PCB HOMOLOGS-HALFND	3/3	54.6	J	137	J	89.7	GI-ET502-0510	160	0	17.2	3	NC
METALS (MG/KG)												
ALUMINUM	3/3	22.6		32.2	J	27.2	GI-ET504-0510	4.48	3	46.7	0	NC
ARSENIC	3/3	2.1		3.2		2.6	GI-ET504-0510	2.41	2	7.2	0	NC
BARIUM	2/3	0.255	J	0.754		0.504	GI-ET504-0510	86.3	0	1.5	0	NC
CADMIUM	3/3	0.153		0.18		0.167	GI-ET504-0510	1.79	0	0.23	0	NC
CALCIUM	3/3	1450		2060	J	1660	GI-ET502-0510	NONE		3690	0	NC
CHROMIUM	3/3	0.184	J	0.275		0.225	GI-ET504-0510	5.57	0	0.546	0	NC
COBALT	3/3	0.087	J	0.147	J	0.112	GI-ET504-0510	17.02	0	0.235	0	NC
COPPER	3/3	1.4		1.9		1.67	GI-ET504-0510	13.51	0	4	0	NC
IRON	3/3	47.8	J	81.1	J	62.4	GI-ET504-0510	116.1	0	107	0	NC
LEAD	3/3	0.287		1.4		0.67	GI-ET504-0510	6.76	0	1.1	1	NC
MAGNESIUM	3/3	640		838		719	GI-ET504-0510	NONE		828	1	NC
MANGANESE	3/3	3		6.7		4.33	GI-ET504-0510	119.6	0	20.6	0	NC
MERCURY	3/3	0.014	J	0.016	--	0.0153	GI-ET504-0510, GI-ET505-0510-AVG	0.03	0	0.042	0	NC
NICKEL	3/3	0.272	J	0.546	J	0.376	GI-ET504-0510	3.95	0	0.86	0	NC
POTASSIUM	3/3	2160		2580		2330	GI-ET505-0510-AVG	NONE		3110	0	NC
SELENIUM	3/3	0.713		0.942		0.839	GI-ET505-0510-AVG	0.46	3	1.2	0	NC
SILVER	3/3	0.018	J	0.213		0.0843	GI-ET504-0510	8.38	0	0.817	0	NC
SODIUM	3/3	4060		5560		4610	GI-ET504-0510	NONE		4860	1	NC
VANADIUM	3/3	0.199	J	0.232	J	0.213	GI-ET505-0510-AVG	1.43	0	0.58	0	NC
ZINC	3/3	15.2		18.4		16.6	GI-ET505-0510-AVG	175	0	18.5	0	NC
LIPIDS (%)												
LIPIDS	2/3	0.699		1.06		0.88	GI-ET502-0510	NONE		4.23	0	NC

TABLE 4-6
SUMMARY OF STATISTICS FOR BIOTA SAMPLES COLLECTED IN THE STILLWATER AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2010 (CRABS)												
PCBS (UG/KG)												
HEPTACHLOROBIPHENYLS	3/3	18	--	20.5		18.8	GI-ET509-0610-AVG	NONE		2.9	3	NC
HEXACHLOROBIPHENYL	3/3	35		63	J	47.7	GI-ET509-0610-AVG	NONE		22	3	NC
PENTACHLOROBIPHENYLS	3/3	11	J	27		19.3	GI-ET509-0610-AVG	NONE		15	2	NC
TOTAL PCB HOMOLOGS	3/3	73		110	J	85.7	GI-ET509-0610-AVG	160	0	31.9	3	NC
TOTAL PCB HOMOLOGS-HALFND	3/3	86		124	J	99	GI-ET509-0610-AVG	160	0	38.2	3	NC
METALS (MG/KG)												
ALUMINUM	3/3	386		468		422	GI-ET509-0610-AVG	4.48	3	697	0	NC
ARSENIC	3/3	8.3	J	8.9	J	8.57	GI-ET507-0610	2.41	3	9.9	0	NC
BARIUM	3/3	5.8		6.15		5.95	GI-ET509-0610-AVG	86.3	0	6.5	0	NC
BERYLLIUM	1/3	0.072	J	0.072	J	0.072	GI-ET509-0610-AVG	1.23	0	0.063	1	NC
CADMIUM	3/3	0.0505	J	0.052	--	0.0515	GI-ET507-0610, GI-ET527-0610	1.79	0	0.155	0	NC
CALCIUM	3/3	42900	J	68200	J	56300	GI-ET527-0610	NONE		75600	0	NC
CHROMIUM	3/3	1.5		2.35		1.88	GI-ET509-0610-AVG	5.57	0	8.2	0	NC
COBALT	3/3	0.337	J	0.383	J	0.362	GI-ET509-0610-AVG	17.02	0	0.566	0	NC
COPPER	3/3	31.2	--	36.6		33	GI-ET509-0610-AVG	13.51	3	56.6	0	NC
IRON	3/3	790		880		827	GI-ET509-0610-AVG	116.1	3	1030	0	NC
LEAD	3/3	1.8	J	2.35	J	2.05	GI-ET509-0610-AVG	6.76	0	6.1	0	NC
MAGNESIUM	3/3	4990		5290		5110	GI-ET509-0610-AVG	NONE		5560	0	NC
MANGANESE	3/3	102		112		107	GI-ET507-0610	119.6	0	143	0	NC
MERCURY	3/3	0.032	J	0.066	J	0.0487	GI-ET507-0610	0.03	3	0.082	0	NC
NICKEL	3/3	1.8		2.8		2.27	GI-ET509-0610-AVG	3.95	0	10.4	0	NC
POTASSIUM	3/3	1920	J	2100	J	2020	GI-ET507-0610	NONE		2470	0	NC
SELENIUM	3/3	1.18	J	1.3	J	1.23	GI-ET507-0610	0.46	3	1.4	0	NC
SILVER	3/3	0.224	J	0.246	J	0.235	GI-ET527-0610	8.38	0	0.216	3	NC
SODIUM	3/3	4660	J	5000	J	4830	GI-ET527-0610	NONE		5710	0	NC
VANADIUM	3/3	1.7	--	1.9	J	1.77	GI-ET509-0610-AVG	1.43	3	2.2	0	NC
ZINC	3/3	34.8		37.5		35.8	GI-ET509-0610-AVG	175	0	50.5	0	NC

Notes:
ND = Not detected
NC = Not calculated.
NONE = No PAL has been established
NA = Not analyzed for this parameter

TABLE 4-7
SUMMARY OF STATISTICS FOR BIOTA SAMPLES COLLECTED FROM THE NORTHEAST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2005 (CLAMS AND MUSSELS)												
SEMIVOLATILES (UG/KG)												
2-METHYLPHENOL	3/11	230	J	330	J	287	G32-ET310F-090105	NONE		NA		340.37
4-CHLORO-3-METHYLPHENOL	1/11	560	J	560	J	560	G32-ET309-090105	NONE		NA		NC
BENZALDEHYDE	10/11	1100	JEB	27000	JEB	12000	G32-ET309-090105	NONE		NA		16712.37
BIS(2-ETHYLHEXYL)PHTHALATE	1/11	210	J	210	J	210	G32-ET304-082905	NONE		NA		NC
FLUORANTHENE	1/11	37		37		37	G32-ET304F-090205	NONE		NA		NC
HIGH MOLECULAR WEIGHT PAHS	1/11	83		83		83	G32-ET304F-090205	NONE		NA		NC
ISOPHORONE	1/11	230	J	230	J	230	G32-ET304F-090205	NONE		NA		NC
PYRENE	1/11	46		46		46	G32-ET304F-090205	NONE		NA		NC
TOTAL PAHS	1/11	83		83		83	G32-ET304F-090205	NONE		NA		NC
PCBS (UG/KG)												
AROCLOR-1260	3/11	98		170		143	G32-ET304-082905	NONE		NA		170
TOTAL AROCLOR	3/11	98		170		143	G32-ET304-082905	160	1	NA		170
METALS (MG/KG)												
ARSENIC	11/11	1.1	J	3.9	J	2.05	G32-ET307-090105	2.41	3	7.2	0	2.49
BERYLLIUM	5/11	0.006	J	0.012	J	0.0074	G32-ET307-090105	1.23	0	ND	5	0.01
CADMIUM	8/11	0.062	J	0.73	J	0.205	G32-ET307-090105	1.79	0	0.23	1	0.28
CALCIUM	11/11	188	J	8140	J	1320	G32-ET306F-090105	NONE		3690	1	4426.63
CHROMIUM	4/11	0.14	J	2.9	J	0.951	G32-ET306F-090105	5.57	0	0.546	1	0.93
COBALT	2/11	0.141		0.17		0.156	G32-ET304-082905	17.02	0	0.235	0	0.15
COPPER	2/11	1.2	J	1.93	J	1.56	G32-ET305-082905-AVG	13.51	0	4	0	1.93
IRON	4/11	23.3	J	73.7		53	G32-ET304F-090205	116.1	0	107	0	68.79
LEAD	2/11	0.218	J	1.1	J	0.659	G32-ET304F-090205	6.76	0	1.1	0	NC
MAGNESIUM	11/11	464		778		644	G32-ET306-090105	NONE		828	0	702.59
MANGANESE	2/11	9.25	J	12.5	J	10.9	G32-ET307-090105	119.6	0	20.6	0	12.50
MERCURY	2/11	0.005	J	0.0088	J	0.007	G32-ET304-082905	0.03	0	0.042	0	0.01
NICKEL	2/11	0.405		0.42		0.412	G32-ET304-082905	3.95	0	0.86	0	0.41
POTASSIUM	11/11	2070	J	2900	J	2430	G32-ET306-090105	NONE		3110	0	2575.80
SODIUM	11/11	2610	J	4700	J	3740	G32-ET304-082905	NONE		4860	0	4146.12
THALLIUM	1/11	0.18	J	0.18	J	0.18	G32-ET306F-090105	0.02	1	ND	1	NC
VANADIUM	9/11	0.11	J	0.65	J	0.269	G32-ET309F-090105	1.43	0	0.58	1	0.33
ZINC	11/11	7.1		24.3		14	G32-ET310F-090105	175	0	18.5	2	16.78
LIPIDS (%)												
LIPIDS	11/11	0.2		1.6		0.755	G32-ET310F-090105	NONE		4.23	0	NC

TABLE 4-7
SUMMARY OF STATISTICS FOR BIOTA SAMPLES COLLECTED FROM THE NORTHEAST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2010 (CLAMS AND MUSSELS)												
PCBS (UG/KG)												
DICHLOROBIPHENYLS	1/5	2.1	J	2.1	J	2.1	GI-ET530-0510	NONE		ND	1	NC
HEPTACHLOROBIPHENYLS	4/5	5.85	J	21	J	11.2	GI-ET566-0510-A	NONE		ND	4	16.33
HEXACHLOROBIPHENYL	5/5	16		34	--	24.8	GI-ET517-0510, GI-ET518-0510-AVG	NONE		6.2	5	32.98
PENTACHLOROBIPHENYLS	4/5	5	J	20	J	13.2	GI-ET518-0510-AVG	NONE		ND	4	18.00
TETRACHLOROBIPHENYLS	2/5	3.05	J	5.7	J	4.38	GI-ET530-0510	NONE		ND	2	5.70
TOTAL PCB HOMOLOGS	5/5	29.8	J	62	J	46.4	GI-ET518-0510-AVG	160	0	6.2	5	58.92
TOTAL PCB HOMOLOGS-HALFND	5/5	34.2	J	72.6	J	56.5	GI-ET518-0510-AVG	160	0	17.2	5	71.56
METALS (MG/KG)												
ALUMINUM	5/5	13.1	J	42.6	J	29.7	GI-ET518-0510-AVG	4.48	5	46.7	0	42.17
ARSENIC	5/5	2.4		3.7		2.95	GI-ET566-0510-B	2.41	4	7.2	0	3.53
BARIUM	3/5	0.29	J	0.754		0.495	GI-ET566-0510-A	86.3	0	1.5	0	0.75
CADMIUM	5/5	0.123		0.2		0.177	GI-ET518-0510-AVG	1.79	0	0.23	0	0.21
CALCIUM	5/5	751	J	3580	J	2030	GI-ET566-0510-A	NONE		3690	0	3255.82
CHROMIUM	5/5	0.174	J	0.533		0.383	GI-ET566-0510-B	5.57	0	0.546	0	0.52
COBALT	5/5	0.091	J	0.176	J	0.132	GI-ET566-0510-A	17.02	0	0.235	0	0.17
COPPER	5/5	1.4		2.3		1.85	GI-ET566-0510-A	13.51	0	4	0	2.19
IRON	5/5	38.8	J	102	J	83.5	GI-ET518-0510-AVG	116.1	0	107	0	108.12
LEAD	5/5	0.251		0.705		0.439	GI-ET517-0510	6.76	0	1.1	0	0.62
MAGNESIUM	5/5	614		784		691	GI-ET566-0510-B	NONE		828	0	749.86
MANGANESE	5/5	3		9.3		5.35	GI-ET566-0510-B	119.6	0	20.6	0	7.89
MERCURY	5/5	0.006	J	0.016	J	0.0124	GI-ET518-0510-AVG	0.03	0	0.042	0	0.02
NICKEL	5/5	0.269	J	0.59	J	0.423	GI-ET566-0510-A	3.95	0	0.86	0	0.55
POTASSIUM	5/5	2530		3120		2730	GI-ET566-0510-B	NONE		3110	1	2952.15
SELENIUM	5/5	0.748		0.884		0.819	GI-ET518-0510-AVG	0.46	5	1.2	0	0.88
SILVER	5/5	0.012	J	0.407		0.139	GI-ET566-0510-A	8.38	0	0.817	0	0.31
SODIUM	5/5	3790		4450		4140	GI-ET566-0510-B	NONE		4860	0	4387.89
THALLIUM	1/5	0.926	J	0.926	J	0.926	GI-ET518-0510-AVG	0.02	1	ND	1	NC
VANADIUM	5/5	0.19	J	0.294	J	0.234	GI-ET566-0510-A	1.43	0	0.58	0	0.27
ZINC	5/5	15.1		19.5		17.5	GI-ET517-0510	175	0	18.5	2	19.31
LIPIDS (%)												
LIPIDS	3/5	0.702		0.891		0.826	GI-ET518-0510-AVG	NONE		4.23	0	NC

TABLE 4-7
SUMMARY OF STATISTICS FOR BIOTA SAMPLES COLLECTED FROM THE NORTHEAST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2010 (CRABS)												
PCBS (UG/KG)												
DICHLOROBIPHENYLS	1/2	2.4	J	2.4	J	2.4	GI-ET514-0610	NONE		ND	1	NC
HEPTACHLOROBIPHENYLS	2/2	8	J	13	J	10.5	GI-ET515-0610	NONE		2.9	2	NC
HEXACHLOROBIPHENYL	2/2	24		31		27.5	GI-ET515-0610	NONE		22	2	NC
PENTACHLOROBIPHENYLS	1/2	16	J	16	J	16	GI-ET514-0610	NONE		15	1	NC
TOTAL PCB HOMOLOGS	2/2	44	J	50.4	J	47.2	GI-ET514-0610	160	0	31.9	2	NC
TOTAL PCB HOMOLOGS-HALFND	2/2	58.6	J	62.5	J	60.6	GI-ET514-0610	160	0	38.2	2	NC
METALS (MG/KG)												
ALUMINUM	2/2	345		429		387	GI-ET515-0610	4.48	2	697	0	NC
ARSENIC	2/2	6.3	J	7.3	J	6.8	GI-ET514-0610	2.41	2	9.9	0	NC
BARIUM	2/2	5.2		6.2		5.7	GI-ET514-0610	86.3	0	6.5	0	NC
CADMIUM	2/2	0.052	J	0.082	J	0.067	GI-ET515-0610	1.79	0	0.155	0	NC
CALCIUM	2/2	56300	J	87500	J	71900	GI-ET515-0610	NONE		75600	1	NC
CHROMIUM	2/2	2.3		3.4		2.85	GI-ET515-0610	5.57	0	8.2	0	NC
COBALT	2/2	0.325	J	0.347	J	0.336	GI-ET514-0610	17.02	0	0.566	0	NC
COPPER	2/2	26.6		30.6		28.6	GI-ET515-0610	13.51	2	56.6	0	NC
IRON	2/2	762		800		781	GI-ET514-0610	116.1	2	1030	0	NC
LEAD	2/2	1.7	J	1.9	J	1.8	GI-ET515-0610	6.76	0	6.1	0	NC
MAGNESIUM	2/2	4170		5340		4760	GI-ET514-0610	NONE		5560	0	NC
MANGANESE	2/2	97.3		133		115	GI-ET514-0610	119.6	1	143	0	NC
MERCURY	2/2	0.027		0.037		0.032	GI-ET515-0610	0.03	1	0.082	0	NC
NICKEL	2/2	2.4		4.5		3.45	GI-ET515-0610	3.95	1	10.4	0	NC
POTASSIUM	2/2	1200	J	1540	J	1370	GI-ET514-0610	NONE		2470	0	NC
SELENIUM	2/2	0.859	J	1.1	J	0.98	GI-ET515-0610	0.46	2	1.4	0	NC
SILVER	2/2	0.169	J	0.246	J	0.208	GI-ET514-0610	8.38	0	0.216	1	NC
SODIUM	2/2	3620	J	3690	J	3660	GI-ET514-0610	NONE		5710	0	NC
THALLIUM	1/2	0.004	J	0.004	J	0.004	GI-ET514-0610	0.02	0	0.005	0	NC
VANADIUM	2/2	1.5	J	1.6	J	1.55	GI-ET515-0610	1.43	2	2.2	0	NC
ZINC	2/2	26.8		32.4		29.6	GI-ET515-0610	175	0	50.5	0	NC

Notes:
ND = Not detected
NC = Not calculated.
NONE = No PAL has been established
NA = Not analyzed for this parameter

TABLE 4-8
SUMMARY OF STATISTICS FOR BIOTA SAMPLES COLLECTED FROM THE NORTHWEST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2005 (CLAMS AND MUSSELS)												
SEMIVOLATILES (UG/KG)												
2-METHYLPHENOL	3/6	220	J	600	J	407	G32-ET308F-090205	NONE		NA		627.81
BENZALDEHYDE	5/6	960	JEB	8700	JEB	4210	G32-ET302-082905	NONE		NA		6132.20
METALS (MG/KG)												
ARSENIC	6/6	0.75	J	4.2	J	2.16	G32-ET302-082905	2.41	1	7.2	0	3.09
BERYLLIUM	2/6	0.0056	J	0.0081		0.00685	G32-ET302-082905	1.23	0	ND	2	0.01
CADMIUM	5/6	0.08	J	0.22	J	0.166	G32-ET308F-090205	1.79	0	0.23	0	0.21
CALCIUM	6/6	291	J	3450	J	1390	G32-ET302-082905	NONE		3690	0	2398.52
CHROMIUM	3/6	0.28	J	6.1	J	2.22	G32-ET308-082905	5.57	1	0.546	1	12.04
COBALT	3/6	0.11		0.21		0.147	G32-ET302-082905	17.02	0	0.235	0	0.21
COPPER	3/6	0.59	J	2.1	J	1.46	G32-ET302-082905	13.51	0	4	0	2.10
IRON	3/6	19.9	J	51.9	J	38.4	G32-ET308-082905	116.1	0	107	0	42.53
MAGNESIUM	6/6	620		799	J	687	G32-ET308-082905	NONE		828	0	740.04
MANGANESE	3/6	4.4	J	6.2	J	5.13	G32-ET313-082905	119.6	0	20.6	0	6.20
MERCURY	2/6	0.01	J	0.011	J	0.0105	G32-ET302-082905	0.03	0	0.042	0	0.01
NICKEL	3/6	0.46		0.59		0.517	G32-ET302-082905	3.95	0	0.86	0	0.59
POTASSIUM	6/6	1760		2830	J	2180	G32-ET302F-090205	NONE		3110	0	2543.23
SODIUM	6/6	3650	J	4840	J	4100	G32-ET308-082905	NONE		4860	0	4446.01
THALLIUM	1/6	0.072	J	0.072	J	0.072	G32-ET302F-090205	0.02	1	ND	1	NC
VANADIUM	5/6	0.14	J	0.92	J	0.336	G32-ET302-082905	1.43	0	0.58	1	0.86
ZINC	6/6	10.5	J	36.1		18.4	G32-ET308F-090205	175	0	18.5	2	26.74
LIPIDS (%)												
LIPIDS	6/6	0.3		0.8		0.55	G32-ET302-082905	NONE		4.23	0	NC

TABLE 4-8
SUMMARY OF STATISTICS FOR BIOTA SAMPLES COLLECTED FROM THE NORTHWEST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2010 (CLAMS AND MUSSELS)												
PCBS (UG/KG)												
HEXACHLOROBIPHENYL	1/1	6.9		6.9		6.9	GI-ET520-0610	NONE		6.2	1	NC
TOTAL PCB HOMOLOGS	1/1	6.9		6.9		6.9	GI-ET520-0610	160	0	6.2	1	NC
TOTAL PCB HOMOLOGS-HALFND	1/1	12.5		12.5		12.5	GI-ET520-0610	160	0	17.2	0	NC
METALS (MG/KG)												
ALUMINUM	1/1	7.6	J	7.6	J	7.6	GI-ET520-0610	4.48	1	46.7	0	NC
ARSENIC	1/1	3.8		3.8		3.8	GI-ET520-0610	2.41	1	7.2	0	NC
BARIUM	1/1	0.701		0.701		0.701	GI-ET520-0610	86.3	0	1.5	0	NC
CADMIUM	1/1	0.194		0.194		0.194	GI-ET520-0610	1.79	0	0.23	0	NC
CALCIUM	1/1	4540	J	4540	J	4540	GI-ET520-0610	NONE		3690	1	NC
CHROMIUM	1/1	0.29		0.29		0.29	GI-ET520-0610	5.57	0	0.546	0	NC
COBALT	1/1	0.124	J	0.124	J	0.124	GI-ET520-0610	17.02	0	0.235	0	NC
COPPER	1/1	2.4		2.4		2.4	GI-ET520-0610	13.51	0	4	0	NC
IRON	1/1	26	J	26	J	26	GI-ET520-0610	116.1	0	107	0	NC
LEAD	1/1	0.216		0.216		0.216	GI-ET520-0610	6.76	0	1.1	0	NC
MAGNESIUM	1/1	742		742		742	GI-ET520-0610	NONE		828	0	NC
MANGANESE	1/1	12		12		12	GI-ET520-0610	119.6	0	20.6	0	NC
MERCURY	1/1	0.015	J	0.015	J	0.015	GI-ET520-0610	0.03	0	0.042	0	NC
NICKEL	1/1	0.348	J	0.348	J	0.348	GI-ET520-0610	3.95	0	0.86	0	NC
POTASSIUM	1/1	2490		2490		2490	GI-ET520-0610	NONE		3110	0	NC
SELENIUM	1/1	0.67		0.67		0.67	GI-ET520-0610	0.46	1	1.2	0	NC
SILVER	1/1	0.241		0.241		0.241	GI-ET520-0610	8.38	0	0.817	0	NC
SODIUM	1/1	4470		4470		4470	GI-ET520-0610	NONE		4860	0	NC
VANADIUM	1/1	0.226	J	0.226	J	0.226	GI-ET520-0610	1.43	0	0.58	0	NC
ZINC	1/1	15.5		15.5		15.5	GI-ET520-0610	175	0	18.5	0	NC
LIPIDS (%)												
LIPIDS	1/1	5.43		5.43		5.43	GI-ET520-0610	NONE		4.23	1	NC

TABLE 4-8
SUMMARY OF STATISTICS FOR BIOTA SAMPLES COLLECTED FROM THE NORTHWEST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2010 (CRABS)												
PCBS (UG/KG)												
HEPTACHLOROBIPHENYLS	1/1	9.5	J	9.5	J	9.5	GI-ET523-0610	NONE		2.9	1	NC
HEXACHLOROBIPHENYL	1/1	61		61		61	GI-ET523-0610	NONE		22	1	NC
PENTACHLOROBIPHENYLS	1/1	50		50		50	GI-ET523-0610	NONE		15	1	NC
TOTAL PCB HOMOLOGS	1/1	120	J	120	J	120	GI-ET523-0610	160	0	31.9	1	NC
TOTAL PCB HOMOLOGS-HALFND	1/1	129	J	129	J	129	GI-ET523-0610	160	0	38.2	1	NC
METALS (MG/KG)												
ALUMINUM	1/1	91.6		91.6		91.6	GI-ET523-0610	4.48	1	697	0	NC
ARSENIC	1/1	7.8	J	7.8	J	7.8	GI-ET523-0610	2.41	1	9.9	0	NC
BARIUM	1/1	3.8		3.8		3.8	GI-ET523-0610	86.3	0	6.5	0	NC
CADMIUM	1/1	0.289		0.289		0.289	GI-ET523-0610	1.79	0	0.155	1	NC
CALCIUM	1/1	78400	J	78400	J	78400	GI-ET523-0610	NONE		75600	1	NC
COBALT	1/1	0.168	J	0.168	J	0.168	GI-ET523-0610	17	0	0.566	0	NC
COPPER	1/1	31.6		31.6		31.6	GI-ET523-0610	13.5	1	56.6	0	NC
IRON	1/1	197		197		197	GI-ET523-0610	116	1	1030	0	NC
LEAD	1/1	0.763	J	0.763	J	0.763	GI-ET523-0610	6.76	0	6.1	0	NC
MAGNESIUM	1/1	3280		3280		3280	GI-ET523-0610	NONE		5560	0	NC
MANGANESE	1/1	32.3		32.3		32.3	GI-ET523-0610	120	0	143	0	NC
MERCURY	1/1	0.043		0.043		0.043	GI-ET523-0610	0.03	1	0.082	0	NC
NICKEL	1/1	0.978	J	0.978	J	0.978	GI-ET523-0610	3.95	0	10.4	0	NC
POTASSIUM	1/1	2120	J	2120	J	2120	GI-ET523-0610	NONE		2470	0	NC
SELENIUM	1/1	1.2	J	1.2	J	1.2	GI-ET523-0610	0.46	1	1.4	0	NC
SILVER	1/1	0.296	J	0.296	J	0.296	GI-ET523-0610	8.38	0	0.216	1	NC
SODIUM	1/1	5620	J	5620	J	5620	GI-ET523-0610	NONE		5710	0	NC
VANADIUM	1/1	0.598	J	0.598	J	0.598	GI-ET523-0610	1.43	0	2.2	0	NC
ZINC	1/1	37.4		37.4		37.4	GI-ET523-0610	175	0	50.5	0	NC

Notes:
ND = Not detected
NC = Not calculated.
NONE = No PAL has been established
NA = Not analyzed for this parameter

TABLE 4-9
SUMMARY OF STATISTICS FOR BIOTA SAMPLES COLLECTED FROM SOUTH LOCATIONS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2005 (CLAMS AND MUSSELS)												
SEMIVOLATILES (UG/KG)												
2,4-DIMETHYLPHENOL	1/3	2000	J	2000	J	2000	G32-ET311-090205	NONE		NA		NC
BENZALDEHYDE	3/3	1900	JEB	37000	JEB	14800	G32-ET303-090105	NONE		NA		NC
METALS (MG/KG)												
ARSENIC	3/3	1.3	J	3.3	J	2	G32-ET303-090105	2.41	1	7.2	0	NC
BERYLLIUM	1/3	0.0077	J	0.0077	J	0.0077	G32-ET303-090105	1.23	0	ND	1	NC
CADMIUM	2/3	0.138	J	0.15	J	0.144	G32-ET303-090105	1.79	0	0.23	0	NC
CALCIUM	3/3	299	J	760	J	528	G32-ET303-090105	NONE		3690	0	NC
CHROMIUM	1/3	0.59	J	0.59	J	0.59	G32-ET311-090205	5.57	0	0.546	1	NC
MAGNESIUM	3/3	656		716		680	G32-ET311-090205	NONE		828	0	NC
MANGANESE	2/3	15.4	J	38.6	J	27	G32-ET303-090105	119.6	0	20.6	1	NC
POTASSIUM	3/3	2240	J	2620	J	2420	G32-ET311-090205	NONE		3110	0	NC
SODIUM	3/3	3820	J	3930	J	3890	G32-ET311-090205	NONE		4860	0	NC
VANADIUM	1/3	1.2	J	1.2	J	1.2	G32-ET303-090105	1.43	0	0.58	1	NC
ZINC	3/3	9.75		17.4		12.7	G32-ET303-090105	175	0	18.5	0	NC
LIPIDS (%)												
LIPIDS	3/3	0.1		1.1		0.45	G32-ET303-090105	NONE		4.23	0	NC

TABLE 4-9
SUMMARY OF STATISTICS FOR BIOTA SAMPLES COLLECTED FROM SOUTH LOCATIONS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2010 (CLAMS AND MUSSELS)												
PCBS (UG/KG)												
HEPTACHLOROBIPHENYLS	1/1	4.7	J	4.7	J	4.7	GI-ET529-0610	NONE		ND	1	NC
HEXACHLOROBIPHENYL	1/1	7.1	J	7.1	J	7.1	GI-ET529-0610	NONE		6.2	1	NC
PENTACHLOROBIPHENYLS	1/1	4	J	4	J	4	GI-ET529-0610	NONE		ND	1	NC
TETRACHLOROBIPHENYLS	1/1	1.1	J	1.1	J	1.1	GI-ET529-0610	NONE		ND	1	NC
TOTAL PCB HOMOLOGS	1/1	16.9	J	16.9	J	16.9	GI-ET529-0610	160	0	6.2	1	NC
TOTAL PCB HOMOLOGS-HALFND	1/1	20.8	J	20.8	J	20.8	GI-ET529-0610	160	0	17.2	1	NC
METALS (MG/KG)												
ALUMINUM	1/1	15.9	J	15.9	J	15.9	GI-ET529-0610	4.48	1	46.7	0	NC
ARSENIC	1/1	3.5		3.5		3.5	GI-ET529-0610	2.41	1	7.2	0	NC
BARIUM	1/1	0.535		0.535		0.535	GI-ET529-0610	86.3	0	1.5	0	NC
CADMIUM	1/1	0.156		0.156		0.156	GI-ET529-0610	1.79	0	0.23	0	NC
CALCIUM	1/1	2510	J	2510	J	2510	GI-ET529-0610	NONE		3690	0	NC
CHROMIUM	1/1	0.181	J	0.181	J	0.181	GI-ET529-0610	5.57	0	0.546	0	NC
COBALT	1/1	0.1	J	0.1	J	0.1	GI-ET529-0610	17.02	0	0.235	0	NC
COPPER	1/1	2.7		2.7		2.7	GI-ET529-0610	13.51	0	4	0	NC
IRON	1/1	36.4	J	36.4	J	36.4	GI-ET529-0610	116.1	0	107	0	NC
LEAD	1/1	0.245		0.245		0.245	GI-ET529-0610	6.76	0	1.1	0	NC
MAGNESIUM	1/1	609		609		609	GI-ET529-0610	NONE		828	0	NC
MANGANESE	1/1	12.1		12.1		12.1	GI-ET529-0610	119.6	0	20.6	0	NC
MERCURY	1/1	0.012	J	0.012	J	0.012	GI-ET529-0610	0.03	0	0.042	0	NC
NICKEL	1/1	0.291	J	0.291	J	0.291	GI-ET529-0610	3.95	0	0.86	0	NC
POTASSIUM	1/1	2710		2710		2710	GI-ET529-0610	NONE		3110	0	NC
SELENIUM	1/1	0.69		0.69		0.69	GI-ET529-0610	0.46	1	1.2	0	NC
SILVER	1/1	0.48		0.48		0.48	GI-ET529-0610	8.38	0	0.817	0	NC
SODIUM	1/1	3510		3510		3510	GI-ET529-0610	NONE		4860	0	NC
VANADIUM	1/1	0.195	J	0.195	J	0.195	GI-ET529-0610	1.43	0	0.58	0	NC
ZINC	1/1	15.2		15.2		15.2	GI-ET529-0610	175	0	18.5	0	NC
LIPIDS (%)												
LIPIDS	1/1	4.02		4.02		4.02	GI-ET529-0610	NONE		4.23	0	NC

Notes:
ND = Not detected
NC = Not calculated.
NONE = No PAL has been established
NA = Not analyzed for this parameter

TABLE 4-10
SUMMARY OF STATISTICS FOR BIOTA SAMPLES COLLECTED FROM REFERENCE STATIONS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2010 (CLAMS AND MUSSELS)												
PCBS (UG/KG)												
HEXACHLOROBIPHENYL	3/3	2.2	J	6.2	J	4.53	GI-ET526-0610	NONE		6.2	0	NC
TOTAL PCB HOMOLOGS	3/3	2.2	J	6.2	J	4.53	GI-ET526-0610	160	0	6.2	0	NC
TOTAL PCB HOMOLOGS-HALFND	3/3	7.76	J	17.2	J	11.9	GI-ET526-0610	160	0	17.2	0	NC
METALS (MG/KG)												
ALUMINUM	3/3	20.9	J	46.7	J	33.9	GI-ET526-0610	4.48	3	46.7	0	NC
ARSENIC	3/3	3.6		7.2		5.6	GI-ET524-0610	2.41	3	7.2	0	NC
BARIUM	3/3	0.783		1.5		1.09	GI-ET524-0610	86.3	0	1.5	0	NC
CADMIUM	3/3	0.157		0.23		0.19	GI-ET524-0610	1.79	0	0.23	0	NC
CALCIUM	3/3	1360	J	3690	J	2650	GI-ET526-0610	NONE		3690	0	NC
CHROMIUM	3/3	0.303		0.546		0.405	GI-ET524-0610	5.57	0	0.546	0	NC
COBALT	3/3	0.202	J	0.235	J	0.221	GI-ET525-0610	17.02	0	0.235	0	NC
COPPER	3/3	2.5		4		3.3	GI-ET524-0610	13.51	0	4	0	NC
IRON	3/3	41.5	J	107	J	70.5	GI-ET526-0610	116.07	0	107	0	NC
LEAD	3/3	0.265		1.1		0.646	GI-ET526-0610	6.76	0	1.1	0	NC
MAGNESIUM	3/3	705		828		753	GI-ET524-0610	NONE		828	0	NC
MANGANESE	3/3	5.9		20.6		11.2	GI-ET526-0610	119.55	0	20.6	0	NC
MERCURY	3/3	0.016	J	0.042		0.028	GI-ET524-0610	0.03	1	0.042	0	NC
NICKEL	3/3	0.464	J	0.86		0.628	GI-ET524-0610	3.95	0	0.86	0	NC
POTASSIUM	3/3	2510		3110		2890	GI-ET525-0610	NONE		3110	0	NC
SELENIUM	3/3	0.764		1.2		0.967	GI-ET524-0610	0.46	3	1.2	0	NC
SILVER	3/3	0.358		0.817		0.585	GI-ET525-0610	8.38	0	0.817	0	NC
SODIUM	3/3	4070		4860		4340	GI-ET524-0610	NONE		4860	0	NC
VANADIUM	3/3	0.315	J	0.58	J	0.434	GI-ET524-0610	1.43	0	0.58	0	NC
ZINC	3/3	16.7		18.5		17.4	GI-ET526-0610	175.03	0	18.5	0	NC
LIPIDS (%)												
LIPIDS	3/3	2.99		4.23		3.51	GI-ET524-0610	NONE		4.23	0	NC

TABLE 4-10
SUMMARY OF STATISTICS FOR BIOTA SAMPLES COLLECTED FROM REFERENCE STATIONS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

PARAMETERS	FREQ. OF DETECTS	MIN. DETECT		MAX. DETECT		AVG	SAMPLE WITH MAX. DETECT	PAL	# OF PAL EXCEEDANCES	MAX. CONC. OF REF. SAMPLES	# OF REF. EXCEEDANCES	UCL
2010 (CRABS)												
PCBS (UG/KG)												
HEPTACHLOROBIPHENYLS	1/3	2.9	J	2.9	J	2.9	GI-ET524-0610_2010604	NONE		2.9	0	NC
HEXACHLOROBIPHENYL	3/3	14		22		17	GI-ET526-0610_2010604	NONE		22	0	NC
PENTACHLOROBIPHENYLS	2/3	14		15		14.5	GI-ET525-0610_20100604	NONE		15	0	NC
TOTAL PCB HOMOLOGS	3/3	22		31.9	J	27.6	GI-ET524-0610_2010604	160	0	31.9	0	NC
TOTAL PCB HOMOLOGS-HALFND	3/3	36.2	J	38.2	--	37.5	GI-ET525-0610_20100604, G	160	0	38.2	0	NC
METALS (MG/KG)												
ALUMINUM	3/3	85.7		697		461	GI-ET524-0610_2010604	4.48	3	697	0	NC
ARSENIC	3/3	7.1	J	9.9	J	8.33	GI-ET526-0610_2010604	2.41	3	9.9	0	NC
BARIUM	3/3	4.3		6.5		5.43	GI-ET526-0610_2010604	86.3	0	6.5	0	NC
BERYLLIUM	2/3	0.05	J	0.063	J	0.0565	GI-ET524-0610_2010604	1.23	0	0.063	0	NC
CADMIUM	3/3	0.064	J	0.155	J	0.116	GI-ET525-0610_20100604	1.79	0	0.155	0	NC
CALCIUM	3/3	44400	J	75600	J	60400	GI-ET525-0610_20100604	NONE		75600	0	NC
CHROMIUM	2/3	6		8.2		7.1	GI-ET526-0610_2010604	5.57	2	8.2	0	NC
COBALT	3/3	0.362	J	0.566	J	0.466	GI-ET526-0610_2010604	17.02	0	0.566	0	NC
COPPER	3/3	28.4		56.6		44.2	GI-ET524-0610_2010604	13.51	3	56.6	0	NC
IRON	3/3	290		1030		771	GI-ET526-0610_2010604	116.07	3	1030	0	NC
LEAD	3/3	1.2	J	6.1	J	3.27	GI-ET524-0610_2010604	6.76	0	6.1	0	NC
MAGNESIUM	3/3	3530		5560		4810	GI-ET524-0610_2010604	NONE		5560	0	NC
MANGANESE	3/3	53.1		143		87.3	GI-ET526-0610_2010604	119.55	1	143	0	NC
MERCURY	3/3	0.049	J	0.082		0.0603	GI-ET525-0610_20100604	0.03	3	0.082	0	NC
NICKEL	3/3	0.637	J	10.4		6.05	GI-ET526-0610_2010604	3.95	2	10.4	0	NC
POTASSIUM	3/3	1370	J	2470	J	2040	GI-ET526-0610_2010604	NONE		2470	0	NC
SELENIUM	3/3	1.1	--	1.4	J	1.2	GI-ET526-0610_2010604	0.46	3	1.4	0	NC
SILVER	3/3	0.145	J	0.216	J	0.185	GI-ET524-0610_2010604	8.38	0	0.216	0	NC
SODIUM	3/3	4530	J	5710	J	5310	GI-ET524-0610_2010604	NONE		5710	0	NC
THALLIUM	2/3	0.004	J	0.005	J	0.0045	GI-ET524-0610_2010604	0.02	0	0.005	0	NC
VANADIUM	3/3	0.841	J	2.2		1.71	GI-ET526-0610_2010604	1.43	2	2.2	0	NC
ZINC	3/3	32		50.5		43.2	GI-ET524-0610_2010604	175.03	0	50.5	0	NC
LIPIDS (%)												
LIPIDS	1/3	0.687		0.687		0.687	GI-ET524-0610_201060	NONE		0.687	0	NC

Notes:
ND = Not detected
NC = Not calculated.
NONE = No PAL has been established
NA = Not analyzed for this parameter

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	G32-SB321-1012	G32-SB321-0204	G32-SB322-0204	G32-SB322-0608	G32-SB323-1012	G32-SB323-0204	G32-SB324-0204	G32-SB324-0810	G32-SB325-0305-AVG	G32-SB325-0709
LOCATION ID		G32-SB321	G32-SB321	G32-SB322	G32-SB322	G32-SB323	G32-SB323	G32-SB324	G32-SB324	G32-SB325	G32-SB325
SAMPLE DATE		6/23/2005	6/23/2005	6/20/2005	6/20/2005	6/21/2005	6/21/2005	6/20/2005	6/20/2005	6/17/2005	6/17/2005
TOP DEPTH		10 FT	2 FT	2 FT	6 FT	10 FT	2 FT	2 FT	8 FT	3 FT	7 FT
BOTTOM DEPTH		12 FT	4 FT	4 FT	8 FT	12 FT	4 FT	4 FT	10 FT	5 FT	9 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL
SUBMATRIX		SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
1,1-BIPHENYL		360 U	360 U	360 U	400 U	360 U	360 U	360 U	NA	355 U	350 U
2-METHYLNAPHTHALENE	70	3.6 UJ	3.6 U	3.6 UJ	4 UJ	3.6 UJ	3.6 UJ	3.6 UJ	NA	3.55 UJ	3.5 UJ
ACENAPHTHENE	16	3.6 UJ	3.6 U	3.6 UJ	4 UJ	3.6 UJ	3.6 UJ	3.6 UJ	NA	3.55 UJ	3.5 UJ
ACENAPHTHYLENE	44	3.6 UJ	3.6 U	3.6 UJ	4 UJ	3.6 UJ	3.6 UJ	3.6 UJ	NA	3.55 UJ	3.5 UJ
ANTHRACENE	85.3	3.7 J	7.6	3.6 UJ	4 UJ	3.6 UJ	3.6 UJ	3.6 UJ	NA	3.55 UJ	3.5 UJ
BENZALDEHYDE		360 UJ	360 UJ	360 UJ	400 UJ	360 UJ	360 UJ	360 UJ	NA	355 UJ	350 UJ
BENZO(A)ANTHRACENE	261	48 J	11	4.4 J	4 UJ	3.6 UJ	5.2 J	3.6 UJ	NA	3.55 UJ	3.5 UJ
BENZO(A)PYRENE	430	78 J	3.6 U	3.6 UJ	4 UJ	3.6 UJ	4.2 J	3.6 UJ	NA	3.55 UJ	3.5 UJ
BENZO(B)FLUORANTHENE	1800	95 J	6.2	3.6 UJ	4 UJ	3.6 UJ	6.5 J	3.6 UJ	NA	3.55 UJ	3.5 UJ
BENZO(G,H,I)PERYLENE	670	39 J	3.6 U	3.6 UJ	4 UJ	3.6 UJ	3.6 UJ	3.6 UJ	NA	3.55 UJ	3.5 UJ
BENZO(K)FLUORANTHENE	1800	31 J	3.6 U	3.6 UJ	4 UJ	3.6 UJ	3.6 UJ	3.6 UJ	NA	3.55 UJ	3.5 UJ
BIS(2-ETHYLHEXYL)PHTHALATE		360 U	360 U	360 U	400 U	80 J	140 J	65 J	NA	77.5 J	61 J
CARBAZOLE		360 U	360 U	360 U	400 U	360 U	360 U	360 U	NA	355 U	350 U
CHRYSENE	384	48 J	11	4.2 J	4 UJ	3.6 UJ	6.6 J	3.6 UJ	NA	3.55 UJ	3.5 UJ
DIBENZO(A,H)ANTHRACENE	63.4	11 J	3.6 U	3.6 UJ	4 UJ	3.6 UJ	3.6 UJ	3.6 UJ	NA	3.55 UJ	3.5 UJ
DIBENZOFURAN		360 U	360 U	360 U	400 U	360 U	360 U	360 U	NA	355 U	350 U
DI-N-BUTYL PHTHALATE		360 U	360 U	360 U	400 U	360 U	360 U	40 J	NA	112 J	40 J
FLUORANTHENE	600	22 J	41	15 J	7.6 J	5.1 J	14 J	3.6 UJ	NA	3.55 UJ	3.5 UJ
FLUORENE	19	3.6 UJ	4	3.6 UJ	4 UJ	3.6 UJ	3.6 UJ	3.6 UJ	NA	3.55 UJ	3.5 UJ

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	G32-SB321-1012	G32-SB321-0204	G32-SB322-0204	G32-SB322-0608	G32-SB323-1012	G32-SB323-0204	G32-SB324-0204	G32-SB324-0810	G32-SB325-0305-AVG	G32-SB325-0709
LOCATION ID		G32-SB321	G32-SB321	G32-SB322	G32-SB322	G32-SB323	G32-SB323	G32-SB324	G32-SB324	G32-SB325	G32-SB325
SAMPLE DATE		6/23/2005	6/23/2005	6/20/2005	6/20/2005	6/21/2005	6/21/2005	6/20/2005	6/20/2005	6/17/2005	6/17/2005
TOP DEPTH		10 FT	2 FT	2 FT	6 FT	10 FT	2 FT	2 FT	8 FT	3 FT	7 FT
BOTTOM DEPTH		12 FT	4 FT	4 FT	8 FT	12 FT	4 FT	4 FT	10 FT	5 FT	9 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL
SUBMATRIX		SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
HIGH MOLECULAR WEIGHT PAHS		432 J	99.2	34.6 J	13.3 J	8.9 J	50.5 J	3.6 UJ	NA	3.55 UJ	3.5 UJ
INDENO(1,2,3-CD)PYRENE	600	39 J	3.6 U	3.6 UJ	4 UJ	3.6 UJ	3.6 UJ	3.6 UJ	NA	3.55 UJ	3.5 UJ
LOW MOLECULAR WEIGHT PAHS		17.7 J	42.6	12 J	6.4 J	4.6 J	8.2 J	3.6 UJ	NA	3.55 UJ	4.6 J
NAPHTHALENE	160	3.6 UJ	3.6 U	3.6 UJ	4 UJ	3.6 UJ	3.6 UJ	3.6 UJ	NA	3.55 UJ	3.5 UJ
PHENANTHRENE	240	14 J	31	12 J	6.4 J	4.6 J	8.2 J	3.6 UJ	NA	3.55 UJ	4.6 J
PYRENE	665	21 J	30	11 J	5.7 J	3.8 J	14 J	3.6 UJ	NA	3.55 UJ	3.5 UJ
TOTAL PAHS		450 J	142	46.6 J	19.7 J	13.5 J	58.7 J	3.6 UJ	NA	3.55 UJ	4.6 J
METALS (MG/KG)											
ALUMINUM	18000	12900 J	5670 J	4440 J	5280	19900	5850	6220	NA	6120	13400
ANTIMONY	2	0.054 UJ	0.051 UJ	0.054 UJ	0.61 UJ	0.92 UJ	0.48 UJ	0.55 UJ	NA	0.595 UJ	0.89 UJ
ARSENIC	8.2	4.1 J	1.8 J	1.3 J	2.2 J	23.1 J	2.2 J	1.8 J	NA	2.6 J	3.8 J
BARIUM	48	12.3 J	14.9 J	11.6 J	14.7 J	7.5 J	16.1 J	12.5 J	NA	14.1 J	13.2 J
BERYLLIUM		0.29 J	0.23 J	0.16 J	0.15	0.29	0.18	0.26	NA	0.265	0.21
CADMIUM	1.2	0.16 J	0.005 UJ	0.0053 UJ	0.0061 UJ	0.43	0.0053 UJ	0.0048 UJ	NA	0.0049 UJ	0.32
CALCIUM		3910 J	1020 J	762 J	931 J	2510 J	3040 J	1040 J	NA	1060 J	686 J
CHROMIUM	81	10.6 J	8.2 J	7.3 J	7.9 J	13.3 J	8.9 J	9.5 J	NA	9.6 J	23.7 J
COBALT	10	13.2 J	7.6 J	6.5 J	7.2 J	26.1 J	4.6 J	7 J	NA	9.45 J	15.8 J
COPPER	34	20.3 J	9.4 J	25.7 J	12.2 J	53 J	13.7 J	10.1 J	NA	15.8 J	53.7 J
CYANIDE		0.12 U	0.12 U	0.12 U	0.13 U	0.12 U	0.12 U	0.12 U	NA	0.13 U	0.12 U
IRON	220000	31300 J	11100 J	9030 J	11100 J	35700 J	10900 J	12900 J	NA	13700 J	30500 J

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	G32-SB321-1012	G32-SB321-0204	G32-SB322-0204	G32-SB322-0608	G32-SB323-1012	G32-SB323-0204	G32-SB324-0204	G32-SB324-0810	G32-SB325-0305-AVG	G32-SB325-0709
LOCATION ID		G32-SB321	G32-SB321	G32-SB322	G32-SB322	G32-SB323	G32-SB323	G32-SB324	G32-SB324	G32-SB325	G32-SB325
SAMPLE DATE		6/23/2005	6/23/2005	6/20/2005	6/20/2005	6/21/2005	6/21/2005	6/20/2005	6/20/2005	6/17/2005	6/17/2005
TOP DEPTH		10 FT	2 FT	2 FT	6 FT	10 FT	2 FT	2 FT	8 FT	3 FT	7 FT
BOTTOM DEPTH		12 FT	4 FT	4 FT	8 FT	12 FT	4 FT	4 FT	10 FT	5 FT	9 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL
SUBMATRIX		SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
LEAD	46.7	6.2 J	4.5 J	4.4 J	4.8 J	5.6 J	7.4 J	4.3 J	NA	5.5 J	11 J
MAGNESIUM		7050 J	2390 J	1830 J	2440 J	12900 J	2250 J	2630 J	NA	2800 J	6320 J
MANGANESE	260	259 J	107 J	79.5 J	106 J	254 J	126 J	124 J	NA	116 J	220 J
MERCURY	0.15	0.0065 U	0.0065 U	0.007 U	0.0084 U	0.0073 U	0.0065 U	0.0065 U	NA	0.0075 UJ	0.0062 U
NICKEL	20.9	20.1 J	19.5 J	17.1 J	20.9 J	50.2 J	10.4 J	17.7 J	NA	22.6 J	39.4 J
POTASSIUM		473	546	491	579	281	610	528	NA	576	434
SELENIUM	1	0.065 UJ	0.061 UJ	0.065 UJ	0.073 UJ	0.06 UJ	0.065 UJ	0.059 UJ	NA	0.06 UJ	0.061 UJ
SILVER	0.5	0.72 UJ	0.6 UJ	0.63 UJ	0.59 UJ	2 UJ	0.31 UJ	0.66 UJ	NA	0.66 UJ	1.4 UJ
SODIUM		177	37 U	40.7 U	34.7	42.2	92	58.2	NA	55.8	31.2
THALLIUM		0.16 UJ	0.41 UJ	0.23 UJ	0.29 UJ	0.071 U	0.15 UJ	0.21 UJ	NA	0.22 UJ	0.32 UJ
VANADIUM	57	44 J	9.8 J	8.2 J	9.6 J	71.6	10.4 J	10.2 J	NA	10.4 J	12.6 J
ZINC	150	45.9 J	28.1 J	19.4 J	29.2 J	46 J	37.3 J	28.4 J	NA	28.4 J	73.2 J
PETROLEUM HYDROCARBONS (MG/KG)											
EXTRACTABLE PETROLEUM HYDROCARBONS	2500	13 U	13 U	13 U	15 UJ	13 UJ	21 J	13 U	NA	13 U	13 U
TOTAL PETROLEUM HYDROCARBONS	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	2500	3.4 U	3.8 U	5.1 U	5.4 U	3.9 U	4.7 U	3.5 U	3.2 UJ	3.8 U	4.2 U

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	G32-SB332-0002	G32-SB332-0406	G32-SB333-1214	G32-SB333-0406	G32-SB337-0002	G32-SB337-1012	G32-SB338-0002	G32-SB338-1012	G32-SOTP07	G32-SOTP08
LOCATION ID		G32-SB332	G32-SB332	G32-SB333	G32-SB333	G32-SB337	G32-SB337	G32-SB338	G32-SB338	G32-TP07	G32-TP08
SAMPLE DATE		7/14/2005	7/14/2005	6/23/2005	6/23/2005	7/14/2005	7/14/2005	7/14/2005	7/14/2005	7/22/2005	7/22/2005
TOP DEPTH		0 FT	4 FT	12 FT	4 FT	0 FT	10 FT	0 FT	10 FT		
BOTTOM DEPTH		2 FT	6 FT	14 FT	6 FT	2 FT	12 FT	2 FT	12 FT		
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX		SS	SB	SB	SB	SS	SB	SS	SB	SB	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
1,1-BIPHENYL		370 U	370 U	380 U	610 J	370 U	370 U	350 U	360 U	360 U	86 J
2-METHYLNAPHTHALENE	70	38	3.7 U	41	2200	4.1	3.7 UJ	3.5 U	3.6 U	7.2	340 J
ACENAPHTHENE	16	480	3.7 U	180	6100	46	3.7 UJ	86	3.6 U	19	1100
ACENAPHTHYLENE	44	12	3.7 U	4.4	280	5.4	3.7 UJ	3.5 U	3.6 U	3.6 U	97
ANTHRACENE	85.3	1700	5.7	350	12000	210	3.7 UJ	310	3.6 U	49	1800
BENZALDEHYDE		370 UJ	370 UJ	380 UJ	2200 UJ	370 UJ	370 UJ	350 UJ	360 UJ	360 UJ	390 UJ
BENZO(A)ANTHRACENE	261	2900	7.3	620	23000	350	3.7 UJ	520	3.6 U	160	4400
BENZO(A)PYRENE	430	2400	3.7 U	410	16000	300	3.7 UJ	370	3.6 U	160	3700 J
BENZO(B)FLUORANTHENE	1800	2900	6	520	23000	360	3.7 UJ	440	3.6 U	220	5200 J
BENZO(G,H,I)PERYLENE	670	1400 J	3.7 U	260	7700	150	3.7 UJ	190	3.6 U	91	1100 J
BENZO(K)FLUORANTHENE	1800	1300	3.7 U	300	8400	170	3.7 UJ	230	3.6 U	130	1900 J
BIS(2-ETHYLHEXYL)PHTHALATE		370 U	80 J	380 U	2200 U	370 U	52 J	350 U	360 U	65 J	64 J
CARBAZOLE		280 J	370 U	150 J	6300	370 U	370 U	64 J	360 U	360 U	890
CHRYSENE	384	3000	6.7	480	21000	310	3.7 UJ	450	3.6 U	150	3700
DIBENZO(A,H)ANTHRACENE	63.4	440 J	3.7 U	86 J	2300	47	3.7 UJ	62	3.6 U	26	270 J
DIBENZOFURAN		290 J	370 U	130 J	5400	370 U	370 U	120 J	360 U	360 U	620
DI-N-BUTYL PHTHALATE		370 U	370 U	380 U	2200 U	370 U	370 U	350 U	360 U	56 J	58 J
FLUORANTHENE	600	6100	18	1500	69000	700	3.7 UJ	1100	3.6 U	270 J	9500
FLUORENE	19	590	3.7 U	190	7200	42	3.7 UJ	160	3.6 U	23	990

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	G32-SB332-0002	G32-SB332-0406	G32-SB333-1214	G32-SB333-0406	G32-SB337-0002	G32-SB337-1012	G32-SB338-0002	G32-SB338-1012	G32-SOTP07	G32-SOTP08
LOCATION ID		G32-SB332	G32-SB332	G32-SB333	G32-SB333	G32-SB337	G32-SB337	G32-SB338	G32-SB338	G32-TP07	G32-TP08
SAMPLE DATE		7/14/2005	7/14/2005	6/23/2005	6/23/2005	7/14/2005	7/14/2005	7/14/2005	7/14/2005	7/22/2005	7/22/2005
TOP DEPTH		0 FT	4 FT	12 FT	4 FT	0 FT	10 FT	0 FT	10 FT		
BOTTOM DEPTH		2 FT	6 FT	14 FT	6 FT	2 FT	12 FT	2 FT	12 FT		
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX		SS	SB	SB	SB	SS	SB	SS	SB	SB	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
HIGH MOLECULAR WEIGHT PAHS		26700 J	52	5450 J	222000	3020	3.7 UJ	4350	3.6 U	1550 J	43100 J
INDENO(1,2,3-CD)PYRENE	600	1500 J	3.7 U	270	8200	140	3.7 UJ	180	3.6 U	84	1300 J
LOW MOLECULAR WEIGHT PAHS		6770	14.5	1960	94600	634	3.7 UJ	1060	3.6 U	276	12700 J
NAPHTHALENE	160	53	3.7 U	96	4800	6.2	3.7 UJ	6.9	3.6 U	7.5	860
PHENANTHRENE	240	3900	8.8	1100	62000	320	3.7 UJ	500	3.6 U	170	7500
PYRENE	665	4800	14	1000	43000	490	3.7 UJ	810	3.6 U	260	12000
TOTAL PAHS		33500 J	66.5	7410 J	316000	3650	3.7 UJ	5410	3.6 U	1830 J	55800 J
METALS (MG/KG)											
ALUMINUM	18000	4660	17000	13500 J	4860 J	7710	8400	5570	3260	7030	5330
ANTIMONY	2	0.3 UJ	0.62 UJ	0.051 UJ	6.3 UJ	0.35 UJ	0.45 UJ	0.42 UJ	0.33 UJ	0.51 J	0.75 J
ARSENIC	8.2	2.4 J	8.5 J	2.7 J	12.9 J	3.2 J	2.4 J	2.5 J	2.2 J	2.7 J	4.5 J
BARIUM	48	15.6 J	9.7 J	15.7 J	140 J	20.1 J	16.4 J	14.7 J	10.4 J	28.1 J	37.7 J
BERYLLIUM		0.17	0.24	0.24 J	0.14 J	0.22	0.21	0.24	0.13	0.34	0.29
CADMIUM	1.2	0.64 J	0.37 J	0.76 J	234 J	0.0051 UJ	0.0051 UJ	0.0049 UJ	0.005 UJ	0.52 UJ	0.73 J
CALCIUM		1520	5460	1170 J	53600 J	1080	1000	932	652	677 J	5160 J
CHROMIUM	81	6.2	14.5 J	20.5 J	82.5 J	11.3	12.1	8.3	4.7	8.5 J	8.6 J
COBALT	10	4.5 J	21 J	10.1 J	7.4 J	5.5 J	8.1 J	7 J	5.3 J	7.5 J	3 J
COPPER	34	19.2	43.5	25.6 J	313 J	16	18.3	18	14.4	20.2 J	14.3 J
CYANIDE		0.12 U	0.12 U	0.12 U	0.14 U	0.12	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U
IRON	220000	8960	49300	31500 J	181000 J	16300	17800	11400	6590	12600 J	11100 J

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	G32-SB332-0002	G32-SB332-0406	G32-SB333-1214	G32-SB333-0406	G32-SB337-0002	G32-SB337-1012	G32-SB338-0002	G32-SB338-1012	G32-SOTP07	G32-SOTP08
LOCATION ID		G32-SB332	G32-SB332	G32-SB333	G32-SB333	G32-SB337	G32-SB337	G32-SB338	G32-SB338	G32-TP07	G32-TP08
SAMPLE DATE		7/14/2005	7/14/2005	6/23/2005	6/23/2005	7/14/2005	7/14/2005	7/14/2005	7/14/2005	7/22/2005	7/22/2005
TOP DEPTH		0 FT	4 FT	12 FT	4 FT	0 FT	10 FT	0 FT	10 FT		
BOTTOM DEPTH		2 FT	6 FT	14 FT	6 FT	2 FT	12 FT	2 FT	12 FT		
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX		SS	SB	SB	SB	SS	SB	SS	SB	SB	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
LEAD	46.7	7.1 J	13.1 J	15.8 J	242 J	7.2 J	9.8 J	5.8 J	3.6 J	10.3 J	141 J
MAGNESIUM		1900	8780	6100 J	3680 J	2840	3760	2200	1390	2340	2110
MANGANESE	260	132	372	218 J	601 J	156	149	111	64.1	131	349
MERCURY	0.15	0.0073 U	0.0066 U	0.0074 U	0.034	0.012 J	0.0074 U	0.0066 U	0.0065 U	0.021 UJ	0.02 UJ
NICKEL	20.9	10.2 J	34.7 J	21.3 J	56.8 J	13.5 J	20.6 J	18.1 J	12 J	12.5 J	7.3 J
POTASSIUM		520 J	249 J	472	690	599 J	567 J	469 J	412 J	860 J	721 J
SELENIUM	1	0.06 U	0.06 U	0.062 UJ	0.073 UJ	0.062 U	0.062 U	0.06 U	0.061 U	0.062 U	0.069 U
SILVER	0.5	0.098 UJ	0.2 UJ	1.3 UJ	0.021 UJ	0.41 UJ	0.53 UJ	0.25 UJ	0.092 UJ	0.45 UJ	0.02 U
SODIUM		34.1	27	49.6 U	956	30.7	33.1	26.7	22.1	36.5 UJ	124 J
THALLIUM		0.071 U	0.071 U	0.25 UJ	0.43 UJ	0.073 U	0.073 U	0.071 U	0.072 U	0.073 U	0.082 U
VANADIUM	57	7.5 J	44.2 J	17.4 J	13.2 J	15.1 J	12.3 J	10 J	6.1 J	12.8 J	8.8 J
ZINC	150	23.1 J	48.8 J	51.5 J	415 J	27.4 J	34.6 J	21.9 J	15.8 J	28.2 J	170 J
PETROLEUM HYDROCARBONS (MG/KG)											
EXTRACTABLE PETROLEUM HYDROCARBONS	2500	85	13 U	14 U	270	97	13 U	65	13 U	140	91
TOTAL PETROLEUM HYDROCARBONS	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	2500	3.8 U	4.2 U	3.1 U	13 U	4.5 U	3.9 U	3.6 U	4 U	78	6.3 U

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	G32-SOTP09-01-0002	G32-SOTP09-02-0002	G32-SOTP10-01-0002	G32-SOTP10-02-0002	G32-SOTP11-01-AVG	G32-SOTP12-01-AVG	G32-SOTP13-01	GI-SB402-0006	GI-SB402-1218	GI-SB402-2430
LOCATION ID		G32-TP09-01	G32-TP09-02	G32-TP10A	G32-TP10B	G32-TP11B	G32-TP12	G32-TP13	GI-SB402	GI-SB402	GI-SB402
SAMPLE DATE		7/21/2005	7/21/2005	7/21/2005	7/21/2005	7/21/2005	7/21/2005	7/21/2005	6/2/2010	6/2/2010	6/2/2010
TOP DEPTH		0 FT	0 FT	0 FT	0 FT				0 FT	1 FT	2 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT				0.5 FT	1.5 FT	2.5 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX		SB	SB	SB	SB	SB	SB	SB	SS	SB	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
1,1-BIPHENYL		410 U	58 J	460 U	390 U	410 U	355 U	370 U	NA	NA	NA
2-METHYLNAPHTHALENE	70	98	350 J	450 J	3.9 U	11.6 J	7.65 J	61	78 U	72 U	76 U
ACENAPHTHENE	16	370	540	180	150	41 J	8.75	300 J	78 U	72 U	76 U
ACENAPHTHYLENE	44	58	140	4.6 U	3.9 U	4.1 U	3.55 U	3.7 U	78 U	72 U	76 U
ANTHRACENE	85.3	310	1000	38	37	78.5 J	20	530	61 J	72 U	76 U
BENZALDEHYDE		410 UJ	79 J	460 UJ	390 UJ	410 UJ	355 UJ	370 UJ	NA	NA	NA
BENZO(A)ANTHRACENE	261	800	3400	82	34	190	37.5	840	220 J	40 J	140 J
BENZO(A)PYRENE	430	790 J	2500 J	73	31	180	28.5	580	180 J	72 U	110 J
BENZO(B)FLUORANTHENE	1800	910 J	3700 J	74	26	245	43.5	730	240 J	52 J	130 J
BENZO(G,H,I)PERYLENE	670	390	880 J	46	19	83.5	14	310	120 J	72 U	50 J
BENZO(K)FLUORANTHENE	1800	660 J	1600 J	62	24	98	16.5	370	170 J	72 U	57 J
BIS(2-ETHYLHEXYL)PHTHALATE		79 J	130 J	76 J	68 J	127 J	38 J	370 U	NA	NA	NA
CARBAZOLE		91 J	530	460 U	390 U	410 U	355 U	250 J	NA	NA	NA
CHRYSENE	384	740	2500	97	44	180	34.5	920	250 J	48 J	150 J
DIBENZO(A,H)ANTHRACENE	63.4	140	200 J	20	7	25.5	3.38	110	78 U	72 U	76 U
DIBENZOFURAN		96 J	280 J	460 U	390 U	410 U	355 U	220 J	NA	NA	NA
DI-N-BUTYL PHTHALATE		71 J	98 J	55 J	58 J	130 J	46.5 J	47 J	NA	NA	NA
FLUORANTHENE	600	1500	6900	200	120	440 J	96	2100	430	60 J	280 J
FLUORENE	19	190	390 J	130	210	41 J	11	330 J	78 U	72 U	76 U

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	G32-SOTP09-01-0002	G32-SOTP09-02-0002	G32-SOTP10-01-0002	G32-SOTP10-02-0002	G32-SOTP11-01-AVG	G32-SOTP12-01-AVG	G32-SOTP13-01	GI-SB402-0006	GI-SB402-1218	GI-SB402-2430
LOCATION ID		G32-TP09-01	G32-TP09-02	G32-TP10A	G32-TP10B	G32-TP11B	G32-TP12	G32-TP13	GI-SB402	GI-SB402	GI-SB402
SAMPLE DATE		7/21/2005	7/21/2005	7/21/2005	7/21/2005	7/21/2005	7/21/2005	7/21/2005	6/2/2010	6/2/2010	6/2/2010
TOP DEPTH		0 FT	0 FT	0 FT	0 FT				0 FT	1 FT	2 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT				0.5 FT	1.5 FT	2.5 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX		SB	SB	SB	SB	SB	SB	SB	SS	SB	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
HIGH MOLECULAR WEIGHT PAHS		8410 J	30300 J	846	404	1840 J	348 J	7970	2210 J	276 J	1220 J
INDENO(1,2,3-CD)PYRENE	600	380	840 J	42	15	81.5	11.8 J	310	120 J	72 U	47 J
LOW MOLECULAR WEIGHT PAHS		1930	7740 J	1070 J	544	433 J	105 J	3860 J	431 J	37 J	140 J
NAPHTHALENE	160	85	320	140	100	16.1 J	10.4 J	38	78 U	72 U	76 U
PHENANTHRENE	240	820	5000	130	47	245 J	47	2600	370 J	37 J	140 J
PYRENE	665	2100	7800	150	84	320	62.5	1700	480	76 J	260 J
TOTAL PAHS		10300 J	38100 J	1910 J	948	2280 J	452 J	11800 J	2640 J	313 J	1360 J
METALS (MG/KG)											
ALUMINUM	18000	5230	6630	8000	9350	8770	13400	8830	3370	3610	8630
ANTIMONY	2	0.63 J	15.4 J	0.97 J	0.93 J	0.67 J	0.745 J	0.55 J	0.54 UJ	0.48 UJ	0.85 UJ
ARSENIC	8.2	2.5 J	11.4 J	4 J	3.2 J	3.55 J	4.55 J	2.9 J	3.3	3.7	2.4
BARIUM	48	24 J	51.5 J	45.9 J	12.4 J	23 J	26.1 J	20.2 J	14.4	12.9	28.2
BERYLLIUM		0.23	0.23	0.31	0.3	0.375	0.39	0.3	0.22	0.27	0.68
CADMIUM	1.2	25.4 J	5670 J	23.7 J	0.74 J	4.6 J	2 J	2.5 J	1.4	0.35 J	0.47 J
CALCIUM		1100 J	1420 J	1090 J	765 J	508 J	945 J	813 J	1070	698	761
CHROMIUM	81	10.9 J	340 J	14.8 J	10.4 J	14.6 J	21.8 J	13.4 J	5.1	3.9	10.5
COBALT	10	4.8 J	8.3 J	7.4 J	4.1 J	6.85 J	10.6 J	9.4 J	2.3 J	5.3 J	12.3 J
COPPER	34	25.6 J	424 J	25.7 J	17.5 J	51.8 J	29.4 J	28.6 J	7.8 J	5.8 J	23.6 J
CYANIDE		0.13 U	0.18 U	0.16 U	0.14 U	0.135 U	0.115 U	0.12 U	NA	NA	NA
IRON	220000	12500 J	57800 J	14700 J	24700 J	15200 J	26000 J	17300 J	7440	8470	19200

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	G32-SOTP09-01-0002	G32-SOTP09-02-0002	G32-SOTP10-01-0002	G32-SOTP10-02-0002	G32-SOTP11-01-AVG	G32-SOTP12-01-AVG	G32-SOTP13-01	GI-SB402-0006	GI-SB402-1218	GI-SB402-2430
LOCATION ID		G32-TP09-01	G32-TP09-02	G32-TP10A	G32-TP10B	G32-TP11B	G32-TP12	G32-TP13	GI-SB402	GI-SB402	GI-SB402
SAMPLE DATE		7/21/2005	7/21/2005	7/21/2005	7/21/2005	7/21/2005	7/21/2005	7/21/2005	6/2/2010	6/2/2010	6/2/2010
TOP DEPTH		0 FT	0 FT	0 FT	0 FT				0 FT	1 FT	2 FT
BOTTOM DEPTH		2 FT	2 FT	2 FT	2 FT				0.5 FT	1.5 FT	2.5 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX		SB	SB	SB	SB	SB	SB	SB	SS	SB	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
LEAD	46.7	83.6 J	2700 J	138 J	9 J	24.8 J	18.2 J	12.9 J	13 J	9 J	23.1 J
MAGNESIUM		1950	2790	3280	4270	3020	4640	3460	1120 J	1130 J	3250 J
MANGANESE	260	138	369	147	259	116	206	181	259	318	246
MERCURY	0.15	0.011 UJ	0.067 UJ	0.03 UJ	0.015 UJ	0.0285 UJ	0.0146 UJ	0.02 UJ	0.0091 J	0.0065 J	0.028 U
NICKEL	20.9	13.6 J	45.3 J	20.5 J	10.6 J	18 J	21.4 J	23.2 J	4.6 J	5.6 J	22.2 J
POTASSIUM		742 J	383 UJ	3950 J	592 J	738 J	482 J	486 J	469 J	423 J	1760 J
SELENIUM	1	0.074 U	0.095 U	0.079 U	0.066 U	0.076 U	0.065 U	0.066 U	1 UJ	0.9 UJ	0.82 UJ
SILVER	0.5	0.29 UJ	0.027 U	0.61 UJ	0.42 UJ	0.735 UJ	0.85 UJ	0.62 UJ	0.16 UJ	0.14 UJ	0.13 UJ
SODIUM		41.6 UJ	61.2 UJ	61.6 UJ	29.2 UJ	33 UJ	47.4 UJ	31.5 UJ	60.2	28.8 J	27 J
THALLIUM		0.087 U	0.11 U	0.094 U	0.077 U	0.0895 U	0.0765 U	0.078 U	0.28 J	0.58 J	0.3 J
VANADIUM	57	11.2 J	24.9 J	18.5 J	13.6 J	20.2 J	18 J	13 J	6.7	5.7	18.3
ZINC	150	62.2 J	653 J	47.6 J	33.4 J	58.4 J	54.2 J	66.4 J	41.3	31.2	48.7
PETROLEUM HYDROCARBONS (MG/KG)											
EXTRACTABLE PETROLEUM HYDROCARBONS	2500	1800	580	1200 J	3500	45.5	54.5	42	NA	NA	NA
TOTAL PETROLEUM HYDROCARBONS	2500	NA	NA	NA	NA	NA	NA	NA	55	26 U	37
GASOLINE RANGE ORGANICS	2500	24 U	120	180	54	3.7 U	19.5 UJ	3.5 U	2.8 U	2.4 U	2.4 U

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB402-4248	GI-SB403-0006	GI-SB403-1218-AVG	GI-SB403-2430	GI-SB403-4248	GI-SB404-0006	GI-SB404-1218-AVG	GI-SB404-2430	GI-SB404-4248	GI-SB405-0006
LOCATION ID		GI-SB402	GI-SB403	GI-SB403	GI-SB403	GI-SB403	GI-SB404	GI-SB404	GI-SB404	GI-SB404	GI-SB405
SAMPLE DATE		6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/3/2010	6/3/2010	6/3/2010	6/3/2010	6/3/2010
TOP DEPTH		3.5 FT	0 FT	1 FT	2 FT	3.5 FT	0 FT	1 FT	2 FT	3.5 FT	0 FT
BOTTOM DEPTH		4 FT	0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT
SACODE		NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX		SB	SS	SB	SB	SB	SS	SB	SB	SB	SS
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
1,1-BIPHENYL		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	70	75 U	76 U	74 U	73 U	71 U	74 U	74 U	76 U	76 U	80 U
ACENAPHTHENE	16	200 J	76 U	74 U	73 U	71 U	74 U	74 U	76 U	130 J	80 U
ACENAPHTHYLENE	44	75 U	76 U	74 U	73 U	71 U	74 U	74 U	76 U	76 U	80 U
ANTHRACENE	85.3	88 J	46 J	74 U	73 U	71 U	74 U	74 U	76 U	120 J	89 J
BENZALDEHYDE		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	261	110 J	220 J	42.5 J	73 U	71 U	89 J	74 U	95 J	250 J	330 J
BENZO(A)PYRENE	430	75 U	170 J	74 U	73 U	71 U	65 J	74 U	81 J	190 J	250 J
BENZO(B)FLUORANTHENE	1800	66 J	220 J	74 U	73 U	71 U	100 J	74 U	110 J	230 J	370 J
BENZO(G,H,I)PERYLENE	670	75 U	99 J	74 U	73 U	71 U	74 U	74 U	48 J	97 J	140 J
BENZO(K)FLUORANTHENE	1800	71 J	130 J	74 U	73 U	71 U	44 J	74 U	50 J	120 J	120 J
BIS(2-ETHYLHEXYL)PHTHALATE		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	384	110 J	250 J	43 J	73 U	71 U	110 J	74 U	110 J	230 J	340 J
DIBENZO(A,H)ANTHRACENE	63.4	75 U	76 U	74 U	73 U	71 U	74 U	74 U	76 U	76 U	41 J
DIBENZOFURAN		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	600	360 J	380	73.5 J	39 J	71 U	170 J	74 U	200 J	540	660 J
FLUORENE	19	400	76 U	74 U	73 U	71 U	74 U	74 U	76 U	150 J	80 U

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB402-4248	GI-SB403-0006	GI-SB403-1218-AVG	GI-SB403-2430	GI-SB403-4248	GI-SB404-0006	GI-SB404-1218-AVG	GI-SB404-2430	GI-SB404-4248	GI-SB405-0006
LOCATION ID		GI-SB402	GI-SB403	GI-SB403	GI-SB403	GI-SB403	GI-SB404	GI-SB404	GI-SB404	GI-SB404	GI-SB405
SAMPLE DATE		6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/3/2010	6/3/2010	6/3/2010	6/3/2010	6/3/2010
TOP DEPTH		3.5 FT	0 FT	1 FT	2 FT	3.5 FT	0 FT	1 FT	2 FT	3.5 FT	0 FT
BOTTOM DEPTH		4 FT	0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT
SACODE		NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX		SB	SS	SB	SB	SB	SS	SB	SB	SB	SS
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
HIGH MOLECULAR WEIGHT PAHS		967 J	2030 J	169 J	39 J	71 U	718 J	74 U	938 J	2180 J	2930 J
INDENO(1,2,3-CD)PYRENE	600	75 U	110 J	74 U	73 U	71 U	74 U	74 U	44 J	85 J	120 J
LOW MOLECULAR WEIGHT PAHS		1430 J	296 J	57.5 J	73 UJ	71 UJ	86 J	74 UJ	120 J	840 J	499 J
NAPHTHALENE	160	250 J	76 U	74 UJ	73 UJ	71 UJ	74 UJ	74 UJ	76 UJ	76 UJ	80 UJ
PHENANTHRENE	240	490	250 J	57.5 J	73 U	71 U	86 J	74 U	120 J	440	410 J
PYRENE	665	250 J	450	65.5 J	73 U	71 U	140 J	74 U	200 J	440	560 J
TOTAL PAHS		2400 J	2320 J	208 J	39 J	71 UJ	804 J	74 UJ	1060 J	3020 J	3430 J
METALS (MG/KG)											
ALUMINUM	18000	8270	6550	7720	6880	6060	5650	7100	4900	8780	5800
ANTIMONY	2	0.62 UJ	1.4 UJ	0.495 UJ	0.28 UJ	0.23 UJ	0.25 UJ	0.27 UJ	0.84 UJ	0.8 UJ	0.28 UJ
ARSENIC	8.2	2.5	4.1	2.45 J	0.71 J	0.57 J	1.9 J	1.55 J	2 J	2.1 J	2.1 J
BARIUM	48	28.1	27.8	17.6 J	15.1 J	13 J	21.9 J	22.7 J	21.6 J	26.1 J	22.1 J
BERYLLIUM		0.71	0.16 J	0.165 J	0.18 J	0.12 J	0.21 J	0.21 J	0.26 J	0.34 J	0.19 J
CADMIUM	1.2	0.48 J	31.5	8	2.7	0.73 J	0.63 J	1.7 J	6.8	22.6	2.1
CALCIUM		652	698	498	400	510	362	398	580	484	653
CHROMIUM	81	9.6	20.4	11.6	9.6	8	11.4	13	9.5	22.6	10.7
COBALT	10	8.1 J	4.2 J	4.05 J	3.9 J	3.4 J	3.3 J	3.85 J	6.4 J	8.3 J	4.9 J
COPPER	34	21.8 J	34.3 J	18.8 J	19.7	14.8	30.7	46.6	70.3	84.8	28.5
CYANIDE		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	220000	15900	22100	18600	17100	14000	14400	17000	8830	20500	15500

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB402-4248	GI-SB403-0006	GI-SB403-1218-AVG	GI-SB403-2430	GI-SB403-4248	GI-SB404-0006	GI-SB404-1218-AVG	GI-SB404-2430	GI-SB404-4248	GI-SB405-0006
LOCATION ID		GI-SB402	GI-SB403	GI-SB403	GI-SB403	GI-SB403	GI-SB404	GI-SB404	GI-SB404	GI-SB404	GI-SB405
SAMPLE DATE		6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/3/2010	6/3/2010	6/3/2010	6/3/2010	6/3/2010
TOP DEPTH		3.5 FT	0 FT	1 FT	2 FT	3.5 FT	0 FT	1 FT	2 FT	3.5 FT	0 FT
BOTTOM DEPTH		4 FT	0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT
SACODE		NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX		SB	SS	SB	SB	SB	SS	SB	SB	SB	SS
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
LEAD	46.7	7.4 J	194 J	13 J	11.1	5.4	84.5	88.8	43.2	111	41.2
MAGNESIUM		2540 J	2630 J	2840 J	2570	2450	2160	2500	1810	3700	2190
MANGANESE	260	160	197	146	129	116	96.1	110	103	179	116
MERCURY	0.15	0.026 U	0.015 J	0.023 U	0.024 U	0.024 U	0.023 J	0.0275 J	0.031 J	0.086	0.022 J
NICKEL	20.9	18.3 J	12.5 J	11.8 J	9.9	8	9.1	11.5	13.1	18.3	11.5
POTASSIUM		598 J	550 J	649 J	633	807	533	568	432	597	603
SELENIUM	1	0.74 UJ	1 UJ	0.84 UJ	1 U	0.83 U	0.9 U	0.97 U	0.63 J	1.1 U	1 U
SILVER	0.5	0.12 UJ	0.1 J	0.135 UJ	0.16 UJ	0.13 UJ	0.14 UJ	0.155 UJ	0.15 UJ	0.17 UJ	0.16 UJ
SODIUM		29.2 J	53.8 J	42.2 J	31.2 J	28.1 J	33 J	27 J	61.7	35.9 J	54.7 J
THALLIUM		0.3 U	0.32 J	0.162 J	0.4 U	0.33 U	0.36 U	0.38 U	0.39 U	0.44 U	0.4 U
VANADIUM	57	12.8	21.9	14.8	11.6	10.4	12.6	12.8	10.8	15	17.2
ZINC	150	48.7	97.3	35.1	26.5	21.5	22	32.7	36.4	99	37.2
PETROLEUM HYDROCARBONS (MG/KG)											
EXTRACTABLE PETROLEUM HYDROCARBONS	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PETROLEUM HYDROCARBONS	2500	1100	54	27 U	27 U	25 U	60	60	530	1200	88
GASOLINE RANGE ORGANICS	2500	9.8	2.9 U	2.35 U	3.0 U	2.3 U	3.0 U	2.6 U	13	83	3.0 U

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB405-1218	GI-SB405-2430	GI-SB405-4248
LOCATION ID		GI-SB405	GI-SB405	GI-SB405
SAMPLE DATE		6/3/2010	6/3/2010	6/3/2010
TOP DEPTH		1 FT	2 FT	3.5 FT
BOTTOM DEPTH		1.5 FT	2.5 FT	4 FT
SACODE		NORMAL	NORMAL	NORMAL
SUBMATRIX		SB	SB	SB
QC TYPE		NM	NM	NM
SEMIVOLATILES (UG/KG)				
1,1-BIPHENYL		NA	NA	NA
2-METHYLNAPHTHALENE	70	73 U	74 U	73 U
ACENAPHTHENE	16	73 U	74 U	73 U
ACENAPHTHYLENE	44	73 U	74 U	73 U
ANTHRACENE	85.3	73 U	74 U	73 U
BENZALDEHYDE		NA	NA	NA
BENZO(A)ANTHRACENE	261	73 U	74 U	41 J
BENZO(A)PYRENE	430	73 U	74 U	73 U
BENZO(B)FLUORANTHENE	1800	73 U	74 U	73 U
BENZO(G,H,I)PERYLENE	670	73 U	74 U	73 U
BENZO(K)FLUORANTHENE	1800	73 U	74 U	73 U
BIS(2-ETHYLHEXYL)PHTHALATE		NA	NA	NA
CARBAZOLE		NA	NA	NA
CHRYSENE	384	73 U	74 U	46 J
DIBENZO(A,H)ANTHRACENE	63.4	73 U	74 U	73 U
DIBENZOFURAN		NA	NA	NA
DI-N-BUTYL PHTHALATE		NA	NA	NA
FLUORANTHENE	600	56 J	45 J	79 J
FLUORENE	19	73 U	74 U	73 U

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB405-1218	GI-SB405-2430	GI-SB405-4248
LOCATION ID		GI-SB405	GI-SB405	GI-SB405
SAMPLE DATE		6/3/2010	6/3/2010	6/3/2010
TOP DEPTH		1 FT	2 FT	3.5 FT
BOTTOM DEPTH		1.5 FT	2.5 FT	4 FT
SACODE		NORMAL	NORMAL	NORMAL
SUBMATRIX		SB	SB	SB
QC TYPE		NM	NM	NM
HIGH MOLECULAR WEIGHT PAHS		104 J	45 J	235 J
INDENO(1,2,3-CD)PYRENE	600	73 U	74 U	73 U
LOW MOLECULAR WEIGHT PAHS		41 J	74 UJ	44 J
NAPHTHALENE	160	73 UJ	74 UJ	73 UJ
PHENANTHRENE	240	41 J	74 U	44 J
PYRENE	665	48 J	74 U	69 J
TOTAL PAHS		145 J	45 J	279 J
METALS (MG/KG)				
ALUMINUM	18000	6200	5020	7340
ANTIMONY	2	0.33 UJ	0.2 UJ	0.3 UJ
ARSENIC	8.2	0.87 J	0.85 J	1.1 J
BARIUM	48	22.2 J	16.6 J	26.8 J
BERYLLIUM		0.15 J	0.14 J	0.22 J
CADMIUM	1.2	0.78 J	5.3	12.6
CALCIUM		515	369	659
CHROMIUM	81	8.7	8	13.9
COBALT	10	4.7 J	3.5 J	7.4 J
COPPER	34	14.7	14.9	50.4
CYANIDE		NA	NA	NA
IRON	220000	14000	13000	18200

TABLE 4-11
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 32
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB405-1218	GI-SB405-2430	GI-SB405-4248
LOCATION ID		GI-SB405	GI-SB405	GI-SB405
SAMPLE DATE		6/3/2010	6/3/2010	6/3/2010
TOP DEPTH		1 FT	2 FT	3.5 FT
BOTTOM DEPTH		1.5 FT	2.5 FT	4 FT
SACODE		NORMAL	NORMAL	NORMAL
SUBMATRIX		SB	SB	SB
QC TYPE		NM	NM	NM
LEAD	46.7	9.3	13	55.1
MAGNESIUM		2490	2080	2890
MANGANESE	260	135	87.6	132
MERCURY	0.15	0.022 U	0.025 U	0.009 J
NICKEL	20.9	8.7	7.3	14.4
POTASSIUM		735	702	946
SELENIUM	1	1.2 U	0.73 U	1.1 U
SILVER	0.5	0.19 UJ	0.12 UJ	0.079 J
SODIUM		23.1 J	20.9 J	27.7 J
THALLIUM		0.47 U	0.29 U	0.43 U
VANADIUM	57	13	11.5	16.4
ZINC	150	32.8	22.9	45.1
PETROLEUM HYDROCARBONS (MG/KG)				
EXTRACTABLE PETROLEUM HYDROCARBONS	2500	NA	NA	NA
TOTAL PETROLEUM HYDROCARBONS	2500	26 U	32	49
GASOLINE RANGE ORGANICS	2500	2.3 U	2.5 U	2.9 U

TABLE 4-12
SUMMARY OF ANALYTICAL RESULTS FOR SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 33
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB401-0006	GI-SB401-1218	GI-SB401-2430	GI-SB401-4248	GI-SB406-0006	GI-SB406-1218	GI-SB406-2430-AVG	GI-SB406-4248-AVG	GI-SB407-0006	GI-SB407-1218
LOCATION ID		GI-SB401	GI-SB401	GI-SB401	GI-SB401	GI-SB406	GI-SB406	GI-SB406	GI-SB406	GI-SB407	GI-SB407
SAMPLE DATE		6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010
TOP DEPTH		0 FT	1 FT	2 FT	3.5 FT	0 FT	1 FT	2 FT	3.5 FT	0 FT	1 FT
BOTTOM DEPTH		0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT	1.5 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	AVG	NORMAL	NORMAL
SUBMATRIX		SS	SB	SB	SB	SS	SB	SB	SB	SS	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
2-METHYLNAPHTHALENE	70	81 U	73 U	71 U	73 U	70 U	72 U	72 U	73 U	98 J	71 U
ACENAPHTHENE	16	81 U	40 J	71 U	73 U	70 U	72 U	72 U	73 U	490	71 U
ANTHRACENE	85.3	81 U	92 J	71 U	73 U	70 U	72 U	72 U	73 U	610	71 U
BENZO(A)ANTHRACENE	261	160 J	310 J	71 U	73 U	36 J	72 U	72 U	73 U	1300	60 J
BENZO(A)PYRENE	430	140 J	190 J	71 U	73 U	70 U	72 U	72 U	73 U	930	42 J
BENZO(B)FLUORANTHENE	1800	170 J	300 J	71 U	73 U	70 U	72 U	72 U	73 U	1200	71 U
BENZO(G,H,I)PERYLENE	670	130 J	110 J	71 U	73 U	70 U	72 U	72 U	73 U	580	71 U
BENZO(K)FLUORANTHENE	1800	120 J	110 J	71 U	73 U	70 U	72 U	72 U	73 U	520 J	36 J
CHRYSENE	384	190 J	280 J	71 U	73 U	41 J	72 U	72 U	73 U	1100	56 J
DIBENZO(A,H)ANTHRACENE	63.4	81 U	73 U	71 U	73 U	70 U	72 U	72 U	73 U	140 J	71 U
FLUORANTHENE	600	300 J	610	71 U	73 U	57 J	72 U	72 U	73 U	3100	95 J
FLUORENE	19	81 U	42 J	71 U	73 U	70 U	72 U	72 U	73 U	260 J	71 U
HIGH MOLECULAR WEIGHT PAHS		1620 J	2580 J	71 U	73 U	187 J	72 U	72 U	73 U	11900 J	379 J
INDENO(1,2,3-CD)PYRENE	600	100 J	98 J	71 U	73 U	70 U	72 U	72 U	73 U	520	71 U
LOW MOLECULAR WEIGHT PAHS		190 J	574 J	71 U	73 U	40 J	72 U	72 U	73 U	4530 J	48 J
NAPHTHALENE	160	81 U	73 U	71 U	73 U	70 U	72 U	72 U	73 U	270 J	71 U
PHENANTHRENE	240	190 J	400	71 U	73 U	40 J	72 U	72 U	73 U	2800	48 J
PYRENE	665	310 J	570	71 U	73 U	53 J	72 U	72 U	73 U	2500	90 J
TOTAL PAHS		1810 J	3150 J	71 U	73 U	227 J	72 U	72 U	73 U	16400 J	427 J

TABLE 4-12
SUMMARY OF ANALYTICAL RESULTS FOR SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 33
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB401-0006	GI-SB401-1218	GI-SB401-2430	GI-SB401-4248	GI-SB406-0006	GI-SB406-1218	GI-SB406-2430-AVG	GI-SB406-4248-AVG	GI-SB407-0006	GI-SB407-1218
LOCATION ID		GI-SB401	GI-SB401	GI-SB401	GI-SB401	GI-SB406	GI-SB406	GI-SB406	GI-SB406	GI-SB407	GI-SB407
SAMPLE DATE		6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010
TOP DEPTH		0 FT	1 FT	2 FT	3.5 FT	0 FT	1 FT	2 FT	3.5 FT	0 FT	1 FT
BOTTOM DEPTH		0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT	1.5 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	AVG	NORMAL	NORMAL
SUBMATRIX		SS	SB	SB	SB	SS	SB	SB	SB	SS	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
METALS (MG/KG)											
ALUMINUM	18000	5800	5830	6300	5040	5070	6660	5660	5780	6820	7200
ANTIMONY	2	0.9 UJ	0.52 UJ	0.73 UJ	0.5 UJ	0.62 UJ	0.73 UJ	0.28 UJ	0.245 UJ	0.7 UJ	0.59 UJ
ARSENIC	8.2	2.4	1.6	1.7	1.2	2.9	2.9	0.93 J	0.865 J	2	2
BARIUM	48	19.7	21.6	13.6	11.6	16.4	21.3	14.4	10.6 J	27.6	27.4
BERYLLIUM		0.2	0.16 J	0.18 J	0.15 J	0.17 J	0.24	0.12 J	0.11 J	0.2	0.21
CADMIUM	1.2	0.15 J	0.33 J	0.018 UJ	0.022 UJ	0.071 J	0.02 UJ	0.15 UJ	0.145 UJ	0.14 J	0.26 J
CALCIUM		1000	1070	682	667	1000	838	748 J	824 J	1550	1120
CHROMIUM	81	5.8	10.9	10.7	8.4	6.1	9.1	10.5	7.65	10	11.7
COBALT	10	1.8 J	3.8 J	4.4 J	3.3 J	2.5 J	4.7 J	4	4.65	4.2 J	4.7 J
COPPER	34	5.3 J	11.9 J	15.6 J	9.7 J	8.1 J	12 J	8.2	10.1	15.9 J	14.3 J
IRON	220000	10100	12500	16600	11000	9790	16700	15100	14400	16900	18200
LEAD	46.7	10.6 J	14.9 J	5.8 J	4.8 J	7 J	6.2 J	4.8 J	4.9 J	19 J	10.7 J
MAGNESIUM		1240 J	2310 J	2500 J	1960 J	1660 J	2520 J	2150	2380	2640 J	2780 J
MANGANESE	260	146	159	131	105	203	178	139	132	152	154
MERCURY	0.15	0.013 J	0.024 U	0.026 U	0.027 U	0.026 U	0.022 U	0.023 UJ	0.023 UJ	0.0068 J	0.022 U
NICKEL	20.9	3.6 J	9.9 J	10.9 J	9.1 J	5.2 J	9.7 J	7.1 J	7.15 J	9.6 J	10.5 J
POTASSIUM		541 J	823 J	614 J	509 J	550 J	785 J	644	510	746 J	1190 J
SODIUM		40.3 J	30.9 J	30.4 J	30.5 J	22.6 J	26.2 J	27.8 J	25.2 J	35.5 J	34 J
THALLIUM		0.37 U	0.42 U	0.36 U	0.43 U	0.39 U	0.41 U	0.4 U	0.35 U	0.15 J	0.18 J
VANADIUM	57	9.2	13.2	12.9	9.4	8.6	12.8	11.7	12.8	12.6	14.4

TABLE 4-12
SUMMARY OF ANALYTICAL RESULTS FOR SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 33
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB401-0006	GI-SB401-1218	GI-SB401-2430	GI-SB401-4248	GI-SB406-0006	GI-SB406-1218	GI-SB406-2430-AVG	GI-SB406-4248-AVG	GI-SB407-0006	GI-SB407-1218
LOCATION ID		GI-SB401	GI-SB401	GI-SB401	GI-SB401	GI-SB406	GI-SB406	GI-SB406	GI-SB406	GI-SB407	GI-SB407
SAMPLE DATE		6/2/2010	6/2/2010	6/2/2010	6/2/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010
TOP DEPTH		0 FT	1 FT	2 FT	3.5 FT	0 FT	1 FT	2 FT	3.5 FT	0 FT	1 FT
BOTTOM DEPTH		0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT	1.5 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	AVG	NORMAL	NORMAL
SUBMATRIX		SS	SB	SB	SB	SS	SB	SB	SB	SS	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
ZINC	150	44	45.7	25.9	21.8	30.3	29.8	19 J	18.2 J	39.3	30.2
PETROLEUM HYDROCARBONS (MG/KG)											
TOTAL PETROLEUM HYDROCARBONS	2500	60	26 U	25 U	27 U	25	26 U	26 U	26 U	34	26 U

TABLE 4-12
SUMMARY OF ANALYTICAL RESULTS FOR SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 33
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB407-2430	GI-SB407-4248	GI-SB408-0006	GI-SB408-1218	GI-SB408-2430	GI-SB408-4248	GI-SB409-0006	GI-SB409-1218	GI-SB409-2430	GI-SB409-4854-AVG
LOCATION ID		GI-SB407	GI-SB407	GI-SB408	GI-SB408	GI-SB408	GI-SB408	GI-SB409	GI-SB409	GI-SB409	GI-SB409
SAMPLE DATE		6/1/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010	5/28/2010	5/28/2010	5/28/2010	5/28/2010
TOP DEPTH		2 FT	3.5 FT	0 FT	1 FT	2 FT	3.5 FT	0 FT	1 FT	2 FT	4 FT
BOTTOM DEPTH		2.5 FT	4 FT	0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT	1.5 FT	2.5 FT	4.5 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
SUBMATRIX		SB	SB	SS	SB	SB	SB	SS	SB	SB	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
2-METHYLNAPHTHALENE	70	72 U	70 U	72 U	71 U	70 U	72 U	72 U	70 U	71 U	71 U
ACENAPHTHENE	16	54 J	70 U	72 U	71 U	70 U	72 U	72 U	70 U	71 U	71 U
ANTHRACENE	85.3	73 J	70 U	72 U	71 U	70 U	72 U	72 U	70 U	71 U	71 U
BENZO(A)ANTHRACENE	261	310 J	71 J	80 J	72 J	70 U	72 U	140 J	70 U	71 U	71 U
BENZO(A)PYRENE	430	300 J	47 J	94 J	71 U	70 U	72 U	120 J	70 U	71 U	71 U
BENZO(B)FLUORANTHENE	1800	360 J	65 J	120 J	66 J	70 U	72 U	150 J	70 U	71 U	71 U
BENZO(G,H,I)PERYLENE	670	180 J	70 U	55 J	40 J	70 U	72 U	69 J	70 U	71 U	71 U
BENZO(K)FLUORANTHENE	1800	230 J	37 J	44 J	39 J	70 U	72 U	97 J	70 U	71 U	71 U
CHRYSENE	384	370	70 J	91 J	70 J	70 U	72 U	150 J	70 U	71 U	71 U
DIBENZO(A,H)ANTHRACENE	63.4	72 U	70 U	72 U	71 U	70 U	72 U	72 U	70 U	71 U	71 U
FLUORANTHENE	600	630	140 J	120 J	100 J	70 U	72 U	300 J	70 U	71 U	71 U
FLUORENE	19	72 U	70 U	72 U	71 U	70 U	72 U	72 U	70 U	71 U	71 U
HIGH MOLECULAR WEIGHT PAHS		3150 J	540 J	816 J	507 J	70 U	72 U	1350 J	70 U	71 U	71 U
INDENO(1,2,3-CD)PYRENE	600	150 J	70 U	72 J	71 U	70 U	72 U	75 J	70 U	71 U	71 U
LOW MOLECULAR WEIGHT PAHS		527 J	75 J	87 J	74 J	70 U	72 U	130 J	70 UJ	71 UJ	71 UJ
NAPHTHALENE	160	72 U	70 U	72 U	71 U	70 U	72 U	72 UJ	70 UJ	71 UJ	71 UJ
PHENANTHRENE	240	400	75 J	87 J	74 J	70 U	72 U	130 J	70 U	71 U	71 U
PYRENE	665	620	110 J	140 J	120 J	70 U	72 U	250 J	70 U	71 U	71 U
TOTAL PAHS		3680 J	615 J	903 J	581 J	70 U	72 U	1480 J	70 UJ	71 UJ	71 UJ

TABLE 4-12
SUMMARY OF ANALYTICAL RESULTS FOR SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 33
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB407-2430	GI-SB407-4248	GI-SB408-0006	GI-SB408-1218	GI-SB408-2430	GI-SB408-4248	GI-SB409-0006	GI-SB409-1218	GI-SB409-2430	GI-SB409-4854-AVG
LOCATION ID		GI-SB407	GI-SB407	GI-SB408	GI-SB408	GI-SB408	GI-SB408	GI-SB409	GI-SB409	GI-SB409	GI-SB409
SAMPLE DATE		6/1/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010	5/28/2010	5/28/2010	5/28/2010	5/28/2010
TOP DEPTH		2 FT	3.5 FT	0 FT	1 FT	2 FT	3.5 FT	0 FT	1 FT	2 FT	4 FT
BOTTOM DEPTH		2.5 FT	4 FT	0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT	1.5 FT	2.5 FT	4.5 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
SUBMATRIX		SB	SB	SS	SB	SB	SB	SS	SB	SB	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
METALS (MG/KG)											
ALUMINUM	18000	7410	6900	6210	4300	6790	5820	6190	9490	8060	10400
ANTIMONY	2	0.88 UJ	0.82 UJ	1.7 J	0.67 UJ	0.65 UJ	0.67 UJ	2.2 UJ	0.41 UJ	0.3 UJ	0.535 UJ
ARSENIC	8.2	1.4	2.1	3.8	1.5	1.7	1.6	11.4	2.1 J	1.9 J	2.3 J
BARIUM	48	37.5	30	30.3	18.7	20.7	16.9	27.7	31.4	31.6	39.1
BERYLLIUM		0.15 J	0.19 J	0.43	0.18 J	0.18 J	0.17 J	0.44	0.3	0.29	0.285
CADMIUM	1.2	0.39 J	0.11 J	0.16 J	0.39 J	0.024 UJ	0.018 UJ	0.023 UJ	0.019 UJ	0.021 UJ	0.022 UJ
CALCIUM		1740	1050	2150	922	961	691	2030 J	1090 J	908 J	1160 J
CHROMIUM	81	14.8	9.9	7.4	7.2	9.9	8.1	8.2	11	11.4	14.4
COBALT	10	5.6 J	3.8 J	3.3 J	3.2 J	4.2 J	4.7 J	6.1	8.1	6.7	6.75
COPPER	34	12.9 J	10.9 J	13.2 J	10.7 J	11.3 J	11.2 J	18.7	16.6	14.3	16.6
IRON	220000	17500	17200	16100	11200	14600	15400	20200	19300	19000	23000
LEAD	46.7	26.7 J	9.2 J	17.7 J	9.7 J	6.5 J	5.8 J	23.2 J	6.5 J	6.6 J	7.6 J
MAGNESIUM		3520 J	2910 J	1480 J	1640 J	2750 J	2230 J	1590	3320	3090	4140
MANGANESE	260	149	145	350	120	176	129	440	242	186	202
MERCURY	0.15	0.01 J	0.022 U	0.013 J	0.026 U	0.022 U	0.022 U	0.067 J	0.021 J	0.0075 J	0.0092 J
NICKEL	20.9	11.8 J	8.3 J	5.5 J	6.3 J	8.5 J	9.8 J	9.8 J	12.2 J	10.1 J	12.7 J
POTASSIUM		2240 J	1540 J	559 J	457 J	1020 J	615 J	458	1110	1190	1910
SODIUM		47.2 J	39.4 J	33.6 J	17.4 J	23.5 J	17.8 J	34.6 J	31.2 J	29.6 J	41.3 J
THALLIUM		0.46 U	0.37 U	0.37 U	0.44 U	0.49 U	0.37 U	0.46 U	0.38 U	0.42 U	0.445 U
VANADIUM	57	18	13.4	11.6	9.9	11.7	10.2	10.8	15.1	16.6	19.4

TABLE 4-12
SUMMARY OF ANALYTICAL RESULTS FOR SAMPLES COLLECTED FROM SOIL BORINGS AT BUILDING 33
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB407-2430	GI-SB407-4248	GI-SB408-0006	GI-SB408-1218	GI-SB408-2430	GI-SB408-4248	GI-SB409-0006	GI-SB409-1218	GI-SB409-2430	GI-SB409-4854-AVG
LOCATION ID		GI-SB407	GI-SB407	GI-SB408	GI-SB408	GI-SB408	GI-SB408	GI-SB409	GI-SB409	GI-SB409	GI-SB409
SAMPLE DATE		6/1/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010	6/1/2010	5/28/2010	5/28/2010	5/28/2010	5/28/2010
TOP DEPTH		2 FT	3.5 FT	0 FT	1 FT	2 FT	3.5 FT	0 FT	1 FT	2 FT	4 FT
BOTTOM DEPTH		2.5 FT	4 FT	0.5 FT	1.5 FT	2.5 FT	4 FT	0.5 FT	1.5 FT	2.5 FT	4.5 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
SUBMATRIX		SB	SB	SS	SB	SB	SB	SS	SB	SB	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
ZINC	150	56.3	28	59.1	27.6	27	20.5	67.1 J	30.2 J	27.3 J	34.2 J
PETROLEUM HYDROCARBONS (MG/KG)											
TOTAL PETROLEUM HYDROCARBONS	2500	56	25 U	45	25 U	26 U	25 UJ	52	25 U	26 U	26 U

TABLE 4-13
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS LOCATED AT BUILDING 41
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB410-0012	GI-SB410-6072	GI-SB411-0012	GI-SB411-6072	GI-SB412-0012	GI-SB412-144156	GI-SB412-7296	GI-SB413-0012-AVG	GI-SB413-7296
LOCATION ID		GI-SB410	GI-SB410	GI-SB411	GI-SB411	GI-SB412	GI-SB412	GI-SB412	GI-SB413	GI-SB413
SAMPLE DATE		5/28/2010	5/28/2010	5/28/2010	5/28/2010	5/27/2010	5/27/2010	5/27/2010	5/27/2010	5/27/2010
TOP DEPTH		0 FT	5 FT	0 FT	5 FT	0 FT	12 FT	6 FT	0 FT	6 FT
BOTTOM DEPTH		1 FT	6 FT	1 FT	6 FT	1 FT	13 FT	8 FT	1 FT	8 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL
SUBMATRIX		SS	SB	SS	SB	SS	SB	SB	SS	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)										
2-METHYLNAPHTHALENE	70	70 U	69 U	70 U	70 U	330 J	76 U	75 U	73 U	74 U
ACENAPHTHENE	16	100 J	69 U	37 J	70 U	2500 J	76 U	75 U	73 U	74 U
ACENAPHTHYLENE	44	70 U	69 U	70 U	70 U	260 J	76 U	75 U	73 U	74 U
ANTHRACENE	85.3	290 J	82 J	100 J	70 U	5200 J	76 U	75 U	73 U	74 U
BENZO(A)ANTHRACENE	261	960 J	260 J	290 J	43 J	8400	76 UJ	60 J	73 UJ	74 UJ
BENZO(A)PYRENE	430	930	180 J	220 J	70 U	6700	76 U	75 U	73 U	74 U
BENZO(B)FLUORANTHENE	1800	980 J	240 J	330 J	49 J	8200	76 UJ	52 J	73 UJ	74 UJ
BENZO(G,H,I)PERYLENE	670	530	120 J	130 J	70 U	4700 J	76 U	75 U	73 U	74 U
BENZO(K)FLUORANTHENE	1800	710 J	150 J	140 J	70 UJ	4600 J	76 UJ	43 J	73 UJ	74 UJ
CHRYSENE	384	1200	350	300 J	70 U	8100	76 U	73 J	73 U	74 U
DIBENZO(A,H)ANTHRACENE	63.4	130 J	69 UJ	39 J	70 UJ	2000 J	76 UJ	75 UJ	73 UJ	74 UJ
FLUORANTHENE	600	1700	760	680	69 J	17000	76 U	110 J	42.5 J	74 U
FLUORENE	19	81 J	69 U	41 J	70 U	2400 J	76 U	75 U	73 U	74 U
HIGH MOLECULAR WEIGHT PAHS		9350 J	3020 J	2820 J	258 J	79300 J	42 J	468 J	98 J	74 UJ
INDENO(1,2,3-CD)PYRENE	600	410	85 J	120 J	70 U	4600 J	76 U	75 U	73 U	74 U
LOW MOLECULAR WEIGHT PAHS		1400 J	432 J	538 J	70 U	24400 J	76 U	78 J	73 U	74 U
NAPHTHALENE	160	70 U	69 U	70 UJ	70 U	730 J	76 U	75 U	73 U	74 U
PHENANTHRENE	240	930	350	360	70 U	13000	76 U	78 J	73 U	74 U

TABLE 4-13
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS LOCATED AT BUILDING 41
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB410-0012	GI-SB410-6072	GI-SB411-0012	GI-SB411-6072	GI-SB412-0012	GI-SB412-144156	GI-SB412-7296	GI-SB413-0012-AVG	GI-SB413-7296
LOCATION ID		GI-SB410	GI-SB410	GI-SB411	GI-SB411	GI-SB412	GI-SB412	GI-SB412	GI-SB413	GI-SB413
SAMPLE DATE		5/28/2010	5/28/2010	5/28/2010	5/28/2010	5/27/2010	5/27/2010	5/27/2010	5/27/2010	5/27/2010
TOP DEPTH		0 FT	5 FT	0 FT	5 FT	0 FT	12 FT	6 FT	0 FT	6 FT
BOTTOM DEPTH		1 FT	6 FT	1 FT	6 FT	1 FT	13 FT	8 FT	1 FT	8 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL
SUBMATRIX		SS	SB	SS	SB	SS	SB	SB	SS	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM
PYRENE	665	1800	880	570	97 J	15000	42 J	130 J	55.5 J	74 U
TOTAL PAHS		10800 J	3460 J	3360 J	258 J	104000 J	42 J	546 J	98 J	74 UJ
METALS (MG/KG)										
ALUMINUM	18000	6950	6290	8070	8280	6520	5140	7100	7410	7350
ARSENIC	8.2	6.6 J	10.1 J	5.2 J	2.8 J	3.8 J	1.7 J	1.8 J	2.55 J	2.1 J
BARIUM	48	40.5	32.8	41.9	37.1	50.5	13.1	23	38.6	27
BERYLLIUM		0.29	0.35	0.35	0.33	0.28	0.16 J	0.22 J	0.22	0.16 J
CADMIUM	1.2	0.47 J	0.21 J	0.25 J	0.027 UJ	1.4 J	0.024 UJ	0.022 UJ	0.125 J	0.021 UJ
CALCIUM		21500 J	7260 J	1590 J	1260 J	15100 J	2810 J	1160 J	6020 J	1030 J
CHROMIUM	81	10.7	9.1	12	14	11.1	8.3	9.8	11.2	18.8
COBALT	10	5.1	6.3	6.1	6.2	4	3.6	5.7	4.25	5.6
COPPER	34	20	17.9	28.8	16.2	31.3	7.1	13.3	14	13.3
IRON	220000	18000	22300	22500	20500	18500	12400	16700	17100	18000
LEAD	46.7	26.8 J	22.9 J	28.7 J	11.6 J	115 J	7 J	7 J	13.8 J	7.4 J
MAGNESIUM		2900	2100	2560	3160	2270	2250	2850	2960	3570
MANGANESE	260	331	411	341	296	263	112	179	214	145
MERCURY	0.15	0.046 J	0.031 J	0.097 J	0.037 J	0.049 J	0.014 J	0.019 J	0.03 J	0.018 J
NICKEL	20.9	10.3 J	12.5 J	14.2 J	11.6 J	10.2 J	7.8 J	9.9 J	8.75 J	9.8 J
POTASSIUM		511	617	705	1390	585	654	952	924	1300
SODIUM		158 J	150 J	168 J	154 J	376 J	75.1 J	544 J	272 J	506 J
VANADIUM	57	10.9	10.6	15.2	16.5	11.4	10.7	12.2	13.8	24

TABLE 4-13
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM SOIL BORINGS LOCATED AT BUILDING 41
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Soil Project Action Limit from SAP	GI-SB410-0012	GI-SB410-6072	GI-SB411-0012	GI-SB411-6072	GI-SB412-0012	GI-SB412-144156	GI-SB412-7296	GI-SB413-0012-AVG	GI-SB413-7296
LOCATION ID		GI-SB410	GI-SB410	GI-SB411	GI-SB411	GI-SB412	GI-SB412	GI-SB412	GI-SB413	GI-SB413
SAMPLE DATE		5/28/2010	5/28/2010	5/28/2010	5/28/2010	5/27/2010	5/27/2010	5/27/2010	5/27/2010	5/27/2010
TOP DEPTH		0 FT	5 FT	0 FT	5 FT	0 FT	12 FT	6 FT	0 FT	6 FT
BOTTOM DEPTH		1 FT	6 FT	1 FT	6 FT	1 FT	13 FT	8 FT	1 FT	8 FT
SACODE		NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL
SUBMATRIX		SS	SB	SS	SB	SS	SB	SB	SS	SB
QC TYPE		NM	NM	NM	NM	NM	NM	NM	NM	NM
ZINC	150	76.9 J	65 J	73.6 J	46.2 J	234 J	24.5 J	27.3 J	41 J	24.8 J
PCBS (UG/KG)										
AROCLOR-1248	22.7	8.8 U	8.6 U	8.7 U	8.7 U	1200 J	9.5 U	9.2 U	9.15 U	9.1 U
AROCLOR-1254	22.7	8.8 U	8.6 U	8.7 U	8.7 U	640	9.5 U	9.2 U	9.15 U	9.1 U
AROCLOR-1260	22.7	110	82	87	8.7 U	8.7 U	9.5 U	9.2 U	9.15 U	9.1 U
TOTAL AROCLOR	22.7	110	82	87	9.89 U	1840 J	10.9 U	10.5 U	10.5 U	10.4 U

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD401-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006-AVG	GI-SD402-0612	GI-SD403-0006	GI-SD404-0006	GI-SD404-0612	GI-SD404-1824
LOCATION ID			GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD403	GI-SD404	GI-SD404	GI-SD404
SAMPLE DATE			10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009
TOP DEPTH			0 FT	1.33 FT	2.67 FT	0 FT	2 FT	0 FT	0 FT	0.71 FT	2.13 FT
BOTTOM DEPTH			1.33 FT	2.67 FT	4 FT	2 FT	4 FT	4 FT	0.71 FT	1.42 FT	2.83 FT
SACODE			NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
2-METHYLNAPHTHALENE	70		4.1	5.4	6.7	6.1	12	4	5.2	7.4	17
ACENAPHTHENE	16	3.9	17	23	26	24.5	75	3.5	13	14	23
ACENAPHTHYLENE	44	15	88	30	57	88.5	310 D	22	31	47	67
ANTHRACENE	85.3	18	130	63	88	160	510 D	36	120	100	150
BENZO(A)ANTHRACENE	261	61	680 D	180	180	330 D	1400 D	80	170	150	270
BENZO(A)PYRENE	430	73	240	90	160	285	1000 D	110	140	250	430 D
BENZO(B)FLUORANTHENE	1800	58	450 D	130	210	520 D	2700 D	220	240	420 D	700 D
BENZO(G,H,I)PERYLENE	670	48	84	35	70	140	510 D	54	74	130	240
BENZO(K)FLUORANTHENE	1800	52	200	100	180	200	990 D	70	97	160	270
CHRYSENE	384	71	660 D	160	180	580 D	3100 D	110	230	230	450 D
DIBENZO(A,H)ANTHRACENE	63.4	15	36	14	27	50	240	17	22	40	69
FLUORANTHENE	600	130	2800 D	570 D	320	2050 D	14000 D	120	210	210	320 D
FLUORENE	19	7.2	31	28	31	35.5	130	6.5	17	19	31
HIGH MOLECULAR WEIGHT PAHS		673	7440	1850	2020	6540	36500	1100	1560	2410	5170
INDENO(1,2,3-CD)PYRENE	600	45	90	37	73	140	540 D	55	71	130	220
LOW MOLECULAR WEIGHT PAHS		103.3	463	305	415	673	1590	107	288	295	473
NAPHTHALENE	160	6.1	13	16	16	8.65	16	4.6	9.2	9.3	15
PHENANTHRENE	240	58	180	140	190	350 D	540 D	30	93	98	170

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD401-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006-AVG	GI-SD402-0612	GI-SD403-0006	GI-SD404-0006	GI-SD404-0612	GI-SD404-1824
LOCATION ID			GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD403	GI-SD404	GI-SD404	GI-SD404
SAMPLE DATE			10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009
TOP DEPTH			0 FT	1.33 FT	2.67 FT	0 FT	2 FT	0 FT	0 FT	0.71 FT	2.13 FT
BOTTOM DEPTH			1.33 FT	2.67 FT	4 FT	2 FT	4 FT	4 FT	0.71 FT	1.42 FT	2.83 FT
SACODE			NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
PYRENE	665	120	2200 D	530 D	620 D	2250 D	12000 D	260	310 D	690 D	2200 D
TOTAL PAHS		770	7900	2150	2430	7220	38100	1200	1850	2700	5640
PESTICIDES/PCBS (UG/KG)											
AROCLOR-1248	22.7		170 U	66 U	330 U	4100 U	9900 U	830 U	660 U	660 U	660 U
AROCLOR-1254	22.7		170 U	66 U	330 U	4100 U	9900 U	830 U	660 U	660 U	660 U
AROCLOR-1260	22.7		980	600	2200	20500	55000	4800	2000	2500	1200
TOTAL AROCLOR	22.7		980	600	2200	20500	55000	4800	2000	2500	1200
METALS (MG/KG)											
ALUMINUM	18000	7460	5230 *E	7300 *E	6300 *E	4840 E	5340 E	5660 E	3940 E	5040 E	5510 E
ANTIMONY	2	0.2	0.36 BN	0.53 N	0.51 N	0.275 BN	0.55 N	0.39 BN	0.18 BN	0.1 UN	6.5 N
ARSENIC	8.2	2.7	2.6	3.6	3.7	3.4 E	4.5 E	5.3 E	4.1 E	4.6 E	7.2 E
BARIUM	48	15.7	13 E	10.6 E	18.5 E	11.7 NE	11.6 NE	13 NE	9.4 NE	13.9 NE	26.6 NE
BERYLLIUM		0.405	0.34 E	0.43 E	0.42 E	0.175 NE	0.26 NE	0.22 NE	0.19 NE	0.27 NE	0.29 NE
CADMIUM	1.2	0.367	0.34	0.65	0.57	0.21	0.22	0.34	0.16	0.22	2.1
CALCIUM		32500	25400 *	8000 *	19200 *	55200	90500	45900	133000	135000	121000
CHROMIUM	81	19.8	10.1 E	14.9 E	16.8 E	10 NE	14.2 NE	13.3 NE	12.9 NE	16.3 NE	53.2 NE
COBALT	10	6	3.9 *E	5.8 *E	4.8 *E	3.75 NE	3.4 NE	4.6 NE	2.4 NE	2.9 NE	4.8 NE
COPPER	34	15	13.9 N	21.4 N	22.1 N	20 NE	22.9 NE	35.1 NE	19.1 NE	22.6 NE	497 NE
IRON	220000	16700	17000 *	29400 *	25500 *	23000	22500	34800	15500	16400	20900
LEAD	46.7	20.6	10.3 N*E	12.8 N*E	18 N*E	9.9 NE	38.4 NE	14.6 NE	21.4 NE	21.7 NE	407 NE

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD401-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006-AVG	GI-SD402-0612	GI-SD403-0006	GI-SD404-0006	GI-SD404-0612	GI-SD404-1824
LOCATION ID			GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD403	GI-SD404	GI-SD404	GI-SD404
SAMPLE DATE			10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009
TOP DEPTH			0 FT	1.33 FT	2.67 FT	0 FT	2 FT	0 FT	0 FT	0.71 FT	2.13 FT
BOTTOM DEPTH			1.33 FT	2.67 FT	4 FT	2 FT	4 FT	4 FT	0.71 FT	1.42 FT	2.83 FT
SACODE			NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
MAGNESIUM		3810	2710 *E	3360 *E	3430 *E	2780 E	3110 E	2990 E	2440 E	3320 E	3600 E
MANGANESE	260	139	119 *E	200 *E	143 *E	134 E	144 E	195 E	108 E	144 E	154 E
MERCURY	0.15	0.083	0.016 B	0.01 B	0.027	0.0275	0.059	0.011 B	0.057	0.1	0.41
NICKEL	20.9	11.7	8.6 *E	14.1 *E	11.9 *E	9.3 NE	9.1 NE	11.5 NE	6.3 NE	8.1 NE	12 NE
POTASSIUM		1590	857 *	834 *	1450 *	1320	1230	1030	1050	1520	1650
SELENIUM	1	0.73	0.42 B	0.72	0.66	0.355 UN	0.37 UN	0.32 UN	0.39 UN	0.43 UN	0.47 UN
SILVER	0.5	0.19	0.034 U	0.032 U	0.033 U	0.0355 UN	0.037 UN	0.033 UN	0.039 UN	0.16 BN	0.56 BN
SODIUM		6310	3250	2520	3680	3290	8270	3870	8860	10700	11200
THALLIUM			0.29 B	0.098 U	0.15 B	0.355 BN	0.58 N	0.13 BN	0.84 N	0.87 N	0.92 N
VANADIUM	57	20	12.8 *E	14 *E	15.6 *E	11 NE	15.5 NE	12.4 NE	12.5 NE	18 NE	21.9 NE
ZINC	150	61.8	32.9 E	36.2 E	43 E	50.6 NE	46.9 NE	38.5 NE	39.9 NE	54.8 NE	616 NE

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD404-2834	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006
LOCATION ID			GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408
SAMPLE DATE			10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/13/2009
TOP DEPTH			3.29 FT	0 FT	1.33 FT	2.67 FT	0 FT	2 FT	0 FT	2 FT	0 FT
BOTTOM DEPTH			4 FT	1.33 FT	2.67 FT	4 FT	2 FT	4 FT	2 FT	4 FT	1.27 FT
SACODE			NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
2-METHYLNAPHTHALENE	70		18	14.5	4.6	3.3 U	22	5.3	3.3 U	6.1	3.3 U
ACENAPHTHENE	16	3.9	60	59	4.3	3.3 U	130	24	3.4	38	3.4
ACENAPHTHYLENE	44	15	89	52.5	22	3.3 U	590 E	36	8.2	140	9.2
ANTHRACENE	85.3	18	310 D	125	29	3.3 U	3400 D	1200 D	33	280 D	10
BENZO(A)ANTHRACENE	261	61	560 D	345 D	34	3.3 U	5400 D	750 D	73	510 D	21
BENZO(A)PYRENE	430	73	470 D	315 D	49	3.3 U	2700 D	260	50	740 D	23
BENZO(B)FLUORANTHENE	1800	58	690 D	505 D	93	3.3 U	4800 D	410 D	87	1100 D	35
BENZO(G,H,I)PERYLENE	670	48	220	165	20	3.3 U	1100 D	73	17	330	15
BENZO(K)FLUORANTHENE	1800	52	270	225	31	3.3 U	2500 D	140	29	320	17
CHRYSENE	384	71	920 D	480 D	37	3.3 U	7600 D	890 D	67	790 D	28
DIBENZO(A,H)ANTHRACENE	63.4	15	69	58.5	9.7	3.3 U	480 E	27	5.5	100	5
FLUORANTHENE	600	130	3100 D	1150 D	50	3.3 U	27000 D	4100 D	120	780 D	78
FLUORENE	19	7.2	53	71.5	7.1	3.3 U	240	41	5.7	54	5.9
HIGH MOLECULAR WEIGHT PAHS		673	9820	4500	544	19	73700	9230	816	7690	304
INDENO(1,2,3-CD)PYRENE	600	45	220	160	20	3.3 U	1100 D	77	17	320 D	15
LOW MOLECULAR WEIGHT PAHS		103.3	788	1080	95.5	3.3 U	6620	1650	68.3	801	92.5
NAPHTHALENE	160	6.1	38	34	4.5	3.3 U	39	3.3 U	3.3 U	13	3.3 U
PHENANTHRENE	240	58	220	730 D	24	3.3 U	2200 D	340 D	18	270	64

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD404-2834	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006
LOCATION ID			GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408
SAMPLE DATE			10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/13/2009
TOP DEPTH			3.29 FT	0 FT	1.33 FT	2.67 FT	0 FT	2 FT	0 FT	2 FT	0 FT
BOTTOM DEPTH			4 FT	1.33 FT	2.67 FT	4 FT	2 FT	4 FT	2 FT	4 FT	1.27 FT
SACODE			NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
PYRENE	665	120	3300 D	1100 D	200	19	21000 D	2500 D	350 D	2700 D	67
TOTAL PAHS		770	10600	5590	639	19	80300	10900	884	8490	396
PESTICIDES/PCBS (UG/KG)											
AROCLOR-1248	22.7		33 U	330 U	33 U	33 U	660 U	33 U	33 U	660 U	33 U
AROCLOR-1254	22.7		45	330 U	33 U	33 U	660 U	33 U	33 U	660 U	33 U
AROCLOR-1260	22.7		33 U	2200	250	33 U	5100	300	190	6000	160
TOTAL AROCLOR	22.7		45	2200	250	33 U	5100	300	190	6000	160
METALS (MG/KG)											
ALUMINUM	18000	7460	6100 E	5930 *E	6950 *E	5860 *E	4550 E	6450 E	5780 E	5700 E	2680 *E
ANTIMONY	2	0.2	0.46 BN	0.565 BN	0.56 N	0.081 BN	0.85 N	0.15 BN	0.21 BN	0.19 BN	0.12 BN
ARSENIC	8.2	2.7	5.1 E	3.55 E	3.5	1.7	3.8 E	2.2 E	2.3 E	3.9 E	1.5 E
BARIUM	48	15.7	19.5 NE	11.4 E	13 E	14.5 E	17.3 NE	25.6 NE	16.9 NE	15.1 NE	9 E
BERYLLIUM		0.405	0.32 NE	0.32 E	0.46 E	0.33 E	0.2 NE	0.23 NE	0.23 NE	0.25 NE	0.23 E
CADMIUM	1.2	0.367	0.44	0.475	0.36	0.23	0.14	0.05 B	0.033 B	0.11	0.0087 B
CALCIUM		32500	132000	52200 *	4640 *	14400 *	63000	3110	2120	4170	2240 *
CHROMIUM	81	19.8	30.1 NE	15.8 E	11.9 E	9.7 E	11.2 NE	13.5 NE	9.6 NE	62.3 NE	6 E
COBALT	10	6	3.5 NE	3.2 *E	4.7 *E	3.8 *E	2.9 NE	4.7 NE	4 NE	4.2 NE	2.4 E
COPPER	34	15	139 NE	36.8 N	18.1 N	9.7 N	20 NE	13.6 NE	47.4 NE	28.4 NE	7.3 E
IRON	220000	16700	19600	28000 *	16300 *	15100 *	13900	16900	16000	16700	6220 *
LEAD	46.7	20.6	51.9 NE	21.5 N*E	19.6 N*E	5.3 N*E	19.7 NE	6.3 NE	6.9 NE	18.9 NE	5 E

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD404-2834	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006
LOCATION ID			GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408
SAMPLE DATE			10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009	10/13/2009
TOP DEPTH			3.29 FT	0 FT	1.33 FT	2.67 FT	0 FT	2 FT	0 FT	2 FT	0 FT
BOTTOM DEPTH			4 FT	1.33 FT	2.67 FT	4 FT	2 FT	4 FT	2 FT	4 FT	1.27 FT
SACODE			NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
MAGNESIUM		3810	3320 E	2910 *E	2600 *E	2730 *E	2280 E	2870 E	2450 E	2820 E	1360 *E
MANGANESE	260	139	151 E	152 *E	104 *E	123 *E	91.9 E	122 E	103 E	111 E	51.3 *E
MERCURY	0.15	0.083	0.3	0.049	0.065	0.0075 B	0.059	0.004 B	0.012 B	0.6	0.0087 B
NICKEL	20.9	11.7	9.5 NE	8.75 *E	9.5 *E	7.1 *E	6.5 NE	10.6 NE	9.5 NE	30.1 NE	5.6 E
POTASSIUM		1590	1820	891 *	880 *	865 *	976	1370	762	1130	452
SELENIUM	1	0.73	0.49 UN	0.35 U	0.94	0.87	0.36 UN	0.48 BN	0.61 N	0.7 N	0.81
SILVER	0.5	0.19	0.32 BN	0.608 N	0.035 U	0.033 U	0.036 UN	0.031 UN	0.031 UN	0.035 UN	0.033 U
SODIUM		6310	11400	4440	3300	2040	4970	2180	2720	5050	2240
THALLIUM			0.86 N	0.302	0.11 U	0.2 B	0.45 BN	0.093 UN	0.094 UN	0.11 UN	0.1 UN
VANADIUM	57	20	18.8 NE	14.4 *E	13.9 *E	12.9 *E	12.3 NE	15.5 NE	12 NE	18 NE	7.5 *E
ZINC	150	61.8	121 NE	82.6 E	65.7 E	20.6 E	54.6 NE	23.7 NE	27.3 NE	48.3 NE	16 E

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248	GI-SD410-0006	GI-SD410-0612	GI-SD410-1824
LOCATION ID			GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409	GI-SD410	GI-SD410	GI-SD410
SAMPLE DATE			10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
TOP DEPTH			1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	0 FT	0.75 FT	2.25 FT
BOTTOM DEPTH			2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT	0.75 FT	1.5 FT	3 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
2-METHYLNAPHTHALENE	70		3.3 U	3.3 U	3.3 U	17	5.5	3.3 U	3.3 U	3.3 U	3.3 U
ACENAPHTHENE	16	3.9	3.3 U	3.3 U	3.3 U	7.6	9.5	3.3 U	7.1	3.3 U	3.3 U
ACENAPHTHYLENE	44	15	5.8	3.3 U	3.3 U	4.1	23	3.3 U	18	6.5	3.3 U
ANTHRACENE	85.3	18	9.3	3.3 U	3.3 U	5.4	44	3.3 U	28	5.8	3.3 U
BENZO(A)ANTHRACENE	261	61	32	3.3 U	3.3 U	4.2	110	3.3 U	74	13	3.4
BENZO(A)PYRENE	430	73	23	3.3 U	3.3 U	3.3 U	87	3.3 U	59	14	3.3 U
BENZO(B)FLUORANTHENE	1800	58	40	3.3 U	3.3 U	3.5	150	4	110	21	6.4
BENZO(G,H,I)PERYLENE	670	48	14	3.3 U	3.3 U	3.3 U	49	3.3 U	32	8.2	3.3 U
BENZO(K)FLUORANTHENE	1800	52	18	3.3 U	3.3 U	3.3 U	64	3.3 U	34	15	3.3 U
CHRYSENE	384	71	44	3.3 U	3.3 U	3.3 U	170	3.3 U	110	21	6.5
DIBENZO(A,H)ANTHRACENE	63.4	15	5	3.3 U	3.3 U	3.3 U	18	3.3 U	12	3.3 U	3.3 U
FLUORANTHENE	600	130	76	3.3 U	3.3 U	7.4	250	3.3 U	180	30	4.1
FLUORENE	19	7.2	3.3	3.3 U	3.3 U	6.2	11	3.3 U	9.8	3.3 U	3.3 U
HIGH MOLECULAR WEIGHT PAHS		673	335	3.3 U	3.3 U	24.4	1220	4	813	165	25.7
INDENO(1,2,3-CD)PYRENE	600	45	13	3.3 U	3.3 U	3.3 U	49	3.3 U	32	8.1	3.3 U
LOW MOLECULAR WEIGHT PAHS		103.3	45.4	3.3 U	3.3 U	71.3	192	3.3 U	132	25.3	3.3 U
NAPHTHALENE	160	6.1	3.3 U	3.3 U	3.3 U	15	9.1	3.3 U	3.3 U	3.3 U	3.3 U
PHENANTHRENE	240	58	27	3.3 U	3.3 U	16	90	3.3 U	69	13	3.3 U

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248	GI-SD410-0006	GI-SD410-0612	GI-SD410-1824
LOCATION ID			GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409	GI-SD410	GI-SD410	GI-SD410
SAMPLE DATE			10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
TOP DEPTH			1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	0 FT	0.75 FT	2.25 FT
BOTTOM DEPTH			2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT	0.75 FT	1.5 FT	3 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
PYRENE	665	120	70	3.3 U	3.3 U	9.3	270	3.3 U	170	35	5.3
TOTAL PAHS		770	380	3.3 U	3.3 U	95.7	1410	4	945	191	25.7
PESTICIDES/PCBS (UG/KG)											
AROCLOR-1248	22.7		33 U	33 U	33 U	33 U	33 U	33 U	990 U	33 U	33 U
AROCLOR-1254	22.7		33 U	33 U	33 U	40	33 U	320	990 U	33 U	33 U
AROCLOR-1260	22.7		96	33 U	33 U	33 U	310	33 U	4100	410	54
TOTAL AROCLOR	22.7		96	33 U	33 U	40	310	320	4100	410	54
METALS (MG/KG)											
ALUMINUM	18000	7460	3610 *E	3510 *E	2990 E	3060 E	5140 E	5790 E	3440 E	5540 E	4940 E
ANTIMONY	2	0.2	0.075 UN	0.13 BN	0.08 UN	0.15 BN	0.083 UN	0.084 BN	0.13 BN	0.084 UN	0.1 BN
ARSENIC	8.2	2.7	1.7 E	1.7 E	1.6 E	1.8 E	2.2 E	2.5 E	1.7 E	2.2 E	2.5 E
BARIUM	48	15.7	9.2 E	9.8 E	10.3 *E	7.3 *E	23.6 *E	20.2 *E	9.4 *E	15 *E	13.8 *E
BERYLLIUM		0.405	0.25 E	0.37 E	0.27 E	0.31 E	0.39 E	0.41 E	0.29 E	0.34 E	0.32 E
CADMIUM	1.2	0.367	0.018 B	0.0083 B	0.058 B	0.079 B	0.14	0.12	0.081 B	0.12 B	0.11
CALCIUM		32500	5450 *	2820 *	1060 *	1000 *	2170 *	1800 *	2170 *	2270 *	2240 *
CHROMIUM	81	19.8	7 E	8.5 E	7 E	6.9 E	12.8 E	9.5 E	7.6 E	8.5 E	8.2 E
COBALT	10	6	2.8 E	3.8 E	2.3 E	2.8 E	3.4 E	4.5 E	2.6 E	3.6 E	3.5 E
COPPER	34	15	8.6 E	7.8 E	8.3 NE	9.7 NE	18.9 NE	14.9 NE	9.5 NE	12.7 NE	11.1 NE
IRON	220000	16700	9400 *	9110 *	8280	10300	13500	14700	9710	13200	12400
LEAD	46.7	20.6	5.4 E	4.8 E	3.7 NE	4.5 NE	8.7 NE	6 NE	7.4 NE	7.3 NE	6.8 NE

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248	GI-SD410-0006	GI-SD410-0612	GI-SD410-1824
LOCATION ID			GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409	GI-SD410	GI-SD410	GI-SD410
SAMPLE DATE			10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
TOP DEPTH			1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	0 FT	0.75 FT	2.25 FT
BOTTOM DEPTH			2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT	0.75 FT	1.5 FT	3 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
MAGNESIUM		3810	1650 *E	1830 *E	1340 E	1420 E	2310 E	2460 E	1710 E	2250 E	2090 E
MANGANESE	260	139	64.8 *E	82.6 *E	61 E	63.7 E	78.2 E	109 E	69.2 E	92.4 E	91.3 E
MERCURY	0.15	0.083	0.015 B	0.006 B	0.0042 U	0.004 U	0.033	0.009 B	0.032 B	0.014 B	0.011 B
NICKEL	20.9	11.7	6.1 E	11.2 E	6 E	6.1 E	7.8 E	9.7 E	5.5 E	7.7 E	7.1 E
POTASSIUM		1590	507	977	452	448	1510	883	586	690	665
SELENIUM	1	0.73	0.8	0.85	0.58 B	1	1.3	1.2	0.98	1.2	0.79
SILVER	0.5	0.19	0.033 U	0.031 U	0.035 U	0.035 U	0.036 U	0.035 U	0.039 U	0.037 U	0.036 U
SODIUM		6310	2200	1130	1670	1590	2310	2090	2920	2010	2510
THALLIUM			0.1 UN	0.095 UN	0.12 BN	0.22 BN	0.24 BN	0.14 BN	0.12 UN	0.15 BN	0.11 UN
VANADIUM	57	20	8.5 *E	8.7 *E	7 E	9.1 E	14.5 E	11.8 E	9.6 E	10.4 E	9.6 E
ZINC	150	61.8	17.4 E	21.4 E	13.6 *E	14.1 *E	27.3 *E	24.9 *E	20.1 *E	23.1 *E	20.9 *E

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD410-2632	GI-SD411-0006	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824
LOCATION ID			GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD412	GI-SD412	GI-SD412	GI-SD412
SAMPLE DATE			10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009
TOP DEPTH			3.25 FT	0 FT	0.86 FT	1.72 FT	2.58 FT	0 FT	1 FT	2 FT	3 FT
BOTTOM DEPTH			4 FT	0.86 FT	1.72 FT	2.58 FT	3.43 FT	1 FT	2 FT	3 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
2-METHYLNAPHTHALENE	70		6.1	14	3.3 U	3.3 U	3.3 U	41	26	31	30
ACENAPHTHENE	16	3.9	8.5	52	3.3 U	3.3 U	3.3 U	200	66	34	18
ACENAPHTHYLENE	44	15	14	13	3.3 U	3.3 U	3.3 U	62	160	49	37
ANTHRACENE	85.3	18	13	270	3.3 U	3.3 U	3.3 U	550 D	200	110	88
BENZO(A)ANTHRACENE	261	61	16	240	3.5	3.3 U	4.4	930 D	460 D	290	93
BENZO(A)PYRENE	430	73	15	130	4.9	3.3 U	4.3	960 D	570 D	320	200
BENZO(B)FLUORANTHENE	1800	58	17	170	7.3	3.3 U	7	1200 D	950 D	610 D	350 D
BENZO(G,H,I)PERYLENE	670	48	15	48	3.3	3.3 U	3.3 U	530 D	340 D	210	120
BENZO(K)FLUORANTHENE	1800	52	15	130	4.4	3.3 U	4.3	310	300	230	100
CHRYSENE	384	71	16	230	4.3	3.3 U	5.2	810 D	590 D	330	170
DIBENZO(A,H)ANTHRACENE	63.4	15	14	18	3.3 U	3.3 U	3.3 U	130	130	74	38
FLUORANTHENE	600	130	17	1000 D	4.9	3.3 U	5.3	2400 D	870 D	700 D	200
FLUORENE	19	7.2	14	110	3.3 U	3.3 U	3.3 U	220	84	39	28
HIGH MOLECULAR WEIGHT PAHS		673	158	2840	47.6	4	37.3	10200	6530	4560	2480
INDENO(1,2,3-CD)PYRENE	600	45	15	52	3.3 U	3.3 U	3.3 U	480 D	320 D	200	110
LOW MOLECULAR WEIGHT PAHS		103.3	70.6	1950	3.3 U	3.3 U	8.5	2450	959	585	319
NAPHTHALENE	160	6.1	3.3 U	190	3.3 U	3.3 U	3.3 U	75	33	32	27
PHENANTHRENE	240	58	15	1300 D	3.3 U	3.3 U	8.5	1300 D	390 D	290	91

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD410-2632	GI-SD411-0006	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824
LOCATION ID			GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD412	GI-SD412	GI-SD412	GI-SD412
SAMPLE DATE			10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009
TOP DEPTH			3.25 FT	0 FT	0.86 FT	1.72 FT	2.58 FT	0 FT	1 FT	2 FT	3 FT
BOTTOM DEPTH			4 FT	0.86 FT	1.72 FT	2.58 FT	3.43 FT	1 FT	2 FT	3 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
PYRENE	665	120	18	820 D	15	4	6.8	2400 D	2000 D	1600 D	1100 D
TOTAL PAHS		770	229	4790	47.6	4	45.8	12600	7490	5150	2800
PESTICIDES/PCBS (UG/KG)											
AROCLOR-1248	22.7		33 U	170 U	33 U	33 U	33 U	160 U	1700 U	1400	33 U
AROCLOR-1254	22.7		88	170 U	46 P	33 U	33 U	160 U	1700 U	160 U	64
AROCLOR-1260	22.7		33 U	570	55 P	33 U	33 U	5300 D	7200	320	65
TOTAL AROCLOR	22.7		88	570	101	33 U	33 U	5300	7200	1720	129
METALS (MG/KG)											
ALUMINUM	18000	7460	4900 E	2980 E	4730 E	4040 E	4700 E	5380 E	6020 E	7400 E	7810 E
ANTIMONY	2	0.2	0.17 BN	0.12 BN	0.13 BN	0.096 BN	0.082 UN	0.61 N	1.9 N	8.9 N	3.2 N
ARSENIC	8.2	2.7	2.3 E	1.6 E	2.4 E	1.9 E	2.4 E	4.8 E	9.6 E	11.3 E	10 E
BARIUM	48	15.7	15.6 *E	6.6 *E	15.2 *E	12.2 *E	14.6 *E	13.6 NE	24.1 NE	24.2 NE	29.8 NE
BERYLLIUM		0.405	0.31 E	0.23 E	0.32 E	0.29 E	0.31 E	0.29 NE	0.35 NE	0.44 NE	0.38 NE
CADMIUM	1.2	0.367	0.11 B	0.1 B	0.12	0.093 B	0.11 B	0.26	1.3	1.3	1.1
CALCIUM		32500	3180 *	3750 *	2740 *	2370 *	3560 *	65600	92200	14600	15600
CHROMIUM	81	19.8	8.2 E	6.2 E	7.8 E	6.7 E	7.9 E	17.3 NE	33.7 NE	34.4 NE	41.9 NE
COBALT	10	6	3.6 E	2.2 E	3.3 E	3 E	3.2 E	3.3 NE	4.9 NE	5.9 NE	6.4 NE
COPPER	34	15	10.6 NE	8.9 NE	11.1 NE	10 NE	9.4 NE	26.6 NE	162 NE	109 NE	130 NE
IRON	220000	16700	11800	8410	12400	10800	11900	21400	31200	33300	41600
LEAD	46.7	20.6	6.7 NE	6 NE	6.6 NE	5.5 NE	6.7 NE	25.7 NE	345 NE	202 NE	111 NE

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD410-2632	GI-SD411-0006	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824
LOCATION ID			GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD412	GI-SD412	GI-SD412	GI-SD412
SAMPLE DATE			10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/9/2009	10/9/2009	10/9/2009	10/9/2009
TOP DEPTH			3.25 FT	0 FT	0.86 FT	1.72 FT	2.58 FT	0 FT	1 FT	2 FT	3 FT
BOTTOM DEPTH			4 FT	0.86 FT	1.72 FT	2.58 FT	3.43 FT	1 FT	2 FT	3 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
MAGNESIUM		3810	2200 E	1460 E	2020 E	1740 E	2020 E	3080 E	3470 E	4940 E	4670 E
MANGANESE	260	139	99.6 E	63 E	86 E	78.5 E	96.6 E	114 E	161 E	225 E	246 E
MERCURY	0.15	0.083	0.012 B	0.0099 B	0.017 B	0.018 B	0.021 B	0.044	0.36	0.94	0.29
NICKEL	20.9	11.7	7.1 E	4.6 E	6.6 E	5.7 E	6.4 E	9.2 NE	13.8 NE	13.6 NE	20.9 NE
POTASSIUM		1590	669	459	632	554	658	1510	1870	2250	1980
SELENIUM	1	0.73	1.1	0.98	1.1	0.91	0.92	0.4 UN	0.43 UN	0.4 UN	0.43 UN
SILVER	0.5	0.19	0.036 U	0.036 U	0.035 U	0.035 U	0.036 U	0.04 UN	0.39 BN	0.058 BN	0.081 BN
SODIUM		6310	2710	2160	2010	1740	2360	9190	9430	8170	10900
THALLIUM			0.14 BN	0.15 BN	0.15 BN	0.11 BN	0.18 BN	0.48 BN	0.64 N	0.12 UN	0.13 UN
VANADIUM	57	20	9.6 E	7.5 E	10.1 E	9 E	9.5 E	18.4 NE	27.2 NE	24.1 NE	23.8 NE
ZINC	150	61.8	20.7 *E	16.7 *E	19.6 *E	16.5 *E	19.8 *E	68.2 NE	1160 NE	599 NE	207 NE

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD413-0006	GI-SD413-0612	GI-SD414-0006-AVG	GI-SD414-0612	GI-SD414-1218	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824
LOCATION ID			GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415
SAMPLE DATE			10/6/2009	10/6/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009
TOP DEPTH			0 FT	2 FT	0 FT	0.93 FT	1.85 FT	2.77 FT	0 FT	0.5 FT	1.5 FT
BOTTOM DEPTH			2 FT	4 FT	0.93 FT	1.85 FT	2.77 FT	3.69 FT	0.5 FT	1 FT	2 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
2-METHYLNAPHTHALENE	70		20	7.3	2.78	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ACENAPHTHENE	16	3.9	64	11	14.5	3.3 U	3.3 U	3.3 U	3.3 U	3.5	3.3 U
ACENAPHTHYLENE	44	15	63	81	31	3.3 U	3.3 U	3.3 U	3.6	18	3.3 U
ANTHRACENE	85.3	18	200	170	73	4.6	3.3 U	3.3 U	4.3	39	5.9
BENZO(A)ANTHRACENE	261	61	470 D	310	175	11	5.3	2.58	12	110	16
BENZO(A)PYRENE	430	73	230	260	170	22	3.3 U	3.92	13	110	15
BENZO(B)FLUORANTHENE	1800	58	410 D	490 D	275	32	5.2	3.38	22	200	27
BENZO(G,H,I)PERYLENE	670	48	70	97	93	13	3.3 U	3.3 U	8.4	62	11
BENZO(K)FLUORANTHENE	1800	52	140	190	121	11	3.3 U	3.3 U	6.3	60	7.9
CHRYSENE	384	71	520 D	420 D	200	14	4.8	2.98	13	170	21
DIBENZO(A,H)ANTHRACENE	63.4	15	33	38	37	5.6	3.3 U	3.3 U	3.3 U	21	4.7
FLUORANTHENE	600	130	1100 D	320	255	16	6.7	2.92	15	170	19
FLUORENE	19	7.2	72	35	20	3.3 U	3.3 U	3.3 U	3.3 U	6.1	3.3 U
HIGH MOLECULAR WEIGHT PAHS		673	4550	3320	1940	170	30.1	16.2	115	1120	150
INDENO(1,2,3-CD)PYRENE	600	45	77	100	91	12	3.3 U	3.3 U	8.2	58	9.9
LOW MOLECULAR WEIGHT PAHS		103.3	1040	472	278	13.8	3.3 U	3.3 U	14.2	121	15.7
NAPHTHALENE	160	6.1	29	18	7.65	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
PHENANTHRENE	240	58	590 D	150	130	9.2	3.3 U	3.3 U	6.3	54	9.8

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD413-0006	GI-SD413-0612	GI-SD414-0006-AVG	GI-SD414-0612	GI-SD414-1218	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824
LOCATION ID			GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415
SAMPLE DATE			10/6/2009	10/6/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009
TOP DEPTH			0 FT	2 FT	0 FT	0.93 FT	1.85 FT	2.77 FT	0 FT	0.5 FT	1.5 FT
BOTTOM DEPTH			2 FT	4 FT	0.93 FT	1.85 FT	2.77 FT	3.69 FT	0.5 FT	1 FT	2 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
PYRENE	665	120	1500 D	1100 D	525 D	33	8.1	4.52	17	160	18
TOTAL PAHS		770	5590	3800	2220	183	30.1	16.2	129	1240	165
PESTICIDES/PCBS (UG/KG)											
AROCLOR-1248	22.7		330 U	330 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1254	22.7		330 U	330 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1260	22.7		2800	2400	390	33 U	33 U	33 U	33 U	35	33 U
TOTAL AROCLOR	22.7		2800	2400	390	33 U	33 U	33 U	33 U	35	33 U
METALS (MG/KG)											
ALUMINUM	18000	7460	5120 *E	5470 *E	4970 *E	5920 *E	5380 *E	5900 *E	3910 *E	4800 *E	6190 *E
ANTIMONY	2	0.2	0.48 BN	0.41 BN	0.23 BN	0.084 BN	0.074 UN	0.119 BN	0.099 BN	0.081 UN	0.11 BN
ARSENIC	8.2	2.7	6	5.2	3.75 E	2.6 E	2.3 E	2.5 E	4.9 E	5 E	9.8 E
BARIUM	48	15.7	13.9 E	16.4 E	13.7 E	17 E	16.1 E	12.6 E	7.2 E	7.5 E	8.1 E
BERYLLIUM		0.405	0.41 E	0.46 E	0.35 E	0.32 E	0.27 E	0.275 E	0.27 E	0.36 E	0.32 E
CADMIUM	1.2	0.367	0.77	0.89	0.195	0.071 B	0.036 B	0.052 B	0.052 B	0.083 B	0.11
CALCIUM		32500	106000 *	118000 *	11000 *	2450 *	1550 *	1810 *	27400 *	9520 *	12800 *
CHROMIUM	81	19.8	23.1 E	25.9 E	16.4 E	9.5 E	8.5 E	11.6 E	10.5 E	12.9 E	30.3 E
COBALT	10	6	3.7 *E	3.4 *E	3.6 E	4 E	4.8 E	4.6 E	3.5 E	3.7 E	5.4 E
COPPER	34	15	37.4 N	41.9 N	25 E	11.9 E	14.2 E	15 E	7.3 E	9.6 E	7.9 E
IRON	220000	16700	29700 *	33100 *	13400 *	14700 *	12900 *	15000 *	13000 *	15600 *	21000 *
LEAD	46.7	20.6	27 N*E	31.9 N*E	21.6 E	7.8 E	5.6 E	4.8 E	8.5 E	12 E	9 E

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD413-0006	GI-SD413-0612	GI-SD414-0006-AVG	GI-SD414-0612	GI-SD414-1218	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824
LOCATION ID			GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415
SAMPLE DATE			10/6/2009	10/6/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009
TOP DEPTH			0 FT	2 FT	0 FT	0.93 FT	1.85 FT	2.77 FT	0 FT	0.5 FT	1.5 FT
BOTTOM DEPTH			2 FT	4 FT	0.93 FT	1.85 FT	2.77 FT	3.69 FT	0.5 FT	1 FT	2 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
MAGNESIUM		3810	3370 *E	4980 *E	2620 *E	2540 *E	2230 *E	2650 *E	2080 *E	2500 *E	3230 *E
MANGANESE	260	139	142 *E	188 *E	98.8 *E	102 *E	89.2 *E	108 *E	165 *E	137 *E	248 *E
MERCURY	0.15	0.083	0.075	0.13	0.0955	0.01 B	0.004 U	0.00915 B	0.038	0.059	0.036
NICKEL	20.9	11.7	13.3 *E	12.5 *E	8.1 E	8.3 E	9 E	9.6 E	6.8 E	7.4 E	16.6 E
POTASSIUM		1590	1630 *	1960 *	1120	810	669	724	819	925	939
SELENIUM	1	0.73	0.39 U	0.43 U	0.935	0.93	1.2	1.2	0.33 B	1.1	0.82
SILVER	0.5	0.19	0.2 B	0.37 B	0.18 B	0.033 U	0.032 U	0.031 U	0.033 U	0.062 B	0.034 U
SODIUM		6310	10800	13500	4560	2690	2160	2030	2660	2620	2350
THALLIUM			0.79	0.8	0.128 BN	0.15 BN	0.1 BN	0.072 BN	0.3 BN	0.24 BN	0.18 BN
VANADIUM	57	20	19 *E	22.4 *E	15.1 *E	11 *E	9.6 *E	11.8 *E	14.2 *E	16.1 *E	24.2 *E
ZINC	150	61.8	237 E	326 E	80.2 E	26.2 E	20.2 E	21.3 E	26.3 E	33.3 E	32.9 E

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612
LOCATION ID			GI-SD415	GI-SD416	GI-SD416	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418
SAMPLE DATE			10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/13/2009	10/13/2009
TOP DEPTH			3.5 FT	0 FT	1.5 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT
BOTTOM DEPTH			4 FT	1.5 FT	3 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT
SACODE			AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
2-METHYLNAPHTHALENE	70		3.3 U	15	34	3.3 U	4.3	3.3 U	3.3 U	14	13
ACENAPHTHENE	16	3.9	3.3 U	21	210	3.3 U	27	3.3 U	3.3 U	12	3.3 U
ACENAPHTHYLENE	44	15	3.3 U	170	40	11	18	3.3 U	3.3 U	47	8.3
ANTHRACENE	85.3	18	3.3 U	250	320	14	80	5	3.3 U	65	6.5
BENZO(A)ANTHRACENE	261	61	3.3 U	700 D	590 D	46	200	8	3.3 U	100	15
BENZO(A)PYRENE	430	73	3.3 U	780 D	590 D	44	150	7.4	3.3 U	170	16
BENZO(B)FLUORANTHENE	1800	58	3.3 U	1500 D	920 D	82	240	14	3.3 U	270	25
BENZO(G,H,I)PERYLENE	670	48	3.3 U	320	270	27	77	4.8	3.3 U	110	11
BENZO(K)FLUORANTHENE	1800	52	3.3 U	470 D	280 D	26	94	4.2	3.3 U	150	14
CHRYSENE	384	71	3.3 U	1200 D	690 D	67	240	9.3	3.3 U	160	18
DIBENZO(A,H)ANTHRACENE	63.4	15	3.3 U	150	100	9.4	28	3.3 U	3.3 U	54	4.2
FLUORANTHENE	600	130	3.3 U	1000 D	1300 D	93	430 D	10	3.3 U	180	19
FLUORENE	19	7.2	3.3 U	85	180	5.4	28	3.3 U	3.3 U	18	5
HIGH MOLECULAR WEIGHT PAHS		673	3.3 U	8640	6210	540	1920	76.3	3.3 U	1710	174
INDENO(1,2,3-CD)PYRENE	600	45	3.3 U	320	270	26	77	4.6	3.3 U	110	11
LOW MOLECULAR WEIGHT PAHS		103.3	3.02	879	2130	70.2	358	12.4	3.3 U	266	61.1
NAPHTHALENE	160	6.1	3.3 U	18	150	3.8	11	3.3 U	3.3 U	19	5.3
PHENANTHRENE	240	58	3.02	320	1200 D	36	190	7.4	3.3 U	91	23

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612
LOCATION ID			GI-SD415	GI-SD416	GI-SD416	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418
SAMPLE DATE			10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/13/2009	10/13/2009
TOP DEPTH			3.5 FT	0 FT	1.5 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT
BOTTOM DEPTH			4 FT	1.5 FT	3 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT
SACODE			AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
PYRENE	665	120	3.3 U	2200 D	1200 D	120	380 D	14	3.3 U	410 D	41
TOTAL PAHS		770	3.02	9520	8340	611	2270	88.7	3.3 U	1980	235
PESTICIDES/PCBS (UG/KG)											
AROCLOR-1248	22.7		33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1254	22.7		33 U	33 U	33 U	33 U	33 U	33 U	33 U	35 P	33 U
AROCLOR-1260	22.7		33 U	33 U	33 U	33 U	33 U	33 U	33 U	100	33 U
TOTAL AROCLOR	22.7		33 U	33 U	33 U	33 U	33 U	33 U	33 U	135	33 U
METALS (MG/KG)											
ALUMINUM	18000	7460	5920 *E	6950 E	4410 *E	4120 *E	4550 *E	4050 *E	4500 *E	7360 E	5190 E
ANTIMONY	2	0.2	0.112 BN	0.37 BN	0.084 UN	0.092 BN	0.21 BN	0.083 BN	0.19 BN	0.45 BN	0.086 BN
ARSENIC	8.2	2.7	3.5 E	6.5 E	6.5 E	3.9 E	4.1 E	2.3 E	2.1 E	6.7 E	3.1 E
BARIUM	48	15.7	15.6 E	24.4 *E	15.1 E	6.9 E	18.4 E	17.2 E	22.2 E	22.3 *E	19.1 *E
BERYLLIUM		0.405	0.285 E	0.61 E	0.33 E	0.29 E	0.37 E	0.3 E	0.27 E	0.63 E	0.42 E
CADMIUM	1.2	0.367	0.0425 B	0.53	0.091 B	0.055 B	1.1	0.042 B	0.019 B	0.46	0.15
CALCIUM		32500	2850 *	20000 *	52500 *	8740 *	4400 *	3140 *	722 *	3220 *	2400 *
CHROMIUM	81	19.8	9.2 E	30.7 E	15.3 E	13 E	20.1 E	7.5 E	7.9 E	29.5 E	10.8 E
COBALT	10	6	4.7 E	5.1 E	3.8 E	4.1 E	3.4 E	3.4 E	3.9 E	5.2 E	4.7 E
COPPER	34	15	7.65 E	39 NE	14.6 E	10.5 E	31.3 E	7.6 E	8.2 E	41 NE	16.1 NE
IRON	220000	16700	15400 *	21300	14900 *	14500 *	13400 *	12400 *	12900 *	19700	13900
LEAD	46.7	20.6	4.4 E	38.6 NE	19.1 E	14.1 E	30.6 E	5.8 E	5.2 E	38.7 NE	10 NE

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612
LOCATION ID			GI-SD415	GI-SD416	GI-SD416	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418
SAMPLE DATE			10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/13/2009	10/13/2009
TOP DEPTH			3.5 FT	0 FT	1.5 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT
BOTTOM DEPTH			4 FT	1.5 FT	3 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT
SACODE			AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
MAGNESIUM		3810	2710 *E	3770 E	2340 *E	2390 *E	2530 *E	1960 *E	2090 *E	3830 E	2390 E
MANGANESE	260	139	132 *E	184 E	125 *E	112 *E	97.1 *E	81 *E	89.8 *E	143 E	106 E
MERCURY	0.15	0.083	0.0056 B	0.17	0.13	0.076	0.1	0.036	0.024 B	0.14	0.06
NICKEL	20.9	11.7	7.95 E	11.5 E	7.2 E	6.8 E	8.5 E	6.2 E	7.2 E	12.3 E	8.8 E
POTASSIUM		1590	1020	1920	1120	887	1130	757	737	1740	883
SELENIUM	1	0.73	1.1	1.5	0.36 U	1.1	1.3	1.1	1.1	1.5	1
SILVER	0.5	0.19	0.031 U	0.41 B	0.085 B	0.055 B	0.26 B	0.032 U	0.032 U	0.31 B	0.036 U
SODIUM		6310	1620	7910	3730	2260	4580	1830	1550	7660	2830
THALLIUM			0.145 BN	0.32 BN	0.54 N	0.18 BN	0.18 BN	0.15 BN	0.13 BN	0.22 BN	0.11 BN
VANADIUM	57	20	12.9 *E	23 E	14.9 *E	15.3 *E	14.6 *E	10.8 *E	10.5 *E	21.2 E	11.6 E
ZINC	150	61.8	20.4 E	82.8 *E	38.6 E	32.8 E	77.8 E	18.1 E	16.4 E	78.2 *E	29.6 *E

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD419-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006-AVG	GI-SD420-0612
LOCATION ID			GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420	GI-SD420
SAMPLE DATE			10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
TOP DEPTH			0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	1.6 FT
BOTTOM DEPTH			0.75 FT	1.58 FT	3 FT	4 FT	1.6 FT	3.2 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)								
2-METHYLNAPHTHALENE	70		17	3.7	12	3.3 U	2.98	3.3 U
ACENAPHTHENE	16	3.9	32	4	24	3.3 U	9.45	3.3 U
ACENAPHTHYLENE	44	15	240	20	69	8.9	6.5	3.3 U
ANTHRACENE	85.3	18	300	41	160	11	24.5	3.3 U
BENZO(A)ANTHRACENE	261	61	1200 D	110	650 D	22	47	4.5
BENZO(A)PYRENE	430	73	960 D	99	320	22	37.5	4
BENZO(B)FLUORANTHENE	1800	58	1500 D	170	910 D	33	51	5.5
BENZO(G,H,I)PERYLENE	670	48	500 D	48	220	15	24	3.8
BENZO(K)FLUORANTHENE	1800	52	330	56	320 D	19	30.5	3.4
CHRYSENE	384	71	1400 D	160	830 D	28	42.5	4.6
DIBENZO(A,H)ANTHRACENE	63.4	15	140	23	87	6	8.4	3.3 U
FLUORANTHENE	600	130	1800 D	140	580 D	21	89.5	5.9
FLUORENE	19	7.2	100	9.2	52	3.3 U	16.5	3.3 U
HIGH MOLECULAR WEIGHT PAHS		673	9850	1010	4830	202	432	42
INDENO(1,2,3-CD)PYRENE	600	45	520 D	55	210	14	23	3.8
LOW MOLECULAR WEIGHT PAHS		103.3	1350	131	560	29	136	3.3 U
NAPHTHALENE	160	6.1	19	3.3 U	13	3.3 U	8.1	3.3 U
PHENANTHRENE	240	58	640 D	53	230	9.1	69	3.3 U

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD419-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006-AVG	GI-SD420-0612
LOCATION ID			GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420	GI-SD420
SAMPLE DATE			10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
TOP DEPTH			0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	1.6 FT
BOTTOM DEPTH			0.75 FT	1.58 FT	3 FT	4 FT	1.6 FT	3.2 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM
PYRENE	665	120	1500 D	150	700 D	22	78.5	6.5
TOTAL PAHS		770	11200	1140	5390	231	568	42
PESTICIDES/PCBS (UG/KG)								
AROCLOR-1248	22.7		33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1254	22.7		33 U	120	33 U	33 U	33 U	56
AROCLOR-1260	22.7		61	33 U	34 P	33 U	40.8	33 U
TOTAL AROCLOR	22.7		61	120	34	33 U	40.8	56
METALS (MG/KG)								
ALUMINUM	18000	7460	6370 E	3980 E	4890 E	6100 E	3480 E	4550
ANTIMONY	2	0.2	0.38 BN	0.083 UN	0.21 BN	0.19 BN	0.099 BN	0.1 BN
ARSENIC	8.2	2.7	7.1 E	3.7 E	4.3 E	8.6 E	1.7 E	2.1
BARIUM	48	15.7	15.6 *E	17.3 *E	7.7 *E	4.6 *E	8.05 *E	13.5 E
BERYLLIUM		0.405	0.58 E	0.3 E	0.35 E	0.3 E	0.275 E	0.37 E
CADMIUM	1.2	0.367	0.3	0.13	0.2	0.2	0.0575 B	0.11 B
CALCIUM		32500	45600 *	18400 *	15300 *	9900 *	1570 *	1490
CHROMIUM	81	19.8	25.7 E	11.4 E	13 E	12.6 E	7 E	8
COBALT	10	6	5.6 E	3.2 E	3.7 E	5.1 E	3.05 E	4 E
COPPER	34	15	25.5 NE	8.7 NE	11 NE	7.8 NE	10.1 NE	15.6
IRON	220000	16700	19500	13000	14500	19800	8930 *	12300
LEAD	46.7	20.6	28 NE	39.9 NE	14 NE	9.4 NE	6.25 NE	5.4 E

TABLE 4-14
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD419-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006-AVG	GI-SD420-0612
LOCATION ID			GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420	GI-SD420
SAMPLE DATE			10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009
TOP DEPTH			0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	1.6 FT
BOTTOM DEPTH			0.75 FT	1.58 FT	3 FT	4 FT	1.6 FT	3.2 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM
MAGNESIUM		3810	3800 E	2230 E	2670 E	3280 E	1760 E	1970 E
MANGANESE	260	139	365 E	122 E	129 E	314 E	68.5 E	85.3 E
MERCURY	0.15	0.083	0.13	0.048	0.065	0.037	0.417 B	0.0067 B
NICKEL	20.9	11.7	12.9 E	6.2 E	7.1 E	9.3 E	7.3 E	8 E
POTASSIUM		1590	1820	776	918	600	536	626
SELENIUM	1	0.73	0.64 B	0.73	0.81	1.1	0.945	1
SILVER	0.5	0.19	0.11 B	0.036 U	0.036 U	0.037 U	0.035 U	0.035 U
SODIUM		6310	10300	2750	2590	2200	2440	2120
THALLIUM			0.16 BN	0.27 BN	0.22 BN	0.11 BN	0.115 BN	0.18 B
VANADIUM	57	20	25 E	15.2 E	17 E	24.6 E	7.85 E	10.9
ZINC	150	61.8	72.2 *E	37.6 *E	38.1 *E	31.8 *E	21.8 *E	19.9 E

TABLE 4-15
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE - STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD430-0006
LOCATION ID			GI-SD421	GI-SD422	GI-SD423	GI-SD424	GI-SD425	GI-SD426	GI-SD427	GI-SD428	GI-SD430
SAMPLE DATE			10/5/2009	9/21/2009	10/5/2009	10/5/2009	9/21/2009	10/5/2009	9/21/2009	9/21/2009	9/21/2009
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
2-METHYLNAPHTHALENE	70		3.3 U	6.2	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ACENAPHTHENE	16	3.9	4.5	18	3.3 U	3.3 U	3.3 U	3.3 U	25	3.9	8.1
ACENAPHTHYLENE	44	15	3.9	7.8	3.3 U	3.3 U	3.3 U	6.5	3.3 U	3.3 U	3.3 U
ANTHRACENE	85.3	18	11	54	3.3 U	6.9	3.3 U	5.9	41	7.1	14
BENZO(A)ANTHRACENE	261	61	24	100	4.4	12	7.9	8.7	67	17	30
BENZO(A)PYRENE	430	73	23	90	2.72	12	19	7.4	60	21	27
BENZO(B)FLUORANTHENE	1800	58	27	110	4.9	16	21	13	68	30	32
BENZO(G,H,I)PERYLENE	670	48	10	54	3.3 U	7.2	9.4	5.4	39	17	18
BENZO(K)FLUORANTHENE	1800	52	17	82	2.62	11	17	4.1	47	9.6	25
CHRYSENE	384	71	24	100	4	16	8.3	8	58	16	29
DIBENZO(A,H)ANTHRACENE	63.4	15	3.3	18	3.3 U	3.3 U	4.4	3.3 U	11	4.8	5.3
FLUORANTHENE	600	130	42	220	5.85	16	7.8	13	150	34	61
FLUORENE	19	7.2	4.7	25	3.3 U	3.3 U	3.3 U	3.3 U	19	3.5	5
HIGH MOLECULAR WEIGHT PAHS		673	211	1000	27.8	111	114	75.9	655	191	298
INDENO(1,2,3-CD)PYRENE	600	45	9.9	51	3.3 U	7	11	5.3	35	14	16
LOW MOLECULAR WEIGHT PAHS		103.3	54.1	283	8.88	20.9	3.4	52.4	220	43.7	71.1
NAPHTHALENE	160	6.1	3.3 U	12	4.78	3.3 U	3.3 U	30	5.5	4.2	3.3 U
PHENANTHRENE	240	58	30	160	4.92	14	3.4	10	130	25	44
PYRENE	665	120	31	180	4.95	14	8.2	11	120	28	55

TABLE 4-15
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE - STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD430-0006
LOCATION ID			GI-SD421	GI-SD422	GI-SD423	GI-SD424	GI-SD425	GI-SD426	GI-SD427	GI-SD428	GI-SD430
SAMPLE DATE			10/5/2009	9/21/2009	10/5/2009	10/5/2009	9/21/2009	10/5/2009	9/21/2009	9/21/2009	9/21/2009
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
TOTAL PAHS		770	265	1290	35.8	132	117	128	876	235	369
PESTICIDES/PCBS (UG/KG)											
AROCLOR-1248	22.7		33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1260	22.7		33 U	100	33 U	33 U	33 U	33 U	33 U	33 U	42
TOTAL AROCLOR	22.7		33 U	100	33 U	33 U	33 U	33 U	33 U	33 U	42
METALS (MG/KG)											
ALUMINUM	18000	7460	6890 *E	4520 E	5250 *E	6940 *E	5390 E	6810 *E	5140 E	4660 E	4520 E
ANTIMONY	2	0.2	0.21 BN	0.11 BN	0.148 BN	0.39 BN	0.082 UN	0.36 BN	0.15 BN	0.21 BN	0.089 BN
ARSENIC	8.2	2.7	2.3	2.8 *	2.85	4.1	2.1 *	2.6	1.9 *	2.6 *	2.4 *
BARIUM	48	15.7	10.1 E	10.5 E	5.85 E	11.1 E	13.9 E	11.6 E	13.6 E	6.2 E	8.6 E
BERYLLIUM		0.405	0.29 E	0.11 BE	0.22 E	0.33 E	0.065 BE	0.33 E	0.077 BE	0.15 E	0.097 BE
CADMIUM	1.2	0.367	0.26	0.028 B*	0.615	0.59	0.0059 U*	0.33	0.052 B*	0.037 B*	0.053 B*
CALCIUM		32500	8770 *	33400 *	5170 *	19500 *	30400 *	8060 *	21100 *	42400 *	38500 *
CHROMIUM	81	19.8	10.1 E	10.1 E	11 E	16.5 E	10.4 E	12.2 E	10.2 E	9.3 E	10.5 E
COBALT	10	6	4.1 *E	2.6 E	3.4 *E	4.8 *E	2.8 E	4.8 *E	2.9 E	3.6 E	2.7 E
COPPER	34	15	25.5 N	14.9 E	16.6 N	19.4 N	9.8 E	16 N	7.3 E	28.2 E	7.5 E
IRON	220000	16700	18100 *	12300 *	19200 *	21800 *	14700 *	21800 *	13700 *	14500 *	12200 *
LEAD	46.7	20.6	138 N*E	10.8 NE	7.75 N*E	32.8 N*E	6.4 NE	34.7 N*E	8.2 NE	7.6 NE	11.4 NE
MAGNESIUM		3810	2860 *E	2390 E	2600 *E	3790 *E	2940 E	3930 *E	2810 E	2690 E	2560 E
MANGANESE	260	139	152 *E	140 *E	124 *E	141 *E	119 *E	121 *E	108 *E	124 *E	118 *E
MERCURY	0.15	0.083	0.0075 B	0.032	0.0047 B	0.029	0.0098 B	0.018 B	0.025 B	0.011 B	0.037

TABLE 4-15
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE - STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD430-0006
LOCATION ID			GI-SD421	GI-SD422	GI-SD423	GI-SD424	GI-SD425	GI-SD426	GI-SD427	GI-SD428	GI-SD430
SAMPLE DATE			10/5/2009	9/21/2009	10/5/2009	10/5/2009	9/21/2009	10/5/2009	9/21/2009	9/21/2009	9/21/2009
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
NICKEL	20.9	11.7	8 *E	6 E	8.15 *E	9.5 *E	5.9 E	9.3 *E	6.3 E	6.4 E	5.7 E
POTASSIUM		1590	724 *	996 *	522 *	1110 *	1070 *	937 *	942 *	761 *	831 *
SELENIUM	1	0.73	0.86	0.38 U	0.88	0.79	0.35 U	1.2	0.34 U	0.38 U	0.36 U
SODIUM		6310	2180	4400 E	1650	3140	3510 E	4230	3430 E	3640 E	3880 E
THALLIUM			0.094 U	0.12 U	0.145 B	0.23 B	0.11 U	0.24 B	0.11 U	0.12 U	0.11 U
VANADIUM	57	20	11 *E	11.5 E	10.4 *E	21.9 *E	12.8 E	19.2 *E	12.4 E	14 E	11.8 E
ZINC	150	61.8	26.1 E	31.1 E	75.4 E	164 E	27.2 E	40.1 E	30.6 E	23.9 E	26.5 E

TABLE 4-15
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE - STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD431-0006	GI-SD432-0006	GI-SD433-0006	GI-SD434-0006	GI-SD435-0006	GI-SD436-0006	GI-SD437-0006	GI-SD446-0006	GI-SD447-0006-AVG
LOCATION ID			GI-SD431	GI-SD432	GI-SD433	GI-SD434	GI-SD435	GI-SD436	GI-SD437	GI-SD446	GI-SD447
SAMPLE DATE			10/5/2009	9/21/2009	9/21/2009	9/21/2009	9/21/2009	9/21/2009	9/21/2009	9/22/2009	9/22/2009
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
2-METHYLNAPHTHALENE	70		3.3 U	24	19	15	3.3 U	3.3 U	3.3 U	3.3 U	5.2
ACENAPHTHENE	16	3.9	14	110	120	130	23	15	21	16	58.5
ACENAPHTHYLENE	44	15	3.3 U	4.5	7.9	9.3	4	3.3 U	3.3 U	3.3 U	10.8
ANTHRACENE	85.3	18	20	210	220	160	49	28	42	40	130
BENZO(A)ANTHRACENE	261	61	30	540 D	420 D	250	100	58	110	110	345 D
BENZO(A)PYRENE	430	73	22	480 D	290	220	88	53	99	96	275
BENZO(B)FLUORANTHENE	1800	58	24	590 D	400 D	300	120	71	140	140	410 D
BENZO(G,H,I)PERYLENE	670	48	9.1	290	170	130	55	33	61	57	170
BENZO(K)FLUORANTHENE	1800	52	16	240	170	110	47	25	50	49	185
CHRYSENE	384	71	22	450 D	330	230	98	56	110	100	320 D
DIBENZO(A,H)ANTHRACENE	63.4	15	3.3 U	110	74	43	22	9.8	22	18	64.5
FLUORANTHENE	600	130	49	1300 D	1000 D	670 D	230	130	220	230	830 D
FLUORENE	19	7.2	14	88	89	68	16	8.5	15	13	44.5
HIGH MOLECULAR WEIGHT PAHS		673	221	5250	3810	2600	1020	576	1070	1040	3420
INDENO(1,2,3-CD)PYRENE	600	45	8.6	250	160	120	50	30	56	52	155
LOW MOLECULAR WEIGHT PAHS		103.3	130	1230	1290	961	257	140	226	205	724
NAPHTHALENE	160	6.1	10	78	42	49	5	3.5	7.6	5.6	9.8
PHENANTHRENE	240	58	72	720 D	790 D	530 D	160	85	140	130	465 D
PYRENE	665	120	40	1000 D	800 D	530 D	210	110	200	190	665 D

TABLE 4-15
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE - STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD431-0006	GI-SD432-0006	GI-SD433-0006	GI-SD434-0006	GI-SD435-0006	GI-SD436-0006	GI-SD437-0006	GI-SD446-0006	GI-SD447-0006-AVG
LOCATION ID			GI-SD431	GI-SD432	GI-SD433	GI-SD434	GI-SD435	GI-SD436	GI-SD437	GI-SD446	GI-SD447
SAMPLE DATE			10/5/2009	9/21/2009	9/21/2009	9/21/2009	9/21/2009	9/21/2009	9/21/2009	9/22/2009	9/22/2009
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
TOTAL PAHS		770	351	6480	5100	3560	1280	716	1290	1250	4140
PESTICIDES/PCBS (UG/KG)											
AROCLOR-1248	22.7		33 U	33 U	33 U	33 U	160 U	33 U	33 U	33 U	33 U
AROCLOR-1260	22.7		33 U	360	170	400	890	170	310	140	185
TOTAL AROCLOR	22.7		33 U	360	170	400	890	170	310	140	185
METALS (MG/KG)											
ALUMINUM	18000	7460	7500 *E	3220 E	3340 E	3530 E	3380 E	3660 E	4100 E	7800 E	7060 E
ANTIMONY	2	0.2	0.25 BN	0.084 UN	0.098 BN	0.21 BN	0.21 BN	0.081 UN	0.085 UN	0.22 BN	0.275 BN
ARSENIC	8.2	2.7	3.8	2 *	4.5 *	7.6 *	2.4 *	1.7 *	2.3 *	2.3 *	2.6 *
BARIUM	48	15.7	19.9 E	6.2 E	13.3 E	10.1 E	7.9 E	5.4 E	9.4 E	26.7 E	22 E
BERYLLIUM		0.405	0.37 E	0.074 BE	0.15 E	0.076 BE	0.072 BE	0.08 BE	0.086 BE	0.25 E	0.2 E
CADMIUM	1.2	0.367	0.35	0.011 B*	0.083 B*	0.26 *	0.091 B*	0.062 B*	0.16 *	0.11 B*	0.14 *
CALCIUM		32500	19100 *	77800 *	140000 *	80300 *	45800 *	42900 *	28500 *	2950 *	1660 *
CHROMIUM	81	19.8	17.5 E	6.2 E	10.4 E	25.8 E	9.4 E	7.9 E	9.4 E	10.5 E	10.4 E
COBALT	10	6	4.5 *E	1.9 E	1.8 E	2.9 E	2.2 E	2 E	2.6 E	6.9 E	5.8 E
COPPER	34	15	10.7 N	7.2 E	12.1 E	21.4 E	11.8 E	12.6 E	9.6 E	17.1 E	26.6 E
IRON	220000	16700	22100 *	6220 *	6340 *	42500 *	13100 *	10400 *	13100 *	20300 *	18400 *
LEAD	46.7	20.6	10.3 N*E	13.8 NE	14.6 NE	9.3 NE	14.7 NE	18.6 NE	24.3 NE	9.8 NE	17.6 NE
MAGNESIUM		3810	3820 *E	1960 E	2460 E	2400 E	2200 E	1920 E	2320 E	4410 E	3120 E
MANGANESE	260	139	141 *E	93.8 *E	134 *E	193 *E	93.4 *E	84.6 *E	108 *E	261 *E	156 *E
MERCURY	0.15	0.083	0.014 B	0.02 B	0.059	0.021 B	0.025 B	0.068	0.029 B	0.004 U	0.03 B

TABLE 4-15
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE - STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD431-0006	GI-SD432-0006	GI-SD433-0006	GI-SD434-0006	GI-SD435-0006	GI-SD436-0006	GI-SD437-0006	GI-SD446-0006	GI-SD447-0006-AVG
LOCATION ID			GI-SD431	GI-SD432	GI-SD433	GI-SD434	GI-SD435	GI-SD436	GI-SD437	GI-SD446	GI-SD447
SAMPLE DATE			10/5/2009	9/21/2009	9/21/2009	9/21/2009	9/21/2009	9/21/2009	9/21/2009	9/22/2009	9/22/2009
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
NICKEL	20.9	11.7	10.2 *E	3.8 E	4.1 E	15.4 E	5.1 E	4.5 E	5.9 E	10.9 E	11.5 E
POTASSIUM		1590	1800 *	677 *	1330 *	804 *	686 *	631 *	768 *	1050 *	1100 *
SELENIUM	1	0.73	0.8	0.36 U	0.39 U	0.38 U	0.38 U	0.35 U	0.37 U	0.33 U	0.29 B
SODIUM		6310	2620	4070 E	10900 E	4700 E	4900 E	3370 E	3440 E	1690 E	2280 E
THALLIUM			0.23 B	0.43 B	0.89	0.12 U	0.12 U	0.11 U	0.11 U	0.1 U	0.099 U
VANADIUM	57	20	23.3 *E	7.8 E	12.8 E	11.9 E	9.9 E	11.2 E	13.9 E	14 E	13.8 E
ZINC	150	61.8	36 E	19.3 E	29.9 E	21.1 E	33.9 E	23.6 E	28.1 E	37.3 E	42.8 E

TABLE 4-15
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE - STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD449-0006	GI-SD450-0006
LOCATION ID			GI-SD449	GI-SD450
SAMPLE DATE			9/22/2009	9/22/2009
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
SUBMATRIX			SD	SD
QC TYPE			NM	NM
SEMIVOLATILES (UG/KG)				
2-METHYLNAPHTHALENE	70		3.3 U	3.3 U
ACENAPHTHENE	16	3.9	3.3 U	3.3 U
ACENAPHTHYLENE	44	15	31	3.3 U
ANTHRACENE	85.3	18	53	3.3 U
BENZO(A)ANTHRACENE	261	61	16	3.3 U
BENZO(A)PYRENE	430	73	7.3	3.3 U
BENZO(B)FLUORANTHENE	1800	58	14	3.3 U
BENZO(G,H,I)PERYLENE	670	48	4.3	3.3 U
BENZO(K)FLUORANTHENE	1800	52	5.5	3.3 U
CHRYSENE	384	71	21	3.3 U
DIBENZO(A,H)ANTHRACENE	63.4	15	3.3 U	3.3 U
FLUORANTHENE	600	130	160	3.3 U
FLUORENE	19	7.2	100	3.3 U
HIGH MOLECULAR WEIGHT PAHS		673	372	3.3 U
INDENO(1,2,3-CD)PYRENE	600	45	4.3	3.3 U
LOW MOLECULAR WEIGHT PAHS		103.3	484	3.3 U
NAPHTHALENE	160	6.1	110	3.3 U
PHENANTHRENE	240	58	190	3.3 U
PYRENE	665	120	140	3.3 U

TABLE 4-15
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE - STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD449-0006	GI-SD450-0006
LOCATION ID			GI-SD449	GI-SD450
SAMPLE DATE			9/22/2009	9/22/2009
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
SUBMATRIX			SD	SD
QC TYPE			NM	NM
TOTAL PAHS		770	856	3.3 U
PESTICIDES/PCBS (UG/KG)				
AROCLOR-1248	22.7		340	33 U
AROCLOR-1260	22.7		33 U	33 U
TOTAL AROCLOR	22.7		340	33 U
METALS (MG/KG)				
ALUMINUM	18000	7460	6950 E	7410 E
ANTIMONY	2	0.2	0.079 UN	0.19 BN
ARSENIC	8.2	2.7	2.5 *	2.9 *
BARIUM	48	15.7	19.1 E	25.1 E
BERYLLIUM		0.405	0.27 E	0.2 E
CADMIUM	1.2	0.367	0.11 B*	0.0056 U*
CALCIUM		32500	414 *	3010 *
CHROMIUM	81	19.8	7.9 E	9 E
COBALT	10	6	10.8 E	5.5 E
COPPER	34	15	11 E	11.9 E
IRON	220000	16700	12900 *	15100 *
LEAD	46.7	20.6	9 NE	10.1 NE
MAGNESIUM		3810	2090 E	2550 E
MANGANESE	260	139	84.9 *E	122 *E
MERCURY	0.15	0.083	0.019 B	0.0083 B

TABLE 4-15
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE - STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD449-0006	GI-SD450-0006
LOCATION ID			GI-SD449	GI-SD450
SAMPLE DATE			9/22/2009	9/22/2009
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
SUBMATRIX			SD	SD
QC TYPE			NM	NM
NICKEL	20.9	11.7	13.1 E	10.1 E
POTASSIUM		1590	718 *	819 *
SELENIUM	1	0.73	0.63 B	0.52 B
SODIUM		6310	2070 E	2110 E
THALLIUM			0.1 U	0.1 U
VANADIUM	57	20	12.5 E	12.1 E
ZINC	150	61.8	78.9 E	26.7 E

TABLE 4-16
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE NORTHWEST SHORELINE - STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD439-0006	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID			GI-SD439	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD445
SAMPLE DATE			10/5/2009	10/5/2009	10/5/2009	10/5/2009	9/22/2009	9/22/2009	9/22/2009
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)									
2-METHYLNAPHTHALENE	70		4.6	3.3 U	3.3 U	17	3.3 U	3.38	4.9
ACENAPHTHENE	16	3.9	12	3.3 U	16	84	24	26	24
ACENAPHTHYLENE	44	15	8.1	3.3 U	3.3 U	5.6	3.3 U	3.02	8.3
ANTHRACENE	85.3	18	25	3.6	25	130	58	57	57
BENZO(A)ANTHRACENE	261	61	56	7.6	63	190	96	150	120
BENZO(A)PYRENE	430	73	51	8.6	49	150	77	125	120
BENZO(B)FLUORANTHENE	1800	58	59	11	57	170	100	160	160
BENZO(G,H,I)PERYLENE	670	48	30	5.1	25	77	50	75.5	72
BENZO(K)FLUORANTHENE	1800	52	43	6.5	40	130	45	73	66
CHRYSENE	384	71	45	8.8	50	150	99	145	120
DIBENZO(A,H)ANTHRACENE	63.4	15	11	3.3 U	9.1	29	17	27.5	28
FLUORANTHENE	600	130	77	11	92	300	220	350 D	260
FLUORENE	19	7.2	11	3.3 U	19	75	21	17.9	18
HIGH MOLECULAR WEIGHT PAHS		673	476	73.3	494	1530	925	1460	1240
INDENO(1,2,3-CD)PYRENE	600	45	28	4.7	23	75	41	67.5	64
LOW MOLECULAR WEIGHT PAHS		103.3	163	10.9	188	787	287	308	291
NAPHTHALENE	160	6.1	23	3.3 U	8.3	55	4.4	8.3	8.4
PHENANTHRENE	240	58	79	7.3	120	420 D	180	195	170

TABLE 4-16
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE NORTHWEST SHORELINE - STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD439-0006	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID			GI-SD439	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD445
SAMPLE DATE			10/5/2009	10/5/2009	10/5/2009	10/5/2009	9/22/2009	9/22/2009	9/22/2009
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM
PYRENE	665	120	76	10	86	260	180	290 D	230
TOTAL PAHS		770	639	84.2	682	2320	1210	1770	1530
METALS (MG/KG)									
ALUMINUM	18000	7460	7870 *E	5630 *E	5090 *E	5710 *E	4540 E	4010 E	5770 E
ANTIMONY	2	0.2	2.6 N	0.21 BN	0.3 BN	0.55 N	0.081 UN	0.0762 BN	0.18 BN
ARSENIC	8.2	2.7	6.8	1.7	2.7	4.6	1.9 *	1.95 *	4.3 *
BARIUM	48	15.7	25.3 E	11 E	10.7 E	12.4 E	14.5 E	9.35 E	13.2 E
BERYLLIUM		0.405	0.73 E	0.35 E	0.31 E	0.35 E	0.061 BE	0.0845 BE	0.25 E
CADMIUM	1.2	0.367	0.9	0.25	0.42	0.61	0.052 B*	0.0725 B*	0.1 B*
CALCIUM		32500	19900 *	9000 *	31200 *	57800 *	42100 *	26300 *	45800 *
CHROMIUM	81	19.8	21.8 E	12.8 E	19.3 E	21.5 E	9.7 E	14.8 E	19.2 E
COBALT	10	6	5.7 *E	3.4 *E	3.3 *E	3.7 *E	2.5 E	2.2 E	3.2 E
COPPER	34	15	33 N	8.1 N	9.9 N	42 N	6.9 E	7.25 E	18.2 E
IRON	220000	16700	34100 *	14700 *	21800 *	25300 *	11300 *	10300 *	15500 *
LEAD	46.7	20.6	51.4 N*E	9.2 N*E	11.5 N*E	23.1 N*E	8.6 NE	21.8 NE	21.3 NE
MAGNESIUM		3810	3810 *E	3150 *E	3120 *E	3270 *E	2610 E	2310 E	3230 E
MANGANESE	260	139	185 *E	112 *E	147 *E	177 *E	102 *E	98.8 *E	123 *E
MERCURY	0.15	0.083	0.043	0.024	0.026	0.031	0.029	0.0325	0.084
NICKEL	20.9	11.7	16.9 *E	7.3 *E	11.2 *E	12.3 *E	6 E	5.35 E	8.4 E
POTASSIUM		1590	1820 *	1050 *	1080 *	1070 *	1550 *	974 *	1860 *

TABLE 4-16
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE NORTHWEST SHORELINE - STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD439-0006	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID			GI-SD439	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD445
SAMPLE DATE			10/5/2009	10/5/2009	10/5/2009	10/5/2009	9/22/2009	9/22/2009	9/22/2009
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM
SELENIUM	1	0.73	0.47 B	0.97	0.58 B	0.36 U	0.35 U	0.36 U	0.44 U
SILVER	0.5	0.19	0.037 U	0.033 U	0.035 U	0.045 B	0.036 U	0.0365 U	0.14 B
SODIUM		6310	4290	2840	3960	4570	3790 E	4480 E	8830 E
THALLIUM			0.18 B	0.13 B	0.24 B	0.46 B	0.12 B	0.11 U	0.14 U
VANADIUM	57	20	21.8 *E	15.4 *E	18 *E	16.7 *E	13.8 E	11.3 E	19 E
ZINC	150	61.8	67.5 E	32.2 E	33.5 E	48.5 E	24.8 E	29.6 E	47.4 E

TABLE 4-17
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED AT REFERENCE LOCATIONS DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	GI-JPC01-0006-AVG	GI-JPC02-0006	GI-JCC02-0006	GI-JCC04-0006	GI-JCC01-0006	GI-JPC03-0006
LOCATION ID		DSY-JPC-01	DSY-JPC-02	MCA-JCC-02	MCA-JCC-04	MCA-JCC-M-01	OFF-SD-JPC03
SAMPLE DATE		9/23/2009	9/23/2009	9/23/2009	9/23/2009	9/23/2009	9/23/2009
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE		AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX		SD	SD	SD	SD	SD	SD
QC TYPE		NM	NM	NM	NM	NM	NM
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)							
ACENAPHTHYLENE	44	5.65	5	10	3.3 U	15	3.6
ANTHRACENE	85.3	6.4	7.9	11	4.4	18	3.3 U
BENZO(A)ANTHRACENE	261	20	19	33	9.8	55	9.9
BENZO(A)PYRENE	430	18	19	30	9.8	45	8.8
BENZO(B)FLUORANTHENE	1800	22	24	34	11	52	12
BENZO(G,H,I)PERYLENE	670	13	13	21	7.1	31	7.1
BENZO(K)FLUORANTHENE	1800	13.5	13	23	6.8	33	7.9
CHRYSENE	384	18	23	28	12	44	11
DIBENZO(A,H)ANTHRACENE	63.4	3.9	4.5	5.7	3.3 U	9.1	3.3 U
FLUORANTHENE	600	40.5	48	63	19	120	19
FLUORENE	19	3.3 U	3.8	4.2	3.3 U	7.2	3.3 U
HIGH MOLECULAR WEIGHT PAHS		197.4	217.5	314.7	101.5	517.1	99
INDENO(1,2,3-CD)PYRENE	600	11	12	18	6	28	6.3
LOW MOLECULAR WEIGHT PAHS		31.55	45.7	60.7	11.8	103.3	10.3
NAPHTHALENE	160	3.3 U	3.3 U	4.5	3.3 U	6.1	3.3 U
PHENANTHRENE	240	19.5	29	31	7.4	57	6.7

TABLE 4-17
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED AT REFERENCE LOCATIONS DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	GI-JPC01-0006-AVG	GI-JPC02-0006	GI-JCC02-0006	GI-JCC04-0006	GI-JCC01-0006	GI-JPC03-0006
LOCATION ID		DSY-JPC-01	DSY-JPC-02	MCA-JCC-02	MCA-JCC-04	MCA-JCC-M-01	OFF-SD-JPC03
SAMPLE DATE		9/23/2009	9/23/2009	9/23/2009	9/23/2009	9/23/2009	9/23/2009
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE		AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX		SD	SD	SD	SD	SD	SD
QC TYPE		NM	NM	NM	NM	NM	NM
PYRENE	665	37.5	42	59	20	100	17
TOTAL PAHS		228.95	263.2	375.4	113.3	620.4	109.3
METALS (MG/KG)							
ALUMINUM	18000	3775 E	4890 E	4880 E	5290 E	4340 E	3500 E
ANTIMONY	2	0.108 BNN	0.2 BN	0.19 BN	0.082 UN	0.09 UN	0.17 BN
ARSENIC	8.2	1.65	2.7	2.5	1.5	2.3	1.1
BARIUM	48	8.55 E	11 E	8 E	6 E	8.3 E	7.2 E
BERYLLIUM		0.15 E	0.24 E	0.24 E	0.16 E	0.2 E	0.11 BE
CADMIUM	1.2	0.059 B	0.18	0.055 B	0.063 B	0.048 B	0.06 B
CALCIUM		2525 *	12500 *	2420 *	1420 *	1860 *	633 *
CHROMIUM	81	9.65 E	13.5 E	12.7 E	11.2 E	11.6 E	7.8 E
COBALT	10	2.45 E	3.1 E	3.3 E	4.1 E	2.9 E	2.2 E
COPPER	34	6.45 E	11.3 E	7.9 E	7.2 E	7.5 E	4.4 E
IRON	220000	7865	12000	12900	12500	10600	6250
LEAD	46.7	8.1 E	13.7 E	9.6 E	8.7 E	8.9 E	5.4 E
MAGNESIUM		2170 E	2820 E	2800 E	2760 E	2600 E	1980 E
MANGANESE	260	107.25 E	98.2 E	101 E	102 E	92.4 E	66.6 E
MERCURY	0.15	0.022 B	0.058	0.027 B	0.022 B	0.031 B	0.013 B
NICKEL	20.9	5.7 E	7.4 E	7.2 E	8.2 E	6.4 E	5.3 E

TABLE 4-17
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED AT REFERENCE LOCATIONS DURING STEP 1 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	GI-JPC01-0006-AVG	GI-JPC02-0006	GI-JCC02-0006	GI-JCC04-0006	GI-JCC01-0006	GI-JPC03-0006
LOCATION ID		DSY-JPC-01	DSY-JPC-02	MCA-JCC-02	MCA-JCC-04	MCA-JCC-M-01	OFF-SD-JPC03
SAMPLE DATE		9/23/2009	9/23/2009	9/23/2009	9/23/2009	9/23/2009	9/23/2009
TOP DEPTH		0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH		0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE		AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX		SD	SD	SD	SD	SD	SD
QC TYPE		NM	NM	NM	NM	NM	NM
POTASSIUM		721.5	1150	1050	690	958	566
SELENIUM	1	0.54 B	0.73 B	0.73	0.55 B	0.65 B	0.72 B
SODIUM		3640 E	5440 E	4550 E	3080 E	4660 E	3360 E
VANADIUM	57	8.65 E	13.3 E	11.7 E	11.3 E	10.8 E	7.2 E
ZINC	150	29.3 E	46 E	36.6 E	30.5 E	30.7 E	21.1 E

TABLE 4-18
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD532-0006	GI-SD502-0006	GI-SD505-0006	GI-SD501-0006	GI-SD506-0006	GI-SD507-0006	GI-SD509-0006-AVG	GI-SD504-0006	GI-SD527-0006
LOCATION ID			GI-SD401	GI-SD402	GI-SD404	GI-SD406	GI-SD408	GI-SD410	GI-SD411	GI-SD413	GI-SD414
SAMPLE DATE			5/3/2010	5/3/2010	5/4/2010	4/30/2010	5/4/2010	4/30/2010	4/30/2010	4/30/2010	4/30/2010
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)											
2-METHYLNAPHTHALENE	70		290 U	320 U	110 U	520 U	46 U	46 UJ	17.8 J	96 U	18 U
ACENAPHTHENE	16	3.9	230 J	200 J	38 J	130 J	19 J	62 J	44 J	110	13 J
ACENAPHTHYLENE	44	15	87 J	110 J	54 J	210 J	35 J	51 J	17 J	29 J	17 J
ANTHRACENE	85.3	18	2400	2300	270	4400	97	230 J	136 J	240	57
BENZO(A)ANTHRACENE	261	61	2900	2200	580	5200	290	750 J	300 J	650	160
BENZO(A)PYRENE	430	73	2100	1500	600	3800	260	740 J	285 J	590	160
BENZO(B)FLUORANTHENE	1800	58	2600	1700	590	4100	280	770 J	260 J	490	160
BENZO(G,H,I)PERYLENE	670	48	970	620	320	1600	150	330 J	155 J	340	98
BENZO(K)FLUORANTHENE	1800	52	2000	1400	520	3900	240	590 J	225 J	530	140
CHRYSENE	384	71	4900	3800	840	6900	480	1100 J	425 J	730	240
DIBENZO(A,H)ANTHRACENE	63.4	15	360	250 J	110	580	49	120 J	55 J	110	33
FLUORANTHENE	600	130	8900	8800	830	12000	940	1500 J	625 J	1200	260
FLUORENE	19	7.2	330	440	49 J	210 J	26 J	72 J	44 J	87 J	16 J
HIGH MOLECULAR WEIGHT PAHS		673	32000	27000 J	5510	48600	3570	7430 J	3000 J	5960	1570
INDENO(1,2,3-CD)PYRENE	600	45	980	690	280	1600	140	330 J	155 J	320	91
LOW MOLECULAR WEIGHT PAHS		103.3	6650 J	7750 J	801 J	6550 J	494 J	1090 J	593 J	1240 J	233 J
NAPHTHALENE	160	6.1	290 U	320 U	110 U	520 U	7 J	67 J	36.5 UJ	96 U	18 U
PHENANTHRENE	240	58	3600	4700	390	1600	310	610 J	345 J	770	130

TABLE 4-18
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD532-0006	GI-SD502-0006	GI-SD505-0006	GI-SD501-0006	GI-SD506-0006	GI-SD507-0006	GI-SD509-0006-AVG	GI-SD504-0006	GI-SD527-0006
LOCATION ID			GI-SD401	GI-SD402	GI-SD404	GI-SD406	GI-SD408	GI-SD410	GI-SD411	GI-SD413	GI-SD414
SAMPLE DATE			5/3/2010	5/3/2010	5/4/2010	4/30/2010	5/4/2010	4/30/2010	4/30/2010	4/30/2010	4/30/2010
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
PYRENE	665	120	6300	6000	840	8900	740	1200 J	520 J	1000	230
TOTAL PAHS		770	38700 J	34700 J	6310 J	55100 J	4060 J	8520 J	3600 J	7200 J	1800 J
PCB HOMOLOGS (UG/KG)											
HEPTACHLOROBIPHENYLS	22.7		540	360 J	360	890 J	210	970	180	180	8.3
HEXACHLOROBIPHENYL	22.7		640	440 J	470	1400 J	270	1300	225	200	17
PENTACHLOROBIPHENYLS	22.7		48 U	51 UJ	78	300 J	41	220	35 J	43 U	5.2 U
TETRACHLOROBIPHENYLS	22.7		2.4 U	22 J	2.7 U	5.2 U	2.3 U	4.6 U	6.2 J	4.8 U	0.45 U
TOTAL OCTACHLOROBIPHENYLS			61	40 J	42	130 J	26	100	21.5	14 J	0.58 U
TOTAL PCB HOMOLOGS	22.7		1240	862 J	950	2720 J	547	2590	460 J	394 J	25.3
TOTAL PCB HOMOLOGS-HALFND	22.7		1270	896 J	968	2740 J	556	2610	473 J	434 J	29.9
METALS (MG/KG)											
ALUMINUM	18000	7460	4500	5190	4690	5070	3930	4230	3770	4380	5510
ANTIMONY	2	0.2	0.71 UJ	0.81 J	0.208 J	0.79 UJ	0.692 UJ	0.69 UJ	0.68 UJ	0.72 UJ	0.71 UJ
ARSENIC	8.2	2.7	0.876 J	2.7 J	0.543 UJ	1.6 J	0.999 J	1.3 J	0.795 J	1.9 J	0.975 J
BARIUM	48	15.7	24.7 J	26.7 J	14.7	32.5 J	9.2	8.8 J	9.1 J	13.8 J	11.4 J
BERYLLIUM		0.405	0.206 J	0.271 J	0.359 J	0.336	0.257 J	0.237	0.232 J	0.304	0.321
CADMIUM	1.2	0.367	0.324 J	0.507 J	0.288 J	0.307 J	0.103 J	0.145 J	0.15 J	0.305 J	0.222 J
CALCIUM		32500	77100 J	122000 J	165000 J	47000 J	7790 J	3810 J	10100 J	18700 J	27000 J
CHROMIUM	81	19.8	10 J	12.4 J	13.9	18.8 J	10.1	11.2 J	9.8 J	14.1 J	14.2 J

TABLE 4-18
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD532-0006	GI-SD502-0006	GI-SD505-0006	GI-SD501-0006	GI-SD506-0006	GI-SD507-0006	GI-SD509-0006-AVG	GI-SD504-0006	GI-SD527-0006
LOCATION ID			GI-SD401	GI-SD402	GI-SD404	GI-SD406	GI-SD408	GI-SD410	GI-SD411	GI-SD413	GI-SD414
SAMPLE DATE			5/3/2010	5/3/2010	5/4/2010	4/30/2010	5/4/2010	4/30/2010	4/30/2010	4/30/2010	4/30/2010
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM	NM
COBALT	10	6	3.2 J	3.7 J	2.7 J	3.2 J	3.2	3 J	2.8 J	3.2 J	3.5 J
COPPER	34	15	10.4 J	21.2 J	25 J	28.7 J	11.1 J	12.5 J	11.8 J	17.8 J	14.9 J
IRON	220000	16700	13600	20100	8860	11200	9110	10200	9550	15400	12100
LEAD	46.7	20.6	7.1 J	11.3 J	20.4	35.2 J	11.4	12.4 J	10.6 J	21 J	15 J
MAGNESIUM		3810	3160 J	3990 J	3070	2950 J	2150	2250 J	2000 J	2320 J	2760 J
MANGANESE	260	139	148 J	203 J	109	107 J	75	83.5 J	77.8 J	94.3 J	105 J
MERCURY	0.15	0.083	0.023 J	0.02 J	0.079	0.107	0.035	0.045	0.0285	0.083	0.054
NICKEL	20.9	11.7	8.4 J	10 J	6.7	7.7 J	6.5	6.5 J	5.85 J	7 J	7.7 J
POTASSIUM		1590	1160	835 J	1220 J	1290	818	868	806	1120	1270
SELENIUM	1	0.73	0.71 U	2.42 U	2.4 U	0.79 U	0.692 U	0.69 U	0.68 U	0.321 U	0.322 J
SILVER	0.5	0.19	0.24 U	0.27 U	0.271 U	0.145 J	0.231 UJ	0.143 J	0.106 J	0.223 J	0.23 UJ
SODIUM		6310	4530	6710	7690	6130	3830	3440	3810	4700	5060
THALLIUM			1.3 J	2.4 J	4.5 J	0.417 J	0.461 UJ	0.46 UJ	0.455 UJ	0.48 UJ	0.45 UJ
VANADIUM	57	20	10.8 J	11.5 J	16.5	17.3 J	12.2	12.7 J	12 J	14 J	15.8 J
ZINC	150	61.8	31 J	43.8 J	48.2 J	51.9 J	40 J	42 J	30.6 J	76.9 J	38.3 J
MISCELLANEOUS PARAMETERS (MG/KG)											
TOTAL ORGANIC CARBON		11600	4420	9460	13800	11700	7200	7240	5900	11300	11400

TABLE 4-18
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD503-0006	GI-SD508-0006-AVG
LOCATION ID			GI-SD419	GI-SD508
SAMPLE DATE			4/30/2010	5/3/2010
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	AVG
SUBMATRIX			SD	SD
QC TYPE			NM	NM
SEMIVOLATILES (UG/KG)				
2-METHYLNAPHTHALENE	70		93 U	21.5 U
ACENAPHTHENE	16	3.9	42 J	18 J
ACENAPHTHYLENE	44	15	24 J	12 J
ANTHRACENE	85.3	18	300	94.5 J
BENZO(A)ANTHRACENE	261	61	1000	185 J
BENZO(A)PYRENE	430	73	760	118 J
BENZO(B)FLUORANTHENE	1800	58	770	145 J
BENZO(G,H,I)PERYLENE	670	48	330	61.5
BENZO(K)FLUORANTHENE	1800	52	580	125 J
CHRYSENE	384	71	1100	270 J
DIBENZO(A,H)ANTHRACENE	63.4	15	130	20.5 J
FLUORANTHENE	600	130	2100	655
FLUORENE	19	7.2	38 J	21.5 J
HIGH MOLECULAR WEIGHT PAHS		673	8900	2150 J
INDENO(1,2,3-CD)PYRENE	600	45	330	56.5
LOW MOLECULAR WEIGHT PAHS		103.3	944 J	326 J
NAPHTHALENE	160	6.1	93 U	21.5 U
PHENANTHRENE	240	58	540	180 J

TABLE 4-18
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD503-0006	GI-SD508-0006-AVG
LOCATION ID			GI-SD419	GI-SD508
SAMPLE DATE			4/30/2010	5/3/2010
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	AVG
SUBMATRIX			SD	SD
QC TYPE			NM	NM
PYRENE	665	120	1800	515
TOTAL PAHS		770	9840 J	2480 J
PCB HOMOLOGS (UG/KG)				
HEPTACHLOROBIPHENYLS	22.7		5.9 U	365 J
HEXACHLOROBIPHENYL	22.7		4.7 U	430 J
PENTACHLOROBIPHENYLS	22.7		4.7 U	58.5 J
TETRACHLOROBIPHENYLS	22.7		4.7 U	1.98 J
TOTAL OCTACHLOROBIPHENYLS			5.9 U	40.5 J
TOTAL PCB HOMOLOGS	22.7		5.71 U	895 J
TOTAL PCB HOMOLOGS-HALFND	22.7		5.71 U	902 J
METALS (MG/KG)				
ALUMINUM	18000	7460	4790	4340
ANTIMONY	2	0.2	0.7 UJ	0.65 UJ
ARSENIC	8.2	2.7	2 J	1.03 J
BARIUM	48	15.7	7.4 J	11.2 J
BERYLLIUM		0.405	0.27	0.215 J
CADMIUM	1.2	0.367	0.211 J	0.43 J
CALCIUM		32500	36600 J	30000
CHROMIUM	81	19.8	13.7 J	9.85 J

TABLE 4-18
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED IN THE STILLWATER AREA DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD503-0006	GI-SD508-0006-AVG
LOCATION ID			GI-SD419	GI-SD508
SAMPLE DATE			4/30/2010	5/3/2010
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	AVG
SUBMATRIX			SD	SD
QC TYPE			NM	NM
COBALT	10	6	3.4 J	3.45 J
COPPER	34	15	9.6 J	14.8 J
IRON	220000	16700	12700	17400
LEAD	46.7	20.6	13.9 J	10.6 J
MAGNESIUM		3810	2700 J	2480 J
MANGANESE	260	139	106 J	134 J
MERCURY	0.15	0.083	0.059	0.0195 J
NICKEL	20.9	11.7	6.7 J	8.9 J
POTASSIUM		1590	1100	770
SELENIUM	1	0.73	0.7 U	0.65 U
SILVER	0.5	0.19	0.23 UJ	0.0435 J
SODIUM		6310	4390	3500
THALLIUM			0.136 J	0.435 UJ
VANADIUM	57	20	17 J	10.8 J
ZINC	150	61.8	43.8 J	47.2 J
MISCELLANEOUS PARAMETERS (MG/KG)				
TOTAL ORGANIC CARBON		11600	8000	2880

TABLE 4-19
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD304-0006	GI-SD511-0006	GI-SD528-0006	GI-SD531-0006	GI-SD513-0006	GI-SD512-0006	GI-SD510-0006	GI-SD530-0006
LOCATION ID			G32-SD304	G32-SD304F	G32-SD306	G32-SD306F	G32-SD309	G32-SD309F	G32-SD310	G32-SD317
SAMPLE DATE			5/13/2010	4/30/2010	5/13/2010	5/13/2010	5/13/2010	5/13/2010	4/30/2010	5/13/2010
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)										
2-METHYLNAPHTHALENE	70		13 J	9.3 U	3.1 J	3.5 J	1.4 J	42 J	8.4 UJ	3.2 J
ACENAPHTHENE	16	3.9	70 J	4.2 J	13	17	9 U	190 J	11 J	7.9 J
ACENAPHTHYLENE	44	15	44 UJ	1.9 J	2.2 J	6 J	12	32 UJ	12 J	6.9 J
ANTHRACENE	85.3	18	120 J	11	22	32	9 U	360 J	76 J	23
BENZO(A)ANTHRACENE	261	61	220 J	25	55	69	28	420 J	96 J	68
BENZO(A)PYRENE	430	73	210 J	28	53 J	77 J	31 J	380 J	130 J	67 J
BENZO(B)FLUORANTHENE	1800	58	160 J	27	46	93	22	280 J	120 J	59
BENZO(G,H,I)PERYLENE	670	48	120 J	21	38 J	78 J	25 J	190 J	71 J	40 J
BENZO(K)FLUORANTHENE	1800	52	180 J	24	40	64	24	260 J	93 J	55
CHRYSENE	384	71	230 J	31	54	82	31	370 J	140 J	100
DIBENZO(A,H)ANTHRACENE	63.4	15	33 J	7.1 J	12	25	6.8 J	70 J	26 J	15
FLUORANTHENE	600	130	520 J	49	120	140	48	1000 J	150 J	140
FLUORENE	19	7.2	57 J	4.7 J	9.3	13	9 U	170 J	23 J	7.9 J
HIGH MOLECULAR WEIGHT PAHS		673	2210 J	271 J	551 J	824 J	283 J	3910 J	1020 J	711 J
INDENO(1,2,3-CD)PYRENE	600	45	130 J	16	33	66	19	190 J	73 J	37
LOW MOLECULAR WEIGHT PAHS		103.3	690 J	55.8 J	124 J	166 J	38.4 J	1880 J	244 J	123 J
NAPHTHALENE	160	6.1	44 UJ	9.3 U	8.8 U	10 U	9 U	130 J	12 J	9.2 U
PHENANTHRENE	240	58	430 J	34	74	95	25	990 J	110 J	74

TABLE 4-19
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD304-0006	GI-SD511-0006	GI-SD528-0006	GI-SD531-0006	GI-SD513-0006	GI-SD512-0006	GI-SD510-0006	GI-SD530-0006
LOCATION ID			G32-SD304	G32-SD304F	G32-SD306	G32-SD306F	G32-SD309	G32-SD309F	G32-SD310	G32-SD317
SAMPLE DATE			5/13/2010	4/30/2010	5/13/2010	5/13/2010	5/13/2010	5/13/2010	4/30/2010	5/13/2010
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
PYRENE	665	120	410 J	43	100 J	130 J	48 J	750 J	120 J	130 J
TOTAL PAHS		770	2900 J	327 J	675 J	990 J	321 J	5790 J	1260 J	834 J
PCB HOMOLOGS (UG/KG)										
DICHLOROBIPHENYLS	22.7		0.67 U	0.75 UJ	0.45 U	0.77 U	0.5 U	0.41 U	0.65 U	1.2 U
HEPTACHLOROBIPHENYLS	22.7		410	94 J	23	5.1 J	1.2 U	1 U	1.6 U	2.9 U
HEXACHLOROBIPHENYL	22.7		650	140 J	30	14	4.3 J	3.2 J	1.3 U	8.1 J
PENTACHLOROBIPHENYLS	22.7		190	30 J	8.8 U	6.5 UJ	4.7 UJ	3.9 UJ	7.2 UJ	2.3 U
TETRACHLOROBIPHENYLS	22.7		11	0.93 U	0.88 U	1.5 U	0.9 U	0.79 U	1.3 U	2.3 U
TOTAL OCTACHLOROBIPHENYLS			74	12 J	3.1 J	1.9 U	1.2 U	1 U	1.6 U	2.9 U
TOTAL PCB HOMOLOGS	22.7		1340	276 J	56.1 J	19.1 J	4.3 J	3.2 J	2.14 UJ	8.1 J
TOTAL PCB HOMOLOGS-HALFND	22.7		1340	280 J	63.8 J	33.1 J	11.3 J	9.16 J	2.14 UJ	20.9 J
TOTAL TRICHLOROBIPHENYLS			0.67 U	0.48 U	0.45 U	9 U	0.47 U	0.41 U	0.65 U	1.2 U
METALS (MG/KG)										
ALUMINUM	18000	7460	4840	4770	4450	4570	4570	5730	8070	6060
ANTIMONY	2	0.2	1.96 UJ	0.71 UJ	0.67 UJ	0.75 UJ	2.05 UJ	1.77 UJ	0.63 UJ	0.69 UJ
ARSENIC	8.2	2.7	0.467 J	0.278 J	0.841 J	1.4 J	0.13 UJ	2.9 J	2.2 J	5.6 J
BARIUM	48	15.7	8.6	9.9 J	12.9	10.7	12.8	7.9 J	11.3 J	10.2 J
BERYLLIUM		0.405	0.219	0.238	0.253	0.242 J	0.214 J	0.234	0.222 J	0.254
CADMIUM	1.2	0.367	0.23	0.301 J	0.17 J	0.288	0.166 J	0.555	0.443 J	0.724

TABLE 4-19
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD304-0006	GI-SD511-0006	GI-SD528-0006	GI-SD531-0006	GI-SD513-0006	GI-SD512-0006	GI-SD510-0006	GI-SD530-0006
LOCATION ID			G32-SD304	G32-SD304F	G32-SD306	G32-SD306F	G32-SD309	G32-SD309F	G32-SD310	G32-SD317
SAMPLE DATE			5/13/2010	4/30/2010	5/13/2010	5/13/2010	5/13/2010	5/13/2010	4/30/2010	5/13/2010
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
CALCIUM		32500	16200	26700 J	35400	18000	112000	11500	35900 J	33400
CHROMIUM	81	19.8	9.8 J	11.9 J	8.9 J	11.3 J	8.4 J	19.9 J	16.1 J	28.1 J
COBALT	10	6	3.6	3.4 J	3	4	2.8	6	4.7 J	5.2
COPPER	34	15	13.4 J	10.6 J	16.4 J	102 J	6.8 J	30.6 J	17.7 J	186 J
IRON	220000	16700	11400	14300	12100	16500	9830	31900	22900	37400
LEAD	46.7	20.6	20.7 J	20.7 J	96.8 J	199 J	7.3 J	8.4 J	10.7 J	20.9 J
MAGNESIUM		3810	2870	2800 J	2660	3040	3610	3140	4220 J	3050
MANGANESE	260	139	111	117 J	127	122	175	211	210 J	230
MERCURY	0.15	0.083	0.02 J	0.029	0.018 J	0.229	0.039 U	0.006 J	0.012 J	0.031
NICKEL	20.9	11.7	7.7	7.6 J	7.3	8.2	6.2	33.4	10.8 J	32.8
POTASSIUM		1590	791 J	871	788 J	894 J	1040 J	1170 J	869	712 J
SILVER	0.5	0.19	0.22 UJ	0.24 UJ	0.254 UJ	0.25 UJ	0.524	0.2 UJ	0.017 U	0.23 UJ
SODIUM		6310	3530	4540	3410	5480	5600	2240	3120	3700
THALLIUM			0.44 UJ	0.47 UJ	0.123 J	0.5 UJ	2.4	1.18 UJ	0.42 UJ	0.46 UJ
VANADIUM	57	20	15.3	18.2 J	14.2	23.8	13	12.3	13.9 J	14.9
ZINC	150	61.8	38.1 J	32.2 J	40 J	47.2 J	27.6 J	43.4 J	43.9 J	41.2 J
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON		11600	4100	5900	4400	6460	6700	2330	4740	5000

TABLE 4-19
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD429-0006	GI-SD514-0006	GI-SD515-0006	GI-SD566-0006	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD518-0006	GI-SD519-0006
LOCATION ID			GI-SD429	GI-SD432	GI-SD434	GI-SD435	GI-SD437	GI-SD438	GI-SD447	GI-SD519
SAMPLE DATE			5/4/2010	4/30/2010	4/30/2010	4/30/2010	5/13/2010	5/13/2010	5/3/2010	5/4/2010
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)										
2-METHYLNAPHTHALENE	70		9 J	117 UJ	26 J	13 J	1.95 J	18 J	37 U	1.8 J
ACENAPHTHENE	16	3.9	110	220 J	150 J	91 J	2.75 J	85 J	70	6.8 J
ACENAPHTHYLENE	44	15	18 U	47 J	14 J	5.7 J	3.75 J	89 UJ	13 J	2.3 J
ANTHRACENE	85.3	18	130	500 J	260 J	190 J	11 UJ	130 UJ	160	25
BENZO(A)ANTHRACENE	261	61	200	910 J	510 J	340 J	37 J	270 J	560	68
BENZO(A)PYRENE	430	73	190	890 J	530 J	330 J	37 J	290 J	540	68
BENZO(B)FLUORANTHENE	1800	58	150	700 J	440 J	250 J	38.5 J	220 J	430	60
BENZO(G,H,I)PERYLENE	670	48	120	490 J	290 J	180 J	24 J	150 J	330	37
BENZO(K)FLUORANTHENE	1800	52	120	630 J	340 J	230 J	32 J	200 J	360	49
CHRYSENE	384	71	190	940 J	500 J	340 J	42 J	270 J	560	74
DIBENZO(A,H)ANTHRACENE	63.4	15	38	170 J	100 J	74 J	7.7 J	67 J	110	13
FLUORANTHENE	600	130	480	2000 J	1100 J	770 J	56.5 J	630 J	1000	120
FLUORENE	19	7.2	59	200 J	100 J	66 J	3.75 J	67 J	57	6.3 J
HIGH MOLECULAR WEIGHT PAHS		673	1970	8700 J	4970 J	3290 J	342 J	2700 J	5100	633
INDENO(1,2,3-CD)PYRENE	600	45	110	470 J	300 J	190 J	22 J	150 J	310	34
LOW MOLECULAR WEIGHT PAHS		103.3	730 J	2470 J	1390 J	949 J	37.2 J	660 J	840 J	112 J
NAPHTHALENE	160	6.1	22	117 UJ	54 J	33 J	10 UJ	89 UJ	37 U	2.7 J
PHENANTHRENE	240	58	400	1500 J	790 J	550 J	25 J	490 J	540	67

TABLE 4-19
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD429-0006	GI-SD514-0006	GI-SD515-0006	GI-SD566-0006	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD518-0006	GI-SD519-0006
LOCATION ID			GI-SD429	GI-SD432	GI-SD434	GI-SD435	GI-SD437	GI-SD438	GI-SD447	GI-SD519
SAMPLE DATE			5/4/2010	4/30/2010	4/30/2010	4/30/2010	5/13/2010	5/13/2010	5/3/2010	5/4/2010
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
PYRENE	665	120	370	1500 J	860 J	590 J	45.5 J	450 J	900	110
TOTAL PAHS		770	2700 J	11200 J	6360 J	4240 J	380 J	3360 J	5940 J	745 J
PCB HOMOLOGS (UG/KG)										
DICHLOROBIPHENYLS	22.7		0.46 U	1.5 U	1.4 U	2.4 U	0.432 J	0.23 U	1 U	0.69 U
HEPTACHLOROBIPHENYLS	22.7		4.1 J	3.7 UJ	120	41	47 J	38 J	62	100
HEXACHLOROBIPHENYL	22.7		6.9	16 J	160	88	63.5 J	50 J	95	150
PENTACHLOROBIPHENYLS	22.7		0.89 U	2.9 U	26 U	16 UJ	13	11 J	15 U	26
TETRACHLOROBIPHENYLS	22.7		0.89 U	2.9 U	2.7 U	4.7 U	0.975 U	0.44 U	1.9 U	1.3 U
TOTAL OCTACHLOROBIPHENYLS			1.4 J	3.7 U	9.5 J	6 U	7.1	6.7 J	7 J	10
TOTAL PCB HOMOLOGS	22.7		12.4 J	16 J	290 J	129 J	150 J	106 J	164 J	286
TOTAL PCB HOMOLOGS-HALFND	22.7		16.2 J	32.2 J	313 J	158 J	156 J	107 J	179 J	291
TOTAL TRICHLOROBIPHENYLS			0.46 U	1.5 U	1.4 U	2.4 U	21.6 J	0.23 U	1 U	0.69 U
METALS (MG/KG)										
ALUMINUM	18000	7460	6160	4090	3860	4430	4840	5400	5910	4520
ANTIMONY	2	0.2	0.666 UJ	0.89 UJ	0.253 J	0.71 UJ	1.46 UJ	0.67 UJ	0.57 UJ	0.665 UJ
ARSENIC	8.2	2.7	0.7 J	0.59 UJ	2.6 J	0.84 J	1.6 J	2.6 J	0.643 J	0.554 J
BARIUM	48	15.7	7.6	15.9 J	15.4 J	8.1 J	8.55	11.2	19.3 J	10.5
BERYLLIUM		0.405	0.204 J	0.333 J	0.275 J	0.222 J	0.278	0.257	0.286	0.205 J
CADMIUM	1.2	0.367	0.2 J	0.327 UJ	0.465 J	0.256 J	0.254	0.283	0.282 J	0.177 J

TABLE 4-19
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD429-0006	GI-SD514-0006	GI-SD515-0006	GI-SD566-0006	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD518-0006	GI-SD519-0006
LOCATION ID			GI-SD429	GI-SD432	GI-SD434	GI-SD435	GI-SD437	GI-SD438	GI-SD447	GI-SD519
SAMPLE DATE			5/4/2010	4/30/2010	4/30/2010	4/30/2010	5/13/2010	5/13/2010	5/3/2010	5/4/2010
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
CALCIUM		32500	30500 J	206000 J	140000 J	33100 J	14400	39200	1390 J	20000
CHROMIUM	81	19.8	12	13.5 J	20.4 J	11.9 J	14.4 J	15.5 J	8.9 J	9.3
COBALT	10	6	3.8	2.6 J	2.6 J	3 J	4.7	4.9	4.9 J	3
COPPER	34	15	7.5 J	13.9 J	18.7 J	16 J	13.8 J	15.7 J	17.9 J	10.9 J
IRON	220000	16700	12500	11400	17900	13800	16800	19500	13700	10400
LEAD	46.7	20.6	11.2	23 J	18.3 J	17.7 J	41.6 J	108 J	14.5 J	17.9
MAGNESIUM		3810	3390	3140 J	3210 J	2650 J	3000	3460	2530 J	2570
MANGANESE	260	139	137	188 J	146 J	127 J	142	164	142 J	107
MERCURY	0.15	0.083	0.026 J	0.087	0.239	0.03	0.031 J	0.012 J	0.023	0.02 J
NICKEL	20.9	11.7	7.4	6.3 J	8.2 J	8.8 J	8.5	11.4	9.6 J	6
POTASSIUM		1590	758	1390 J	1120 J	817	863 J	794 J	932	709
SILVER	0.5	0.19	0.222 UJ	0.3 U	0.27 U	0.24 UJ	0.245 UJ	0.248 UJ	0.19 U	0.222 UJ
SODIUM		6310	3390	9070	8420	4490	4420	3560	810	3100
THALLIUM			0.444 UJ	4.9 J	3.5 J	0.47 UJ	0.495 UJ	0.45 UJ	1.1 UJ	0.443 U
VANADIUM	57	20	15	14.9 J	16.8 J	12.5 J	23.1	14.4	11.2 J	12.4
ZINC	150	61.8	34.4 J	47.2 J	37 J	36.4 J	40.4 J	35.8 J	38.3 J	30.9 J
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON		11600	5860	13700	14700	10300	8250	5550	9700	5240

TABLE 4-20
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHWEST SHORELINE DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD520-0006	GI-SD521-0006	GI-SD522-0006	GI-SD523-0006
LOCATION ID			G32-SD308	G32-SD308F	G32-SD313	G32-SD313F
SAMPLE DATE			5/13/2010	5/13/2010	5/13/2010	5/13/2010
TOP DEPTH			0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM
SEMIVOLATILES (UG/KG)						
2-METHYLNAPHTHALENE	70		8.9 J	31 J	2.9 J	4.8 J
ACENAPHTHENE	16	3.9	21 J	290 J	7.5 J	30
ACENAPHTHYLENE	44	15	12 J	12 J	5.2 J	2 J
ANTHRACENE	85.3	18	70 J	780 J	25	65
BENZO(A)ANTHRACENE	261	61	150 J	1600 J	130	150
BENZO(A)PYRENE	430	73	150 J	1400 J	81 J	150
BENZO(B)FLUORANTHENE	1800	58	110 J	990 J	76	110
BENZO(G,H,I)PERYLENE	670	48	92 J	680 J	43 J	89
BENZO(K)FLUORANTHENE	1800	52	110 J	1100 J	89	110
CHRYSENE	384	71	160 J	1500 J	160	150
DIBENZO(A,H)ANTHRACENE	63.4	15	29 J	270 J	15	30
FLUORANTHENE	600	130	360 J	3300 J	490	320
FLUORENE	19	7.2	34 J	290 J	6.9 J	28
HIGH MOLECULAR WEIGHT PAHS		673	1520 J	14100 J	1490 J	1450 J
INDENO(1,2,3-CD)PYRENE	600	45	82 J	690 J	42	84
LOW MOLECULAR WEIGHT PAHS		103.3	425 J	3800 J	116 J	360 J
NAPHTHALENE	160	6.1	19 J	78 UJ	11 U	7.9 UJ

TABLE 4-20
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHWEST SHORELINE DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD520-0006	GI-SD521-0006	GI-SD522-0006	GI-SD523-0006
LOCATION ID			G32-SD308	G32-SD308F	G32-SD313	G32-SD313F
SAMPLE DATE			5/13/2010	5/13/2010	5/13/2010	5/13/2010
TOP DEPTH			0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM
PHENANTHRENE	240	58	260 J	2400 J	69	230
PYRENE	665	120	280 J	2600 J	360 J	260 J
TOTAL PAHS		770	1950 J	17900 J	1600 J	1810 J
PCB HOMOLOGS (UG/KG)						
HEXACHLOROBIPHENYL	22.7		5.1 J	1.2 U	6.4 J	3.2
TOTAL PCB HOMOLOGS	22.7		6.7 J	1.42 U	6.4 J	3.92 J
TOTAL PCB HOMOLOGS-HALFND	22.7		15.2 J	1.42 U	16.6 J	8.42 J
TOTAL TRICHLOROBIPHENYLS			1.6 J	0.6 U	0.59 U	0.72 J
METALS (MG/KG)						
ALUMINUM	18000	7460	4400	4210	6990	5460
ARSENIC	8.2	2.7	0.193 J	1.2 J	5.3 J	3.3 J
BARIUM	48	15.7	10.4	7.4	10.6 J	13.1
BERYLLIUM		0.405	0.194 J	0.188 J	0.495	0.188 J
CADMIUM	1.2	0.367	0.15 J	0.212	1	0.783
CALCIUM		32500	45500	8220	16800	13800
CHROMIUM	81	19.8	8.2 J	10.1 J	24.7 J	18 J
COBALT	10	6	3	3.7	5.7	4.4
COPPER	34	15	6.5 J	22.9 J	40.6 J	37.7 J
IRON	220000	16700	11000	13800	46500	35200

TABLE 4-20
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED ALONG THE NORTHWEST SHORELINE DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD520-0006	GI-SD521-0006	GI-SD522-0006	GI-SD523-0006
LOCATION ID			G32-SD308	G32-SD308F	G32-SD313	G32-SD313F
SAMPLE DATE			5/13/2010	5/13/2010	5/13/2010	5/13/2010
TOP DEPTH			0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX			SD	SD	SD	SD
QC TYPE			NM	NM	NM	NM
LEAD	46.7	20.6	9.3 J	13.2 J	22.2 J	35.9 J
MAGNESIUM		3810	2950	2550	4450	3460
MANGANESE	260	139	155	136	281	229
MERCURY	0.15	0.083	0.015 J	0.019 J	0.039	0.005 J
NICKEL	20.9	11.7	6.7	9.4	21.6	17.2
POTASSIUM		1590	852 J	742 J	1190 J	897 J
SILVER	0.5	0.19	0.435 J	0.19 UJ	0.492 J	0.277 UJ
SODIUM		6310	4180	2710	6610	3380
THALLIUM			0.107 J	1.93 UJ	1.74 UJ	1.2 UJ
VANADIUM	57	20	13.2	12	21.4	11
ZINC	150	61.8	26.8 J	33.7 J	65.4 J	50.7 J
MISCELLANEOUS PARAMETERS (MG/KG)						
TOTAL ORGANIC CARBON		11600	4290	2960	11900	3660

TABLE 4-21
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE SOUTHERN SHORELINE - STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD311-0006	GI-SD529-0006
LOCATION ID			G32-SD311	G32-SD314
SAMPLE DATE			5/13/2010	5/4/2010
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
SUBMATRIX			SD	SD
QC TYPE			NM	NM
SEMIVOLATILES (UG/KG)				
2-METHYLNAPHTHALENE	70		6 J	13
ACENAPHTHENE	16	3.9	32 J	57
ACENAPHTHYLENE	44	15	40 UJ	2.4 J
ANTHRACENE	85.3	18	54 UJ	98
BENZO(A)ANTHRACENE	261	61	77 J	180
BENZO(A)PYRENE	430	73	62 J	180
BENZO(B)FLUORANTHENE	1800	58	58 J	140
BENZO(G,H,I)PERYLENE	670	48	18 J	110
BENZO(K)FLUORANTHENE	1800	52	56 J	150
CHRYSENE	384	71	81 J	180
DIBENZO(A,H)ANTHRACENE	63.4	15	20 J	36
FLUORANTHENE	600	130	240 J	400
FLUORENE	19	7.2	24 J	47
HIGH MOLECULAR WEIGHT PAHS		673	812 J	1780
INDENO(1,2,3-CD)PYRENE	600	45	40 J	98
LOW MOLECULAR WEIGHT PAHS		103.3	242 J	567 J
NAPHTHALENE	160	6.1	40 UJ	30
PHENANTHRENE	240	58	180 J	320

TABLE 4-21
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE SOUTHERN SHORELINE - STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD311-0006	GI-SD529-0006
LOCATION ID			G32-SD311	G32-SD314
SAMPLE DATE			5/13/2010	5/4/2010
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
SUBMATRIX			SD	SD
QC TYPE			NM	NM
PYRENE	665	120	160 J	310
TOTAL PAHS		770	1050 J	2350 J
PCB HOMOLOGS (UG/KG)				
HEXACHLOROBIPHENYL	22.7		0.8 U	16
TOTAL PCB HOMOLOGS	22.7		0.963 U	16
TOTAL PCB HOMOLOGS-HALFND	22.7		0.963 U	29.2
METALS (MG/KG)				
ALUMINUM	18000	7460	4280	6250
ARSENIC	8.2	2.7	0.293 J	0.49 J
BARIUM	48	15.7	7.4	10.1
BERYLLIUM		0.405	0.203	0.213 J
CADMIUM	1.2	0.367	0.22	0.205 J
CALCIUM		32500	14700	31100
CHROMIUM	81	19.8	8.3 J	11.3
COBALT	10	6	2.8	3.6
COPPER	34	15	17 J	8.1 J
IRON	220000	16700	10200	13200
LEAD	46.7	20.6	14.1 J	12.7
MAGNESIUM		3810	2450	3230
MANGANESE	260	139	102	129

TABLE 4-21
SUMMARY OF ANALYTICAL RESULTS - SEDIMENT SAMPLES COLLECTED ALONG THE SOUTHERN SHORELINE - STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	Maxiumum Detected Result In Reference Samples (Jamestown)	GI-SD311-0006	GI-SD529-0006
LOCATION ID			G32-SD311	G32-SD314
SAMPLE DATE			5/13/2010	5/4/2010
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
SUBMATRIX			SD	SD
QC TYPE			NM	NM
MERCURY	0.15	0.083	0.011 J	0.027 J
NICKEL	20.9	11.7	6.4	8.4
POTASSIUM		1590	809 J	867
SILVER	0.5	0.19	0.331 J	0.252 UJ
SODIUM		6310	3020	4830
VANADIUM	57	20	13.2	13.4
ZINC	150	61.8	29.8 J	35.2 J
MISCELLANEOUS PARAMETERS (MG/KG)				
TOTAL ORGANIC CARBON		11600	5570	8300

TABLE 4-22
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED AT REFERENCE LOCATIONS DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	GI-SD524-0006	GI-SD525-0006	GI-SD526-0006
LOCATION ID		DSY-JPC-01	DSY-JPC-02	MCA-JCC-04
SAMPLE DATE		5/3/2010	5/3/2010	5/3/2010
TOP DEPTH		0 FT	0 FT	0 FT
BOTTOM DEPTH		0.5 FT	0.5 FT	0.5 FT
SACODE		NORMAL	NORMAL	NORMAL
SUBMATRIX		SD	SD	SD
QC TYPE		NM	NM	NM
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)				
ACENAPHTHENE	16	9.1 U	3.9 J	8.9 U
ACENAPHTHYLENE	44	4.6 J	13 J	3.6 J
ANTHRACENE	85.3	4.1 J	15 J	5 J
BENZO(A)ANTHRACENE	261	22	61 J	15
BENZO(A)PYRENE	430	24	73 J	18
BENZO(B)FLUORANTHENE	1800	19	58 J	15
BENZO(G,H,I)PERYLENE	670	20	48 J	14
BENZO(K)FLUORANTHENE	1800	18	52 J	13
CHRYSENE	384	27	71 J	17
DIBENZO(A,H)ANTHRACENE	63.4	4.1 J	15 J	3.2 J
FLUORANTHENE	600	40	130 J	36
FLUORENE	19	2.3 J	6.7 J	1.8 J
HIGH MOLECULAR WEIGHT PAHS		229 J	673 J	173 J
INDENO(1,2,3-CD)PYRENE	600	15	45 J	12
LOW MOLECULAR WEIGHT PAHS		31 J	96.6 J	10.4 J
PHENANTHRENE	240	20	58 J	17 U
PYRENE	665	40	120 J	30

TABLE 4-22
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED AT REFERENCE LOCATIONS DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	GI-SD524-0006	GI-SD525-0006	GI-SD526-0006
LOCATION ID		DSY-JPC-01	DSY-JPC-02	MCA-JCC-04
SAMPLE DATE		5/3/2010	5/3/2010	5/3/2010
TOP DEPTH		0 FT	0 FT	0 FT
BOTTOM DEPTH		0.5 FT	0.5 FT	0.5 FT
SACODE		NORMAL	NORMAL	NORMAL
SUBMATRIX		SD	SD	SD
QC TYPE		NM	NM	NM
TOTAL PAHS		260 J	770 J	184 J
METALS (MG/KG)				
ALUMINUM	18000	4550	6850	7460
ARSENIC	8.2	0.273 J	1.6 J	0.423 J
BARIUM	48	9.7 J	15.7 J	7.7 J
BERYLLIUM		0.216 J	0.405	0.395
CADMIUM	1.2	0.132 J	0.367 J	0.27 J
CALCIUM		2490 J	32500 J	4490 J
CHROMIUM	81	11.1 J	19.8 J	16.5 J
COBALT	10	3.2 J	4.4 J	6 J
COPPER	34	6.2 J	15 J	9.9 J
IRON	220000	9200	13500	16700
LEAD	46.7	9.2 J	20.6 J	10.6 J
MAGNESIUM		2560 J	3810 J	3610 J
MANGANESE	260	112 J	139 J	128 J
MERCURY	0.15	0.028	0.083	0.039
NICKEL	20.9	7 J	10.2 J	11.7 J
POTASSIUM		802	1590	990
SELENIUM	1	0.341 J	0.83 U	0.68 U
SILVER	0.5	0.097 J	0.19 J	0.144 J

TABLE 4-22
SUMMARY OF ANALYTICAL RESULTS FOR SEDIMENT SAMPLES COLLECTED AT REFERENCE LOCATIONS DURING STEP 2 SAMPLING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Sediment Project Action Limit (SAP)	GI-SD524-0006	GI-SD525-0006	GI-SD526-0006
LOCATION ID		DSY-JPC-01	DSY-JPC-02	MCA-JCC-04
SAMPLE DATE		5/3/2010	5/3/2010	5/3/2010
TOP DEPTH		0 FT	0 FT	0 FT
BOTTOM DEPTH		0.5 FT	0.5 FT	0.5 FT
SACODE		NORMAL	NORMAL	NORMAL
SUBMATRIX		SD	SD	SD
QC TYPE		NM	NM	NM
SODIUM		3500	6310	2880
VANADIUM	57	10.3 J	20 J	17.8 J
ZINC	150	30.7 J	61.8 J	42.9 J
MISCELLANEOUS PARAMETERS (MG/KG)				
TOTAL ORGANIC CARBON		5900	11600	8490

TABLE 4-23
SUMMARY OF ANALYTICAL RESULTS FOR CLAM/MUSSEL SAMPLES
COLLECTED FROM THE STILLWATER AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Tissue PAL	Maximum Reference Clam/Mussel Result * (Table 4-30)	Maximum Reference Crab Result* (Table 4-31)	GI-ET502-0510	GI-ET505-0510-AVG	GI-ET504-0510
LOCATION ID				GI-SD402	GI-SD404	GI-SD413
SAMPLE DATE				5/26/2010	5/26/2010	5/26/2010
TOP DEPTH						
BOTTOM DEPTH						
SA CODE				NORMAL	AVG	NORMAL
SUBMATRIX				MU	MU	CL
QC TYPE				NM	NM	NM
PCB HOMOLOGS (UG/KG)						
HEPTACHLOROBIPHENYLS			2.9	13 U	6.75 J	15 J
HEXACHLOROBIPHENYL		6.2	22	81	39	25
PENTACHLOROBIPHENYLS			15	9.9 U	16.5 J	3 U
TOTAL PCB HOMOLOGS	160	6.2	31.9	81 J	61 J	40 J
TOTAL PCB HOMOLOGS - HALF ND	160	17.2	38.2	137 J	77.6 J	54.6 J
METALS (MG/KG)						
ALUMINUM	4.48	46.7	697	26.9 J	22.6	32.2 J
ARSENIC	2.41	7.2	9.9	2.1	2.5	3.2
BARIUM	86.3	1.5	6.5	0.255 J	0.33 UJ	0.754
CADMIUM	1.79	0.23	0.155	0.153	0.168	0.18
CALCIUM		3690	75600	2060 J	1450	1460 J
CHROMIUM	5.57	0.546	8.2	0.215	0.184 J	0.275
COBALT	17.02	0.235	0.566	0.087 J	0.102 J	0.147 J
COPPER	13.51	4	56.6	1.4	1.7	1.9
IRON	116.07	107	1030	58.3 J	47.8 J	81.1 J
LEAD	6.76	1.1	6.1	0.287	0.324	1.4
MAGNESIUM		828	5560	680	640	838
MANGANESE	119.55	20.6	143	3	3.3	6.7
MERCURY	0.03	0.042	0.082	0.014 J	0.016 J	0.016
NICKEL	3.95	0.86	10.4	0.272 J	0.31 J	0.546 J
POTASSIUM		3110	2470	2160	2580	2250
SELENIUM	0.46	1.2	1.4	0.863	0.942	0.713
SILVER	8.38	0.817	0.216	0.022 J	0.018 J	0.213
SODIUM		4860	5710	4210	4060	5560
VANADIUM	1.43	0.58	2.2	0.199 J	0.232 J	0.208 J
ZINC	175.03	18.5	50.5	16.2	18.4	15.2
MISCELLANEOUS PARAMETERS (%)						
LIPIDS				1.06	0.699	0.5 U

Tissue data are presented in wet weight

* Locations of reference stations are presented on Figure 2-4

TABLE 4-24
SUMMARY OF ANALYTICAL RESULTS FOR CRAB SAMPLES COLLECTED FROM THE STILLWATER AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Tissue PAL	Maximum Reference Clam/Mussel Result * (Table 4-30)	Maximum Reference Crab Result * (Table 4-31)	GI-ET507-0610	GI-ET509-0610-AVG	GI-ET527-0610
LOCATION ID				GI-SD410	GI-SD411	GI-SD414
SAMPLE DATE				6/4/2010	6/4/2010	6/4/2010
SA CODE				NORMAL	AVG	NORMAL
SUBMATRIX				SC	SC	SC
QC TYPE				NM	NM	NM
PCB HOMOLOGS (UG/KG)						
HEPTACHLOROBIPHENYLS			2.9	18	20.5	18
HEXACHLOROBIPHENYL		6.2	22	35	63 J	45
PENTACHLOROBIPHENYLS			15	20	27	11 J
TOTAL PCB HOMOLOGS	160	6.2	31.9	73	110 J	74 J
TOTAL PCB HOMOLOGS - HALF ND	160	17.2	38.2	86	124 J	87 J
METALS (MG/KG)						
ALUMINUM	4.48	46.7	697	386	468	411
ARSENIC	2.41	7.2	9.9	8.9 J	8.3 J	8.5 J
BARIUM	86.3	1.5	6.5	5.8	6.15	5.9
BERYLLIUM	1.23		0.063	0.195 UJ	0.072 J	0.04 UJ
CADMIUM	1.79	0.23	0.155	0.052 J	0.0505 J	0.052 J
CALCIUM		3690	75600	42900 J	57800 J	68200 J
CHROMIUM	5.57	0.546	8.2	1.5	2.35	1.8
COBALT	17.02	0.235	0.566	0.365 J	0.383 J	0.337 J
COPPER	13.51	4	56.6	31.2	36.6	31.2
IRON	116.07	107	1030	812	880	790
LEAD	6.76	1.1	6.1	2 J	2.35 J	1.8 J
MAGNESIUM		828	5560	5050	5290	4990
MANGANESE	119.55	20.6	143	112	102	108
MERCURY	0.03	0.042	0.082	0.066 J	0.048 J	0.032 J
NICKEL	3.95	0.86	10.4	1.8	2.8	2.2
POTASSIUM		3110	2470	2100 J	1920 J	2040 J
SELENIUM	0.46	1.2	1.4	1.3 J	1.18 J	1.2 J
SILVER	8.38	0.817	0.216	0.224 J	0.234 J	0.246 J
SODIUM		4860	5710	4660 J	4820 J	5000 J
VANADIUM	1.43	0.58	2.2	1.7 J	1.9 J	1.7 J
ZINC	175.03	18.5	50.5	34.8	37.5	35

Tissue data is presented in wet weight

* Locations of reference stations are presented on Figure 2-4

TABLE 4-25
SUMMARY OF ANALYTICAL RESULTS FOR CLAM/MUSSELS COLLECTED ALONG THE NORTHEAST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Tissue PAL	Maximum Reference Clam/Mussel Result * (Table 4-30)	Maximum Reference Crab Result * (Table 4-31)	GI-ET530-0510	GI-ET566-0510-A	GI-ET566-0510-B	GI-ET517-0510	GI-ET518-0510-AVG
LOCATION ID				G32-SD317	GI-SD435	GI-SD435	GI-SD437	GI-SD447
SAMPLE DATE				5/26/2010	5/27/2010	5/27/2010	5/27/2010	5/27/2010
SA CODE				NORMAL	NORMAL	NORMAL	NORMAL	AVG
SUBMATRIX				MU	CL	CL	MU	MU
QC TYPE				NM	NM	NM	NM	NM
PCB HOMOLOGS (UG/KG)								
DICHLOROBIPHENYLS				2.1 J	1 UJ	0.51 UJ	1.5 U	1.25 UJ
HEPTACHLOROBIPHENYLS			2.9	3.8 U	21 J	8.8	9.3 J	5.85 J
HEXACHLOROBIPHENYL		6.2	22	21	19 J	16	34	34
PENTACHLOROBIPHENYLS			15	14 J	2 UJ	5 J	14 J	20 J
TETRACHLOROBIPHENYLS				5.7 J	2 UJ	1 U	3 U	3.05 J
TOTAL PCB HOMOLOGS	160	6.2	31.9	42.8 J	40 J	29.8 J	57.3 J	62 J
TOTAL PCB HOMOLOGS - HALF ND	160	17.2	38.2	55.6 J	49.8 J	34.2 J	70.4 J	72.6 J
METALS (MG/KG)								
ALUMINUM	4.48	46.7	697	18.7 J	35.5 J	13.1 J	38.8 J	42.6 J
ARSENIC	2.41	7.2	9.9	2.4	3.5	3.7	2.5	2.65
BARIUM	86.3	1.5	6.5	0.086 UJ	0.754	0.44 J	0.181 UJ	0.29 J
CADMIUM	1.79	0.23	0.155	0.171	0.195	0.123	0.198	0.2
CALCIUM		3690	75600	751 J	3580 J	3240 J	1240 J	1350 J
CHROMIUM	5.57	0.546	8.2	0.174 J	0.457	0.533	0.321	0.428 J
COBALT	17.02	0.235	0.566	0.091 J	0.176 J	0.163 J	0.124 J	0.108 J
COPPER	13.51	4	56.6	1.4	2.3	2.1	1.7	1.75
IRON	116.07	107	1030	99.6 J	84.7 J	38.8 J	92.2 J	102 J
LEAD	6.76	1.1	6.1	0.291	0.549	0.251	0.705	0.398
MAGNESIUM		828	5560	614	694	784	668	696
MANGANESE	119.55	20.6	143	3	6.9	9.3	3.7	3.85
MERCURY	0.03	0.042	0.082	0.015 J	0.006 J	0.012 J	0.013 J	0.016 J
NICKEL	3.95	0.86	10.4	0.269 J	0.59 J	0.544 J	0.329 J	0.382 J
POTASSIUM		3110	2470	2530	2650	3120	2610	2750
SELENIUM	0.46	1.2	1.4	0.806	0.748	0.782	0.876	0.884
SILVER	8.38	0.817	0.216	0.012 J	0.407	0.247	0.014 J	0.0135 J
SODIUM		4860	5710	3790	3990	4450	4190	4290
THALLIUM	0.02		0.005	3.4 U	3.5 U	4.1 U	3.7 U	0.926 J
VANADIUM	1.43	0.58	2.2	0.235 J	0.294 J	0.19 J	0.234 J	0.216 J
ZINC	175.03	18.5	50.5	15.8	15.1	18.4	19.5	18.6
MISCELLANEOUS PARAMETERS (%)								
LIPIDS				0.884	0.5 U	0.5 U	0.702	0.891

Tissue data is presented in wet weight

* Locations of reference stations are presented on Figure 2-4

TABLE 4-26
SUMMARY OF ANALYTICAL RESULTS FOR CRAB SAMPLES COLLECTED ALONG THE NORTHEAST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Tissue PAL	Maximum Reference Clam/Mussel Result * (Table 4-30)	Maximum Reference Crab Result * (Table 4-31)	GI-ET514-0610	GI-ET515-0610
LOCATION ID				GI-SD432	GI-SD434
SAMPLE DATE				6/4/2010	6/4/2010
SA CODE				NORMAL	NORMAL
SUBMATRIX				SC	SC
QC TYPE				NM	NM
PCB HOMOLOGS (UG/KG)					
DICHLOROBIPHENYLS				2.4 J	1.5 U
HEPTACHLOROBIPHENYLS			2.9	8 J	13 J
HEXACHLOROBIPHENYL		6.2	22	24	31
PENTACHLOROBIPHENYLS			15	16 J	3 U
TOTAL PCB HOMOLOGS	160	6.2	31.9	50.4 J	44 J
TOTAL PCB HOMOLOGS - HALF ND	160	17.2	38.2	62.5 J	58.6 J
METALS (MG/KG)					
ALUMINUM	4.48	46.7	697	345	429
ARSENIC	2.41	7.2	9.9	7.3 J	6.3 J
BARIUM	86.3	1.5	6.5	6.2	5.2
CADMIUM	1.79	0.23	0.155	0.052 J	0.082 J
CALCIUM		3690	75600	56300 J	87500 J
CHROMIUM	5.57	0.546	8.2	2.3	3.4
COBALT	17.02	0.235	0.566	0.347 J	0.325 J
COPPER	13.51	4	56.6	26.6	30.6
IRON	116.07	107	1030	800	762
LEAD	6.76	1.1	6.1	1.7 J	1.9 J
MAGNESIUM		828	5560	5340	4170
MANGANESE	119.55	20.6	143	133	97.3
MERCURY	0.03	0.042	0.082	0.027	0.037
NICKEL	3.95	0.86	10.4	2.4	4.5
POTASSIUM		3110	2470	1540 J	1200 J
SELENIUM	0.46	1.2	1.4	0.859 J	1.1 J
SILVER	8.38	0.817	0.216	0.246 J	0.169 J
SODIUM		4860	5710	3690 J	3620 J
THALLIUM	0.02		0.005	0.004 J	6 U
VANADIUM	1.43	0.58	2.2	1.5 J	1.6 J
ZINC	175.03	18.5	50.5	26.8	32.4

Tissue data is presented in wet weight

* Locations of reference stations are presented on Figure 2-4

TABLE 4-27
SUMMARY OF ANALYTICAL RESULTS FOR CLAM/MUSSEL SAMPLES
COLLECTED ALONG THE NORTHWEST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Tissue PAL	Maximum Reference Clam/Mussel Result * (Table 4-30)	Maximum Reference Crab Result * (Table 4-31)	GI-ET520-0610
LOCATION ID				G32-SD308F
SAMPLE DATE				6/2/2010
SA CODE				NORMAL
SUBMATRIX				CL
QC TYPE				NM
PCB HOMOLOGS (UG/KG)				
HEXACHLOROBIPHENYL		6.2	22	6.9
TOTAL PCB HOMOLOGS	160	6.2	31.9	6.9
TOTAL PCB HOMOLOGS - HALF ND	160	17.2	38.2	12.5
METALS (MG/KG)				
ALUMINUM	4.48	46.7	697	7.6 J
ARSENIC	2.41	7.2	9.9	3.8
BARIUM	86.3	1.5	6.5	0.701
CADMIUM	1.79	0.23	0.155	0.194
CALCIUM		3690	75600	4540 J
CHROMIUM	5.57	0.546	8.2	0.29
COBALT	17.02	0.235	0.566	0.124 J
COPPER	13.51	4	56.6	2.4
IRON	116.07	107	1030	26 J
LEAD	6.76	1.1	6.1	0.216
MAGNESIUM		828	5560	742
MANGANESE	119.55	20.6	143	12
MERCURY	0.03	0.042	0.082	0.015 J
NICKEL	3.95	0.86	10.4	0.348 J
POTASSIUM		3110	2470	2490
SELENIUM	0.46	1.2	1.4	0.67
SILVER	8.38	0.817	0.216	0.241
SODIUM		4860	5710	4470
VANADIUM	1.43	0.58	2.2	0.226 J
ZINC	175.03	18.5	50.5	15.5
MISCELLANEOUS PARAMETERS (%)				
LIPIDS				5.43

Tissue data is presented in wet weight

* Locations of reference stations are presented on Figure 2-4

TABLE 4-28
SUMMARY OF ANALYTICAL RESULTS FOR CRAB SAMPLES COLLECTED FROM THE NORTHWEST SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Tissue PAL	Maximum Reference Clam/Mussel Result * (Table 4-30)	Maximum Reference Crab Result * (Table 4-31)	GI-ET523-0610
LOCATION ID				G32-SD313F
SAMPLE DATE				6/4/2010
SA CODE				NORMAL
SUBMATRIX				GC
QC TYPE				NM
PCB HOMOLOGS (UG/KG)				
HEPTACHLOROBIPHENYLS			2.9	9.5 J
HEXACHLOROBIPHENYL		6.2	22	61
PENTACHLOROBIPHENYLS			15	50
TOTAL PCB HOMOLOGS	160	6.2	31.9	120 J
TOTAL PCB HOMOLOGS - HALF ND	160	17.2	38.2	129 J
METALS (MG/KG)				
ALUMINUM	4.48	46.7	697	91.6
ARSENIC	2.41	7.2	9.9	7.8 J
BARIUM	86.3	1.5	6.5	3.8
CADMIUM	1.79	0.23	0.155	0.289
CALCIUM		3690	75600	78400 J
COBALT	17.02	0.235	0.566	0.168 J
COPPER	13.51	4	56.6	31.6
IRON	116.07	107	1030	197
LEAD	6.76	1.1	6.1	0.763 J
MAGNESIUM		828	5560	3280
MANGANESE	119.55	20.6	143	32.3
MERCURY	0.03	0.042	0.082	0.043
NICKEL	3.95	0.86	10.4	0.978 J
POTASSIUM		3110	2470	2120 J
SELENIUM	0.46	1.2	1.4	1.2 J
SILVER	8.38	0.817	0.216	0.296 J
SODIUM		4860	5710	5620 J
VANADIUM	1.43	0.58	2.2	0.598 J
ZINC	175.03	18.5	50.5	37.4

Tissue data is presented in wet weight

* Locations of reference stations are presented on Figure 2-4

TABLE 4-29
SUMMARY OF ANALYTICAL RESULTS FOR CLAM SAMPLES COLLECTED FROM THE SOUTHERN SHORELINE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Tissue PAL	Maximum Reference Clam/Mussel Result * (Table 4-30)	Maximum Reference Crab Result * (Table 4-31)	GI-ET529-0610
LOCATION ID				G32-SD314
SAMPLE DATE				6/2/2010
SA CODE				NORMAL
SUBMATRIX				CL
QC TYPE				NM
PCB HOMOLOGS (UG/KG)				
HEPTACHLOROBIPHENYLS			2.9	4.7 J
HEXACHLOROBIPHENYL		6.2	22	7.1 J
PENTACHLOROBIPHENYLS			15	4 J
TETRACHLOROBIPHENYLS				1.1 J
TOTAL PCB HOMOLOGS	160	6.2	31.9	16.9 J
TOTAL PCB HOMOLOGS - HALF ND	160	17.2	38.2	20.8 J
METALS (MG/KG)				
ALUMINUM	4.48	46.7	697	15.9 J
ARSENIC	2.41	7.2	9.9	3.5
BARIUM	86.3	1.5	6.5	0.535
CADMIUM	1.79	0.23	0.155	0.156
CALCIUM		3690	75600	2510 J
CHROMIUM	5.57	0.546	8.2	0.181 J
COBALT	17.02	0.235	0.566	0.1 J
COPPER	13.51	4	56.6	2.7
IRON	116.07	107	1030	36.4 J
LEAD	6.76	1.1	6.1	0.245
MAGNESIUM		828	5560	609
MANGANESE	119.55	20.6	143	12.1
MERCURY	0.03	0.042	0.082	0.012 J
NICKEL	3.95	0.86	10.4	0.291 J
POTASSIUM		3110	2470	2710
SELENIUM	0.46	1.2	1.4	0.69
SILVER	8.38	0.817	0.216	0.48
SODIUM		4860	5710	3510
VANADIUM	1.43	0.58	2.2	0.195 J
ZINC	175.03	18.5	50.5	15.2
MISCELLANEOUS PARAMETERS (%)				
LIPIDS				4.02

Tissue data is presented in wet weight

* Locations of reference stations are presented on Figure 2-4

TABLE 4-30
SUMMARY OF ANALYTICAL RESULTS FOR CLAM SAMPLES COLLECTED AT REFERENCE STATIONS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Tissue PAL	Maximum Reference Clam/Mussel Result *	Maximum Reference Crab (Table 4-31) Result *	GI-ET524-0610	GI-ET525-0610	GI-ET526-0610
LOCATION ID				DSY-JPC-01	DSY-JPC-02	MCA-JCC-04
SAMPLE DATE				6/2/2010	6/2/2010	6/2/2010
SA CODE				NORMAL	NORMAL	NORMAL
SUBMATRIX				CL	CL	CL
QC TYPE				NM	NM	NM
PCB HOMOLOGS (UG/KG)						
HEXACHLOROBIPHENYL		6.2	22	2.2 J	5.2 J	6.2 J
TOTAL PCB HOMOLOGS	160	6.2	31.9	2.2 J	5.2 J	6.2 J
TOTAL PCB HOMOLOGS - HALF ND	160	17.2	38.2	7.76 J	10.8 J	17.2 J
METALS (MG/KG)						
ALUMINUM	4.48	46.7	697	34.1 J	20.9 J	46.7 J
ARSENIC	2.41	7.2	9.9	7.2	6	3.6
BARIUM	86.3	1.5	6.5	1.5	0.783	0.982
CADMIUM	1.79	0.23	0.155	0.23	0.157	0.183
CALCIUM		3690	75600	1360 J	2890 J	3690 J
CHROMIUM	5.57	0.546	8.2	0.546	0.367	0.303
COBALT	17.02	0.235	0.566	0.225 J	0.235 J	0.202 J
COPPER	13.51	4	56.6	4	3.4	2.5
IRON	116.07	107	1030	62.9 J	41.5 J	107 J
LEAD	6.76	1.1	6.1	0.574	0.265	1.1
MAGNESIUM		828	5560	828	726	705
MANGANESE	119.55	20.6	143	5.9	7	20.6
MERCURY	0.03	0.042	0.082	0.042	0.026	0.016 J
NICKEL	3.95	0.86	10.4	0.86	0.559 J	0.464 J
POTASSIUM		3110	2470	3050	3110	2510
SELENIUM	0.46	1.2	1.4	1.2	0.937	0.764
SILVER	8.38	0.817	0.216	0.358	0.817	0.58
SODIUM		4860	5710	4860	4070	4100
VANADIUM	1.43	0.58	2.2	0.58 J	0.408 J	0.315 J
ZINC	175.03	18.5	50.5	17	16.7	18.5
MISCELLANEOUS PARAMETERS (%)						
LIPIDS				4.23	2.99	3.32

Tissue data is presented in wet weight

* Locations of reference stations are presented on Figure 2-4

TABLE 4-31
SUMMARY OF ANALYTICAL RESULTS FOR CRAB SAMPLES COLLECTED FROM REFERENCE STATIONS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

SAMPLE ID	Tissue PAL from SAP	Maximum Reference Clam/Mussel Result * (Table 4-30)	Maximum Reference Crab Result	GI-ET524-0610_20106 04	GI-ET525-0610_20100 604	GI-ET526-0610_20106 04
LOCATION ID				DSY-JPC-01	DSY-JPC-02	MCA-JCC-04
SAMPLE DATE				6/4/2010	6/4/2010	6/4/2010
SA CODE				NORMAL	NORMAL	NORMAL
SUBMATRIX				SC	GC	SC
QC TYPE				NM	NM	NM
PCB HOMOLOGS (UG/KG)						
HEPTACHLOROBIPHENYLS			2.9	2.9 J	2.3 U	3.7 U
HEXACHLOROBIPHENYL		6.2	22	15	14	22
PENTACHLOROBIPHENYLS			15	14	15	2.9 U
TOTAL PCB HOMOLOGS	160	6.2	31.9	31.9 J	29	22
TOTAL PCB HOMOLOGS - HALF ND	160	17.2	38.2	36.2 J	38.2	38.2
METALS (MG/KG)						
ALUMINUM	4.48	46.7	697	697	85.7	601
ARSENIC	2.41	7.2	9.9	7.1 J	8 J	9.9 J
BARIUM	86.3	1.5	6.5	5.5	4.3	6.5
BERYLLIUM	1.23		0.063	0.063 J	0.159 UJ	0.05 J
CADMIUM	1.79	0.23	0.155	0.128 J	0.155 J	0.064 J
CALCIUM		3690	75600	61100 J	75600 J	44400 J
CHROMIUM	5.57	0.546	8.2	6	0.508 U	8.2
COBALT	17.02	0.235	0.566	0.471 J	0.362 J	0.566 J
COPPER	13.51	4	56.6	56.6	28.4	47.5
IRON	116.07	107	1030	992	290	1030
LEAD	6.76	1.1	6.1	6.1 J	1.2 J	2.5 J
MAGNESIUM		828	5560	5560	3530	5340
MANGANESE	119.55	20.6	143	65.9	53.1	143
MERCURY	0.03	0.042	0.082	0.049 J	0.082	0.05 J
NICKEL	3.95	0.86	10.4	7.1	0.637 J	10.4
POTASSIUM		3110	2470	2280 J	1370 J	2470 J
SELENIUM	0.46	1.2	1.4	1.1 J	1.1 J	1.4 J
SILVER	8.38	0.817	0.216	0.216 J	0.145 J	0.194 J
SODIUM		4860	5710	5710 J	4530 J	5680 J
THALLIUM	0.02		0.005	0.005 J	5.2 U	0.004 J
VANADIUM	1.43	0.58	2.2	2.1 J	0.841 J	2.2
ZINC	175.03	18.5	50.5	50.5	32	47.1
MISCELLANEOUS PARAMETERS (%)						
LIPIDS				0.687	0.5 U	0.5 U

Tissue data is presented in wet weight

* Locations of reference stations are presented on Figure 2-4

TABLE 6-1
ASSESSMENT AND MEASUREMENT ENDPOINTS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Assessment Endpoint	Measurement Endpoint
Adverse effects on the survival, reproduction, and growth of benthic invertebrates	• Survival, growth, and reproduction of benthic macroinvertebrates were evaluated by comparing the measured concentrations of chemicals in the sediment to sediment screening values. • Survival, growth, and reproduction of sediment invertebrates were evaluated by conducting 28-day amphipod toxicity tests with survival, growth, and reproduction as the endpoints.
Adverse effects on the survival, reproduction, and growth of biota (clams, mussels, and crabs)	• Survival, growth, and reproduction of biota (i.e., clams, mussels, crabs) were evaluated by comparing the measured concentrations of chemicals in tissue to tissue residue values.
Adverse effects on the survival and reproduction of piscivorous birds and mammals	• Survival and reproduction of birds and mammals were evaluated by comparing the average ingested dose from contaminants in the sediment, mussel, clams, and crabs collected from the site to NOAELs and LOAELs.

TABLE 6-2
SEDIMENT ECOLOGICAL SCREENING LEVELS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Parameter	Ecological Screening Level	Source of Screening Level
VOLATILES (UG/KG)		
1,1-DICHLOROETHENE	27	SCV
1,3-DICHLOROBENZENE	110	AET
1,4-DICHLOROBENZENE	110	AET
2-BUTANONE	270	SCV
ACETONE	8.7	SCV
CARBON DISULFIDE	0.85	SCV
TOTAL CHLORINATED ETHENES	NA	NA
TOTAL CHLORINATED VOCS	NA	NA
TRICHLOROETHENE	41	AET
SEMIVOLATILES (UG/KG)		
1,1-BIPHENYL	1100	SQB 1996
2-METHYLNAPHTHALENE	70	ER-L 1995
4-METHYLPHENOL	100	AET
ACENAPHTHENE	16	ER-L 1995
ACENAPHTHYLENE	44	ER-L 1995
ANTHRACENE	85.3	ER-L 1995
BENZO(A)ANTHRACENE	261	ER-L 1995
BENZO(A)PYRENE	430	ER-L 1995
BENZO(B)FLUORANTHENE	1800	AET
BENZO(G,H,I)PERYLENE	670	AET
BENZO(K)FLUORANTHENE	1800	AET
BIS(2-ETHYLHEXYL)PHTHALATE	182	TEL
CARBAZOLE	NA	NA
CHRYSENE	384	ER-L 1995
DIBENZO(A,H)ANTHRACENE	63.4	ER-L 1995
DIBENZOFURAN	110	AET
FLUORANTHENE	600	ER-L 1995
FLUORENE	19	ER-L 1995
INDENO(1,2,3-CD)PYRENE	600	AET
NAPHTHALENE	160	ER-L 1995
PHENANTHRENE	240	ER-L 1995
PHENOL	130	AET
PYRENE	665	ER-L 1995
HIGH MOLECULAR WEIGHT PAHS	1700	ER-L 1995
LOW MOLECULAR WEIGHT PAHS	552	ER-L 1995
TOTAL PAHS	NA	NA
PESTICIDES (UG/KG)		
4,4'-DDE	2.2	ER-L 1995
4,4'-DDT	1.19	TEL
ALDRIN	9.5	AET
ALPHA-BHC	0.32	TEL
BETA-BHC	0.32	TEL
DELTA-BHC	0.32	TEL
DIELDRIN	0.02	SQB 2003
ENDOSULFAN I	2.9	SQB 1996

TABLE 6-2
SEDIMENT ECOLOGICAL SCREENING LEVELS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Parameter	Ecological Screening Level	Source of Screening Level
ENDOSULFAN SULFATE	5.4	SQB 1996
ENDRIN ALDEHYDE	0.02	ER-L 1991
ENDRIN KETONE	0.02	ER-L 1991
GAMMA-BHC (LINDANE)	0.32	TEL
GAMMA-CHLORDANE	2.26	TEL
METHOXYCHLOR	19	SQB 1996
TOTAL CHLORDANE	2.26	TEL
TOTAL DDD/DDE/DDT	1.58	ER-L 1995
PCBS (UG/KG)		
AROCLOR-1248	22.7	ER-L 1995
AROCLOR-1254	22.7	ER-L 1995
AROCLOR-1260	22.7	ER-L 1995
TOTAL AROCLOR	22.7	ER-L 1995
PCB HOMOLOGS (UG/KG)		
DICHLOROBIPHENYLS	22.7	ER-L 1995
HEPTACHLOROBIPHENYLS	22.7	ER-L 1995
HEXACHLOROBIPHENYL	22.7	ER-L 1995
PENTACHLOROBIPHENYLS	22.7	ER-L 1995
TETRACHLOROBIPHENYLS	22.7	ER-L 1995
TOTAL OCTACHLOROBIPHENYLS	22.7	ER-L 1995
TOTAL PCB HOMOLOGS	22.7	ER-L 1995
TOTAL TRICHLOROBIPHENYLS	22.7	ER-L 1995
METALS (MG/KG)		
ALUMINUM	18000	AET
ANTIMONY	2	ER-L 1991
ARSENIC	8.2	ER-L 1995
BARIUM	48	AET
BERYLLIUM	NA	NA
CADMIUM	1.2	ER-L 1995
CALCIUM	NA	NA
CHROMIUM	81	ER-L 1995
COBALT	10	AET
COPPER	34	ER-L 1995
CYANIDE	NA	NA
IRON	220000	AET
LEAD	46.7	ER-L 1995
MAGNESIUM	NA	NA
MANGANESE	260	AET
MERCURY	0.15	ER-L 1995
NICKEL	20.9	ER-L 1995
POTASSIUM	NA	NA
SELENIUM	1	AET
SILVER	0.5	LEL
SODIUM	NA	NA
THALLIUM	NA	NA
VANADIUM	57	AET

TABLE 6-2
SEDIMENT ECOLOGICAL SCREENING LEVELS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Parameter	Ecological Screening Level	Source of Screening Level
ZINC	150	ER-L 1995
AVS/SEM (UMOLES/G)		
ACID VOLATILE SULFIDE	NA	NA
CADMIUM	NA	NA
COPPER	NA	NA
LEAD	NA	NA
MERCURY	NA	NA
NICKEL	NA	NA
ZINC	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)		
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA

Sources (in order of preference used):
SQB 2003 - Sediment Quality Benchmark (USEPA, 2003)
ER-L 1995- Effects Range- Low (Long, et al., 1995)
TEL - Threshold Effects Level (McDonald, 1994)
ER-L 1991- Effects Range- Low (Long and Morgan, 1991)
AET - Apparent Effects Threshold (Buchman, 2008)
SQB 1996 - Sediment Quality Benchmark (USEPA, 1996)
SCV - Secondary Chronic Value (Jones, et al., 1997)
LEL - Lowest Effect Level (Persaud, et al., 1993)

NA - Not available

TABLE 6-3
EXPOSURE PARAMETERS FOR THE TERRESTRIAL WILDLIFE MODEL
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Species/Exposure Inputs	Conservative Inputs		Average Inputs	
	Values	Units	Values	Units
Raccoon				
Body Weight = BW	3.670E+00	kg	5.636E+00	kg
Dry Food Ingestion Rate = If	2.370E-01	kg/day	1.840E-01	kg/day
Wet Food Ingestion Rate(1) = If	1.58E+00	kg/day	1.227E+00	kg/day
Water Ingestion Rate = Iw	4.680E-01	L/day	4.650E-01	L/day
Dry Sediment Ingestion Rate = Is	2.228E-02	kg/day	1.730E-02	kg/day
Home Range = HR	Assume 100% on site		3.400E+01	acres
Herring Gull				
Body Weight = BW	9.51E-01	kg	1.09E+00	kg
Dry Food Ingestion Rate(2) = If	3.44E-02	kg/day	3.36E-02	kg/day
Wet Food Ingestion Rate = If	2.29E-01	kg/day	2.24E-01	kg/day
Water Ingestion Rate = Iw	6.40E-02	L/day	6.20E-02	L/day
Dry Sediment Ingestion Rate = Is	2.819E-03	kg/day	2.752E-03	kg/day
Home Range = HR	Assume 100% on site		1.000E+01	km-radius

Footnotes:
1 - Dry weight ingestion rate divided by 0.15 percent solids in shellfish to convert to a wet weight ingestion rate.
2 - Wet weight ingestion rate multipled by 0.15 percent solids in shellfish to convert to a dry weight ingestion rate.

Notes:
The exposure factors were derived as presented in Appendix G.3.
Food and sediment ingestion rates are provided on dry weight and wet weight basis.

The sediment ingestion rates were calculated by multiplying the dry weight food ingestion rates by the following incidental sediment ingestion rates:

	Conservative	Average	Source
Raccon	9.4%	9.4%	1
Herring Gull	8.20%	8.20%	1,2

1 - Beyer, N., E. Connor, and S. Gerould. 1994. Estimates of Soil Ingestion by Wildlife. Journal of Wildlife Management 58(2) pp. 375-382.
2 - Based on Canada goose.

TABLE 6-4
SEDIMENT ANALYTICAL SUMMARY AND COPC SELECTION TABLE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Parameter	Frequency of Detection	Minimum Detected Concentration[1]	Maximum Detected Concentration[1]	Sample with Maximum Detection	Average of Positive Detects[2]	Average of All[3]	Ecological Screening Level	Ecological Effects Quotient[4]	Retained as a COPC? (yes/no)	COPC Rationale
VOLATILES (UG/KG)										
1,1-DICHLOROETHENE	1/66	6	6	G32-SD304D-0.51.0	6	2.83	27	0.222	NO	SERA
1,3-DICHLOROBENZENE	1/66	3 J	3 J	G32-SD312-0.51.0	3	2.77	110	0.0273	NO	SERA
1,4-DICHLOROBENZENE	1/66	11 J	11 J	G32-SD312-0.51.0	11	2.89	110	0.100	NO	SERA
2-BUTANONE	3/66	2 J	7	G32-SD306B-000.5	4.67	2.86	270	0.0259	NO	SERA
ACETONE	54/66	12 JEB	240	G32-SD302E-000.5, G32-SD305A-000.5	74.2	71.8	8.7	27.6	NO	SERA
CARBON DISULFIDE	43/66	1	16	G32-SD312-0.51.0	3.8	3.33	0.85	18.8	NO	SERA
TOTAL CHLORINATED ETHENES	3/66	2 J	6	G32-SD304D-0.51.0	3.58	2.8	NA	NA	NO	NSL*
TOTAL CHLORINATED VOCS	4/66	2 J	14 J	G32-SD312-0.51.0	6.19	2.95	NA	NA	NO	NSL*
TRICHLOROETHENE	2/66	2 J	2.75 J	G32-SD309F-000.5-AVG	2.38	2.75	41	0.0671	NO	SERA
SEMIVOLATILES (UG/KG)										
1,1-BIPHENYL	4/66	41 J	68 J	G32-SD310D-000.5	51.8	158	1100	0.0618	NO	SERA
2-METHYLNAPHTHALENE	106/186	1.4 J	280	G32-SD308E-000.5	18.2	15.6	70	4.00	**YES**	ASL
4-METHYLPHENOL	19/66	35 J	2100 J	G32-SD301-000.5	453	248	100	21.0	NO	SERA
ACENAPHTHENE	150/186	2.75 J	1300	G32-SD310D-000.5	68.9	55.9	16	81.3	**YES**	ASL
ACENAPHTHYLENE	140/186	1.9 J	810	G32-SD312-0.51.0	39.4	30.6	44	18.4	**YES**	ASL
ANTHRACENE	166/186	3.6	4400	GI-SD501-0006	231	207	85.3	51.6	**YES**	ASL
BENZO(A)ANTHRACENE	178/186	2.58	5400 D	GI-SD406-0006	369	353	261	20.7	**YES**	ASL
BENZO(A)PYRENE	175/186	2.72	3800	GI-SD501-0006	285	268	430	8.84	**YES**	ASL
BENZO(B)FLUORANTHENE	179/186	3.38	4900	G32-SD312-0.51.0	377	363	1800	2.72	**YES**	ASL
BENZO(G,H,I)PERYLENE	172/186	3.3	1600	GI-SD501-0006	143	132	670	2.39	**YES**	ASL
BENZO(K)FLUORANTHENE	174/186	2.62	3900	GI-SD501-0006	217	203	1800	2.17	**YES**	ASL
BIS(2-ETHYLHEXYL)PHTHALATE	29/66	34 J	100 J	G32-SD303-0.51.0	49.7	115	182	0.549	NO	SERA
CARBAZOLE	26/66	35 J	1400	G32-SD312-0.51.0	254	200	NA	NA	**YES**	NSL
CHRYSENE	177/186	2.98	8700	G32-SD312-0.51.0	473	450	384	22.7	**YES**	ASL
DIBENZO(A,H)ANTHRACENE	160/186	3.3	580	GI-SD501-0006	53.2	46	63.4	9.15	**YES**	ASL
DIBENZOFURAN	17/66	36 J	510	G32-SD310D-000.5	157	163	110	4.64	**YES**	ASL
FLUORANTHENE	178/186	2.92	28000	G32-SD312-0.51.0	1150	1100	600	46.7	**YES**	ASL
FLUORENE	156/186	3.3	820	G32-SD310D-000.5	68.1	57.4	19	43.2	**YES**	ASL
INDENO(1,2,3-CD)PYRENE	171/186	3.8	1600	GI-SD501-0006	141	130	600	2.67	**YES**	ASL
NAPHTHALENE	119/186	2.7 J	730	G32-SD310D-000.5	34.9	28.1	160	4.56	**YES**	ASL
PHENANTHRENE	174/186	3.02	7200	G32-SD312-0.51.0	449	421	240	30.0	**YES**	ASL
PHENOL	23/66	35 J	1400	G32-SD308A-000.5	221	184	130	10.8	NO	SERA
PYRENE	180/186	4	22000	G32-SD312-0.51.0	998	966	665	33.1	**YES**	ASL
HIGH MOLECULAR WEIGHT PAHS	181/186	4	75800	G32-SD312-0.51.0	4130	4010	1700	44.6	**YES**	ASL
LOW MOLECULAR WEIGHT PAHS	174/186	3.02	12400	G32-SD312-0.51.0	857	801	552	22.5	**YES**	ASL
TOTAL PAHS	182/186	3.02	88100	G32-SD312-0.51.0	4920	4820	NA	NA	**YES**	NSL
PESTICIDES (UG/KG)										
4,4'-DDE	4/65	5.1 J	230 J	G32-SD312-0.51.0	131	10.9	2.2	105	NO	SERA
4,4'-DDT	1/58	420 J	420 J	G32-SD316-0.51.0	420	10.3	1.19	353	NO	SERA
ALDRIN	2/66	1.9 J	2 J	G32-SD305C-000.5	1.95	2.51	9.5	0.211	NO	SERA
ALPHA-BHC	1/66	1.22 J	1.22 J	G32-SD309F-000.5-AVG	1.22	2.48	0.32	3.81	NO	SERA
BETA-BHC	21/59	1.7 J	57 J	G32-SD312-0.51.0	6.44	4.08	0.32	178	**YES**	ASL
DELTA-BHC	2/66	0.915 J	1.6 J	G32-SD305E-000.5	1.26	2.49	0.32	5.00	NO	SERA
DIELDRIN	1/66	16 J	16 J	G32-SD305D-000.5	16	4.87	0.02	800	NO	SERA
ENDOSULFAN I	1/66	8.2 J	8.2 J	G32-SD304A-000.5	8.2	2.54	2.9	2.83	NO	SERA
ENDOSULFAN SULFATE	17/64	2.82 J	640 J	G32-SD312-0.51.0	96	27.5	5.4	119	**YES**	ASL
ENDRIN ALDEHYDE	4/56	1.78 J	120 J	G32-SD316-0.51.0	32.8	5.02	0.02	6000	NO	SERA
ENDRIN KETONE	7/64	3.4 J	13.5 J	G32-SD304D-000.5-AVG	6.71	5.3	0.02	675	NO	SERA

TABLE 6-4
SEDIMENT ANALYTICAL SUMMARY AND COPC SELECTION TABLE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Parameter	Frequency of Detection	Minimum Detected Concentration[1]	Maximum Detected Concentration[1]	Sample with Maximum Detection	Average of Positive Detects[2]	Average of All[3]	Ecological Screening Level	Ecological Effects Quotient[4]	Retained as a COPC? (yes/no)	COPC Rationale
GAMMA-BHC (LINDANE)	1/66	1.1 J	1.1 J	G32-SD305D-0.51.0	1.1	2.48	0.32	3.44	NO	SERA
GAMMA-CHLORDANE	13/62	1.9 J	600	G32-SD316-0.51.0	125	27.3	2.26	265	**YES**	ASL
METHOXYCHLOR	2/66	7.3 J	30	G32-SD305B-000.5	18.6	25.1	19	1.58	NO	SERA
TOTAL CHLORDANE	13/66	1.9 J	600	G32-SD316-0.51.0	125	25.8	2.26	265	**YES**	ASL
TOTAL DDD/DDE/DDT	4/66	5.1 J	640 J	G32-SD316-0.51.0	236	17.5	1.58	405	NO	NSL*
PCBS (UG/KG)										
AROCLOR-1248	4/153	39 J	1400	GI-SD412-1218	468	116	22.7	61.7	**YES**	ASL
AROCLOR-1254	9/153	35 P	320	GI-SD409-4248	90.4	109	22.7	14.1	**YES**	ASL
AROCLOR-1260	76/153	33 J	55000	GI-SD402-0612	3210	1600	22.7	2423	**YES**	ASL
TOTAL AROCLOR	84/153	33 J	55000	GI-SD402-0612	2930	1620	22.7	2423	**YES**	ASL
PCB HOMOLOGS (UG/KG)										
DICHLOROBIPHENYLS	1/33	0.432 J	0.432 J	GI-SD517-0006-AVG	0.432	0.745	22.7	0.0190	NO	BSL
HEPTACHLOROBIPHENYLS	21/33	4.1 J	970	GI-SD507-0006	238	152	22.7	42.7	**YES**	ASL
HEXACHLOROBIPHENYL	29/33	3.2	1400 J	GI-SD501-0006	238	209	22.7	61.7	**YES**	ASL
PENTACHLOROBIPHENYLS	11/33	11 J	300 J	GI-SD501-0006	91.1	34.5	22.7	13.2	**YES**	ASL
TETRACHLOROBIPHENYLS	4/33	1.98 J	22 J	GI-SD502-0006	10.3	2.13	22.7	0.969	NO	BSL
TOTAL OCTACHLOROBIPHENYLS	18/33	1.4 J	130 J	GI-SD501-0006	33.7	18.9	22.7	5.73	**YES**	ASL
TOTAL PCB HOMOLOGS	29/33	3.2 J	2720 J	GI-SD501-0006	468	412	22.7	120	**YES**	ASL
TOTAL PCB HOMOLOGS-HALFND	29/33	8.42 J	2740 J	GI-SD501-0006	481	423	22.7	121	**YES**	ASL
TOTAL TRICHLOROBIPHENYLS	3/33	0.72 J	21.6 J	GI-SD517-0006-AVG	7.97	1.35	22.7	0.952	NO	BSL
METALS (MG/KG)										
ALUMINUM	186/186	2680 *E	9100	G32-SD302A-000.5	5410	5410	18000	0.506	NO	BSL
ANTIMONY	92/186	0.0762 BN	43.5 J	G32-SD304F-000.5	1.76	0.992	2	21.8	**YES**	ASL
ARSENIC	182/186	0.193 J	11.3 E	GI-SD412-1218	3.11	3.05	8.2	1.38	**YES**	ASL
BARIUM	186/186	4.6 *E	32.5 J	GI-SD501-0006	13.3	13.3	48	0.677	NO	BSL
BERYLLIUM	186/186	0.061 BE	0.79	G32-SD310C-000.5	0.296	0.296	NA	NA	**YES**	NSL
CADMIUM	131/186	0.0083 B	398	G32-SD317-000.5	3.47	2.48	1.2	332	**YES**	ASL
CALCIUM	186/186	414 *	206000 J	GI-SD514-0006	30400	30400	NA	NA	NO	NUT
CHROMIUM	186/186	6 E	3910	G32-SD304F-000.5	35.7	35.7	81	48.3	**YES**	ASL
COBALT	186/186	1.8	10.8 E	GI-SD449-0006	3.53	3.53	10	1.08	**YES**	ASL
COPPER	186/186	6.5 J	497 NE	GI-SD404-1824	25.5	25.5	34	14.6	**YES**	ASL
CYANIDE	5/66	0.1 J	0.35 J	G32-SD313F-000.5	0.24	0.0744	NA	NA	NO	SERA
IRON	186/186	6220	72100	G32-SD313F-000.5	17000	17000	220000	0.328	NO	BSL
LEAD	186/186	3.7 NE	21200	G32-SD304F-000.5	149	149	46.7	454	**YES**	ASL
MAGNESIUM	186/186	1340 E	6340	G32-SD305F-000.5	3010	3010	NA	NA	NO	NUT
MANGANESE	186/186	51.3 *E	418 J	G32-SD305F-000.5	139	139	260	1.61	**YES**	ASL
MERCURY	155/186	0.004 B	0.94	GI-SD412-1218	0.0686	0.0588	0.15	6.27	**YES**	ASL
NICKEL	186/186	3.8 E	47.4 J	G32-SD313F-000.5	9.47	9.47	20.9	2.27	**YES**	ASL
POTASSIUM	186/186	448	2400 J	G32-SD302A-000.5	996	996	NA	NA	NO	NUT
SELENIUM	72/186	0.29 B	7.9 J	G32-SD309A-000.5	2.04	1.01	1	7.90	**YES**	ASL
SILVER	28/186	0.0435 J	0.608 N	GI-SD405-0006-AVG	0.245	0.0614	0.5	1.22	**YES**	ASL
SODIUM	186/186	810	13500	GI-SD413-0612	4100	4100	NA	NA	NO	NUT
THALLIUM	88/186	0.072 BN	4.9 J	GI-SD514-0006	0.639	0.394	NA	NA	**YES**	NSL
VANADIUM	186/186	7 E	28.4 J	G32-SD302A-000.5	15.4	15.4	57	0.498	NO	BSL
ZINC	186/186	13.6 *E	1160 NE	GI-SD412-0612	59.2	59.2	150	7.73	**YES**	ASL
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON	99/99	2300 J	29000 J	G32-SD308F-000.5	8250	8250	NA	NA	NA	NA
AVS/SEM (UMOLES/G)										
ACID VOLATILE SULFIDE	64/66	0.57 J	33.7 J	G32-SD312-000.5	5.69	5.53	NA	NA	NO	SERA
CADMIUM	3/66	0.0165 J	0.038 J	G32-SD304C-000.5	0.0305	0.003	NA	NA	NO	SERA

TABLE 6-4
SEDIMENT ANALYTICAL SUMMARY AND COPC SELECTION TABLE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Parameter	Frequency of Detection	Minimum Detected Concentration[1]	Maximum Detected Concentration[1]	Sample with Maximum Detection	Average of Positive Detects[2]	Average of All[3]	Ecological Screening Level	Ecological Effects Quotient[4]	Retained as a COPC? (yes/no)	COPC Rationale
COPPER	48/66	0.0618 J	2.4 J	G32-SD302D-000.5	0.243	0.186	NA	NA	NO	SERA
LEAD	56/66	0.031 J	2.3 J	G32-SD306B-000.5	0.207	0.178	NA	NA	NO	SERA
MERCURY	40/66	0.00004 J	0.0037	G32-SD306F-000.5	0.000355	0.000235	NA	NA	NO	SERA
NICKEL	33/66	0.015 J	3.2 J	G32-SD302D-000.5	0.24	0.145	NA	NA	NO	SERA
ZINC	66/66	0.11 J	4.2 J	G32-SD316-0.51.0	0.482	0.482	NA	NA	NO	SERA
AVS/SEM (RATIO)										
SEM/AVS	66/66	0.02	3.5	G32-SD306A-000.5	0.343	0.343	NA	NA	NO	SERA
PETROLEUM HYDROCARBONS (MG/KG)										
EXTRACTABLE PETROLEUM HYDROCARBONS	66/66	14 J	230	G32-SD316-0.51.0	42.4	42.4	NA	NA	NO	SERA

Footnotes:
1 - Sample and duplicate are considered as one sample when determining the minimum and maximum concentrations detected concentrations and frequency of detection.
2 - Average of positive analytical results only.
3 - Average of all analytical results are calculated using half of the detection limit for nondetects.
4 - The ecological effects quotient is the maximum detected concentration divided by the screening level

Rationale Codes:
For Selection as a COPC or for Further Evaluation:
ASL = Above COPC Screening Level
BSL = Below COPC Screening Level
NSL = No Screening Level Available
NSL* = No screening level, but individual constituents were eliminated as COPCs in the SERA.
NUT = Essential Nutrient
SERA = Chemical was only analyzed for in 2005 and was eliminated as a COPC in the SERA. See SERA (Tetra Tech, 2006)

NA - Not available/Not applicable

TABLE 6-5
2005 AND 2010 CLAM AND MUSSEL DATA COMPARED TO REFERENCE DATA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Parameter	Reference	Northwest		Northeast		Stillwater		South		Retained for Further Evaluation	Rationale for Elimination
		FOD	Max	FOD	Max	FOD	Max	FOD	Max		
SEMIVOLATILES											
2,4-DIMETHYLPHENOL	NA	0/6	ND	0/11	ND	0/1	ND	1/3	2000 J	NO	FRQ
2-METHYLPHENOL	NA	3/6	600 J	3/11	330 J	0/1	ND	0/3	ND	**YES**	
4-CHLORO-3-METHYLPHENOL	NA	0/6	ND	1/11	560 J	0/1	ND	0/3	ND	NO	FRQ
BENZALDEHYDE	NA	5/6	8700 JEB	10/11	27000 JEB	1/1	820 JEB	3/3	37000 JEB	**YES**	
BIS(2-ETHYLHEXYL)PHTHALATE	NA	0/6	ND	1/11	210 J	0/1	ND	0/3	ND	NO	FRQ
ISOPHORONE	NA	0/6	ND	1/11	230 J	0/1	ND	0/3	ND	NO	FRQ
POLYCYCLIC AROMATIC HYDROCARBONS											
ANTHRACENE	NA	0/6	ND	0/11	ND	1/1	27	0/3	ND	NO	FRQ
BENZO(A)ANTHRACENE	NA	0/6	ND	0/11	ND	1/1	66	0/3	ND	NO	FRQ
BENZO(A)PYRENE	NA	0/6	ND	0/11	ND	1/1	33	0/3	ND	NO	FRQ
BENZO(B)FLUORANTHENE	NA	0/6	ND	0/11	ND	1/1	43	0/3	ND	NO	FRQ
CHRYSENE	NA	0/6	ND	0/11	ND	1/1	66	0/3	ND	NO	FRQ
FLUORANTHENE	NA	0/6	ND	1/11	37	1/1	210	0/3	ND	NO	FRQ
PHENANTHRENE	NA	0/6	ND	0/11	ND	1/1	46	0/3	ND	NO	FRQ
PYRENE	NA	0/6	ND	1/11	46	1/1	120	0/3	ND	NO	FRQ
LOW MOLECULAR WEIGHT PAHS	NA	0/6	ND	0/11	ND	1/1	73	0/3	ND	NO	FRQ
HIGH MOLECULAR WEIGHT PAHS	NA	0/6	ND	1/11	83	1/1	538	0/3	ND	NO	FRQ
TOTAL PAHS	NA	0/6	ND	1/11	83	1/1	611	0/3	ND	NO	FRQ
PCBs											
AROCLOR-1260	NA	0/6	ND	3/11	170	1/1	440	0/3	ND	**YES**	
PCB HOMOLOGS											
DICHLOROBIPHENYLS	NA	0/1	ND	1/5	2.1 J	0/3	ND	0/1	ND	NO	TOTAL
HEPTACHLOROBIPHENYLS	NA	0/1	ND	4/5	21 J	2/3	15 J	1/1	4.7 J	NO	TOTAL
HEXACHLOROBIPHENYL	6.2	1/1	**6.9**	5/5	**34** --	3/3	**81**	1/1	**7.1** J	NO	TOTAL
PENTACHLOROBIPHENYLS	NA	0/1	ND	4/5	20 J	1/3	16.5 J	1/1	4 J	NO	TOTAL
TETRACHLOROBIPHENYLS	NA	0/1	ND	2/5	5.7 J	0/3	ND	1/1	1.1 J	NO	TOTAL
TOTAL PCB HOMOLOGS	6.2	1/1	**6.9**	5/5	**62** J	3/3	**81** J	1/1	**16.9** J	**YES**	
TOTAL PCB HOMOLOGS-HALFND	17.2	1/1	12.5	5/5	**72.6** J	3/3	**137** J	1/1	**20.8** J	**YES**	
PESTICIDES											
BETA-BHC	NA	0/6	ND	1/11	6.6	0/1	ND	0/3	ND	NO	FRQ
ENDRIN	NA	0/6	ND	1/11	13 J	0/1	ND	0/3	ND	NO	FRQ
ENDRIN ALDEHYDE	NA	0/6	ND	1/11	13 J	0/1	ND	0/3	ND	NO	FRQ
GAMMA-BHC (LINDANE)	NA	0/6	ND	1/11	2.5 J	0/1	ND	0/3	ND	NO	FRQ
GAMMA-CHLORDANE	NA	0/6	ND	0/11	ND	1/1	8 J	0/3	ND	NO	FRQ
TOTAL CHLORDANE	NA	0/6	ND	0/11	ND	1/1	8 J	0/3	ND	NO	FRQ
METALS											
ALUMINUM	46.7	1/7	7.6 J	5/16	42.6 J	3/4	32.2 J	1/4	15.9 J	**YES**	
ARSENIC	7.2	7/7	4.2 J	16/16	3.9 J	4/4	3.2	4/4	3.5	**YES**	
BARIUM	1.5	1/7	0.701	3/16	0.754	2/4	0.754	1/4	0.535	**YES**	
BERYLLIUM	NA	2/7	0.0081	5/16	0.012 J	0/4	ND	1/4	0.0077 J	**YES**	
CADMIUM	0.23	6/7	0.22 J	13/16	**0.73** J	3/4	0.18	3/4	0.156	**YES**	
CALCIUM	3690	7/7	**4540** J	16/16	**8140** J	4/4	2060 J	4/4	2510 J	NO	NUT
CHROMIUM	0.546	4/7	**6.1** J	9/16	**2.9** J	4/4	0.29 J	2/4	**0.59** J	**YES**	
COBALT	0.235	4/7	0.21	7/16	0.176 J	4/4	0.147 J	1/4	0.1 J	**YES**	
COPPER	4	4/7	2.4	7/16	2.3	4/4	1.9	1/4	2.7	**YES**	

TABLE 6-5
2005 AND 2010 CLAM AND MUSSEL DATA COMPARED TO REFERENCE DATA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Parameter	Reference	Northwest		Northeast		Stillwater		South		Retained for Further Evaluation	Rationale for Elimination
		FOD	Max	FOD	Max	FOD	Max	FOD	Max		
IRON	107	4/7	51.9 J	9/16	102 J	3/4	81.1 J	1/4	36.4 J	**YES**	
LEAD	1.1	1/7	0.216	7/16	1.1 J	3/4	**1.4**	1/4	0.245	**YES**	
MAGNESIUM	828	7/7	799 J	16/16	784	4/4	**838**	4/4	716	NO	NUT
MANGANESE	20.6	4/7	12	7/16	12.5 J	4/4	1.5 J	3/4	**38.6** J	**YES**	
MERCURY	0.042	3/7	0.015 J	7/16	0.016 J	4/4	0.022	1/4	0.012 J	**YES**	
NICKEL	0.86	4/7	0.59	7/16	0.59 J	3/4	0.546 J	1/4	0.291 J	**YES**	
POTASSIUM	3110	7/7	2830 J	16/16	**3120**	4/4	2580	4/4	2710	NO	NUT
SELENIUM	1.2	1/7	0.67	5/16	0.884	3/4	0.942	1/4	0.69	**YES**	
SILVER	0.817	1/7	0.241	5/16	0.407	3/4	0.213	1/4	0.48	**YES**	
SODIUM	4860	7/7	4840 J	16/16	4700 J	4/4	**5560**	4/4	3930 J	NO	NUT
THALLIUM	NA	1/7	0.072 J	2/16	0.926 J	0/4	ND	0/4	ND	NO	FRQ
VANADIUM	0.58	6/7	**0.92** J	14/16	**0.65** J	4/4	0.24 J	2/4	**1.2** J	**YES**	
ZINC	18.5	7/7	**36.1**	16/16	**24.3**	4/4	18.4	4/4	17.4	**YES**	

Notes:
Shading indicates exceedance of reference concentration or chemical retained for further evaluation.
Metals in mg/kg; organics in ug/kg
See Tables 4-6 to 4-10 for complete summary statistics.

NA - Not available/Not applicable
ND - Not detected
FOD - Frequency of Detection
Max - Maximum detected concentration

Rationale Codes:
For Elimination:
FRQ = Detected in only 1 or 2 of 21 samples
NUT = Essential Nutrient
TOTAL = Individual PCB homologs included in total PCB calculation

TABLE 6-6
2010 CRAB DATA COMPARED TO REFERENCE DATA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Parameter	Reference Concentration	Northwest		Northeast		Stillwater		Retained for Further Evaluation	Rationale for Elimination
		FOD	Max	FOD	Max	FOD	Max		
PCBs									
DICHLOROBIPHENYLS	NA	0/1	ND	1/2	2.4 J	0/3	ND	NO	TOTAL
HEPTACHLOROBIPHENYLS	2.9	1/1	**9.5** J	2/2	**13** J	3/3	**20.5**	NO	TOTAL
HEXACHLOROBIPHENYL	22	1/1	**61**	2/2	**31**	3/3	**63** J	NO	TOTAL
PENTACHLOROBIPHENYLS	15	1/1	**50**	1/2	**16** J	3/3	**27**	NO	TOTAL
TOTAL PCB HOMOLOGS	31.9	1/1	**120** J	2/2	**50.4** J	3/3	**110** J	**YES**	
TOTAL PCB HOMOLOGS-HALFND	38.2	1/1	**129** J	2/2	**62.5** J	3/3	**124** J	**YES**	
METALS									
ALUMINUM	697	1/1	91.6	2/2	429	3/3	468	**YES**	
ARSENIC	9.9	1/1	7.8 J	2/2	7.3 J	3/3	8.9 J	**YES**	
BARIUM	6.5	1/1	3.8	2/2	6.2	3/3	6.15	**YES**	
BERYLLIUM	0.063	0/1	ND	0/2	ND	1/3	**0.072** J	**YES**	
CADMIUM	0.155	1/1	**0.289**	2/2	0.082 J	3/3	0.052	**YES**	
CALCIUM	75600	1/1	**78400** J	2/2	**87500** J	3/3	68200 J	NO	NUT
CHROMIUM	8.2	0/1	ND	2/2	3.4	3/3	2.35	**YES**	
COBALT	0.566	1/1	0.168 J	2/2	0.347 J	3/3	0.383 J	**YES**	
COPPER	56.6	1/1	31.6	2/2	30.6	3/3	36.6	**YES**	
IRON	1030	1/1	197	2/2	800	3/3	880	**YES**	
LEAD	6.1	1/1	0.763 J	2/2	1.9 J	3/3	2.35 J	**YES**	
MAGNESIUM	5560	1/1	3280	2/2	5340	3/3	5290	NO	NUT
MANGANESE	143	1/1	32.3	2/2	133	3/3	112	**YES**	
MERCURY	0.082	1/1	0.043	2/2	0.037	3/3	0.066 J	**YES**	
NICKEL	10.4	1/1	0.978 J	2/2	4.5	3/3	2.8	**YES**	
POTASSIUM	2470	1/1	2120 J	2/2	1540 J	3/3	2100 J	NO	NUT
SELENIUM	1.4	1/1	1.2 J	2/2	1.1 J	3/3	1.3 J	**YES**	
SILVER	0.216	1/1	**0.296** J	2/2	**0.246** J	3/3	**0.246** J	**YES**	
SODIUM	5710	1/1	5620 J	2/2	3690 J	3/3	5000 J	NO	NUT
THALLIUM	0.005	0/1	ND	1/2	0.004 J	0/3	ND	**YES**	
VANADIUM	2.2	1/1	0.598 J	2/2	1.6 J	3/3	1.9 J	**YES**	
ZINC	50.5	1/1	37.4	2/2	32.4	3/3	37.5	**YES**	

Notes:
Shading indicates exceedance of reference concentration or chemical retained for further evaluation.
Metals in mg/kg; organics in ug/kg
See Tables 4-6 to 4-10 for complete summary statistics.

Rationale Codes:
For Elimination:
NUT = Essential Nutrient
TOTAL = Individual PCB homologs included in total PCB calculation

Abbreviations:
NA - Not available
ND - Not detected
FOD - Frequency of Detection
Max - Maximum detected concentration

TABLE 6-7
2005 AND 2010 CLAM AND MUSSEL DATA COMPARED TO CTLs
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Chemical	CTL[1]	Northwest		Northeast		Stillwater		South	
		FOD	Max	FOD	Max	FOD	Max	FOD	Max
SVOCs									
2-METHYLPHENOL	NA	3/6	600 J	3/11	330 J	0/1	ND	0/3	ND
BENZALDEHYDE	NA	5/6	8700 JEB	10/11	27000 JEB	1/1	820 JEB	3/3	37000 JEB
PCBs									
AROCLOR-1260	930	0/6	ND	3/11	170	1/1	440	0/3	ND
PCB Homologs									
TOTAL PCB HOMOLOGS	930	1/1	6.9	5/5	62 J	3/3	81 J	1/1	16.9 J
TOTAL PCB HOMOLOGS-HALFND	930	1/1	12.5	5/5	72.6 J	3/3	137 J	1/1	20.8 J
Metals									
ALUMINUM	NA	1/7	7.6 J	5/16	42.6 J	3/4	32.2 J	1/4	15.9 J
ARSENIC	1.6	7/7	**4.2** J	16/16	**3.9** J	4/4	**3.2** J	4/4	**3.5** J
BARIUM	NA	1/7	0.701	3/16	0.754	2/4	0.754	1/4	0.535
BERYLLIUM	NA	2/7	0.0081	5/16	0.012 J	0/4	ND	1/4	0.0077 J
CADMIUM	0.15	6/7	**0.22** J	13/16	**0.73** J	3/4	**0.18** J	3/4	**0.156** J
CHROMIUM	NA	4/7	6.1 J	9/16	2.9 J	4/4	0.29 J	2/4	0.59 J
COBALT	NA	4/7	0.21	7/16	0.176 J	4/4	0.147 J	1/4	0.1 J
COPPER	NA	4/7	2.4	7/16	2.3	4/4	1.9	1/4	2.7
IRON	NA	4/7	51.9 J	9/16	102 J	3/4	81.1 J	1/4	36.4 J
LEAD	0.4	1/7	0.216 J	7/16	**1.1** J	3/4	**1.4**	1/4	0.245 J
MANGANESE	NA	4/7	12	7/16	12.5 J	4/4	1.5 J	3/4	38.6 J
MERCURY	0.18	3/7	0.015 J	7/16	0.016 J	4/4	0.022	1/4	0.012 J
NICKEL	NA	4/7	0.59	7/16	0.59 J	3/4	0.546 J	1/4	0.291 J
SELENIUM	0.34	1/7	**0.67** J	5/16	**0.884** J	3/4	**0.942** J	1/4	**0.69** J
SILVER	NA	1/7	0.241	5/16	0.407	3/4	0.213	1/4	0.48
VANADIUM	NA	6/7	0.92 J	14/16	0.65 J	4/4	0.24 J	2/4	1.2 J
ZINC	NA	7/7	36.1	16/16	24.3	4/4	18.4	4/4	17.4

Footnotes:
1 - CTLs were obtained from Oregon DEQ, 2007.

Notes:
Shading indicates exceedance of CTL.
Metals in mg/kg; organics in ug/kg
See Tables 4-6 to 4-10 for complete summary statistics.

NA - Not available
ND - Not detected
CTL - Critical Tissue Level

TABLE 6-8
2010 CRAB DATA COMPARED TO CTLs
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Chemical	CTL[(1)]	Northwest		Northeast		Stillwater	
		FOD	Max	FOD	Max	FOD	Max
PCBs							
TOTAL PCB HOMOLOGS	930	1/1	120 J	2/2	50.4 J	3/3	110 J
TOTAL PCB HOMOLOGS-HALFND	930	1/1	129 J	2/2	62.5 J	3/3	124 J
Metals							
ALUMINUM	NA	1/1	91.6	2/2	429	3/3	468
ARSENIC	1.6	1/1	**7.8** J	2/2	**7.3** J	3/3	**8.9** J
BARIUM	NA	1/1	3.8	2/2	6.2	3/3	6.15
BERYLLIUM	NA	0/1	ND	0/2	ND	1/3	0.072 J
CADMIUM	0.15	1/1	**0.289**	2/2	0.082 J	3/3	0.052
CHROMIUM	NA	0/1	ND	2/2	3.4	3/3	2.35
COBALT	NA	1/1	0.168 J	2/2	0.347 J	3/3	0.383 J
COPPER	NA	1/1	31.6	2/2	30.6	3/3	36.6
IRON	NA	1/1	197	2/2	800	3/3	880
LEAD	0.4	1/1	**0.763** J	2/2	**1.9** J	3/3	**2.35** J
MANGANESE	NA	1/1	32.3	2/2	133	3/3	112
MERCURY	0.18	1/1	0.043	2/2	0.037	3/3	0.066 J
NICKEL	NA	1/1	0.978 J	2/2	4.5	3/3	2.8
SELENIUM	0.34	1/1	**1.2** J	2/2	**1.1** J	3/3	**1.3** J
SILVER	NA	1/1	0.296 J	2/2	0.246 J	3/3	0.246 J
THALLIUM	NA	0/1	ND	1/2	0.004 J	0/3	ND
VANADIUM	NA	1/1	0.598 J	2/2	1.6 J	3/3	1.9 J
ZINC	NA	1/1	37.4	2/2	32.4	3/3	37.5

Footnotes:
1 - CTLs were obtained from Oregon DEQ, 2007.

Notes:
Shading indicates exceedance of CTL.
Metals in mg/kg; organics in ug/kg
See Tables 4-6 to 4-10 for complete summary statistics.

NA - Not available
ND - Not detected
PAL - Project Action Level
CTL - Critical Tissue Level

TABLE 6-9
TERRESTRIAL FOOD CHAIN MODEL - CONSERVATIVE SCENARIO
PISCIVOROUS RECEPTORS - SEDIMENT/CLAM/MUSSEL
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Chemical	Piscivorous Receptor EEQs			
	Herring Gull		Raccoon	
	NOAEL	LOAEL	NOAEL	LOAEL
SEMIVOLATILES				
2-METHYLNAPHTHALENE	4.1E-04	4.1E-05	2.6E-05	4.8E-06
2-METHYLPHENOL	NV	NV	5.2E-02	1.7E-02
ACENAPHTHENE	1.9E-03	1.9E-04	1.2E-04	2.2E-05
ACENAPHTHYLENE	1.2E-03	1.2E-04	7.5E-05	1.4E-05
ANTHRACENE	6.5E-03	6.5E-04	4.1E-04	7.5E-05
BENZALDEHYDE	NV	NV	8.0E-01	4.0E-01
BENZO(A)ANTHRACENE	8.0E-03	8.0E-04	5.3E-02	8.5E-04
BENZO(A)PYRENE	5.6E-03	5.6E-04	3.8E-02	6.0E-04
BENZO(B)FLUORANTHENE	7.3E-03	7.3E-04	4.8E-02	7.7E-04
BENZO(G,H,I)PERYLENE	2.4E-03	2.4E-04	1.6E-02	2.5E-04
BENZO(K)FLUORANTHENE	5.8E-03	5.8E-04	3.8E-02	6.2E-04
CARBAZOLE	2.1E-03	2.1E-04	1.3E-04	2.4E-05
CHRYSENE	1.3E-02	1.3E-03	8.6E-02	1.4E-03
DIBENZO(A,H)ANTHRACENE	8.6E-04	8.6E-05	5.7E-03	9.2E-05
DIBENZOFURAN	7.6E-04	7.6E-05	NV	NV
FLUORANTHENE	4.1E-02	4.1E-03	2.6E-03	4.8E-04
FLUORENE	1.2E-03	1.2E-04	7.6E-05	1.4E-05
INDENO(1,2,3-CD)PYRENE	2.4E-03	2.4E-04	1.6E-02	2.5E-04
NAPHTHALENE	1.1E-03	1.1E-04	6.8E-05	1.2E-05
PHENANTHRENE	1.1E-02	1.1E-03	6.7E-04	1.2E-04
PYRENE	3.3E-02	3.3E-03	2.2E-01	3.5E-03
PESTICIDES				
GAMMA-CHLORDANE	8.3E-04	1.7E-04	8.0E-04	4.0E-04
TOTAL CHLORDANE	8.3E-04	1.7E-04	8.0E-04	4.0E-04
PCBS				
TOTAL AROCLOR	1.5E+00	1.5E-01	7.7E+00	7.7E-01
PCB HOMOLOGS				
TOTAL PCB HOMOLOGS	1.5E-01	1.5E-02	7.6E-01	7.6E-02
METALS				
ALUMINUM	3.4E-01	3.4E-02	3.8E+01	3.8E+00
ANTIMONY	NV	NV	4.5E+00	9.6E-02
ARSENIC	4.7E-01	2.3E-01	1.8E+00	4.1E-01
BARIUM	1.3E-02	6.7E-03	1.0E-02	6.3E-03
BERYLLIUM	NV	NV	1.9E-02	1.5E-02
CADMIUM	9.2E-01	2.1E-01	3.5E+00	4.0E-01
CHROMIUM	4.9E+00	8.4E-01	1.1E+01	4.5E-01
COBALT	1.1E-02	4.5E-03	2.1E-02	8.3E-03
COPPER	5.2E-01	6.1E-02	7.5E-01	5.1E-02
IRON	2.4E+00	2.4E-01	9.6E+00	9.6E-01
LEAD	3.9E+01	1.4E+00	2.8E+01	6.9E-01
MANGANESE	5.9E-02	2.8E-02	3.7E-01	1.3E-01
MERCURY	1.3E+00	1.3E-01	4.7E-01	9.5E-02
NICKEL	4.2E-02	1.5E-02	3.2E-01	3.7E-02
SELENIUM	8.6E-01	3.1E-01	3.2E+00	6.9E-01
SILVER	5.8E-02	1.9E-03	3.5E-02	1.8E-03
THALLIUM	NV	NV	4.0E+00	4.0E-01
VANADIUM	1.1E+00	2.2E-01	1.7E-01	7.3E-02
ZINC	1.8E-01	7.1E-02	3.0E-01	7.6E-02

Cells are shaded if the value is greater than 1.0
NV - No value
NOAEL - No Observed Adverse Effects Level
LOAEL - Lowest Observed Adverse Effects Level
EEQ - Ecological Effects Quotient

TABLE 6-10
TERRESTRIAL FOOD CHAIN MODEL - AVERAGE SCENARIO
PISCIVOROUS RECEPTORS - SEDIMENT/CLAM/MUSSEL
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Chemical	Piscivorous Receptor EEQs			
	Herring Gull		Raccoon	
	NOAEL	LOAEL	NOAEL	LOAEL
PCBS				
TOTAL AROCLOR	1.1E-01	1.1E-02	3.3E-01	3.3E-02
METALS				
ALUMINUM	1.4E-01	1.4E-02	9.6E+00	9.6E-01
ANTIMONY	NV	NV	5.2E-02	1.1E-03
ARSENIC	2.2E-01	1.1E-01	5.0E-01	1.1E-01
CADMIUM	2.5E-02	5.8E-03	5.2E-02	5.8E-03
CHROMIUM	7.3E-02	1.2E-02	9.1E-02	3.8E-03
IRON	5.1E-01	5.1E-02	1.2E+00	1.2E-01
LEAD	2.6E-01	9.5E-03	1.1E-01	2.7E-03
MERCURY	3.3E-01	3.3E-02	7.1E-02	1.4E-02
SELENIUM	3.9E-01	1.4E-01	8.4E-01	1.8E-01
THALLIUM	NV	NV	1.6E-01	1.6E-02
VANADIUM	2.7E-01	5.5E-02	2.5E-02	1.1E-02

Cells are shaded if the value is greater than 1.0

NOAEL - No Observed Adverse Effects Level
LOAEL - Lowest Observed Adverse Effects Level
EEQ - Ecological Effects Quotient

TABLE 6-11
TERRESTRIAL FOOD CHAIN MODEL - CONSERVATIVE SCENARIO
PISCIVOROUS RECEPTORS - SEDIMENT/CRAB
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Chemical	Piscivorous Receptor EEQs			
	Herring Gull		Raccoon	
	NOAEL	LOAEL	NOAEL	LOAEL
SEMIVOLATILES				
2-METHYLNAPHTHALENE	4.1E-04	4.1E-05	2.6E-05	4.8E-06
ACENAPHTHENE	1.9E-03	1.9E-04	1.2E-04	2.2E-05
ACENAPHTHYLENE	1.2E-03	1.2E-04	7.5E-05	1.4E-05
ANTHRACENE	6.5E-03	6.5E-04	4.1E-04	7.5E-05
BENZO(A)ANTHRACENE	8.0E-03	8.0E-04	5.3E-02	8.5E-04
BENZO(A)PYRENE	5.6E-03	5.6E-04	3.8E-02	6.0E-04
BENZO(B)FLUORANTHENE	7.3E-03	7.3E-04	4.8E-02	7.7E-04
BENZO(G,H,I)PERYLENE	2.4E-03	2.4E-04	1.6E-02	2.5E-04
BENZO(K)FLUORANTHENE	5.8E-03	5.8E-04	3.8E-02	6.2E-04
CARBAZOLE	2.1E-03	2.1E-04	1.3E-04	2.4E-05
CHRYSENE	1.3E-02	1.3E-03	8.6E-02	1.4E-03
DIBENZO(A,H)ANTHRACENE	8.6E-04	8.6E-05	5.7E-03	9.2E-05
DIBENZOFURAN	7.6E-04	7.6E-05	NV	NV
FLUORANTHENE	4.1E-02	4.1E-03	2.6E-03	4.8E-04
FLUORENE	1.2E-03	1.2E-04	7.6E-05	1.4E-05
INDENO(1,2,3-CD)PYRENE	2.4E-03	2.4E-04	1.6E-02	2.5E-04
NAPHTHALENE	1.1E-03	1.1E-04	6.8E-05	1.2E-05
PHENANTHRENE	1.1E-02	1.1E-03	6.7E-04	1.2E-04
PYRENE	3.3E-02	3.3E-03	2.2E-01	3.5E-03
PESTICIDES				
GAMMA-CHLORDANE	8.3E-04	1.7E-04	8.0E-04	4.0E-04
TOTAL CHLORDANE	8.3E-04	1.7E-04	8.0E-04	4.0E-04
PCBS				
TOTAL AROCLOR	9.1E-01	9.1E-02	4.9E+00	4.9E-01
PCB HOMOLOGS				
TOTAL PCB HOMOLOGS	2.1E-01	2.1E-02	1.0E+00	1.0E-01
METALS				
ALUMINUM	1.3E+00	1.3E-01	1.3E+02	1.3E+01
ANTIMONY	NV	NV	4.5E+00	9.6E-02
ARSENIC	9.7E-01	4.8E-01	3.8E+00	8.6E-01
BARIUM	7.6E-02	3.8E-02	5.5E-02	3.5E-02
BERYLLIUM	NV	NV	6.7E-02	5.3E-02
CADMIUM	8.5E-01	2.0E-01	3.3E+00	3.7E-01
CHROMIUM	4.7E+00	7.9E-01	1.0E+01	4.3E-01
COBALT	1.6E-02	6.8E-03	3.1E-02	1.2E-02
COPPER	2.5E+00	2.9E-01	3.4E+00	2.3E-01
IRON	4.3E+00	4.3E-01	1.6E+01	1.6E+00
LEAD	3.9E+01	1.4E+00	2.8E+01	7.0E-01
MANGANESE	1.9E-01	8.8E-02	1.2E+00	4.1E-01
MERCURY	2.9E+00	2.9E-01	1.1E+00	2.1E-01
NICKEL	1.8E-01	6.6E-02	1.3E+00	1.5E-01
SELENIUM	1.2E+00	4.1E-01	4.3E+00	9.2E-01
SILVER	3.6E-02	1.2E-03	2.2E-02	1.1E-03
THALLIUM	NV	NV	4.3E+00	4.3E-01
VANADIUM	1.6E+00	3.2E-01	2.4E-01	1.0E-01
ZINC	1.9E-01	7.3E-02	3.1E-01	7.8E-02

Cells are shaded if the value is greater than 1.0
NV - No value
NOAEL - No Observed Adverse Effects Level
LOAEL - Lowest Observed Adverse Effects Level
EEQ - Ecological Effects Quotient

TABLE 6-12
TERRESTRIAL FOOD CHAIN MODEL - AVERAGE SCENARIO
PISCIVOROUS RECEPTORS - SEDIMENT/CRAB
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Chemical	Piscivorous Receptor EEQs			
	Herring Gull		Raccoon	
	NOAEL	LOAEL	NOAEL	LOAEL
PCBS				
TOTAL AROCLOR	2.3E-02	2.3E-03	7.3E-02	7.3E-03
METALS				
ALUMINUM	7.9E-01	7.9E-02	4.9E+01	4.9E+00
ANTIMONY	NV	NV	5.2E-02	1.1E-03
ARSENIC	7.2E-01	3.6E-01	1.7E+00	3.8E-01
CADMIUM	1.8E-02	4.1E-03	3.7E-02	4.1E-03
CHROMIUM	1.8E-01	3.1E-02	2.2E-01	9.1E-03
COPPER	1.6E+00	1.9E-01	1.2E+00	8.3E-02
IRON	1.9E+00	1.9E-01	4.1E+00	4.1E-01
LEAD	4.5E-01	1.6E-02	1.8E-01	4.5E-03
MANGANESE	1.1E-01	5.4E-02	4.2E-01	1.5E-01
MERCURY	1.4E+00	1.4E-01	2.9E-01	5.9E-02
NICKEL	7.8E-02	2.8E-02	3.3E-01	3.8E-02
SELENIUM	8.2E-01	2.9E-01	1.8E+00	3.8E-01
THALLIUM	NV	NV	7.5E+01	7.5E+00
VANADIUM	1.0E+00	2.1E-01	9.0E-02	4.0E-02

Cells are shaded if the value is greater than 1.0

NOAEL - No Observed Adverse Effects Level
LOAEL - Lowest Observed Adverse Effects Level
EEQ - Ecological Effects Quotient

TABLE 6-13
SUMMARY OF ECOLOGICAL COPCS IN EACH MEDIA AFTER THE SCREENING STEP
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Parameter	Benthic Invertebrates	Biota (CTL) (clams/mussels /crabs)	Piscivorous Birds and Mammals consuming Clam/Mussels	Piscivorous Birds and Mammals consuming Crab
VOLATILES				
1,1-DICHLOROETHENE				
1,3-DICHLOROBENZENE				
1,4-DICHLOROBENZENE				
2-BUTANONE				
ACETONE				
CARBON DISULFIDE				
TOTAL CHLORINATED ETHENES				
TOTAL CHLORINATED VOCS				
TRICHLOROETHENE				
SEMIVOLATILES				
1,1-BIPHENYL				
2,4-DIMETHYLPHENOL				
2-METHYLNAPHTHALENE	X			
2-METHYLPHENOL		X		
4-CHLORO-3-METHYLPHENOL				
4-METHYLPHENOL				
ACENAPHTHENE	X			
ACENAPHTHYLENE	X			
ANTHRACENE	X			
BENZALDEHYDE		X		
BENZO(A)ANTHRACENE	X			
BENZO(A)PYRENE	X			
BENZO(B)FLUORANTHENE	X			
BENZO(G,H,I)PERYLENE	X			
BENZO(K)FLUORANTHENE	X			
BIS(2-ETHYLHEXYL)PHTHALATE				
CARBAZOLE	X			
CHRYSENE	X			
DIBENZO(A,H)ANTHRACENE	X			
DIBENZOFURAN	X			
FLUORANTHENE	X			
FLUORENE	X			
INDENO(1,2,3-CD)PYRENE	X			
ISOPHORONE				
NAPHTHALENE	X			
PHENANTHRENE	X			
PHENOL				
PYRENE	X			
HIGH MOLECULAR WEIGHT PAHS	X			
LOW MOLECULAR WEIGHT PAHS	X			
TOTAL PAHS	X			
PESTICIDES				
4,4'-DDE				
4,4'-DDT				
ALDRIN				
ALPHA-BHC				
BETA-BHC	X			
DELTA-BHC				
DIELDRIN				
ENDOSULFAN I				
ENDOSULFAN SULFATE	X			
ENDRIN				
ENDRIN ALDEHYDE				
ENDRIN KETONE				
GAMMA-BHC (LINDANE)				
GAMMA-CHLORDANE	X			
METHOXYCHLOR				
TOTAL CHLORDANE	X			
TOTAL DDD/DDE/DDT				

TABLE 6-13
SUMMARY OF ECOLOGICAL COPCS IN EACH MEDIA AFTER THE SCREENING STEP
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Parameter	Benthic Invertebrates	Biota (CTL) (clams/mussels /crabs)	Piscivorous Birds and Mammals consuming Clam/Mussels	Piscivorous Birds and Mammals consuming Crab
PCBS				
AROCLOR-1248	X(1)			
AROCLOR-1254	X(1)			
AROCLOR-1260	X(1)	X(1)		
TOTAL AROCLOR	X	X	X	X
PCB HOMOLOGS				
DICHLOROBIPHENYLS				
HEPTACHLOROBIPHENYLS	X(2)			
HEXACHLOROBIPHENYL	X(2)			
PENTACHLOROBIPHENYLS	X(2)			
TETRACHLOROBIPHENYLS				
TOTAL OCTACHLOROBIPHENYLS	X(2)			
TOTAL PCB HOMOLOGS	X	X		
TOTAL TRICHLOROBIPHENYLS				
METALS				
ALUMINUM		X	X	X
ANTIMONY	X		X	X
ARSENIC	X	X	X	X
BARIUM		X		
BERYLLIUM	X	X		
CADMIUM	X	X	X	X
CALCIUM				
CHROMIUM	X	X	X	X
COBALT	X	X		
COPPER	X	X		X
CYANIDE				
IRON		X	X	X
LEAD	X	X	X	X
MAGNESIUM				
MANGANESE	X	X		X
MERCURY	X		X	X
NICKEL	X	X		X
POTASSIUM				
SELENIUM	X	X	X	X
SILVER	X	X		
SODIUM				
THALLIUM	X	X	X	X
VANADIUM		X	X	X
ZINC	X	X		
AVS/SEM				
ACID VOLATILE SULFIDE				
CADMIUM				
COPPER				
LEAD				
MERCURY				
NICKEL				
ZINC				
AVS/SEM				
SEM/AVS				
PETROLEUM HYDROCARBONS				
EXTRACTABLE PETROLEUM HYDROCARBONS				

Footnotes:
1 - Accounted for in total Aroclor value; will not be evaluated separately in this ERA.
2 - Accounted for in total PCB Homologs value; will not be evaluated separately in this ERA.

X - Chemical retained as COPC for further evaluation
CTL - Critical tissue level

TABLE 6-14
SUMMARY OF *LEPTOCHEIRUS PLUMULOSUS* SURVIVAL, GROWTH, AND REPRODUCTION RESULTS
TOXICITY TESTING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sample Number	Mean Survival (%)	Mean Dry Weight (mg/organism)[1]	Mean Dry Biomass (mg/organism)[1]	Mean Overall Juvenile Production (juveniles/ amphipod)	Mean Juvenile Production per Surviving Female (juveniles/female amphipod)
Laboratory Control Sample						
NA	Lab Control	85	1.466	1.237	5.95	12.53
Site Samples						
GI_SD_STILLWATER_2010	GI-SD501-0006	84	1.162	0.965	2.92	5.93
GI_SD_STILLWATER_2010	GI-SD502-0006	92	1.799	1.660	7.27	12.44
GI_SD_STILLWATER_2010	GI-SD503-0006	71	0.979	0.714	4.38	9.98
GI_SD_STILLWATER_2010	GI-SD504-0006	93	1.675	1.565	6.01	12.11
GI_SD_STILLWATER_2010	GI-SD505-0006	85	1.031	0.890	6.12	12.17
GI_SD_STILLWATER_2010	GI-SD506-0006	74	0.981	0.819	5.23	19.29
GI_SD_STILLWATER_2010	GI-SD507-0006	67	1.040	0.785	6.71	10.34
GI_SD_STILLWATER_2010	GI-SD508-0006	74	1.374	1.002	3.26	7.58
GI_SD_STILLWATER_2010	GI-SD509-0006	63	0.990	0.631	5.63	11.59
GI_SD_STILLWATER_2010	GI-SD-DUP01-043010[2]	54	0.857	0.491	4.05	6.49
GI_SD_STILLWATER_2010	GI-SD527-0006	81	1.273	1.028	4.58	9.40
GI_SD_STILLWATER_2010	GI-SD532-0006	88	1.525	1.321	7.02	14.14
GI_SD_NE_2010	GI-SD510-0006	77	1.262	0.948	5.82	11.50
GI_SD_NE_2010	GI-SD511-0006	77	1.568	1.164	4.59	17.16
GI_SD_NE_2010	GI-SD512-0006	74	1.029	0.760	5.56	27.60
GI_SD_NE_2010	GI-SD513-0006	93	1.344	1.248	7.00	16.14
GI_SD_NE_2010	GI-SD514-0006	71	1.551	1.168	8.52	16.53
GI_SD_NE_2010	GI-SD515-0006	75	1.614	1.249	5.97	11.74
GI_SD_NE_2010	GI-SD517-0006	80	1.624	1.318	5.98	13.02
GI_SD_NE_2010	GI-SD518-0006	81	0.480	0.392	1.40	2.39
GI_SD_NE_2010	GI-SD519-0006	63	1.779	1.110	4.08	17.88
GI_SD_NE_2010	GI-SD528-0006	81	1.157	0.907	7.11	19.88
GI_SD_NE_2010	GI-SD530-0006	84	2.140	1.794	8.01	20.74
GI_SD_NE_2010	GI-SD531-0006	79	1.220	0.986	6.71	20.15
GI_SD_NE_2010	GI-SD566-0006	53	1.302	0.706	7.37	13.19
GI_SD_NW_2010	GI-SD520-0006	50	1.344	0.717	3.18	10.26
GI_SD_NW_2010	GI-SD521-0006	73	1.237	0.893	5.65	29.48
GI_SD_NW_2010	GI-SD522-0006	87	1.802	1.574	4.74	14.27
GI_SD_NW_2010	GI-SD523-0006	85	1.216	1.020	3.16	13.46
GI_SD_S_2010	GI-SD529-0006	88	1.898	1.670	8.22	19.00
Reference Sample						
GI_SD_REF_2010	GI-SD524-0006	80	1.516	1.258	5.67	11.50
GI_SD_REF_2010	GI-SD525-0006	84	1.477	1.356	6.02	13.73
GI_SD_REF_2010	GI-SD526-0006	83	1.402	1.120	6.92	13.13

Appendix G.5 presents the toxicity test laboratory report.

NA - Not applicable
1 Measuring adult *L. plumulosus*
2 Duplicate of GI-SD509-0006

TABLE 6-15
SUMMARY OF LEPTOCHEIRUS PLUMULOSUS TEST DATA -
STATISTICAL COMPARISONS TOXICITY TESTING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT

		Survival					
			Statistically Different Compared to:				
		Survival	Lab	Reference Sample			Risk
Sample Area	Sample Number	(%)	Control	GI-SD526-0006	GI-SD525-0006	GI-SD524-0006	
Laboratory Control Sample							
NA	Lab Control	85	--	--	--	--	NA
Site Samples							
GI_SD_STILLWATER_2010	GI-SD501-0006	84	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD502-0006	92	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD503-0006	71	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD504-0006	93	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD505-0006	85	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD506-0006	74	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD507-0006	67	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD508-0006	74	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD509-0006	63	YES	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD-DUP01-043010	54	YES	YES	YES	NO	Potentially unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD527-0006	81	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD532-0006	88	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD510-0006	77	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD511-0006	77	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD512-0006	74	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD513-0006	93	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD514-0006	71	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD515-0006	75	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD517-0006	80	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD518-0006	81	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD519-0006	63	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD528-0006	81	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD530-0006	84	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD531-0006	79	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD566-0006	53	YES	YES	YES	YES	Potentially unacceptable site-related risk
GI_SD_NW_2010	GI-SD520-0006	50	YES	YES	YES	YES	Potentially unacceptable site-related risk
GI_SD_NW_2010	GI-SD521-0006	73	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD522-0006	87	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD523-0006	85	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_S_2010	GI-SD529-0006	88	NO	NO	NO	NO	No unacceptable site-related risk
Reference Sample							
GI_SD_REF_2010	GI-SD524-0006	80	NO	NO	NO	--	NA
GI_SD_REF_2010	GI-SD525-0006	84	NO	NO	--	--	NA
GI_SD_REF_2010	GI-SD526-0006	83	NO	--	--	--	NA

TABLE 6-15
SUMMARY OF LEPTOCHEIRUS PLUMULOSUS TEST DATA -
STATISTICAL COMPARISONS TOXICITY TESTING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT

		Growth (Dry Weight)					
			Statistically Different Compared to:				
		Dry Weight	Lab	Reference Sample			Risk
Sample Area	Sample Number	(mg)	Control	GI-SD526-0006	GI-SD525-0006	GI-SD524-0006	
Laboratory Control Sample							
NA	Lab Control	1.466	--	--	--	--	NA
Site Samples							
GI_SD_STILLWATER_2010	GI-SD501-0006	1.162	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD502-0006	1.799	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD503-0006	0.979	YES	YES	NO	YES	Potentially unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD504-0006	1.675	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD505-0006	1.031	YES	YES	NO	YES	Potentially unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD506-0006	0.981	NO	NO	NO	YES	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD507-0006	1.040	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD508-0006	1.374	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD509-0006	0.990	YES	YES	NO	YES	Potentially unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD-DUP01-043010	0.857	YES	YES	NO	YES	Potentially unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD527-0006	1.273	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD532-0006	1.525	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD510-0006	1.262	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD511-0006	1.568	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD512-0006	1.029	YES	YES	NO	YES	Potentially unacceptable site-related risk
GI_SD_NE_2010	GI-SD513-0006	1.344	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD514-0006	1.551	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD515-0006	1.614	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD517-0006	1.624	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD518-0006	0.480	YES	YES	YES	YES	Potentially unacceptable site-related risk
GI_SD_NE_2010	GI-SD519-0006	1.779	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD528-0006	1.157	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD530-0006	2.140	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD531-0006	1.220	YES	NO	NO	YES	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD566-0006	1.302	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD520-0006	1.344	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD521-0006	1.237	YES	NO	NO	YES	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD522-0006	1.802	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD523-0006	1.216	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_S_2010	GI-SD529-0006	1.898	NO	NO	NO	NO	No unacceptable site-related risk
Reference Sample							
GI_SD_REF_2010	GI-SD524-0006	1.516	NO	NO	NO	--	NA
GI_SD_REF_2010	GI-SD525-0006	1.477	NO	NO	--	--	NA
GI_SD_REF_2010	GI-SD526-0006	1.402	NO	--	--	--	NA

TABLE 6-15
SUMMARY OF LEPTOCHEIRUS PLUMULOSUS TEST DATA -
STATISTICAL COMPARISONS TOXICITY TESTING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT

		Growth (Dry Biomass)					
		Dry	Statistically Different Compared to:				Risk
		Biomass	Lab	Reference Sample			
Sample Area	Sample Number	(mg)	Control	GI-SD526-0006	GI-SD525-0006	GI-SD524-0006	
Laboratory Control Sample							
NA	Lab Control	1.237	--	--	--	--	NA
Site Samples							
GI_SD_STILLWATER_2010	GI-SD501-0006	0.965	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD502-0006	1.660	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD503-0006	0.714	YES	NO	NO	YES	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD504-0006	1.565	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD505-0006	0.890	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD506-0006	0.819	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD507-0006	0.785	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD508-0006	1.002	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD509-0006	0.631	YES	YES	YES	YES	Potentially unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD-DUP01-043010	0.491	YES	YES	YES	YES	Potentially unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD527-0006	1.028	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD532-0006	1.321	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD510-0006	0.948	YES	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD511-0006	1.164	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD512-0006	0.760	YES	YES	NO	YES	Potentially unacceptable site-related risk
GI_SD_NE_2010	GI-SD513-0006	1.248	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD514-0006	1.168	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD515-0006	1.249	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD517-0006	1.318	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD518-0006	0.392	YES	YES	YES	YES	Potentially unacceptable site-related risk
GI_SD_NE_2010	GI-SD519-0006	1.110	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD528-0006	0.907	YES	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD530-0006	1.794	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD531-0006	0.986	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD566-0006	0.706	YES	NO	NO	YES	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD520-0006	0.717	YES	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD521-0006	0.893	YES	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD522-0006	1.574	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD523-0006	1.020	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_S_2010	GI-SD529-0006	1.670	NO	NO	NO	NO	No unacceptable site-related risk
Reference Sample							
GI_SD_REF_2010	GI-SD524-0006	1.258	NO	NO	NO	--	NA
GI_SD_REF_2010	GI-SD525-0006	1.356	NO	NO	--	--	NA
GI_SD_REF_2010	GI-SD526-0006	1.120	NO	--	--	--	NA

TABLE 6-15
SUMMARY OF LEPTOCHEIRUS PLUMULOSUS TEST DATA -
STATISTICAL COMPARISONS TOXICITY TESTING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT

		Reproduction (Overall Juvenile Production)					
		Overall	Statistically Different Compared to:				Risk
		Juvenile	Lab	Reference Sample			
Sample Area	Sample Number	Production	Control	GI-SD526-0006	GI-SD525-0006	GI-SD524-0006	
Laboratory Control Sample							
NA	Lab Control	5.95	--	--	--	--	NA
Site Samples							
GI_SD_STILLWATER_2010	GI-SD501-0006	2.92	YES	YES	YES	YES	Potentially unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD502-0006	7.27	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD503-0006	4.38	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD504-0006	6.01	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD505-0006	6.12	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD506-0006	5.23	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD507-0006	6.71	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD508-0006	3.26	YES	NO	YES	YES	Potentially unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD509-0006	5.63	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD-DUP01-043010	4.05	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD527-0006	4.58	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD532-0006	7.02	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD510-0006	5.82	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD511-0006	4.59	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD512-0006	5.56	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD513-0006	7.00	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD514-0006	8.52	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD515-0006	5.97	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD517-0006	5.98	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD518-0006	1.40	YES	YES	YES	YES	Potentially unacceptable site-related risk
GI_SD_NE_2010	GI-SD519-0006	4.08	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD528-0006	7.11	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD530-0006	8.01	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD531-0006	6.71	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD566-0006	7.37	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD520-0006	3.18	YES	NO	YES	YES	Potentially unacceptable site-related risk
GI_SD_NW_2010	GI-SD521-0006	5.65	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD522-0006	4.74	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD523-0006	3.16	YES	NO	YES	YES	Potentially unacceptable site-related risk
GI_SD_S_2010	GI-SD529-0006	8.22	NO	NO	NO	NO	No unacceptable site-related risk
Reference Sample							
GI_SD_REF_2010	GI-SD524-0006	5.67	NO	NO	NO	--	NA
GI_SD_REF_2010	GI-SD525-0006	6.02	NO	NO	--	--	NA
GI_SD_REF_2010	GI-SD526-0006	6.92	NO	--	--	--	NA

TABLE 6-15
SUMMARY OF LEPTOCHEIRUS PLUMULOSUS TEST DATA -
STATISTICAL COMPARISONS TOXICITY TESTING
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT

		Reproduction (Juvenile Production per Surviving Female)					
		Juvenile Production per	Statistically Different Compared to:				Risk
			Lab	Reference Sample			
Sample Area	Sample Number	Surviving Female	Control	GI-SD526-0006	GI-SD525-0006	GI-SD524-0006	
Laboratory Control Sample							
NA	Lab Control	12.53	--	--	--	--	
Site Samples							
GI_SD_STILLWATER_2010	GI-SD501-0006	5.93	**YES**	NO	**YES**	**YES**	**Potentially unacceptable site-related risk**
GI_SD_STILLWATER_2010	GI-SD502-0006	12.44	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD503-0006	9.98	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD504-0006	12.11	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD505-0006	12.17	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD506-0006	19.29	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD507-0006	10.34	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD508-0006	7.58	NO	NO	**YES**	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD509-0006	11.59	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD-DUP01-043010	6.49	**YES**	NO	**YES**	**YES**	**Potentially unacceptable site-related risk**
GI_SD_STILLWATER_2010	GI-SD527-0006	9.40	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_STILLWATER_2010	GI-SD532-0006	14.14	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD510-0006	11.50	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD511-0006	17.16	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD512-0006	27.60	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD513-0006	16.14	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD514-0006	16.53	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD515-0006	11.74	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD517-0006	13.02	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD518-0006	2.39	**YES**	**YES**	**YES**	**YES**	**Potentially unacceptable site-related risk**
GI_SD_NE_2010	GI-SD519-0006	17.88	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD528-0006	19.88	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD530-0006	20.74	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD531-0006	20.15	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NE_2010	GI-SD566-0006	13.19	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD520-0006	10.26	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD521-0006	29.48	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD522-0006	14.27	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_NW_2010	GI-SD523-0006	13.46	NO	NO	NO	NO	No unacceptable site-related risk
GI_SD_S_2010	GI-SD529-0006	19.00	NO	NO	NO	NO	No unacceptable site-related risk
Reference Sample							
GI_SD_REF_2010	GI-SD524-0006	11.50	NO	NO	NO	--	
GI_SD_REF_2010	GI-SD525-0006	13.73	NO	NO	--	--	
GI_SD_REF_2010	GI-SD526-0006	13.13	NO	--	--	--	

Appendix G.5 presents the complete laboratory report.
NA - Not Applicable
No unacceptable site-related risk - Site sample mean result is not statistically different than the mean result in at least two of the three reference samples
Potentially unacceptable site-related risk - Site sample mean result is statistically different than the mean result in at least two of the three reference samples

TABLE 6-16
SUMMARY OF SAMPLES WITH POTENTIALLY UNACCEPTABLE SITE-RELATED RISK
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sample Number	Mean Survival	Mean Dry Weight	Mean Dry Biomass	Mean Overall Juvenile Production	Mean Juvenile Production per Surviving Female
Site Samples						
GI_SD_STILLWATER_2010	**GI-SD501-0006**				X	X
GI_SD_STILLWATER_2010	GI-SD502-0006					
GI_SD_STILLWATER_2010	**GI-SD503-0006**		X			
GI_SD_STILLWATER_2010	GI-SD504-0006					
GI_SD_STILLWATER_2010	**GI-SD505-0006**		X			
GI_SD_STILLWATER_2010	GI-SD506-0006					
GI_SD_STILLWATER_2010	GI-SD507-0006					
GI_SD_STILLWATER_2010	**GI-SD508-0006**				X	
GI_SD_STILLWATER_2010	**GI-SD509-0006**		X	X		
GI_SD_STILLWATER_2010	**GI-SD-DUP01-043010**[(1)]	X	X	X		X
GI_SD_STILLWATER_2010	GI-SD527-0006					
GI_SD_STILLWATER_2010	GI-SD532-0006					
GI_SD_NE_2010	GI-SD510-0006					
GI_SD_NE_2010	GI-SD511-0006					
GI_SD_NE_2010	**GI-SD512-0006**		X	X		
GI_SD_NE_2010	GI-SD513-0006					
GI_SD_NE_2010	GI-SD514-0006					
GI_SD_NE_2010	GI-SD515-0006					
GI_SD_NE_2010	GI-SD517-0006					
GI_SD_NE_2010	**GI-SD518-0006**		X	X	X	X
GI_SD_NE_2010	GI-SD519-0006					
GI_SD_NE_2010	GI-SD528-0006					
GI_SD_NE_2010	GI-SD530-0006					
GI_SD_NE_2010	GI-SD531-0006					
GI_SD_NE_2010	**GI-SD566-0006**	X				
GI_SD_NW_2010	**GI-SD520-0006**	X			X	
GI_SD_NW_2010	GI-SD521-0006					
GI_SD_NW_2010	GI-SD522-0006					
GI_SD_NW_2010	**GI-SD523-0006**				X	
GI_SD_S_2010	GI-SD529-0006					

X - Indicates that this sample has Potentially Unacceptable Site-Related Risk as presented in Table 6-16.
Shaded cells are samples with Potentially Unacceptable Site-Related Risk for at least one endpoint.

Footnotes:
1 - Duplicate of sample GI-SD509-0006

TABLE 6-17
SUMMARY OF SEDIMENT RESULTS COMPARED TO ER-L VALUES
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sampling Number	Sample Concentrations[1]													
		Antimony	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc	HMW PAHs	LMW PAHs	Total PAHs	Total PCB
	ER-L	2	8.2	1.2	81	34	46.7	0.15	20.9	0.5	150	1700	552	4022	22.7
GI_SD_STILLWATER_2010	GI-SD501-0006	0.40 UJ	1.6 J	0.307 J	18.8 J	28.7 J	35.2 J	0.107	7.7 J	0.145 J	51.9 J	48600	6550 J	55100 J	2720 J
GI_SD_STILLWATER_2010	GI-SD502-0006	0.81 J	2.7 J	0.507 J	12.4 J	21.2 J	11.3 J	0.02 J	10 J	0.135 U	43.8 J	27000 J	7750 J	34700 J	862 J
GI_SD_STILLWATER_2010	GI-SD503-0006	0.35 UJ	2 J	0.211 J	13.7 J	9.6 J	13.9 J	0.059	6.7 J	0.115 UJ	43.8 J	8900	944 J	9840 J	2.855 U
GI_SD_STILLWATER_2010	GI-SD504-0006	0.36 UJ	1.9 J	0.305 J	14.1 J	17.8 J	21 J	0.083	7 J	0.223 J	76.9 J	5960	1240 J	7200 J	394 J
GI_SD_STILLWATER_2010	GI-SD505-0006	0.208 J	0.272 UJ	0.288 J	13.9	25 J	20.4	0.079	6.7	0.136 U	48.2 J	5510	801 J	6310 J	950
GI_SD_STILLWATER_2010	GI-SD506-0006	0.35 UJ	0.999 J	0.103 J	10.1	11.1 J	11.4	0.035	6.5	0.116 UJ	40 J	3570	494 J	4060 J	547
GI_SD_STILLWATER_2010	GI-SD507-0006	0.35 UJ	1.3 J	0.145 J	11.2 J	12.5 J	12.4 J	0.045	6.5 J	0.143 J	42 J	7430 J	1090 J	8520 J	2590
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.33 UJ	1.03 J	0.43 J	9.85 J	14.8 J	10.6 J	0.0195 J	8.9 J	0.044 J	47.2 J	2150 J	326 J	2480 J	895 J
GI_SD_STILLWATER_2010	GI-SD509-0006	0.34 UJ	0.795 J	0.15 J	9.8 J	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	30.6 J	3000 J	593 J	3600 J	460 J
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.34 UJ	0.795 J	0.15 J	9.8 J	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	30.6 J	3000 J	593 J	3600 J	460 J
GI_SD_STILLWATER_2010	GI-SD527-0006	0.36 UJ	0.975 J	0.222 J	14.2 J	14.9 J	15 J	0.054	7.7 J	0.115 UJ	38.3 J	1570	233 J	1800 J	25.3
GI_SD_STILLWATER_2010	GI-SD532-0006	0.36 UJ	0.876 J	0.324 J	10 J	10.4 J	7.1 J	0.023 J	8.4 J	0.12 U	31 J	32000	6650 J	38700 J	1240
GI_SD_NE_2010	GI-SD510-0006	0.32 UJ	2.2 J	0.443 J	16.1 J	17.7 J	10.7 J	0.012 J	10.8 J	0.009 U	43.9 J	1020 J	244 J	1260 J	1.07 UJ
GI_SD_NE_2010	GI-SD511-0006	0.36 UJ	0.278 J	0.301 J	11.9 J	10.6 J	20.7 J	0.029	7.6 J	0.12 UJ	32.2 J	271 J	55.8 J	327 J	276 J
GI_SD_NE_2010	GI-SD512-0006	0.89 UJ	2.9 J	0.555	19.9 J	30.6 J	8.4 J	0.006 J	33.4	0.1 UJ	43.4 J	3910 J	1880 J	5790 J	3.2 J
GI_SD_NE_2010	GI-SD513-0006	1.03 UJ	0.065 UJ	0.166 J	8.4 J	6.8 J	7.3 J	0.0195 U	6.2	0.524	27.6 J	283 J	38.4 J	321 J	4.3 J
GI_SD_NE_2010	GI-SD514-0006	0.45 UJ	0.295 UJ	0.164 UJ	13.5 J	13.9 J	23 J	0.087	6.3 J	0.15 U	47.2 J	8700 J	2470 J	11200 J	16 J
GI_SD_NE_2010	GI-SD515-0006	0.253 J	2.6 J	0.465 J	20.4 J	18.7 J	18.3 J	0.239	8.2 J	0.135 U	37 J	4970 J	1390 J	6360 J	290 J
GI_SD_NE_2010	GI-SD517-0006-AVG	0.73 UJ	1.6 J	0.254	14.4 J	13.8 J	41.6 J	0.031 J	8.5	0.123 UJ	40.4 J	342 J	37.2 J	380 J	150 J
GI_SD_NE_2010	GI-SD518-0006	0.29 UJ	0.643 J	0.282 J	8.9 J	17.9 J	14.5 J	0.023	9.6 J	0.095 U	38.3 J	5100	840 J	5940 J	164 J
GI_SD_NE_2010	GI-SD519-0006	0.33 UJ	0.554 J	0.177 J	9.3	10.9 J	17.9	0.02 J	6	0.111 UJ	30.9 J	633	112 J	745 J	286
GI_SD_NE_2010	GI-SD528-0006	0.34 UJ	0.841 J	0.17 J	8.9 J	16.4 J	96.8 J	0.018 J	7.3	0.127 UJ	40 J	551 J	124 J	675 J	56.1 J
GI_SD_NE_2010	GI-SD530-0006	0.35 UJ	5.6 J	0.724	28.1 J	186 J	20.9 J	0.031	32.8	0.115 UJ	41.2 J	711 J	123 J	834 J	8.1 J
GI_SD_NE_2010	GI-SD531-0006	0.38 UJ	1.4 J	0.288	11.3 J	102 J	199 J	0.229	8.2	0.125 UJ	47.2 J	824 J	166 J	990 J	19.1 J
GI_SD_NE_2010	GI-SD566-0006	0.36 UJ	0.84 J	0.256 J	11.9 J	16 J	17.7 J	0.03	8.8 J	0.12 UJ	36.4 J	3290 J	949 J	4240 J	129 J
GI_SD_NW_2010	GI-SD520-0006	0.34 UJ	0.193 J	0.15 J	8.2 J	6.5 J	9.3 J	0.015 J	6.7	0.435 J	26.8 J	1520 J	425 J	1950 J	6.7 J
GI_SD_NW_2010	GI-SD521-0006	0.29 UJ	1.2 J	0.212	10.1 J	22.9 J	13.2 J	0.019 J	9.4	0.095 UJ	33.7 J	14100 J	3800 J	17900 J	0.71 U
GI_SD_NW_2010	GI-SD522-0006	1.3 UJ	5.3 J	1	24.7 J	40.6 J	22.2 J	0.039	21.6	0.492 J	65.4 J	1490 J	116 J	1600 J	6.4 J
GI_SD_NW_2010	GI-SD523-0006	0.3 UJ	3.3 J	0.783	18 J	37.7 J	35.9 J	0.005 J	17.2	0.139 UJ	50.7 J	1450 J	360 J	1810 J	3.92 J
GI_SD_S_2010	GI-SD529-0006	0.36 UJ	0.49 J	0.205 J	11.3	8.1 J	12.7	0.027 J	8.4	0.126 UJ	35.2 J	1780	567 J	2350 J	16
GI_SD_REF_2010	GI-SD524-0006	0.34 UJ	0.273 J	0.132 J	11.1 J	6.2 J	9.2 J	0.028	7 J	0.097 J	30.7 J	229 J	31 J	260 J	0.2715 U
GI_SD_REF_2010	GI-SD525-0006	0.42 UJ	1.6 J	0.367 J	19.8 J	15 J	20.6 J	0.083	10.2 J	0.19 J	61.8 J	673 J	96.6 J	770 J	0.3345 U
GI_SD_REF_2010	GI-SD526-0006	0.34 UJ	0.423 J	0.27 J	16.5 J	9.9 J	10.6 J	0.039	11.7 J	0.144 J	42.9 J	173 J	10.4 J	184 J	0.269 U

Footnotes:

1 Concentrations are presented in mg/kg for metals and ug/kg for organics.
2 Calculated by dividing sample concentration by ER-L.

Notes:
Shaded cells indicates an exceedance of ER-L.
One-half the detection limit is presented for nondetected results and used to calculate the ERL-Q.
ER-L - Effects range low
ERL-Q - Effects range low quotient

TABLE 6-17
SUMMARY OF SEDIMENT RESULTS COMPARED TO ER-L VALUES
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sampling Number	ERL-Q[2]													
		Antimony	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc	HMW PAHs	LMW PAHs	Total PAHs	Total PCB
	ER-L	2	8.2	1.2	81	34	46.7	0.15	20.9	0.5	150	1700	552	4022	22.7
GI_SD_STILLWATER_2010	GI-SD501-0006	0.20	0.20	0.26	0.23	0.84	0.75	0.71	0.37	0.29	0.35	28.59	11.87	13.70	119.82
GI_SD_STILLWATER_2010	GI-SD502-0006	0.41	0.33	0.42	0.15	0.62	0.24	0.13	0.48	0.27	0.29	15.88	14.04	8.63	37.97
GI_SD_STILLWATER_2010	GI-SD503-0006	0.18	0.24	0.18	0.17	0.28	0.30	0.39	0.32	0.23	0.29	5.24	1.71	2.45	0.13
GI_SD_STILLWATER_2010	GI-SD504-0006	0.18	0.23	0.25	0.17	0.52	0.45	0.55	0.33	0.45	0.51	3.51	2.25	1.79	17.36
GI_SD_STILLWATER_2010	GI-SD505-0006	0.10	0.03	0.24	0.17	0.74	0.44	0.53	0.32	0.27	0.32	3.24	1.45	1.57	41.85
GI_SD_STILLWATER_2010	GI-SD506-0006	0.17	0.12	0.09	0.12	0.33	0.24	0.23	0.31	0.23	0.27	2.10	0.89	1.01	24.10
GI_SD_STILLWATER_2010	GI-SD507-0006	0.17	0.16	0.12	0.14	0.37	0.27	0.30	0.31	0.29	0.28	4.37	1.97	2.12	114.10
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.16	0.13	0.36	0.12	0.44	0.23	0.13	0.43	0.09	0.31	1.26	0.59	0.62	39.43
GI_SD_STILLWATER_2010	GI-SD509-0006	0.17	0.10	0.13	0.12	0.35	0.23	0.19	0.28	0.21	0.20	1.76	1.07	0.90	20.26
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.17	0.10	0.13	0.12	0.35	0.23	0.19	0.28	0.21	0.20	1.76	1.07	0.90	20.26
GI_SD_STILLWATER_2010	GI-SD527-0006	0.18	0.12	0.19	0.18	0.44	0.32	0.36	0.37	0.23	0.26	0.92	0.42	0.45	1.11
GI_SD_STILLWATER_2010	GI-SD532-0006	0.18	0.11	0.27	0.12	0.31	0.15	0.15	0.40	0.24	0.21	18.82	12.05	9.62	54.63
GI_SD_NE_2010	GI-SD510-0006	0.16	0.27	0.37	0.20	0.52	0.23	0.08	0.52	0.02	0.29	0.60	0.44	0.31	0.05
GI_SD_NE_2010	GI-SD511-0006	0.18	0.03	0.25	0.15	0.31	0.44	0.19	0.36	0.24	0.21	0.16	0.10	0.08	12.16
GI_SD_NE_2010	GI-SD512-0006	0.44	0.35	0.46	0.25	0.90	0.18	0.04	1.60	0.20	0.29	2.30	3.41	1.44	0.14
GI_SD_NE_2010	GI-SD513-0006	0.51	0.01	0.14	0.10	0.20	0.16	0.13	0.30	1.05	0.18	0.17	0.07	0.08	0.19
GI_SD_NE_2010	GI-SD514-0006	0.22	0.04	0.14	0.17	0.41	0.49	0.58	0.30	0.30	0.31	5.12	4.47	2.78	0.70
GI_SD_NE_2010	GI-SD515-0006	0.13	0.32	0.39	0.25	0.55	0.39	1.59	0.39	0.27	0.25	2.92	2.52	1.58	12.78
GI_SD_NE_2010	GI-SD517-0006-AVG	0.37	0.20	0.21	0.18	0.41	0.89	0.21	0.41	0.25	0.27	0.20	0.07	0.09	6.61
GI_SD_NE_2010	GI-SD518-0006	0.14	0.08	0.24	0.11	0.53	0.31	0.15	0.46	0.19	0.26	3.00	1.52	1.48	7.22
GI_SD_NE_2010	GI-SD519-0006	0.17	0.07	0.15	0.11	0.32	0.38	0.13	0.29	0.22	0.21	0.37	0.20	0.19	12.60
GI_SD_NE_2010	GI-SD528-0006	0.17	0.10	0.14	0.11	0.48	2.07	0.12	0.35	0.25	0.27	0.32	0.22	0.17	2.47
GI_SD_NE_2010	GI-SD530-0006	0.17	0.68	0.60	0.35	5.47	0.45	0.21	1.57	0.23	0.27	0.42	0.22	0.21	0.36
GI_SD_NE_2010	GI-SD531-0006	0.19	0.17	0.24	0.14	3.00	4.26	1.53	0.39	0.25	0.31	0.48	0.30	0.25	0.84
GI_SD_NE_2010	GI-SD566-0006	0.18	0.10	0.21	0.15	0.47	0.38	0.20	0.42	0.24	0.24	1.94	1.72	1.05	5.68
GI_SD_NW_2010	GI-SD520-0006	0.17	0.02	0.13	0.10	0.19	0.20	0.10	0.32	0.87	0.18	0.89	0.77	0.48	0.30
GI_SD_NW_2010	GI-SD521-0006	0.15	0.15	0.18	0.12	0.67	0.28	0.13	0.45	0.19	0.22	8.29	6.88	4.45	0.03
GI_SD_NW_2010	GI-SD522-0006	0.65	0.65	0.83	0.30	1.19	0.48	0.26	1.03	0.98	0.44	0.88	0.21	0.40	0.28
GI_SD_NW_2010	GI-SD523-0006	0.15	0.40	0.65	0.22	1.11	0.77	0.03	0.82	0.28	0.34	0.85	0.65	0.45	0.17
GI_SD_S_2010	GI-SD529-0006	0.18	0.06	0.17	0.14	0.24	0.27	0.18	0.40	0.25	0.23	1.05	1.03	0.58	0.70
GI_SD_REF_2010	GI-SD524-0006	0.17	0.03	0.11	0.14	0.18	0.20	0.19	0.33	0.19	0.20	0.13	0.06	0.06	0.01
GI_SD_REF_2010	GI-SD525-0006	0.21	0.20	0.31	0.24	0.44	0.44	0.55	0.49	0.38	0.41	0.40	0.18	0.19	0.01
GI_SD_REF_2010	GI-SD526-0006	0.17	0.05	0.23	0.20	0.29	0.23	0.26	0.56	0.29	0.29	0.10	0.02	0.05	0.01

Footnotes:

1 Concentrations are presented in mg/kg for metals and ug/kg for organics.
2 Calculated by dividing sample concentration by ER-L.

Notes:
Shaded cells indicates an exceedance of ER-L.
One-half the detection limit is presented for nondetected results and used to calculate the ERL-Q.

ER-L - Effects range low
ERL-Q - Effects range low quotient

TABLE 6-18
SUMMARY OF SEDIMENT RESULTS AND ER-M QUOTIENTS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

		Sample Concentration[1]											ERM-Q[2]									
Sample Area	Sample Number	Arsenic	Cadmium	Chromium	Copper	Lead	Nickel	Zinc	HMW PAHs	LMW PAHs	Total PCB Homologs	Arsenic	Cadmium	Chromium	Copper	Lead	Nickel	Zinc	HMW PAHs	LMW PAHs	Total PCB Homologs	Average ERM-Q
	ER-M	70	9.6	370	270	218	51.6	410	9600	3160	180	70	9.6	370	270	218	51.6	410	9600	3160	180	NA
GI_SD_STILLWATER_2010	GI-SD501-0006	1.6 J	0.307 J	18.8 J	28.7 J	35.2 J	7.7 J	51.9 J	48600	6550 J	2720 J	0.0229	0.032	0.0508	0.106	0.161	0.149	0.127	5.063	2.073	15.1	2.290
GI_SD_STILLWATER_2010	GI-SD502-0006	2.7 J	0.507 J	12.4 J	21.2 J	11.3 J	10 J	43.8 J	27000 J	7750 J	862 J	0.0386	0.0528	0.0335	0.079	0.052	0.194	0.107	2.813	2.453	4.789	1.061
GI_SD_STILLWATER_2010	GI-SD503-0006	2 J	0.211 J	13.7 J	9.6 J	13.9 J	6.7 J	43.8 J	8900	944 J	2.86 U	0.0286	0.022	0.037	0.036	0.064	0.130	0.107	0.927	0.299	0.016	0.167
GI_SD_STILLWATER_2010	GI-SD504-0006	1.9 J	0.305 J	14.1 J	17.8 J	21 J	7 J	76.9 J	5960	1240 J	394 J	0.0271	0.0318	0.0381	0.066	0.096	0.136	0.188	0.621	0.392	2.189	0.378
GI_SD_STILLWATER_2010	GI-SD505-0006	0.272 UJ	0.288 J	13.9	25 J	20.4	6.7	48.2 J	5510	801 J	950	0.0039	0.03	0.0376	0.093	0.094	0.130	0.118	0.574	0.253	5.278	0.661
GI_SD_STILLWATER_2010	GI-SD506-0006	0.999 J	0.103 J	10.1	11.1 J	11.4	6.5	40 J	3570	494 J	547	0.0143	0.0107	0.0273	0.041	0.052	0.126	0.098	0.372	0.156	3.039	0.394
GI_SD_STILLWATER_2010	GI-SD507-0006	1.3 J	0.145 J	11.2 J	12.5 J	12.4 J	6.5 J	42 J	7430 J	1090 J	2590	0.0186	0.0151	0.0303	0.046	0.057	0.126	0.102	0.774	0.345	14.4	1.590
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	1.03 J	0.43 J	9.85 J	14.8 J	10.6 J	8.9 J	47.2 J	2150 J	326 J	895 J	0.0147	0.0448	0.0266	0.055	0.049	0.172	0.115	0.224	0.103	4.972	0.578
GI_SD_STILLWATER_2010	GI-SD509-0006	0.795 J	0.15 J	9.8 J	11.8 J	10.6 J	5.85 J	30.6 J	3000 J	593 J	460 J	0.0114	0.0156	0.0265	0.044	0.049	0.113	0.075	0.313	0.188	2.556	0.339
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.795 J	0.15 J	9.8 J	11.8 J	10.6 J	5.85 J	30.6 J	3000 J	593 J	460 J	0.0114	0.0156	0.0265	0.044	0.049	0.113	0.075	0.313	0.188	2.556	0.339
GI_SD_STILLWATER_2010	GI-SD527-0006	0.975 J	0.222 J	14.2 J	14.9 J	15 J	7.7 J	38.3 J	1570	233 J	25.3	0.0139	0.0231	0.0384	0.055	0.069	0.149	0.093	0.164	0.074	0.141	0.082
GI_SD_STILLWATER_2010	GI-SD532-0006	0.876 J	0.324 J	10 J	10.4 J	7.1 J	8.4 J	31 J	32000	6650 J	1240	0.0125	0.0338	0.027	0.039	0.033	0.163	0.076	3.333	2.104	6.889	1.271
GI_SD_NE_2010	GI-SD510-0006	2.2 J	0.443 J	16.1 J	17.7 J	10.7 J	10.8 J	43.9 J	1020 J	244 J	1.07 UJ	0.0314	0.0461	0.0435	0.066	0.049	0.209	0.107	0.106	0.077	0.006	0.074
GI_SD_NE_2010	GI-SD511-0006	0.278 J	0.301 J	11.9 J	10.6 J	20.7 J	7.6 J	32.2 J	271 J	55.8 J	276 J	0.004	0.0314	0.0322	0.039	0.095	0.147	0.079	0.028	0.018	1.533	0.201
GI_SD_NE_2010	GI-SD512-0006	2.9 J	0.555	19.9 J	30.6 J	8.4 J	33.4	43.4 J	3910 J	1880 J	3.2 J	0.0414	0.0578	0.0538	0.113	0.039	0.647	0.106	0.407	0.595	0.018	0.208
GI_SD_NE_2010	GI-SD513-0006	0.065 UJ	0.166 J	8.4 J	6.8 J	7.3 J	6.2	27.6 J	283 J	38.4 J	4.3 J	0.0009	0.0173	0.0227	0.025	0.033	0.120	0.067	0.029	0.012	0.024	0.035
GI_SD_NE_2010	GI-SD514-0006	0.295 UJ	0.164 UJ	13.5 J	13.9 J	23 J	6.3 J	47.2 J	8700 J	2470 J	16 J	0.0042	0.017	0.0365	0.051	0.106	0.122	0.115	0.906	0.782	0.089	0.223
GI_SD_NE_2010	GI-SD515-0006	2.6 J	0.465 J	20.4 J	18.7 J	18.3 J	8.2 J	37 J	4970 J	1390 J	290 J	0.0371	0.0484	0.0551	0.069	0.084	0.159	0.090	0.518	0.440	1.611	0.311
GI_SD_NE_2010	GI-SD517-0006-AVG	1.6 J	0.254	14.4 J	13.8 J	41.6 J	8.5	40.4 J	342 J	37.2 J	150 J	0.0229	0.0265	0.0389	0.051	0.191	0.165	0.099	0.036	0.012	0.833	0.147
GI_SD_NE_2010	GI-SD518-0006	0.643 J	0.282 J	8.9 J	17.9 J	14.5 J	9.6 J	38.3 J	5100	840 J	164 J	0.0092	0.0294	0.0241	0.066	0.067	0.186	0.093	0.531	0.266	0.911	0.218
GI_SD_NE_2010	GI-SD519-0006	0.554 J	0.177 J	9.3	10.9 J	17.9	6	30.9 J	633	112 J	286	0.0079	0.0184	0.0251	0.040	0.082	0.116	0.075	0.066	0.035	1.589	0.206
GI_SD_NE_2010	GI-SD528-0006	0.841 J	0.17 J	8.9 J	16.4 J	96.8 J	7.3	40 J	551 J	124 J	56.1 J	0.012	0.0177	0.0241	0.061	0.444	0.141	0.098	0.057	0.039	0.312	0.121
GI_SD_NE_2010	GI-SD530-0006	5.6 J	0.724	28.1 J	186 J	20.9 J	32.8	41.2 J	711 J	123 J	8.1 J	0.08	0.0754	0.0759	0.689	0.096	0.636	0.100	0.074	0.039	0.045	0.191
GI_SD_NE_2010	GI-SD531-0006	1.4 J	0.288	11.3 J	102 J	199 J	8.2	47.2 J	824 J	166 J	19.1 J	0.02	0.03	0.0305	0.378	0.913	0.159	0.115	0.086	0.053	0.106	0.189
GI_SD_NE_2010	GI-SD566-0006	0.84 J	0.256 J	11.9 J	16 J	17.7 J	8.8 J	36.4 J	3290 J	949 J	129 J	0.012	0.0267	0.0322	0.059	0.081	0.171	0.089	0.343	0.300	0.717	0.183
GI_SD_NW_2010	GI-SD520-0006	0.193 J	0.15 J	8.2 J	6.5 J	9.3 J	6.7	26.8 J	1520 J	425 J	6.7 J	0.0028	0.0156	0.0222	0.024	0.043	0.130	0.065	0.158	0.134	0.037	0.063
GI_SD_NW_2010	GI-SD521-0006	1.2 J	0.212	10.1 J	22.9 J	13.2 J	9.4	33.7 J	14100 J	3800 J	0.71 U	0.0171	0.0221	0.0273	0.085	0.061	0.182	0.082	1.469	1.203	0.004	0.315
GI_SD_NW_2010	GI-SD522-0006	5.3 J	1	24.7 J	40.6 J	22.2 J	21.6	65.4 J	1490 J	116 J	6.4 J	0.0757	0.1042	0.0668	0.150	0.102	0.419	0.160	0.155	0.037	0.036	0.130
GI_SD_NW_2010	GI-SD523-0006	3.3 J	0.783	18 J	37.7 J	35.9 J	17.2	50.7 J	1450 J	360 J	3.92 J	0.0471	0.0816	0.0486	0.140	0.165	0.333	0.124	0.151	0.114	0.022	0.123
GI_SD_S_2010	GI-SD529-0006	0.49 J	0.205 J	11.3	8.1 J	12.7	8.4	35.2 J	1780	567 J	16	0.007	0.0214	0.0305	0.030	0.058	0.163	0.086	0.185	0.179	0.089	0.085
GI_SD_REF_2010	GI-SD524-0006	0.273 J	0.132 J	11.1 J	6.2 J	9.2 J	7 J	30.7 J	229 J	31 J	0.27 U	0.0039	0.0138	0.03	0.023	0.042	0.136	0.075	0.024	0.010	0.002	0.036
GI_SD_REF_2010	GI-SD525-0006	1.6 J	0.367 J	19.8 J	15 J	20.6 J	10.2 J	61.8 J	673 J	96.6 J	0.33 U	0.0229	0.0382	0.0535	0.056	0.094	0.198	0.151	0.070	0.031	0.002	0.072
GI_SD_REF_2010	GI-SD526-0006	0.423 J	0.27 J	16.5 J	9.9 J	10.6 J	11.7 J	42.9 J	173 J	10.4 J	0.27 U	0.006	0.0281	0.0446	0.037	0.049	0.227	0.105	0.018	0.003	0.001	0.052

Footnotes:
1 Concentrations are presented in mg/kg for metals and ug/kg for organics.
2 Calculated by dividing sample concentration by ER-M.

Notes:
One-half the detection limit is presented for nondetected results and used to calculate the ERM-Q.
ER-M - Effects range medium
ERM-Q - Effects range medium quotient

TABLE 6-19
SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON SURVIVAL ENDPOINT
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_NE_2010	GI-SD566-0006	0.71 UJ	16 J	17.7 J	0.03	8.8 J	0.24 UJ	3290 J	949 J	4240 J	129 J	0.18
GI_SD_NW_2010	GI-SD520-0006	0.67 UJ	6.5 J	9.3 J	0.015 J	6.7	0.435 J	1520 J	425 J	1950 J	6.7 J	0.06
	Non-Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD501-0006	0.79 UJ	28.7 J	35.2 J	0.107	7.7 J	0.145 J	48600	6550 J	55100 J	2720 J	2.29
GI_SD_STILLWATER_2010	GI-SD502-0006	0.81 J	21.2 J	11.3 J	0.02 J	10 J	0.27 U	27000 J	7750 J	34700 J	862 J	1.06
GI_SD_STILLWATER_2010	GI-SD503-0006	0.7 UJ	9.6 J	13.9 J	0.059	6.7 J	0.23 UJ	8900	944 J	9840 J	5.71 U	0.17
GI_SD_STILLWATER_2010	GI-SD504-0006	0.72 UJ	17.8 J	21 J	0.083	7 J	0.223 J	5960	1240 J	7200 J	394 J	0.38
GI_SD_STILLWATER_2010	GI-SD505-0006	0.208 J	25 J	20.4	0.079	6.7	0.271 U	5510	801 J	6310 J	950	0.66
GI_SD_STILLWATER_2010	GI-SD506-0006	0.692 UJ	11.1 J	11.4	0.035	6.5	0.231 UJ	3570	494 J	4060 J	547	0.39
GI_SD_STILLWATER_2010	GI-SD507-0006	0.69 UJ	12.5 J	12.4 J	0.045	6.5 J	0.143 J	7430 J	1090 J	8520 J	2590	1.59
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.65 UJ	14.8 J	10.6 J	0.0195 J	8.9 J	0.0435 J	2150 J	326 J	2480 J	895 J	0.58
GI_SD_STILLWATER_2010	GI-SD509-0006	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD527-0006	0.71 UJ	14.9 J	15 J	0.054	7.7 J	0.23 UJ	1570	233 J	1800 J	25.3	0.08
GI_SD_STILLWATER_2010	GI-SD532-0006	0.71 UJ	10.4 J	7.1 J	0.023 J	8.4 J	0.24 U	32000	6650 J	38700 J	1240	1.27
GI_SD_NE_2010	GI-SD510-0006	0.63 UJ	17.7 J	10.7 J	0.012 J	10.8 J	0.017 U	1020 J	244 J	1260 J	2.14 UJ	0.07
GI_SD_NE_2010	GI-SD511-0006	0.71 UJ	10.6 J	20.7 J	0.029	7.6 J	0.24 UJ	271 J	55.8 J	327 J	276 J	0.20
GI_SD_NE_2010	GI-SD512-0006	1.77 UJ	30.6 J	8.4 J	0.006 J	33.4	0.2 UJ	3910 J	1880 J	5790 J	3.2 J	0.21
GI_SD_NE_2010	GI-SD513-0006	2.05 UJ	6.8 J	7.3 J	0.039 U	6.2	0.524	283 J	38.4 J	321 J	4.3 J	0.04
GI_SD_NE_2010	GI-SD514-0006	0.89 UJ	13.9 J	23 J	0.087	6.3 J	0.3 U	8700 J	2470 J	11200 J	16 J	0.22
GI_SD_NE_2010	GI-SD515-0006	0.253 J	18.7 J	18.3 J	0.239	8.2 J	0.27 U	4970 J	1390 J	6360 J	290 J	0.31
GI_SD_NE_2010	GI-SD517-0006-AVG	1.46 UJ	13.8 J	41.6 J	0.031 J	8.5	0.245 UJ	342 J	37.2 J	380 J	150 J	0.15
GI_SD_NE_2010	GI-SD518-0006	0.57 UJ	17.9 J	14.5 J	0.023	9.6 J	0.19 U	5100	840 J	5940 J	164 J	0.22
GI_SD_NE_2010	GI-SD519-0006	0.665 UJ	10.9 J	17.9	0.02 J	6	0.222 UJ	633	112 J	745 J	286	0.21
GI_SD_NE_2010	GI-SD528-0006	0.67 UJ	16.4 J	96.8 J	0.018 J	7.3	0.254 UJ	551 J	124 J	675 J	56.1 J	0.12
GI_SD_NE_2010	GI-SD530-0006	0.69 UJ	186 J	20.9 J	0.031	32.8	0.23 UJ	711 J	123 J	834 J	8.1 J	0.19
GI_SD_NE_2010	GI-SD531-0006	0.75 UJ	102 J	199 J	0.229	8.2	0.25 UJ	824 J	166 J	990 J	19.1 J	0.19
GI_SD_NW_2010	GI-SD521-0006	0.58 UJ	22.9 J	13.2 J	0.019 J	9.4	0.19 UJ	14100 J	3800 J	17900 J	1.42 U	0.32
GI_SD_NW_2010	GI-SD522-0006	2.6 UJ	40.6 J	22.2 J	0.039	21.6	0.492 J	1490 J	116 J	1600 J	6.4 J	0.13
GI_SD_NW_2010	GI-SD523-0006	0.6 UJ	37.7 J	35.9 J	0.005 J	17.2	0.277 UJ	1450 J	360 J	1810 J	3.92 J	0.12
GI_SD_S_2010	GI-SD529-0006	0.718 UJ	8.1 J	12.7	0.027 J	8.4	0.252 UJ	1780	567 J	2350 J	16	0.08
GI_SD_REF_2010	GI-SD524-0006	0.68 UJ	6.2 J	9.2 J	0.028	7 J	0.097 J	229 J	31 J	260 J	0.543 U	0.04
GI_SD_REF_2010	GI-SD525-0006	0.83 UJ	15 J	20.6 J	0.083	10.2 J	0.19 J	673 J	96.6 J	770 J	0.669 U	0.07
GI_SD_REF_2010	GI-SD526-0006	0.68 UJ	9.9 J	10.6 J	0.039	11.7 J	0.144 J	173 J	10.4 J	184 J	0.538 U	0.05
	NOEC[2]	0.81	186	199	0.239	33.4	0.524	48600	7750	55100	2720	2.29
	[Max.] in toxic sample	NA	16	17.7	0.03	8.8	0.435	3290	949	4240	460	0.34
	LOEC[3]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 6-19
SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON SURVIVAL ENDPOINT
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Footnotes:
1 - Risk characterization in Table 6-17.
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than the maximum concentration in a non-toxic sample.

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 6-20
SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON SURVIVAL ENDPOINT BY AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
	Non-Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD501-0006	0.79 UJ	28.7 J	35.2 J	0.107	7.7 J	0.145 J	48600	6550 J	55100 J	2720 J	2.29
GI_SD_STILLWATER_2010	GI-SD502-0006	0.81 J	21.2 J	11.3 J	0.02 J	10 J	0.27 U	27000 J	7750 J	34700 J	862 J	1.06
GI_SD_STILLWATER_2010	GI-SD503-0006	0.7 UJ	9.6 J	13.9 J	0.059	6.7 J	0.23 UJ	8900	944 J	9840 J	5.71 U	0.17
GI_SD_STILLWATER_2010	GI-SD504-0006	0.72 UJ	17.8 J	21 J	0.083	7 J	0.223 J	5960	1240 J	7200 J	394 J	0.38
GI_SD_STILLWATER_2010	GI-SD505-0006	0.208 J	25 J	20.4	0.079	6.7	0.271 U	5510	801 J	6310 J	950	0.66
GI_SD_STILLWATER_2010	GI-SD506-0006	0.692 UJ	11.1 J	11.4	0.035	6.5	0.231 UJ	3570	494 J	4060 J	547	0.39
GI_SD_STILLWATER_2010	GI-SD507-0006	0.69 UJ	12.5 J	12.4 J	0.045	6.5 J	0.143 J	7430 J	1090 J	8520 J	2590	1.59
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.65 UJ	14.8 J	10.6 J	0.0195 J	8.9 J	0.0435 J	2150 J	326 J	2480 J	895 J	0.58
GI_SD_STILLWATER_2010	GI-SD509-0006	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD527-0006	0.71 UJ	14.9 J	15 J	0.054	7.7 J	0.23 UJ	1570	233 J	1800 J	25.3	0.08
GI_SD_STILLWATER_2010	GI-SD532-0006	0.71 UJ	10.4 J	7.1 J	0.023 J	8.4 J	0.24 U	32000	6650 J	38700 J	1240	1.27
	NOEC[2]	0.81	28.7	35.2	0.107	10	0.223	48600	7750	55100	2720	2.29
	[Max.] in toxic sample	NA	11.8	10.6	0.0285	5.85	0.106	3000	593	3600	460	0.34
	LOEC[3]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
GI_SD_NE_2010	GI-SD566-0006	0.71 UJ	16 J	17.7 J	0.03	8.8 J	0.24 UJ	3290 J	949 J	4240 J	129 J	0.18
GI_SD_NW_2010	GI-SD520-0006	0.67 UJ	6.5 J	9.3 J	0.015 J	6.7	0.435 J	1520 J	425 J	1950 J	6.7 J	0.06
	Non-Toxic Samples[1]											
GI_SD_NE_2010	GI-SD510-0006	0.63 UJ	17.7 J	10.7 J	0.012 J	10.8 J	0.017 U	1020 J	J	1260 J	2.14 UJ	0.07
GI_SD_NE_2010	GI-SD511-0006	0.71 UJ	10.6 J	20.7 J	0.029	7.6 J	0.24 UJ	271 J	J	327 J	276 J	0.20
GI_SD_NE_2010	GI-SD512-0006	1.77 UJ	30.6 J	8.4 J	0.006 J	33.4	0.2 UJ	3910 J	1880 J	5790 J	3.2 J	0.21
GI_SD_NE_2010	GI-SD513-0006	2.05 UJ	6.8 J	7.3 J	0.039 U	6.2	0.524	283 J	38.4 J	321 J	4.3 J	0.04
GI_SD_NE_2010	GI-SD514-0006	0.89 UJ	13.9 J	23 J	0.087	6.3 J	0.3 U	8700 J	2470 J	11200 J	16 J	0.22
GI_SD_NE_2010	GI-SD515-0006	0.253 J	18.7 J	18.3 J	0.239	8.2 J	0.27 U	4970 J	1390 J	6360 J	290 J	0.31
GI_SD_NE_2010	GI-SD517-0006-AVG	1.46 UJ	13.8 J	41.6 J	0.031 J	8.5	0.245 UJ	342 J	37.2 J	380 J	150 J	0.15
GI_SD_NE_2010	GI-SD518-0006	0.57 UJ	17.9 J	14.5 J	0.023	9.6 J	0.19 U	5100	840 J	5940 J	164 J	0.22
GI_SD_NE_2010	GI-SD519-0006	0.665 UJ	10.9 J	17.9	0.02 J	6	0.222 UJ	633	112 J	745 J	286	0.21
GI_SD_NE_2010	GI-SD528-0006	0.67 UJ	16.4 J	96.8 J	0.018 J	7.3	0.254 UJ	551 J	124 J	675 J	56.1 J	0.12
GI_SD_NE_2010	GI-SD530-0006	0.69 UJ	186 J	20.9 J	0.031	32.8	0.23 UJ	711 J	123 J	834 J	8.1 J	0.19
GI_SD_NE_2010	GI-SD531-0006	0.75 UJ	102 J	199 J	0.229	8.2	0.25 UJ	824 J	166 J	990 J	19.1 J	0.19
GI_SD_NW_2010	GI-SD521-0006	0.58 UJ	22.9 J	13.2 J	0.019 J	9.4	0.19 UJ	14100 J	3800 J	17900 J	1.42 U	0.32
GI_SD_NW_2010	GI-SD522-0006	2.6 UJ	40.6 J	22.2 J	0.039	21.6	0.492 J	1490 J	116 J	1600 J	6.4 J	0.13
GI_SD_NW_2010	GI-SD523-0006	0.6 UJ	37.7 J	35.9 J	0.005 J	17.2	0.277 UJ	1450 J	360 J	1810 J	3.92 J	0.12
	NOEC[2]	0.253	186	199	0.239	33.4	0.524	14100	3800	17900	290	0.32
	[Max.] in toxic sample	NA	16	17.7	0.03	8.8	0.435	3290	949	4240	129	0.18
	LOEC[3]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Footnotes:
1 - Risk characterization in Table 6-17.
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than the maximum concentration in a non-toxic sample.

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 6-21
SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON DRY WEIGHT ENDPOINT
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD503-0006	0.7 UJ	9.6 J	13.9 J	0.059	6.7 J	0.23 UJ	8900	944 J	9840 J	5.71 U	0.17
GI_SD_STILLWATER_2010	GI-SD505-0006	0.208 J	25 J	20.4	0.079	6.7	0.271 U	5510	801 J	6310 J	950	0.66
GI_SD_STILLWATER_2010	GI-SD509-0006	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_NE_2010	GI-SD512-0006	1.77 UJ	30.6 J	8.4 J	0.006 J	33.4	0.2 UJ	3910 J	1880 J	5790 J	3.2 J	0.21
GI_SD_NE_2010	GI-SD518-0006	0.57 UJ	17.9 J	14.5 J	0.023	9.6 J	0.19 U	5100	840 J	5940 J	164 J	0.22
	Non-Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD501-0006	0.79 UJ	28.7 J	35.2 J	0.107	7.7 J	0.145 J	48600	6550 J	55100 J	2720 J	2.29
GI_SD_STILLWATER_2010	GI-SD502-0006	0.81 J	21.2 J	11.3 J	0.02 J	10 J	0.27 U	27000 J	7750 J	34700 J	862 J	1.06
GI_SD_STILLWATER_2010	GI-SD504-0006	0.72 UJ	17.8 J	21 J	0.083	7 J	0.223 J	5960	1240 J	7200 J	394 J	0.38
GI_SD_STILLWATER_2010	GI-SD506-0006	0.692 UJ	11.1 J	11.4	0.035	6.5	0.231 UJ	3570	494 J	4060 J	547	0.39
GI_SD_STILLWATER_2010	GI-SD507-0006	0.69 UJ	12.5 J	12.4 J	0.045	6.5 J	0.143 J	7430 J	1090 J	8520 J	2590	1.59
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.65 UJ	14.8 J	10.6 J	0.0195 J	8.9 J	0.0435 J	2150 J	326 J	2480 J	895 J	0.58
GI_SD_STILLWATER_2010	GI-SD527-0006	0.71 UJ	14.9 J	15 J	0.054	7.7 J	0.23 UJ	1570	233 J	1800 J	25.3	0.08
GI_SD_STILLWATER_2010	GI-SD532-0006	0.71 UJ	10.4 J	7.1 J	0.023 J	8.4 J	0.24 U	32000	6650 J	38700 J	1240	1.27
GI_SD_NE_2010	GI-SD510-0006	0.63 UJ	17.7 J	10.7 J	0.012 J	10.8 J	0.017 U	1020 J	244 J	1260 J	2.14 UJ	0.07
GI_SD_NE_2010	GI-SD511-0006	0.71 UJ	10.6 J	20.7 J	0.029	7.6 J	0.24 UJ	271 J	55.8 J	327 J	276 J	0.20
GI_SD_NE_2010	GI-SD513-0006	2.05 UJ	6.8 J	7.3 J	0.039 U	6.2	0.524	283 J	38.4 J	321 J	4.3 J	0.04
GI_SD_NE_2010	GI-SD514-0006	0.89 UJ	13.9 J	23 J	0.087	6.3 J	0.3 U	8700 J	2470 J	11200 J	16 J	0.22
GI_SD_NE_2010	GI-SD515-0006	0.253 J	18.7 J	18.3 J	0.239	8.2 J	0.27 U	4970 J	1390 J	6360 J	290 J	0.31
GI_SD_NE_2010	GI-SD517-0006-AVG	1.46 UJ	13.8 J	41.6 J	0.031 J	8.5	0.245 UJ	342 J	37.2 J	380 J	150 J	0.15
GI_SD_NE_2010	GI-SD519-0006	0.665 UJ	10.9 J	17.9	0.02 J	6	0.222 UJ	633	112 J	745 J	286	0.21
GI_SD_NE_2010	GI-SD528-0006	0.67 UJ	16.4 J	96.8 J	0.018 J	7.3	0.254 UJ	551 J	124 J	675 J	56.1 J	0.12
GI_SD_NE_2010	GI-SD530-0006	0.69 UJ	186 J	20.9 J	0.031	32.8	0.23 UJ	711 J	123 J	834 J	8.1 J	0.19
GI_SD_NE_2010	GI-SD531-0006	0.75 UJ	102 J	199 J	0.229	8.2	0.25 UJ	824 J	166 J	990 J	19.1 J	0.19
GI_SD_NE_2010	GI-SD566-0006	0.71 UJ	16 J	17.7 J	0.03	8.8 J	0.24 UJ	3290 J	949 J	4240 J	129 J	0.18
GI_SD_NW_2010	GI-SD520-0006	0.67 UJ	6.5 J	9.3 J	0.015 J	6.7	0.435 J	1520 J	425 J	1950 J	6.7 J	0.06
GI_SD_NW_2010	GI-SD521-0006	0.58 UJ	22.9 J	13.2 J	0.019 J	9.4	0.19 UJ	14100 J	3800 J	17900 J	1.42 U	0.32
GI_SD_NW_2010	GI-SD522-0006	2.6 UJ	40.6 J	22.2 J	0.039	21.6	0.492 J	1490 J	116 J	1600 J	6.4 J	0.13
GI_SD_NW_2010	GI-SD523-0006	0.6 UJ	37.7 J	35.9 J	0.005 J	17.2	0.277 UJ	1450 J	360 J	1810 J	3.92 J	0.12
GI_SD_S_2010	GI-SD529-0006	0.718 UJ	8.1 J	12.7	0.027 J	8.4	0.252 UJ	1780	567 J	2350 J	16	0.08
GI_SD_REF_2010	GI-SD524-0006	0.68 UJ	6.2 J	9.2 J	0.028	7 J	0.097 J	229 J	31 J	260 J	0.543 U	0.04
GI_SD_REF_2010	GI-SD525-0006	0.83 UJ	15 J	20.6 J	0.083	10.2 J	0.19 J	673 J	96.6 J	770 J	0.669 U	0.07
GI_SD_REF_2010	GI-SD526-0006	0.68 UJ	9.9 J	10.6 J	0.039	11.7 J	0.144 J	173 J	10.4 J	184 J	0.538 U	0.05
	NOEC[2]	0.81	186	199	0.239	32.8	0.524	48600	7750	55100	2720	2.29
	[Max.] in toxic sample	0.208	30.6	20.4	0.079	33.4	0.106	8900	1880	9840	950	0.66
	LOEC[3]	NA	NA	NA	NA	33.4	NA	NA	NA	NA	NA	NA
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	33.1	NA	NA	NA	NA	NA	NA

Footnotes:
1 - Risk characterization in Table 6-17.
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than the maximum concentration in a non-toxic sample.

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 6-22
SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON DRY WEIGHT ENDPOINT BY AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD503-0006	0.7 UJ	9.6 J	13.9 J	0.059	6.7 J	0.23 UJ	8900	944 J	9840 J	5.71 U	0.17
GI_SD_STILLWATER_2010	GI-SD505-0006	0.208 J	25 J	20.4	0.079	6.7	0.271 U	5510	801 J	6310 J	950	0.66
GI_SD_STILLWATER_2010	GI-SD509-0006	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
	Non-Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD501-0006	0.79 UJ	28.7 J	35.2 J	0.107	7.7 J	0.145 J	48600	6550 J	55100 J	2720 J	2.29
GI_SD_STILLWATER_2010	GI-SD502-0006	0.81 J	21.2 J	11.3 J	0.02 J	10 J	0.27 U	27000 J	7750 J	34700 J	862 J	1.06
GI_SD_STILLWATER_2010	GI-SD504-0006	0.72 UJ	17.8 J	21 J	0.083	7 J	0.223 J	5960	1240 J	7200 J	394 J	0.38
GI_SD_STILLWATER_2010	GI-SD506-0006	0.692 UJ	11.1 J	11.4	0.035	6.5	0.231 UJ	3570	494 J	4060 J	547	0.39
GI_SD_STILLWATER_2010	GI-SD507-0006	0.69 UJ	12.5 J	12.4 J	0.045	6.5 J	0.143 J	7430 J	1090 J	8520 J	2590	1.59
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.65 UJ	14.8 J	10.6 J	0.0195 J	8.9 J	0.0435 J	2150 J	326 J	2480 J	895 J	0.58
GI_SD_STILLWATER_2010	GI-SD527-0006	0.71 UJ	14.9 J	15 J	0.054	7.7 J	0.23 UJ	1570	233 J	1800 J	25.3	0.08
GI_SD_STILLWATER_2010	GI-SD532-0006	0.71 UJ	10.4 J	7.1 J	0.023 J	8.4 J	0.24 U	32000	6650 J	38700 J	1240	1.27
	NOEC[2]	0.81	28.7	35.2	0.107	10	0.223	48600	7750	55100	2720	2.29
	[Max.] in toxic sample	0.208	25	20.4	0.079	6.7	0.106	8900	944	9840	950	0.66
	LOEC[3]	NA	NA	NA	NA	NA	0.271	NA	NA	NA	NA	NA
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	NA	0.25	NA	NA	NA	NA	NA

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_NE_2010	GI-SD512-0006	1.77 UJ	30.6 J	8.4 J	0.006 J	33.4	0.2 UJ	3910 J	1880 J	5790 J	3.2 J	0.21
GI_SD_NE_2010	GI-SD518-0006	0.57 UJ	17.9 J	14.5 J	0.023	9.6 J	0.19 U	5100	840 J	5940 J	164 J	0.22
	Non-Toxic Samples[1]											
GI_SD_NE_2010	GI-SD510-0006	0.63 UJ	17.7 J	10.7 J	0.012 J	10.8 J	0.017 U	1020 J	244 J	1260 J	2.14 UJ	0.07
GI_SD_NE_2010	GI-SD511-0006	0.71 UJ	10.6 J	20.7 J	0.029	7.6 J	0.24 UJ	271 J	55.8 J	327 J	276 J	0.20
GI_SD_NE_2010	GI-SD513-0006	2.05 UJ	6.8 J	7.3 J	0.039 U	6.2	0.524	283 J	38.4 J	321 J	4.3 J	0.04
GI_SD_NE_2010	GI-SD514-0006	0.89 UJ	13.9 J	23 J	0.087	6.3 J	0.3 U	8700 J	2470 J	11200 J	16 J	0.22
GI_SD_NE_2010	GI-SD515-0006	0.253 J	18.7 J	18.3 J	0.239	8.2 J	0.27 U	4970 J	1390 J	6360 J	290 J	0.31
GI_SD_NE_2010	GI-SD517-0006-AVG	1.46 UJ	13.8 J	41.6 J	0.031 J	8.5	0.245 UJ	342 J	37.2 J	380 J	150 J	0.15
GI_SD_NE_2010	GI-SD519-0006	0.665 UJ	10.9 J	17.9	0.02 J	6	0.222 UJ	633	112 J	745 J	286	0.21
GI_SD_NE_2010	GI-SD528-0006	0.67 UJ	16.4 J	96.8 J	0.018 J	7.3	0.254 UJ	551 J	124 J	675 J	56.1 J	0.12
GI_SD_NE_2010	GI-SD530-0006	0.69 UJ	186 J	20.9 J	0.031	32.8	0.23 UJ	711 J	123 J	834 J	8.1 J	0.19
GI_SD_NE_2010	GI-SD531-0006	0.75 UJ	102 J	199 J	0.229	8.2	0.25 UJ	824 J	166 J	990 J	19.1 J	0.19
GI_SD_NE_2010	GI-SD566-0006	0.71 UJ	16 J	17.7 J	0.03	8.8 J	0.24 UJ	3290 J	949 J	4240 J	129 J	0.18
GI_SD_NW_2010	GI-SD520-0006	0.67 UJ	6.5 J	9.3 J	0.015 J	6.7	0.435 J	1520 J	425 J	1950 J	6.7 J	0.06
GI_SD_NW_2010	GI-SD521-0006	0.58 UJ	22.9 J	13.2 J	0.019 J	9.4	0.19 UJ	14100 J	3800 J	17900 J	1.42 U	0.32
GI_SD_NW_2010	GI-SD522-0006	2.6 UJ	40.6 J	22.2 J	0.039	21.6	0.492 J	1490 J	116 J	1600 J	6.4 J	0.13
GI_SD_NW_2010	GI-SD523-0006	0.6 UJ	37.7 J	35.9 J	0.005 J	17.2	0.277 UJ	1450 J	360 J	1810 J	3.92 J	0.12
	NOEC[2]	0.253	186	199	0.239	32.8	0.524	14100	3800	17900	290	0.32
	[Max.] in toxic sample	NA	30.6	14.5	0.023	33.4	NA	5100	1880	5940	164	0.22
	LOEC[3]	NA	NA	NA	NA	33.4	NA	NA	NA	NA	NA	NA
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	33.1	NA	NA	NA	NA	NA	NA

Footnotes:
1 - Risk characterization in Table 6-17.
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than the maximum concentration in a non-toxic sample.

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 6-23
SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON DRY BIOMASS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT, RI

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD509-0006	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_NE_2010	GI-SD512-0006	1.77 UJ	30.6 J	8.4 J	0.006 J	33.4	0.2 UJ	3910 J	1880 J	5790 J	3.2 J	0.21
GI_SD_NE_2010	GI-SD518-0006	0.57 UJ	17.9 J	14.5 J	0.023	9.6 J	0.19 U	5100	840 J	5940 J	164 J	0.22
	Non-Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD501-0006	0.79 UJ	28.7 J	35.2 J	0.107	7.7 J	0.145 J	48600	6550 J	55100 J	2720 J	2.29
GI_SD_STILLWATER_2010	GI-SD502-0006	0.81 J	21.2 J	11.3 J	0.02 J	10 J	0.27 U	27000 J	7750 J	34700 J	862 J	1.06
GI_SD_STILLWATER_2010	GI-SD503-0006	0.7 UJ	9.6 J	13.9 J	0.059	6.7 J	0.23 UJ	8900	944 J	9840 J	5.71 U	0.17
GI_SD_STILLWATER_2010	GI-SD504-0006	0.72 UJ	17.8 J	21 J	0.083	7 J	0.223 J	5960	1240 J	7200 J	394 J	0.38
GI_SD_STILLWATER_2010	GI-SD505-0006	0.208 J	25 J	20.4	0.079	6.7	0.271 U	5510	801 J	6310 J	950	0.66
GI_SD_STILLWATER_2010	GI-SD506-0006	0.692 UJ	11.1 J	11.4	0.035	6.5	0.231 UJ	3570	494 J	4060 J	547	0.39
GI_SD_STILLWATER_2010	GI-SD507-0006	0.69 UJ	12.5 J	12.4 J	0.045	6.5 J	0.143 J	7430 J	1090 J	8520 J	2590	1.59
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.65 UJ	14.8 J	10.6 J	0.0195 J	8.9 J	0.0435 J	2150 J	326 J	2480 J	895 J	0.58
GI_SD_STILLWATER_2010	GI-SD527-0006	0.71 UJ	14.9 J	15 J	0.054	7.7 J	0.23 UJ	1570	233 J	1800 J	25.3	0.08
GI_SD_STILLWATER_2010	GI-SD532-0006	0.71 UJ	10.4 J	7.1 J	0.023 J	8.4 J	0.24 U	32000	6650 J	38700 J	1240	1.27
GI_SD_NE_2010	GI-SD510-0006	0.63 UJ	17.7 J	10.7 J	0.012 J	10.8 J	0.017 U	1020 J	244 J	1260 J	2.14 UJ	0.07
GI_SD_NE_2010	GI-SD511-0006	0.71 UJ	10.6 J	20.7 J	0.029	7.6 J	0.24 UJ	271 J	55.8 J	327 J	276 J	0.20
GI_SD_NE_2010	GI-SD513-0006	2.05 UJ	6.8 J	7.3 J	0.039 U	6.2	0.524	283 J	38.4 J	321 J	4.3 J	0.04
GI_SD_NE_2010	GI-SD514-0006	0.89 UJ	13.9 J	23 J	0.087	6.3 J	0.3 U	8700 J	2470 J	11200 J	16 J	0.22
GI_SD_NE_2010	GI-SD515-0006	0.253 J	18.7 J	18.3 J	0.239	8.2 J	0.27 U	4970 J	1390 J	6360 J	290 J	0.31
GI_SD_NE_2010	GI-SD517-0006-AVG	1.46 UJ	13.8 J	41.6 J	0.031 J	8.5	0.245 UJ	342 J	37.2 J	380 J	150 J	0.15
GI_SD_NE_2010	GI-SD519-0006	0.665 UJ	10.9 J	17.9	0.02 J	6	0.222 UJ	633	112 J	745 J	286	0.21
GI_SD_NE_2010	GI-SD528-0006	0.67 UJ	16.4 J	96.8 J	0.018 J	7.3	0.254 UJ	551 J	124 J	675 J	56.1 J	0.12
GI_SD_NE_2010	GI-SD530-0006	0.69 UJ	186 J	20.9 J	0.031	32.8	0.23 UJ	711 J	123 J	834 J	8.1 J	0.19
GI_SD_NE_2010	GI-SD531-0006	0.75 UJ	102 J	199 J	0.229	8.2	0.25 UJ	824 J	166 J	990 J	19.1 J	0.19
GI_SD_NE_2010	GI-SD566-0006	0.71 UJ	16 J	17.7 J	0.03	8.8 J	0.24 UJ	3290 J	949 J	4240 J	129 J	0.18
GI_SD_NW_2010	GI-SD520-0006	0.67 UJ	6.5 J	9.3 J	0.015 J	6.7	0.435 J	1520 J	425 J	1950 J	6.7 J	0.06
GI_SD_NW_2010	GI-SD521-0006	0.58 UJ	22.9 J	13.2 J	0.019 J	9.4	0.19 UJ	14100 J	3800 J	17900 J	1.42 U	0.32
GI_SD_NW_2010	GI-SD522-0006	2.6 UJ	40.6 J	22.2 J	0.039	21.6	0.492 J	1490 J	116 J	1600 J	6.4 J	0.13
GI_SD_NW_2010	GI-SD523-0006	0.6 UJ	37.7 J	35.9 J	0.005 J	17.2	0.277 UJ	1450 J	360 J	1810 J	3.92 J	0.12
GI_SD_S_2010	GI-SD529-0006	0.718 UJ	8.1 J	12.7	0.027 J	8.4	0.252 UJ	1780	567 J	2350 J	16	0.08
GI_SD_REF_2010	GI-SD524-0006	0.68 UJ	6.2 J	9.2 J	0.028	7 J	0.097 J	229 J	31 J	260 J	0.543 U	0.04
GI_SD_REF_2010	GI-SD525-0006	0.83 UJ	15 J	20.6 J	0.083	10.2 J	0.19 J	673 J	96.6 J	770 J	0.669 U	0.07
GI_SD_REF_2010	GI-SD526-0006	0.68 UJ	9.9 J	10.6 J	0.039	11.7 J	0.144 J	173 J	10.4 J	184 J	0.538 U	0.05
	NOEC[2]	0.81	186	199	0.239	32.8	0.524	48600	7750	55100	2720	2.29
	[Max.] in toxic sample	NA	30.6	14.5	0.0285	33.4	0.106	5100	1880	5940	460	0.34
	LOEC[3]	NA	NA	NA	NA	33.4	NA	NA	NA	NA	NA	NA
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	33.1	NA	NA	NA	NA	NA	NA

Footnotes:
1 - Risk characterization in Table 6-17.
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than the maximum concentration in a non-toxic sample.

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 6-24
SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON DRY BIOMASS BY AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT, RI

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD509-0006	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
	Non-Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD501-0006	0.79 UJ	28.7 J	35.2 J	0.107	7.7 J	0.145 J	48600	6550 J	55100 J	2720 J	2.29
GI_SD_STILLWATER_2010	GI-SD502-0006	0.81 J	21.2 J	11.3 J	0.02 J	10 J	0.27 U	27000 J	7750 J	34700 J	862 J	1.06
GI_SD_STILLWATER_2010	GI-SD503-0006	0.7 UJ	9.6 J	13.9 J	0.059	6.7 J	0.23 UJ	8900	944 J	9840 J	5.71 U	0.17
GI_SD_STILLWATER_2010	GI-SD504-0006	0.72 UJ	17.8 J	21 J	0.083	7 J	0.223 J	5960	1240 J	7200 J	394 J	0.38
GI_SD_STILLWATER_2010	GI-SD505-0006	0.208 J	25 J	20.4	0.079	6.7	0.271 U	5510	801 J	6310 J	950	0.66
GI_SD_STILLWATER_2010	GI-SD506-0006	0.692 UJ	11.1 J	11.4	0.035	6.5	0.231 UJ	3570	494 J	4060 J	547	0.39
GI_SD_STILLWATER_2010	GI-SD507-0006	0.69 UJ	12.5 J	12.4 J	0.045	6.5 J	0.143 J	7430 J	1090 J	8520 J	2590	1.59
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.65 UJ	14.8 J	10.6 J	0.0195 J	8.9 J	0.0435 J	2150 J	326 J	2480 J	895 J	0.58
GI_SD_STILLWATER_2010	GI-SD527-0006	0.71 UJ	14.9 J	15 J	0.054	7.7 J	0.23 UJ	1570	233 J	1800 J	25.3	0.08
GI_SD_STILLWATER_2010	GI-SD532-0006	0.71 UJ	10.4 J	7.1 J	0.023 J	8.4 J	0.24 U	32000	6650 J	38700 J	1240	1.27
	NOEC[2]	0.81	28.7	35.2	0.107	10	0.223	48600	7750	55100	2720	2.29
	[Max.] in toxic sample	NA	11.8	10.6	0.0285	5.85	0.106	3000	593	3600	460	0.34
	LOEC[3]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_NE_2010	GI-SD512-0006	1.77 UJ	30.6 J	8.4 J	0.006 J	33.4	0.2 UJ	3910 J	1880 J	5790 J	3.2 J	0.21
GI_SD_NE_2010	GI-SD518-0006	0.57 UJ	17.9 J	14.5 J	0.023	9.6 J	0.19 U	5100	840 J	5940 J	164 J	0.22
	Non-Toxic Samples[1]											
GI_SD_NE_2010	GI-SD510-0006	0.63 UJ	17.7 J	10.7 J	0.012 J	10.8 J	0.017 U	1020 J	244 J	1260 J	2.14 UJ	0.07
GI_SD_NE_2010	GI-SD511-0006	0.71 UJ	10.6 J	20.7 J	0.029	7.6 J	0.24 UJ	271 J	55.8 J	327 J	276 J	0.20
GI_SD_NE_2010	GI-SD513-0006	2.05 UJ	6.8 J	7.3 J	0.039 U	6.2	0.524	283 J	38.4 J	321 J	4.3 J	0.04
GI_SD_NE_2010	GI-SD514-0006	0.89 UJ	13.9 J	23 J	0.087	6.3 J	0.3 U	8700 J	2470 J	11200 J	16 J	0.22
GI_SD_NE_2010	GI-SD515-0006	0.253 J	18.7 J	18.3 J	0.239	8.2 J	0.27 U	4970 J	1390 J	6360 J	290 J	0.31
GI_SD_NE_2010	GI-SD517-0006-AVG	1.46 UJ	13.8 J	41.6 J	0.031 J	8.5	0.245 UJ	342 J	37.2 J	380 J	150 J	0.15
GI_SD_NE_2010	GI-SD519-0006	0.665 UJ	10.9 J	17.9	0.02 J	6	0.222 UJ	633	112 J	745 J	286	0.21
GI_SD_NE_2010	GI-SD528-0006	0.67 UJ	16.4 J	96.8 J	0.018 J	7.3	0.254 UJ	551 J	124 J	675 J	56.1 J	0.12
GI_SD_NE_2010	GI-SD530-0006	0.69 UJ	186 J	20.9 J	0.031	32.8	0.23 UJ	711 J	123 J	834 J	8.1 J	0.19
GI_SD_NE_2010	GI-SD531-0006	0.75 UJ	102 J	199 J	0.229	8.2	0.25 UJ	824 J	166 J	990 J	19.1 J	0.19
GI_SD_NE_2010	GI-SD566-0006	0.71 UJ	16 J	17.7 J	0.03	8.8 J	0.24 UJ	3290 J	949 J	4240 J	129 J	0.18
GI_SD_NW_2010	GI-SD520-0006	0.67 UJ	6.5 J	9.3 J	0.015 J	6.7	0.435 J	1520 J	425 J	1950 J	6.7 J	0.06
GI_SD_NW_2010	GI-SD521-0006	0.58 UJ	22.9 J	13.2 J	0.019 J	9.4	0.19 UJ	14100 J	3800 J	17900 J	1.42 U	0.32
GI_SD_NW_2010	GI-SD522-0006	2.6 UJ	40.6 J	22.2 J	0.039	21.6	0.492 J	1490 J	116 J	1600 J	6.4 J	0.13
GI_SD_NW_2010	GI-SD523-0006	0.6 UJ	37.7 J	35.9 J	0.005 J	17.2	0.277 UJ	1450 J	360 J	1810 J	3.92 J	0.12
	NOEC[2]	0.253	186	199	0.239	32.8	0.524	14100	3800	17900	290	0.32
	[Max.] in toxic sample	NA	30.6	14.5	0.023	33.4	NA	5100	1880	5940	164	0.22
	LOEC[3]	NA	NA	NA	NA	33.4	NA	NA	NA	NA	NA	NA
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	33.1	NA	NA	NA	NA	NA	NA

Footnotes:
1 - Risk characterization in Table 6-17.
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than the maximum concentration in a non-toxic sample.

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 6-25
SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON OVERALL REPRODUCTION ENDPOINT
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD501-0006	0.79 UJ	28.7 J	35.2 J	0.107	7.7 J	0.145 J	48600	6550 J	55100 J	2720 J	2.29
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.65 UJ	14.8 J	10.6 J	0.0195 J	8.9 J	0.0435 J	2150 J	326 J	2480 J	895 J	0.58
GI_SD_NE_2010	GI-SD518-0006	0.57 UJ	17.9 J	14.5 J	0.023	9.6 J	0.19 U	5100	840 J	5940 J	164 J	0.22
GI_SD_NW_2010	GI-SD520-0006	0.67 UJ	6.5 J	9.3 J	0.015 J	6.7	0.435 J	1520 J	425 J	1950 J	6.7 J	0.06
GI_SD_NW_2010	GI-SD523-0006	0.6 UJ	37.7 J	35.9 J	0.005 J	17.2	0.277 UJ	1450 J	360 J	1810 J	3.92 J	0.12
	Non-Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD502-0006	0.81 J	21.2 J	11.3 J	0.02 J	10 J	0.27 U	27000 J	7750 J	34700 J	862 J	1.06
GI_SD_STILLWATER_2010	GI-SD503-0006	0.7 UJ	9.6 J	13.9 J	0.059	6.7 J	0.23 UJ	8900	944 J	9840 J	5.71 U	0.17
GI_SD_STILLWATER_2010	GI-SD504-0006	0.72 UJ	17.8 J	21 J	0.083	7 J	0.223 J	5960	1240 J	7200 J	394 J	0.38
GI_SD_STILLWATER_2010	GI-SD505-0006	0.208 J	25 J	20.4	0.079	6.7	0.271 U	5510	801 J	6310 J	950	0.66
GI_SD_STILLWATER_2010	GI-SD506-0006	0.692 UJ	11.1 J	11.4	0.035	6.5	0.231 UJ	3570	494 J	4060 J	547	0.39
GI_SD_STILLWATER_2010	GI-SD507-0006	0.69 UJ	12.5 J	12.4 J	0.045	6.5 J	0.143 J	7430 J	1090 J	8520 J	2590	1.59
GI_SD_STILLWATER_2010	GI-SD509-0006	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD527-0006	0.71 UJ	14.9 J	15 J	0.054	7.7 J	0.23 UJ	1570	233 J	1800 J	25.3	0.08
GI_SD_STILLWATER_2010	GI-SD532-0006	0.71 UJ	10.4 J	7.1 J	0.023 J	8.4 J	0.24 U	32000	6650 J	38700 J	1240	1.27
GI_SD_NE_2010	GI-SD510-0006	0.63 UJ	17.7 J	10.7 J	0.012 J	10.8 J	0.017 U	1020 J	244 J	1260 J	2.14 UJ	0.07
GI_SD_NE_2010	GI-SD511-0006	0.71 UJ	10.6 J	20.7 J	0.029	7.6 J	0.24 UJ	271 J	55.8 J	327 J	276 J	0.20
GI_SD_NE_2010	GI-SD512-0006	1.77 UJ	30.6 J	8.4 J	0.006 J	33.4	0.2 UJ	3910 J	1880 J	5790 J	3.2 J	0.21
GI_SD_NE_2010	GI-SD513-0006	2.05 UJ	6.8 J	7.3 J	0.039 U	6.2	0.524	283 J	38.4 J	321 J	4.3 J	0.04
GI_SD_NE_2010	GI-SD514-0006	0.89 UJ	13.9 J	23 J	0.087	6.3 J	0.3 U	8700 J	2470 J	11200 J	16 J	0.22
GI_SD_NE_2010	GI-SD515-0006	0.253 J	18.7 J	18.3 J	0.239	8.2 J	0.27 U	4970 J	1390 J	6360 J	290 J	0.31
GI_SD_NE_2010	GI-SD517-0006-AVG	1.46 UJ	13.8 J	41.6 J	0.031 J	8.5	0.245 UJ	342 J	37.2 J	380 J	150 J	0.15
GI_SD_NE_2010	GI-SD519-0006	0.665 UJ	10.9 J	17.9	0.02 J	6	0.222 UJ	633	112 J	745 J	286	0.21
GI_SD_NE_2010	GI-SD528-0006	0.67 UJ	16.4 J	96.8 J	0.018 J	7.3	0.254 UJ	551 J	124 J	675 J	56.1 J	0.12
GI_SD_NE_2010	GI-SD530-0006	0.69 UJ	186 J	20.9 J	0.031	32.8	0.23 UJ	711 J	123 J	834 J	8.1 J	0.19
GI_SD_NE_2010	GI-SD531-0006	0.75 UJ	102 J	199 J	0.229	8.2	0.25 UJ	824 J	166 J	990 J	19.1 J	0.19
GI_SD_NE_2010	GI-SD566-0006	0.71 UJ	16 J	17.7 J	0.03	8.8 J	0.24 UJ	3290 J	949 J	4240 J	129 J	0.18
GI_SD_NW_2010	GI-SD521-0006	0.58 UJ	22.9 J	13.2 J	0.019 J	9.4	0.19 UJ	14100 J	3800 J	17900 J	1.42 U	0.32
GI_SD_NW_2010	GI-SD522-0006	2.6 UJ	40.6 J	22.2 J	0.039	21.6	0.492 J	1490 J	116 J	1600 J	6.4 J	0.13
GI_SD_S_2010	GI-SD529-0006	0.718 UJ	8.1 J	12.7	0.027 J	8.4	0.252 UJ	1780	567 J	2350 J	16	0.08
GI_SD_REF_2010	GI-SD524-0006	0.68 UJ	6.2 J	9.2 J	0.028	7 J	0.097 J	229 J	31 J	260 J	0.543 U	0.04
GI_SD_REF_2010	GI-SD525-0006	0.83 UJ	15 J	20.6 J	0.083	10.2 J	0.19 J	673 J	96.6 J	770 J	0.669 U	0.07
GI_SD_REF_2010	GI-SD526-0006	0.68 UJ	9.9 J	10.6 J	0.039	11.7 J	0.144 J	173 J	10.4 J	184 J	0.538 U	0.05
	NOEC[2]	0.81	186	199	0.239	33.4	0.524	32000	7750	38700	2590	1.59
	[Max.] in toxic sample	NA	37.7	35.9	0.107	17.2	0.435	48600	6550	55100	2720	2.29
	LOEC[3]	NA	NA	NA	NA	NA	NA	48600	NA	55100	2720	2.29
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	NA	NA	39436	NA	46178	2654	1.91

Footnotes:
1 - Risk characterization in Table 6-17.
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than the maximum concentration in a non-toxic sample.

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 6-26
SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON OVERALL REPRODUCTION ENDPOINT BY AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD501-0006	0.79 UJ	28.7 J	35.2 J	0.107	7.7 J	0.145 J	48600	6550 J	55100 J	2720 J	2.29
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.65 UJ	14.8 J	10.6 J	0.0195 J	8.9 J	0.0435 J	2150 J	326 J	2480 J	895 J	0.58
	Non-Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD502-0006	0.81 J	21.2 J	11.3 J	0.02 J	10 J	0.27 U	27000 J	7750 J	34700 J	862 J	1.06
GI_SD_STILLWATER_2010	GI-SD503-0006	0.7 UJ	9.6 J	13.9 J	0.059	6.7 J	0.23 UJ	8900	944 J	9840 J	5.71 U	0.17
GI_SD_STILLWATER_2010	GI-SD504-0006	0.72 UJ	17.8 J	21 J	0.083	7 J	0.223 J	5960	1240 J	7200 J	394 J	0.38
GI_SD_STILLWATER_2010	GI-SD505-0006	0.208 J	25 J	20.4	0.079	6.7	0.271 U	5510	801 J	6310 J	950	0.66
GI_SD_STILLWATER_2010	GI-SD506-0006	0.692 UJ	11.1 J	11.4	0.035	6.5	0.231 UJ	3570	494 J	4060 J	547	0.39
GI_SD_STILLWATER_2010	GI-SD507-0006	0.69 UJ	12.5 J	12.4 J	0.045	6.5 J	0.143 J	7430 J	1090 J	8520 J	2590	1.59
GI_SD_STILLWATER_2010	GI-SD509-0006	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD527-0006	0.71 UJ	14.9 J	15 J	0.054	7.7 J	0.23 UJ	1570	233 J	1800 J	25.3	0.08
GI_SD_STILLWATER_2010	GI-SD532-0006	0.71 UJ	10.4 J	7.1 J	0.023 J	8.4 J	0.24 U	32000	6650 J	38700 J	1240	1.27
	NOEC[2]	0.81	25	21	0.083	10	0.223	32000	7750	38700	2590	1.59
	[Max.] in toxic sample	NA	28.7	35.2	0.107	8.9	0.145	48600	6550	55100	2720	2.29
	LOEC[3]	NA	28.7	35.2	0.107	NA	NA	48600	NA	55100	2720	2.29
	Geometric mean of NOEC and LOEC	NA	27	27	0.094	NA	NA	39436	NA	46178	2654	1.91

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_NE_2010	GI-SD518-0006	0.57 UJ	17.9 J	14.5 J	0.023	9.6 J	0.19 U	5100	840 J	5940 J	164 J	0.22
GI_SD_NW_2010	GI-SD520-0006	0.67 UJ	6.5 J	9.3 J	0.015 J	6.7	0.435 J	1520 J	425 J	1950 J	6.7 J	0.06
GI_SD_NW_2010	GI-SD523-0006	0.6 UJ	37.7 J	35.9 J	0.005 J	17.2	0.277 UJ	1450 J	360 J	1810 J	3.92 J	0.12
	Non-Toxic Samples[1]											
GI_SD_NE_2010	GI-SD510-0006	0.63 UJ	17.7 J	10.7 J	0.012 J	10.8 J	0.017 U	1020 J	244 J	1260 J	2.14 UJ	0.07
GI_SD_NE_2010	GI-SD511-0006	0.71 UJ	10.6 J	20.7 J	0.029	7.6 J	0.24 UJ	271 J	55.8 J	327 J	276 J	0.20
GI_SD_NE_2010	GI-SD512-0006	1.77 UJ	30.6 J	8.4 J	0.006 J	33.4	0.2 UJ	3910 J	1880 J	5790 J	3.2 J	0.21
GI_SD_NE_2010	GI-SD513-0006	2.05 UJ	6.8 J	7.3 J	0.039 U	6.2	0.524	283 J	38.4 J	321 J	4.3 J	0.04
GI_SD_NE_2010	GI-SD514-0006	0.89 UJ	13.9 J	23 J	0.087	6.3 J	0.3 U	8700 J	2470 J	11200 J	16 J	0.22
GI_SD_NE_2010	GI-SD515-0006	0.253 J	18.7 J	18.3 J	0.239	8.2 J	0.27 U	4970 J	1390 J	6360 J	290 J	0.31
GI_SD_NE_2010	GI-SD517-0006-AVG	1.46 UJ	13.8 J	41.6 J	0.031 J	8.5	0.245 UJ	342 J	37.2 J	380 J	150 J	0.15
GI_SD_NE_2010	GI-SD519-0006	0.665 UJ	10.9 J	17.9	0.02 J	6	0.222 UJ	633	112 J	745 J	286	0.21
GI_SD_NE_2010	GI-SD528-0006	0.67 UJ	16.4 J	96.8 J	0.018 J	7.3	0.254 UJ	551 J	124 J	675 J	56.1 J	0.12
GI_SD_NE_2010	GI-SD530-0006	0.69 UJ	186 J	20.9 J	0.031	32.8	0.23 UJ	711 J	123 J	834 J	8.1 J	0.19
GI_SD_NE_2010	GI-SD531-0006	0.75 UJ	102 J	199 J	0.229	8.2	0.25 UJ	824 J	166 J	990 J	19.1 J	0.19
GI_SD_NE_2010	GI-SD566-0006	0.71 UJ	16 J	17.7 J	0.03	8.8 J	0.24 UJ	3290 J	949 J	4240 J	129 J	0.18
GI_SD_NW_2010	GI-SD521-0006	0.58 UJ	22.9 J	13.2 J	0.019 J	9.4	0.19 UJ	14100 J	3800 J	17900 J	1.42 U	0.32
GI_SD_NW_2010	GI-SD522-0006	2.6 UJ	40.6 J	22.2 J	0.039	21.6	0.492 J	1490 J	116 J	1600 J	6.4 J	0.13
	NOEC[2]	0.253	186	199	0.239	33.4	0.524	14100	3800	17900	290	0.32
	[Max.] in toxic sample	NA	37.7	35.9	0.023	17.2	0.435	5100	840	5940	164	0.22
	LOEC[3]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Footnotes:
1 - Risk characterization in Table 6-17.
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than the maximum concentration in a non-toxic sample.

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 6-27
SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON JUVENILE PRODUCTION PER SURVIVING FEMALE ENDPOINT
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD501-0006	0.79 UJ	28.7 J	35.2 J	0.107	7.7 J	0.145 J	48600	6550 J	55100 J	2720 J	2.29
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_NE_2010	GI-SD518-0006	0.57 UJ	17.9 J	14.5 J	0.023	9.6 J	0.19 U	5100	840 J	5940 J	164 J	0.22
	Non-Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD502-0006	0.81 J	21.2 J	11.3 J	0.02 J	10 J	0.27 U	27000 J	7750 J	34700 J	862 J	1.06
GI_SD_STILLWATER_2010	GI-SD503-0006	0.7 UJ	9.6 J	13.9 J	0.059	6.7 J	0.23 UJ	8900	944 J	9840 J	5.71 U	0.17
GI_SD_STILLWATER_2010	GI-SD504-0006	0.72 UJ	17.8 J	21 J	0.083	7 J	0.223 J	5960	1240 J	7200 J	394 J	0.38
GI_SD_STILLWATER_2010	GI-SD505-0006	0.208 J	25 J	20.4	0.079	6.7	0.271 U	5510	801 J	6310 J	950	0.66
GI_SD_STILLWATER_2010	GI-SD506-0006	0.692 UJ	11.1 J	11.4	0.035	6.5	0.231 UJ	3570	494 J	4060 J	547	0.39
GI_SD_STILLWATER_2010	GI-SD507-0006	0.69 UJ	12.5 J	12.4 J	0.045	6.5 J	0.143 J	7430 J	1090 J	8520 J	2590	1.59
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.65 UJ	14.8 J	10.6 J	0.0195 J	8.9 J	0.0435 J	2150 J	326 J	2480 J	895 J	0.58
GI_SD_STILLWATER_2010	GI-SD509-0006	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD527-0006	0.71 UJ	14.9 J	15 J	0.054	7.7 J	0.23 UJ	1570	233 J	1800 J	25.3	0.08
GI_SD_STILLWATER_2010	GI-SD532-0006	0.71 UJ	10.4 J	7.1 J	0.023 J	8.4 J	0.24 U	32000	6650 J	38700 J	1240	1.27
GI_SD_NE_2010	GI-SD510-0006	0.63 UJ	17.7 J	10.7 J	0.012 J	10.8 J	0.017 U	1020 J	244 J	1260 J	2.14 UJ	0.07
GI_SD_NE_2010	GI-SD511-0006	0.71 UJ	10.6 J	20.7 J	0.029	7.6 J	0.24 UJ	271 J	55.8 J	327 J	276 J	0.20
GI_SD_NE_2010	GI-SD512-0006	1.77 UJ	30.6 J	8.4 J	0.006 J	33.4	0.2 UJ	3910 J	1880 J	5790 J	3.2 J	0.21
GI_SD_NE_2010	GI-SD513-0006	2.05 UJ	6.8 J	7.3 J	0.039 U	6.2	0.524	283 J	38.4 J	321 J	4.3 J	0.04
GI_SD_NE_2010	GI-SD514-0006	0.89 UJ	13.9 J	23 J	0.087	6.3 J	0.3 U	8700 J	2470 J	11200 J	16 J	0.22
GI_SD_NE_2010	GI-SD515-0006	0.253 J	18.7 J	18.3 J	0.239	8.2 J	0.27 U	4970 J	1390 J	6360 J	290 J	0.31
GI_SD_NE_2010	GI-SD517-0006-AVG	1.46 UJ	13.8 J	41.6 J	0.031 J	8.5	0.245 UJ	342 J	37.2 J	380 J	150 J	0.15
GI_SD_NE_2010	GI-SD519-0006	0.665 UJ	10.9 J	17.9	0.02 J	6	0.222 UJ	633	112 J	745 J	286	0.21
GI_SD_NE_2010	GI-SD528-0006	0.67 UJ	16.4 J	96.8 J	0.018 J	7.3	0.254 UJ	551 J	124 J	675 J	56.1 J	0.12
GI_SD_NE_2010	GI-SD530-0006	0.69 UJ	186 J	20.9 J	0.031	32.8	0.23 UJ	711 J	123 J	834 J	8.1 J	0.19
GI_SD_NE_2010	GI-SD531-0006	0.75 UJ	102 J	199 J	0.229	8.2	0.25 UJ	824 J	166 J	990 J	19.1 J	0.19
GI_SD_NE_2010	GI-SD566-0006	0.71 UJ	16 J	17.7 J	0.03	8.8 J	0.24 UJ	3290 J	949 J	4240 J	129 J	0.18
GI_SD_NW_2010	GI-SD520-0006	0.67 UJ	6.5 J	9.3 J	0.015 J	6.7	0.435 J	1520 J	425 J	1950 J	6.7 J	0.06
GI_SD_NW_2010	GI-SD521-0006	0.58 UJ	22.9 J	13.2 J	0.019 J	9.4	0.19 UJ	14100 J	3800 J	17900 J	1.42 U	0.32
GI_SD_NW_2010	GI-SD522-0006	2.6 UJ	40.6 J	22.2 J	0.039	21.6	0.492 J	1490 J	116 J	1600 J	6.4 J	0.13
GI_SD_NW_2010	GI-SD523-0006	0.6 UJ	37.7 J	35.9 J	0.005 J	17.2	0.277 UJ	1450 J	360 J	1810 J	3.92 J	0.12
GI_SD_S_2010	GI-SD529-0006	0.718 UJ	8.1 J	12.7	0.027 J	8.4	0.252 UJ	1780	567 J	2350 J	16	0.08
GI_SD_REF_2010	GI-SD524-0006	0.68 UJ	6.2 J	9.2 J	0.028	7 J	0.097 J	229 J	31 J	260 J	0.543 U	0.04
GI_SD_REF_2010	GI-SD525-0006	0.83 UJ	15 J	20.6 J	0.083	10.2 J	0.19 J	673 J	96.6 J	770 J	0.669 U	0.07
GI_SD_REF_2010	GI-SD526-0006	0.68 UJ	9.9 J	10.6 J	0.039	11.7 J	0.144 J	173 J	10.4 J	184 J	0.538 U	0.05
	NOEC[2]	0.81	186	199	0.239	33.4	0.524	32000	7750	38700	2590	1.59
	[Max.] in toxic sample	NA	28.7	35.2	0.107	9.6	0.145	48600	6550	55100	2720	2.29
	LOEC[3]	NA	NA	NA	NA	NA	NA	48600	NA	55100	2720	2.29
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	NA	NA	39436	NA	46178	2654	1.91

Footnotes:
1 - Risk characterization in Table 6-17.
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than the maximum concentration in a non-toxic sample.

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 6-28
SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON JUVENILE PRODUCTION PER SURVIVING FEMALE ENDPOINT BY AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD501-0006	0.79 UJ	28.7 J	35.2 J	0.107	7.7 J	0.145 J	48600	6550 J	55100 J	2720 J	2.29
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
	Non-Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD502-0006	0.81 J	21.2 J	11.3 J	0.02 J	10 J	0.27 U	27000 J	7750 J	34700 J	862 J	1.06
GI_SD_STILLWATER_2010	GI-SD503-0006	0.7 UJ	9.6 J	13.9 J	0.059	6.7 J	0.23 UJ	8900	944 J	9840 J	5.71 U	0.17
GI_SD_STILLWATER_2010	GI-SD504-0006	0.72 UJ	17.8 J	21 J	0.083	7 J	0.223 J	5960	1240 J	7200 J	394 J	0.38
GI_SD_STILLWATER_2010	GI-SD505-0006	0.208 J	25 J	20.4	0.079	6.7	0.271 U	5510	801 J	6310 J	950	0.66
GI_SD_STILLWATER_2010	GI-SD506-0006	0.692 UJ	11.1 J	11.4	0.035	6.5	0.231 UJ	3570	494 J	4060 J	547	0.39
GI_SD_STILLWATER_2010	GI-SD507-0006	0.69 UJ	12.5 J	12.4 J	0.045	6.5 J	0.143 J	7430 J	1090 J	8520 J	2590	1.59
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.65 UJ	14.8 J	10.6 J	0.0195 J	8.9 J	0.0435 J	2150 J	326 J	2480 J	895 J	0.58
GI_SD_STILLWATER_2010	GI-SD509-0006	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD527-0006	0.71 UJ	14.9 J	15 J	0.054	7.7 J	0.23 UJ	1570	233 J	1800 J	25.3	0.08
GI_SD_STILLWATER_2010	GI-SD532-0006	0.71 UJ	10.4 J	7.1 J	0.023 J	8.4 J	0.24 U	32000	6650 J	38700 J	1240	1.27
	NOEC[2]	0.81	25	21	0.083	10	0.223	32000	7750	38700	2590	1.59
	[Max.] in toxic sample	NA	28.7	35.2	0.107	7.7	0.145	48600	6550	55100	2720	2.29
	LOEC[3]	NA	28.7	35.2	0.107	NA	NA	48600	NA	55100	2720	2.29
	Geometric mean of NOEC and LOEC	NA	27	27	0.0942	NA	NA	39436	NA	46178	2654	1.91

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_NE_2010	GI-SD518-0006	0.57 UJ	17.9 J	14.5 J	0.023	9.6 J	0.19 U	5100	840 J	5940 J	164 J	0.22
	Non-Toxic Samples[1]											
GI_SD_NE_2010	GI-SD510-0006	0.63 UJ	17.7 J	10.7 J	0.012 J	10.8 J	0.017 U	1020 J	244 J	1260 J	2.14 UJ	0.07
GI_SD_NE_2010	GI-SD511-0006	0.71 UJ	10.6 J	20.7 J	0.029	7.6 J	0.24 UJ	271 J	55.8 J	327 J	276 J	0.20
GI_SD_NE_2010	GI-SD512-0006	1.77 UJ	30.6 J	8.4 J	0.006 J	33.4	0.2 UJ	3910 J	1880 J	5790 J	3.2 J	0.21
GI_SD_NE_2010	GI-SD513-0006	2.05 UJ	6.8 J	7.3 J	0.039 U	6.2	0.524	283 J	38.4 J	321 J	4.3 J	0.04
GI_SD_NE_2010	GI-SD514-0006	0.89 UJ	13.9 J	23 J	0.087	6.3 J	0.3 U	8700 J	2470 J	11200 J	16 J	0.22
GI_SD_NE_2010	GI-SD515-0006	0.253 J	18.7 J	18.3 J	0.239	8.2 J	0.27 U	4970 J	1390 J	6360 J	290 J	0.31
GI_SD_NE_2010	GI-SD517-0006-AVG	1.46 UJ	13.8 J	41.6 J	0.031 J	8.5	0.245 UJ	342 J	37.2 J	380 J	150 J	0.15
GI_SD_NE_2010	GI-SD519-0006	0.665 UJ	10.9 J	17.9	0.02 J	6	0.222 UJ	633	112 J	745 J	286	0.21
GI_SD_NE_2010	GI-SD528-0006	0.67 UJ	16.4 J	96.8 J	0.018 J	7.3	0.254 UJ	551 J	124 J	675 J	56.1 J	0.12
GI_SD_NE_2010	GI-SD530-0006	0.69 UJ	186 J	20.9 J	0.031	32.8	0.23 UJ	711 J	123 J	834 J	8.1 J	0.19
GI_SD_NE_2010	GI-SD531-0006	0.75 UJ	102 J	199 J	0.229	8.2	0.25 UJ	824 J	166 J	990 J	19.1 J	0.19
GI_SD_NE_2010	GI-SD566-0006	0.71 UJ	16 J	17.7 J	0.03	8.8 J	0.24 UJ	3290 J	949 J	4240 J	129 J	0.18
GI_SD_NW_2010	GI-SD520-0006	0.67 UJ	6.5 J	9.3 J	0.015 J	6.7	0.435 J	1520 J	425 J	1950 J	6.7 J	0.06
GI_SD_NW_2010	GI-SD521-0006	0.58 UJ	22.9 J	13.2 J	0.019 J	9.4	0.19 UJ	14100 J	3800 J	17900 J	1.42 U	0.32
GI_SD_NW_2010	GI-SD522-0006	2.6 UJ	40.6 J	22.2 J	0.039	21.6	0.492 J	1490 J	116 J	1600 J	6.4 J	0.13
GI_SD_NW_2010	GI-SD523-0006	0.6 UJ	37.7 J	35.9 J	0.005 J	17.2	0.277 UJ	1450 J	360 J	1810 J	3.92 J	0.12
	NOEC[2]	0.253	186	199	0.239	33.4	0.524	14100	3800	17900	290	0.32
	[Max.] in toxic sample	NA	17.9	14.5	0.023	9.6	NA	5100	840	5940	164	0.22
	LOEC[3]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Footnotes:
1 - Risk characterization in Table 6-17.
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than the maximum concentration in a non-toxic sample.

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 6-29
SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON ALL ENDPOINTS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD501-0006	0.79 UJ	28.7 J	35.2 J	0.107	7.7 J	0.145 J	48600	6550 J	55100 J	2720 J	2.29
GI_SD_STILLWATER_2010	GI-SD503-0006	0.7 UJ	9.6 J	13.9 J	0.059	6.7 J	0.23 UJ	8900	944 J	9840 J	5.71 U	0.17
GI_SD_STILLWATER_2010	GI-SD505-0006	0.208 J	25 J	20.4	0.079	6.7	0.271 U	5510	801 J	6310 J	950	0.66
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.65 UJ	14.8 J	10.6 J	0.0195 J	8.9 J	0.0435 J	2150 J	326 J	2480 J	895 J	0.58
GI_SD_STILLWATER_2010	GI-SD509-0006	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_NE_2010	GI-SD512-0006	1.77 UJ	30.6 J	8.4 J	0.006 J	33.4	0.2 UJ	3910 J	1880 J	5790 J	3.2 J	0.21
GI_SD_NE_2010	GI-SD518-0006	0.57 UJ	17.9 J	14.5 J	0.023	9.6 J	0.19 U	5100	840 J	5940 J	164 J	0.22
GI_SD_NE_2010	GI-SD566-0006	0.71 UJ	16 J	17.7 J	0.03	8.8 J	0.24 UJ	3290 J	949 J	4240 J	129 J	0.18
GI_SD_NW_2010	GI-SD520-0006	0.67 UJ	6.5 J	9.3 J	0.015 J	6.7	0.435 J	1520 J	425 J	1950 J	6.7 J	0.06
GI_SD_NW_2010	GI-SD523-0006	0.6 UJ	37.7 J	35.9 J	0.005 J	17.2	0.277 UJ	1450 J	360 J	1810 J	3.92 J	0.12
	Non-Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD502-0006	0.81 J	21.2 J	11.3 J	0.02 J	10 J	0.27 U	27000 J	7750 J	34700 J	862 J	1.06
GI_SD_STILLWATER_2010	GI-SD504-0006	0.72 UJ	17.8 J	21 J	0.083	7 J	0.223 J	5960	1240 J	7200 J	394 J	0.38
GI_SD_STILLWATER_2010	GI-SD506-0006	0.692 UJ	11.1 J	11.4	0.035	6.5	0.231 UJ	3570	494 J	4060 J	547	0.39
GI_SD_STILLWATER_2010	GI-SD507-0006	0.69 UJ	12.5 J	12.4 J	0.045	6.5 J	0.143 J	7430 J	1090 J	8520 J	2590	1.59
GI_SD_STILLWATER_2010	GI-SD527-0006	0.71 UJ	14.9 J	15 J	0.054	7.7 J	0.23 UJ	1570	233 J	1800 J	25.3	0.08
GI_SD_STILLWATER_2010	GI-SD532-0006	0.71 UJ	10.4 J	7.1 J	0.023 J	8.4 J	0.24 U	32000	6650 J	38700 J	1240	1.27
GI_SD_NE_2010	GI-SD510-0006	0.63 UJ	17.7 J	10.7 J	0.012 J	10.8 J	0.017 U	1020 J	244 J	1260 J	2.14 UJ	0.07
GI_SD_NE_2010	GI-SD511-0006	0.71 UJ	10.6 J	20.7 J	0.029	7.6 J	0.24 UJ	271 J	55.8 J	327 J	276 J	0.20
GI_SD_NE_2010	GI-SD513-0006	2.05 UJ	6.8 J	7.3 J	0.039 U	6.2	0.524	283 J	38.4 J	321 J	4.3 J	0.04
GI_SD_NE_2010	GI-SD514-0006	0.89 UJ	13.9 J	23 J	0.087	6.3 J	0.3 U	8700 J	2470 J	11200 J	16 J	0.22
GI_SD_NE_2010	GI-SD515-0006	0.253 J	18.7 J	18.3 J	0.239	8.2 J	0.27 U	4970 J	1390 J	6360 J	290 J	0.31
GI_SD_NE_2010	GI-SD517-0006-AVG	1.46 UJ	13.8 J	41.6 J	0.031 J	8.5	0.245 UJ	342 J	37.2 J	380 J	150 J	0.15
GI_SD_NE_2010	GI-SD519-0006	0.665 UJ	10.9 J	17.9	0.02 J	6	0.222 UJ	633	112 J	745 J	286	0.21
GI_SD_NE_2010	GI-SD528-0006	0.67 UJ	16.4 J	96.8 J	0.018 J	7.3	0.254 UJ	551 J	124 J	675 J	56.1 J	0.12
GI_SD_NW_2010	GI-SD521-0006	0.58 UJ	22.9 J	13.2 J	0.019 J	9.4	0.19 UJ	14100 J	3800 J	17900 J	1.42 U	0.32
GI_SD_NW_2010	GI-SD522-0006	2.6 UJ	40.6 J	22.2 J	0.039	21.6	0.492 J	1490 J	116 J	1600 J	6.4 J	0.13
GI_SD_NE_2010	GI-SD530-0006	0.69 UJ	186 J	20.9 J	0.031	32.8	0.23 UJ	711 J	123 J	834 J	8.1 J	0.19
GI_SD_NE_2010	GI-SD531-0006	0.75 UJ	102 J	199 J	0.229	8.2	0.25 UJ	824 J	166 J	990 J	19.1 J	0.19
GI_SD_S_2010	GI-SD529-0006	0.718 UJ	8.1 J	12.7	0.027 J	8.4	0.252 UJ	1780	567 J	2350 J	16	0.08
GI_SD_REF_2010	GI-SD524-0006	0.68 UJ	6.2 J	9.2 J	0.028	7 J	0.097 J	229 J	31 J	260 J	0.543 U	0.04
GI_SD_REF_2010	GI-SD525-0006	0.83 UJ	15 J	20.6 J	0.083	10.2 J	0.19 J	673 J	96.6 J	770 J	0.669 U	0.07
GI_SD_REF_2010	GI-SD526-0006	0.68 UJ	9.9 J	10.6 J	0.039	11.7 J	0.144 J	173 J	10.4 J	184 J	0.538 U	0.05
	NOEC[2]	0.81	186	199	0.239	32.8	0.524	32000	7750	38700	2590	1.59
	[Max.] in toxic sample	0.208	37.7	35.9	0.107	33.4	0.435	48600	6550	55100	2720	2.29
	LOEC[3]	NA	NA	NA	NA	33.4	NA	48600	NA	55100	2720	2.29
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	33.1	NA	39436	NA	46178	2654	1.91

Footnotes:
1 - Risk characterization in Table 6-17.
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than the maximum concentration in a non-toxic sample.

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 6-30
SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON ALL ENDPOINTS BY AREA
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD501-0006	0.79 UJ	28.7 J	35.2 J	0.107	7.7 J	0.145 J	48600	6550 J	55100 J	2720 J	2.29
GI_SD_STILLWATER_2010	GI-SD503-0006	0.7 UJ	9.6 J	13.9 J	0.059	6.7 J	0.23 UJ	8900	944 J	9840 J	5.71 U	0.17
GI_SD_STILLWATER_2010	GI-SD505-0006	0.208 J	25 J	20.4	0.079	6.7	0.271 U	5510	801 J	6310 J	950	0.66
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.65 UJ	14.8 J	10.6 J	0.0195 J	8.9 J	0.0435 J	2150 J	326 J	2480 J	895 J	0.58
GI_SD_STILLWATER_2010	GI-SD509-0006	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	3000 J	593 J	3600 J	460 J	0.34
	Non-Toxic Samples[1]											
GI_SD_STILLWATER_2010	GI-SD502-0006	0.81 J	21.2 J	11.3 J	0.02 J	10 J	0.27 U	27000 J	7750 J	34700 J	862 J	1.06
GI_SD_STILLWATER_2010	GI-SD504-0006	0.72 UJ	17.8 J	21 J	0.083	7 J	0.223 J	5960	1240 J	7200 J	394 J	0.38
GI_SD_STILLWATER_2010	GI-SD506-0006	0.692 UJ	11.1 J	11.4	0.035	6.5	0.231 UJ	3570	494 J	4060 J	547	0.39
GI_SD_STILLWATER_2010	GI-SD507-0006	0.69 UJ	12.5 J	12.4 J	0.045	6.5 J	0.143 J	7430 J	1090 J	8520 J	2590	1.59
GI_SD_STILLWATER_2010	GI-SD527-0006	0.71 UJ	14.9 J	15 J	0.054	7.7 J	0.23 UJ	1570	233 J	1800 J	25.3	0.08
GI_SD_STILLWATER_2010	GI-SD532-0006	0.71 UJ	10.4 J	7.1 J	0.023 J	8.4 J	0.24 U	32000	6650 J	38700 J	1240	1.27
	NOEC[2]	0.81	21.2	21	0.083	10	0.223	32000	7750	38700	2590	1.59
	[Max.] in toxic sample	0.208	28.7	35.2	0.107	8.9	0.145	48600	6550	55100	2720	2.29
	LOEC[3]	NA	25	35.2	0.107	NA	NA	48600	NA	55100	2720	2.29
	Geometric mean of NOEC and LOEC	NA	23	27	0.094	NA	NA	39436	NA	46178	2654	1.91

Sample Area	Sample Number	Concentration (mg/kg)						Concentration (ug/kg)				Average ERM-Q
		Antimony	Copper	Lead	Mercury	Nickel	Silver	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]											
GI_SD_NE_2010	GI-SD512-0006	1.77 UJ	30.6 J	8.4 J	0.006 J	33.4	0.2 UJ	3910 J	1880 J	5790 J	3.2 J	0.21
GI_SD_NE_2010	GI-SD518-0006	0.57 UJ	17.9 J	14.5 J	0.023	9.6 J	0.19 U	5100	840 J	5940 J	164 J	0.22
GI_SD_NE_2010	GI-SD566-0006	0.71 UJ	16 J	17.7 J	0.03	8.8 J	0.24 UJ	3290 J	949 J	4240 J	129 J	0.18
GI_SD_NW_2010	GI-SD520-0006	0.67 UJ	6.5 J	9.3 J	0.015 J	6.7	0.435 J	1520 J	J	1950 J	6.7 J	0.06
GI_SD_NW_2010	GI-SD523-0006	0.6 UJ	37.7 J	35.9 J	0.005 J	17.2	0.277 UJ	1450 J	360 J	1810 J	3.92 J	0.12
	Non-Toxic Samples[1]											
GI_SD_NE_2010	GI-SD510-0006	0.63 UJ	17.7 J	10.7 J	0.012 J	10.8 J	0.017 U	1020 J	244 J	1260 J	2.14 UJ	0.07
GI_SD_NE_2010	GI-SD511-0006	0.71 UJ	10.6 J	20.7 J	0.029	7.6 J	0.24 UJ	271 J	55.8 J	327 J	276 J	0.20
GI_SD_NE_2010	GI-SD513-0006	2.05 UJ	6.8 J	7.3 J	0.039 U	6.2	0.524	283 J	38.4 J	321 J	4.3 J	0.04
GI_SD_NE_2010	GI-SD514-0006	0.89 UJ	13.9 J	23 J	0.087	6.3 J	0.3 U	8700 J	2470 J	11200 J	16 J	0.22
GI_SD_NE_2010	GI-SD515-0006	0.253 J	18.7 J	18.3 J	0.239	8.2 J	0.27 U	4970 J	1390 J	6360 J	290 J	0.31
GI_SD_NE_2010	GI-SD517-0006-AVG	1.46 UJ	13.8 J	41.6 J	0.031 J	8.5	0.245 UJ	342 J	37.2 J	380 J	150 J	0.15
GI_SD_NE_2010	GI-SD519-0006	0.665 UJ	10.9 J	17.9	0.02 J	6	0.222 UJ	633	112 J	745 J	286	0.21
GI_SD_NE_2010	GI-SD528-0006	0.67 UJ	16.4 J	96.8 J	0.018 J	7.3	0.254 UJ	551 J	124 J	675 J	56.1 J	0.12
GI_SD_NE_2010	GI-SD530-0006	0.69 UJ	186 J	20.9 J	0.031	32.8	0.23 UJ	711 J	123 J	834 J	8.1 J	0.19
GI_SD_NE_2010	GI-SD531-0006	0.75 UJ	102 J	199 J	0.229	8.2	0.25 UJ	824 J	166 J	990 J	19.1 J	0.19
GI_SD_NW_2010	GI-SD521-0006	0.58 UJ	22.9 J	13.2 J	0.019 J	9.4	0.19 UJ	14100 J	3800 J	17900 J	1.42 U	0.32
GI_SD_NW_2010	GI-SD522-0006	2.6 UJ	40.6 J	22.2 J	0.039	21.6	0.492 J	1490 J	116 J	1600 J	6.4 J	0.13
	NOEC[2]	0.253	186	199	0.239	32.8	0.524	14100	3800	17900	290	0.32
	[Max.] in toxic sample	NA	37.7	35.9	0.03	33.4	0.44	5100	1880	5940	164	0.22
	LOEC[3]	NA	NA	NA	NA	33.4	NA	NA	NA	NA	NA	NA
	Geometric mean of NOEC and LOEC	NA	NA	NA	NA	33.1	NA	NA	NA	NA	NA	NA

Footnotes:
1 - Risk characterization in Table 6-17.
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than the maximum concentration in a non-toxic sample.

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 6-31
SUMMARY OF NOECS AND LOECS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

	Survival					
	All data		Stillwater		NE/NW	
Chemical	NOEC	LOEC	NOEC	LOEC	NOEC	LOEC
Antimony	0.81	NA	0.81	NA	0.253	NA
Copper	186	NA	28.7	NA	186	NA
Lead	199	NA	35.2	NA	199	NA
Mercury	0.239	NA	0.107	NA	0.239	NA
Nickel	33.4	NA	10	NA	33.4	NA
Silver	0.524	NA	0.223	NA	0.524	NA
HMW PAHs	48600	NA	48600	NA	14100	NA
LMW PAHs	7750	NA	7750	NA	3800	NA
Total PAHs	55100	NA	55100	NA	17900	NA
Total PCB Homologs	2720	NA	2720	NA	290	NA
Average ERM-Q	2.29	NA	2.29	NA	0.32	NA

	Dry Weight					
	All data		Stillwater		NE/NW	
Chemical	NOEC	LOEC	NOEC	LOEC	NOEC	LOEC
Antimony	0.81	NA	0.81	NA	0.253	NA
Copper	186	NA	28.7	NA	186	NA
Lead	199	NA	35.2	NA	199	NA
Mercury	0.239	NA	0.107	NA	0.239	NA
Nickel	32.8	33.4	10	NA	32.8	33.4
Silver	0.524	NA	0.223	NA	0.524	NA
HMW PAHs	48600	NA	48600	NA	14100	NA
LMW PAHs	7750	NA	7750	NA	3800	NA
Total PAHs	55100	NA	55100	NA	17900	NA
Total PCB Homologs	2720	NA	2720	NA	290	NA
Average ERM-Q	2.29	NA	2.29	NA	0.32	NA

TABLE 6-31
SUMMARY OF NOECS AND LOECS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

	Dry Biomass					
	All data		Stillwater		NE/NW	
Chemical	NOEC	LOEC	NOEC	LOEC	NOEC	LOEC
Antimony	0.81	NA	0.81	NA	0.253	NA
Copper	186	NA	28.7	NA	186	NA
Lead	199	NA	35.2	NA	199	NA
Mercury	0.239	NA	0.107	NA	0.239	NA
Nickel	32.8	33.4	10	NA	32.8	33.4
Silver	0.524	NA	0.223	NA	0.524	NA
HMW PAHs	48600	NA	48600	NA	14100	NA
LMW PAHs	7750	NA	7750	NA	3800	NA
Total PAHs	55100	NA	55100	NA	17900	NA
Total PCB Homologs	2720	NA	2720	NA	290	NA
Average ERM-Q	2.29	NA	2.29	NA	0.32	NA

	Overall Reproduction					
	All data		Stillwater		NE/NW	
Chemical	NOEC	LOEC	NOEC	LOEC	NOEC	LOEC
Antimony	0.81	NA	0.81	NA	0.253	NA
Copper	186	NA	25	28.7	186	NA
Lead	199	NA	21	35.2	199	NA
Mercury	0.239	NA	0.083	0.107	0.239	NA
Nickel	33.4	NA	10	NA	33.4	NA
Silver	0.524	NA	0.223	NA	0.524	NA
HMW PAHs	32000	48600	32000	48600	14100	NA
LMW PAHs	7750	NA	7750	NA	3800	NA
Total PAHs	38700	55100	38700	55100	17900	NA
Total PCB Homologs	2590	2720	2590	2720	290	NA
Average ERM-Q	1.59	2.29	1.59	2.29	0.32	NA

TABLE 6-31
SUMMARY OF NOECS AND LOECS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

	Juvenile Production Per Surviving Female					
	All data		Stillwater		NE/NW	
Chemical	NOEC	LOEC	NOEC	LOEC	NOEC	LOEC
Antimony	0.81	NA	0.81	NA	0.253	NA
Copper	186	NA	25	28.7	186	NA
Lead	199	NA	21	35.2	199	NA
Mercury	0.239	NA	0.083	0.107	0.239	NA
Nickel	33.4	NA	10	NA	33.4	NA
Silver	0.524	NA	0.223	NA	0.524	NA
HMW PAHs	32000	48600	32000	48600	14100	NA
LMW PAHs	7750	NA	7750	NA	3800	NA
Total PAHs	38700	55100	38700	55100	17900	NA
Total PCB Homologs	2590	2720	2590	2720	290	NA
Average ERM-Q	1.59	2.29	1.59	2.29	0.32	NA

	All Endpoints					
	All data		Stillwater		NE/NW	
Chemical	NOEC	LOEC	NOEC	LOEC	NOEC	LOEC
Antimony	0.81	NA	0.81	NA	0.253	NA
Copper	186	NA	21.2	25	186	NA
Lead	199	NA	21	35.2	199	NA
Mercury	0.239	NA	0.083	0.107	0.239	NA
Nickel	32.8	33.4	10	NA	32.8	33.4
Silver	0.524	NA	0.223	NA	0.524	NA
HMW PAHs	32000	48600	32000	48600	14100	NA
LMW PAHs	7750	NA	7750	NA	3800	NA
Total PAHs	38700	55100	38700	55100	17900	NA
Total PCB Homologs	2590	2720	2590	2720	290	NA
Average ERM-Q	1.59	2.29	1.59	2.29	0.32	NA

Notes:
Concentrations are presented in mg/kg for metals and ug/kg for organics.
NOECs and LOECs are determined in Tables 6-19 to 6-30.

All data - Includes samples collected from all areas (Stillwater Basin, Northeastern Shoreline, Northwestern Shoreline, and South of Island).
Stillwater - Includes only samples collected in Stillwater Basin.
NE/NW - Includes only samples collected along the Northeastern and Northwestern Shorelines.
NOEC - No Observed Effects Concentration
LOEC - Lowest Observed Effects Concentration
ERM-Q - Effects Range Medium Quotient

TABLE 6-32
UNCERTAINTY ANALYSIS - SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON ALL ENDPOINTS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sample Number	Total Organic Carbon (%)	Concentration (mg/kg)						Concentration (ug/kg)							
			Antimony	Copper	Lead	Mercury	Nickel	Silver	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene
Toxic Samples[1]																
GI_SD_STILLWATER_2010	GI-SD501-0006	1.17	0.79 UJ	28.7 J	35.2 J	0.107	7.7 J	0.145 J	520 U	130 J	210 J	4400	5200	3800	4100	1600
GI_SD_STILLWATER_2010	GI-SD503-0006	0.8	0.7 UJ	9.6 J	13.9 J	0.059	6.7 J	0.23 UJ	93 U	42 J	24 J	300	1000	760	770	330
GI_SD_STILLWATER_2010	GI-SD505-0006	1.38	0.208 J	25 J	20.4	0.079	6.7	0.271 U	110 U	38 J	54 J	270	580	600	590	320
GI_SD_STILLWATER_2010	GI-SD507-0006	0.724	0.69 UJ	12.5 J	12.4 J	0.045	6.5 J	0.143 J	46 UJ	62 J	51 J	230 J	750 J	740 J	770 J	330 J
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	0.288	0.65 UJ	14.8 J	10.6 J	0.0195 J	8.9 J	0.0435 J	21.5 U	18 J	12 J	94.5 J	185 J	118 J	145 J	61.5
GI_SD_STILLWATER_2010	GI-SD509-0006	0.57	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	17.8 J	44 J	17 J	136 J	300 J	285 J	260 J	155 J
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.59	0.68 UJ	11.8 J	10.6 J	0.0285	5.85 J	0.106 J	17.8 J	44 J	17 J	136 J	300 J	285 J	260 J	155 J
GI_SD_NE_2010	GI-SD510-0006	0.474	0.63 UJ	17.7 J	10.7 J	0.012 J	10.8 J	0.017 U	8.4 UJ	11 J	12 J	76 J	96 J	130 J	120 J	71 J
GI_SD_NE_2010	GI-SD512-0006	0.233	1.77 UJ	30.6 J	8.4 J	0.006 J	33.4	0.2 UJ	42 J	190 J	32 UJ	360 J	420 J	380 J	280 J	190 J
GI_SD_NE_2010	GI-SD518-0006	0.97	0.57 UJ	17.9 J	14.5 J	0.023	9.6 J	0.19 U	37 U	70	13 J	160	560	540	430	330
GI_SD_NE_2010	GI-SD519-0006	0.524	0.665 UJ	10.9 J	17.9	0.02 J	6	0.222 UJ	1.8 J	6.8 J	2.3 J	25	68	68	60	37
GI_SD_NW_2010	GI-SD520-0006	0.429	0.67 UJ	6.5 J	9.3 J	0.015 J	6.7	0.435 J	8.9 J	21 J	12 J	70 J	150 J	150 J	110 J	92 J
GI_SD_NW_2010	GI-SD521-0006	0.296	0.58 UJ	22.9 J	13.2 J	0.019 J	9.4	0.19 UJ	31 J	290 J	12 J	780 J	1600 J	1400 J	990 J	680 J
GI_SD_NW_2010	GI-SD523-0006	0.366	0.6 UJ	37.7 J	35.9 J	0.005 J	17.2	0.277 UJ	4.8 J	30	2 J	65	150	150	110	89
GI_SD_NE_2010	GI-SD528-0006	0.44	0.67 UJ	16.4 J	96.8 J	0.018 J	7.3	0.254 UJ	3.1 J	13	2.2 J	22	55	53 J	46	38 J
GI_SD_NE_2010	GI-SD531-0006	0.646	0.75 UJ	102 J	199 J	0.229	8.2	0.25 UJ	3.5 J	17	6 J	32	69	77 J	93	78 J
GI_SD_NE_2010	GI-SD566-0006	1.03	0.71 UJ	16 J	17.7 J	0.03	8.8 J	0.24 UJ	13 J	91 J	5.7 J	190 J	340 J	330 J	250 J	180 J
Non-Toxic Samples[1]																
GI_SD_STILLWATER_2010	GI-SD502-0006	0.946	0.81 J	21.2 J	11.3 J	0.02 J	10 J	0.27 U	320 U	200 J	110 J	2300	2200	1500	1700	620
GI_SD_STILLWATER_2010	GI-SD504-0006	1.13	0.72 UJ	17.8 J	21 J	0.083	7 J	0.223 J	96 U	110	29 J	240	650	590	490	340
GI_SD_STILLWATER_2010	GI-SD506-0006	0.72	0.692 UJ	11.1 J	11.4	0.035	6.5	0.231 UJ	46 U	19 J	35 J	97	290	260	280	150
GI_SD_NE_2010	GI-SD511-0006	0.59	0.71 UJ	10.6 J	20.7 J	0.029	7.6 J	0.24 UJ	9.3 U	4.2 J	1.9 J	11	25	28	27	21
GI_SD_NE_2010	GI-SD513-0006	0.67	2.05 UJ	6.8 J	7.3 J	0.039 U	6.2	0.524	1.4 J	9 U	12	9 U	28	31 J	22	25 J
GI_SD_NE_2010	GI-SD514-0006	1.37	0.89 UJ	13.9 J	23 J	0.087	6.3 J	0.3 U	117 UJ	220 J	47 J	500 J	910 J	890 J	700 J	490 J
GI_SD_NE_2010	GI-SD515-0006	1.47	0.253 J	18.7 J	18.3 J	0.239	8.2 J	0.27 U	26 J	150 J	14 J	260 J	510 J	530 J	440 J	290 J
GI_SD_NE_2010	GI-SD517-0006-AVG	0.825	1.46 UJ	13.8 J	41.6 J	0.031 J	8.5	0.245 UJ	1.95 J	2.75 J	3.75 J	11 UJ	37 J	37 J	38.5 J	24 J
GI_SD_NW_2010	GI-SD522-0006	1.19	2.6 UJ	40.6 J	22.2 J	0.039	21.6	0.492 J	2.9 J	7.5 J	5.2 J	25	130	81 J	76	43 J
GI_SD_REF_2010	GI-SD524-0006	0.59	0.68 UJ	6.2 J	9.2 J	0.028	7 J	0.097 J		9.1 U	4.6 J	4.1 J	22	24	19	20
GI_SD_REF_2010	GI-SD525-0006	1.16	0.83 UJ	15 J	20.6 J	0.083	10.2 J	0.19 J		3.9 J	13 J	15 J	61 J	73 J	58 J	48 J
GI_SD_REF_2010	GI-SD526-0006	0.849	0.68 UJ	9.9 J	10.6 J	0.039	11.7 J	0.144 J		8.9 U	3.6 J	5 J	15	18	15	14
GI_SD_STILLWATER_2010	GI-SD527-0006	1.14	0.71 UJ	14.9 J	15 J	0.054	7.7 J	0.23 UJ	18 U	13 J	17 J	57	160	160	160	98
GI_SD_S_2010	GI-SD529-0006	0.83	0.718 UJ	8.1 J	12.7	0.027 J	8.4	0.252 UJ	13	57	2.4 J	98	180	180	140	110
GI_SD_NE_2010	GI-SD530-0006	0.5	0.69 UJ	186 J	20.9 J	0.031	32.8	0.23 UJ	3.2 J	7.9 J	6.9 J	23	68	67 J	59	40 J
GI_SD_STILLWATER_2010	GI-SD532-0006	0.442	0.71 UJ	10.4 J	7.1 J	0.023 J	8.4 J	0.24 U	290 U	230 J	87 J	2400	2900	2100	2600	970
NOEC[2]			0.81	186	41.6	0.239	32.8	0.524	26	230	110	2400	2900	2100	2600	970
[Max.] in toxic sample			0.208	102	199	0.229	33.4	0.435	42	290	210	4400	5200	3800	4100	1600
LOEC[3]			NA	NA	96.8	NA	33.4	NA	31	290	210	4400	5200	3800	4100	1600
Geometric mean of NOEC and LOEC			NA	NA	63.5	NA	33.1	NA	28	258	152	3250	3883	2825	3265	1246

Footnotes:
1 - Uncertainty analysis risk characterization is presented in Section 6.5.4
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than the maximum concentration in a non-toxic sample.

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 6-32
UNCERTAINTY ANALYSIS - SUMMARY OF NOECS AND LOECS FOR LEPTOCHEIRUS PLUMULOSUS BASED ON ALL ENDPOINTS
PHASE 2 REMEDIAL INVESTIGATION
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

Sample Area	Sample Number	Concentration (ug/kg)													Average ERM-Q
		Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	HMW PAHs	LMW PAHs	Total PAHs	Total PCB Homologs	
	Toxic Samples[1]														
GI_SD_STILLWATER_2010	GI-SD501-0006	3900	6900	580	12000	210 J	1600	520 U	1600	8900	48600	6550 J	55100 J	2720 J	2.29
GI_SD_STILLWATER_2010	GI-SD503-0006	580	1100	130	2100	38 J	330	93 U	540	1800	8900	944 J	9840 J	5.71 U	0.17
GI_SD_STILLWATER_2010	GI-SD505-0006	520	840	110	830	49 J	280	110 U	390	840	5510	801 J	6310 J	950	0.66
GI_SD_STILLWATER_2010	GI-SD507-0006	590 J	1100 J	120 J	1500 J	72 J	330 J	67 J	610 J	1200 J	7430 J	1090 J	8520 J	2590	1.59
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	125 J	270 J	20.5 J	655	21.5 J	56.5	21.5 U	180 J	515	2150 J	326 J	2480 J	895 J	0.58
GI_SD_STILLWATER_2010	GI-SD509-0006	225 J	425 J	55 J	625 J	44 J	155 J	36.5 UJ	345 J	520 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_STILLWATER_2010	GI-SD509-0006-D	225 J	425 J	55 J	625 J	44 J	155 J	36.5 UJ	345 J	520 J	3000 J	593 J	3600 J	460 J	0.34
GI_SD_NE_2010	GI-SD510-0006	93 J	140 J	26 J	150 J	23 J	73 J	12 J	110 J	120 J	1020 J	244 J	1260 J	2.14 UJ	0.07
GI_SD_NE_2010	GI-SD512-0006	260 J	370 J	70 J	1000 J	170 J	190 J	130 J	990 J	750 J	3910 J	1880 J	5790 J	3.2 J	0.21
GI_SD_NE_2010	GI-SD518-0006	360	560	110	1000	57	310	37 U	540	900	5100	840 J	5940 J	164 J	0.22
GI_SD_NE_2010	GI-SD519-0006	49	74	13	120	6.3 J	34	2.7 J	67	110	633	112 J	745 J	286	0.21
GI_SD_NW_2010	GI-SD520-0006	110 J	160 J	29 J	360 J	34 J	82 J	19 J	260 J	280 J	1520 J	425 J	1950 J	6.7 J	0.06
GI_SD_NW_2010	GI-SD521-0006	1100 J	1500 J	270 J	3300 J	290 J	690 J	78 UJ	2400 J	2600 J	14100 J	3800 J	17900 J	1.42 U	0.32
GI_SD_NW_2010	GI-SD523-0006	110	150	30	320	28	84	7.9 UJ	230	260 J	1450 J	360 J	1810 J	3.92 J	0.12
GI_SD_NE_2010	GI-SD528-0006	40	54	12	120	9.3	33	8.8 U	74	100 J	551 J	124 J	675 J	56.1 J	0.12
GI_SD_NE_2010	GI-SD531-0006	64	82	25	140	13	66	10 U	95	130 J	824 J	166 J	990 J	19.1 J	0.19
GI_SD_NE_2010	GI-SD566-0006	230 J	340 J	74 J	770 J	66 J	190 J	33 J	550 J	590 J	3290 J	949 J	4240 J	129 J	0.18
	Non-Toxic Samples[1]														
GI_SD_STILLWATER_2010	GI-SD502-0006	1400	3800	250 J	8800	440	690	320 U	4700	6000	27000 J	7750 J	34700 J	862 J	1.06
GI_SD_STILLWATER_2010	GI-SD504-0006	530	730	110	1200	87 J	320	96 U	770	1000	5960	1240 J	7200 J	394 J	0.38
GI_SD_STILLWATER_2010	GI-SD506-0006	240	480	49	940	26 J	140	7 J	310	740	3570	494 J	4060 J	547	0.39
GI_SD_NE_2010	GI-SD511-0006	24	31	7.1 J	49	4.7 J	16	9.3 U	34	43	271 J	55.8 J	327 J	276 J	0.20
GI_SD_NE_2010	GI-SD513-0006	24	31	6.8 J	48	9 U	19	9 U	25	48 J	283 J	38.4 J	321 J	4.3 J	0.04
GI_SD_NE_2010	GI-SD514-0006	630 J	940 J	170 J	2000 J	200 J	470 J	117 UJ	1500 J	1500 J	8700 J	2470 J	11200 J	16 J	0.22
GI_SD_NE_2010	GI-SD515-0006	340 J	500 J	100 J	1100 J	100 J	300 J	54 J	790 J	860 J	4970 J	1390 J	6360 J	290 J	0.31
GI_SD_NE_2010	GI-SD517-0006-AVG	32 J	42 J	7.7 J	56.5 J	3.75 J	22 J	10 UJ	25 J	45.5 J	342 J	37.2 J	380 J	150 J	0.15
GI_SD_NW_2010	GI-SD522-0006	89	160	15	490	6.9 J	42	11 U	69	360 J	1490 J	116 J	1600 J	6.4 J	0.13
GI_SD_REF_2010	GI-SD524-0006	18	27	4.1 J	40	2.3 J	15	9.1 U	20	40	229 J	31 J	260 J	0.543 U	0.04
GI_SD_REF_2010	GI-SD525-0006	52 J	71 J	15 J	130 J	6.7 J	45 J	11 UJ	58 J	120 J	673 J	96.6 J	770 J	0.669 U	0.07
GI_SD_REF_2010	GI-SD526-0006	13	17	3.2 J	36	1.8 J	12	8.9 U	17 U	30	173 J	10.4 J	184 J	0.538 U	0.05
GI_SD_STILLWATER_2010	GI-SD527-0006	140	240	33	260	16 J	91	18 U	130	230	1570	233 J	1800 J	25.3	0.08
GI_SD_S_2010	GI-SD529-0006	150	180	36	400	47	98	30	320	310	1780	567 J	2350 J	16	0.08
GI_SD_NE_2010	GI-SD530-0006	55	100	15	140	7.9 J	37	9.2 U	74	130 J	711 J	123 J	834 J	8.1 J	0.19
GI_SD_STILLWATER_2010	GI-SD532-0006	2000	4900	360	8900	330	980	290 U	3600	6300	32000	6650 J	38700 J	1240	1.27
	NOEC[2]	2000	4900	360	8900	440	980	54	4700	6300	32000	7750	38700	1240	1.27
	[Max.] in toxic sample	3900	6900	580	12000	290	1600	130	2400	8900	48600	6550	55100	2720	2.29
	LOEC[3]	3900	6900	580	12000	NA	1600	67	NA	8900	48600	NA	55100	2590	1.59
	Geometric mean of NOEC and LOEC	2793	5815	457	10334	NA	1252	60	NA	7488	39436	NA	46178	1792	1.42

Footnotes:
1 - Uncertainty analysis risk characterization is presented in S
2 - Greatest concentration in a non-toxic sample.
3 - Lowest concentration in a toxic sample that is greater than

ERM-Q - Effects range medium quotient
NOEC - No observed effects level
LOEC - Lowest observed effects level

TABLE 7-1
SUMMARY STATISTICS FOR PHASE 1 AND PHASE 2 INVESTIGATIONS
SURFACE SOIL
PHASE 2 REMEDIAL INVESTIGATION
SITE 17 GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

	PHASE I				PHASE II			
PARAMETER	**Avg Of Detects**	**Max**	**Range Of Detects**	**UCL**	**Avg Of Detects**	**Max**	**Range Of Detects**	**UCL**
METALS (MG/KG)								
ALUMINUM	6790	8990	4660 - 8990	7311	6080	8070	3370 - 8070	6677
ANTIMONY	ND	ND	ND	NC	1.7	1.7	1.7 - 1.7	NC
ARSENIC	3.54	5.9	2 - 5.9	4.022	4.12	11.4	1.9 - 11.4	5.634
BARIUM	47	164	14.7 - 164	63.53	28.4	50.5	14.4 - 50.5	34.08
BERYLLIUM	0.253	0.62	0.17 - 0.62	0.295	0.262	0.44	0.16 - 0.44	0.318
CADMIUM	1.61	7.6	0.19 - 7.6	1.801	3.48	31.5	0.071 - 31.5	28.98
CALCIUM	11300	59700	581 - 59700	53576	4060	21500	362 - 21500	12630
CHROMIUM	12.2	26.5	6.2 - 26.5	14.25	9.91	20.4	5.1 - 20.4	12.27
COBALT	4.62	7.5	3.4 - 7.5	5.072	3.98	6.1	1.8 - 6.1	4.714
COPPER	28.2	71.9	11.4 - 71.9	36.87	20.2	34.3	5.3 - 34.3	25.56
CYANIDE	0.12	0.12	0.12 - 0.12	NC	NA	NA	NA	NC
IRON	14900	29600	8700 - 29600	17558	16000	22500	7440 - 22500	18470
LEAD	101	750	5.7 - 750	512.6	48.4	194	7 - 194	86.14
MAGNESIUM	2860	6920	1900 - 6920	3355	2040	2900	1120 - 2900	2348
MANGANESE	196	473	92 - 473	230	241	440	96.1 - 440	297
MERCURY	0.0269	0.06	0.0065 - 0.06	0.0277	0.0328	0.097	0.0068 - 0.097	0.0667
NICKEL	12	22.4	6.2 - 22.4	13.6	8.84	14.2	3.6 - 14.2	10.59
POTASSIUM	1000	4960	469 - 4960	1428	568	746	458 - 746	611.7
SILVER	ND	ND	ND	NC	0.1	0.1	0.1 - 0.1	NC
SODIUM	156	638	26.7 - 638	231.1	89.2	376	22.6 - 376	218.1
THALLIUM	ND	ND	ND	NC	0.25	0.32	0.15 - 0.32	0.342
VANADIUM	13.8	28.7	7.5 - 28.7	16.06	12.4	21.9	6.7 - 21.9	14.52
ZINC	69.1	213	21.3 - 213	94.94	68.5	234	22 - 234	99.41
PESTICIDES/PCBS (UG/KG)								
4,4'-DDE	43.5	64	23 - 64	64	NA	NA	NA	NC
4,4'-DDT	27	27	27 - 27	NC	NA	NA	NA	NC
ALPHA-CHLORDANE	2.1	2.1	2.1 - 2.1	NC	NA	NA	NA	NC
AROCLOR-1248	ND	ND	ND	NC	1200	1200	1200 - 1200	NC
AROCLOR-1254	ND	ND	ND	NC	640	640	640 - 640	NC
AROCLOR-1260	308	700	59 - 700	312.8	98.5	110	87 - 110	NC
BETA-BHC	2.55	3.1	2 - 3.1	2.285	NA	NA	NA	NC
ENDOSULFAN SULFATE	46	46	46 - 46	NC	NA	NA	NA	NC
ENDRIN	94	170	18 - 170	98.92	NA	NA	NA	NC
ENDRIN ALDEHYDE	9.9	16	3.8 - 16	16	NA	NA	NA	NC
ENDRIN KETONE	90.3	270	4.1 - 270	93.33	NA	NA	NA	NC
METHOXYCHLOR	179	250	67 - 250	114.9	NA	NA	NA	NC
TOTAL AROCLOR	308	700	59 - 700	317.8	679	1840	87 - 1840	NC
TOTAL CHLORDANE	2.1	2.1	2.1 - 2.1	NC	NA	NA	NA	NC
TOTAL DDD/DDE/DDT	57	64	50 - 64	52.64	NA	NA	NA	NC

TABLE 7-1
SUMMARY STATISTICS FOR PHASE 1 AND PHASE 2 INVESTIGATIONS
SURFACE SOIL
PHASE 2 REMEDIAL INVESTIGATION
SITE 17 GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

	PHASE I				PHASE II			
PARAMETER	**Avg Of Detects**	**Max**	**Range Of Detects**	**UCL**	**Avg Of Detects**	**Max**	**Range Of Detects**	**UCL**
PETROLEUM HYDROCARBONS (MG/KG)								
EXTRACTABLE PETROLEUM HYDROCARBONS	2110	14000	15 - 14000	11549	NC	NA	NA	NC
TOTAL PETROLEUM HYDROCARBONS	NA	NA	NA	NC	52.6	88	25 - 88	63.59
SEMIVOLATILES (UG/KG)								
1,1-BIPHENYL	2370	5500	360 - 5500	2656	NA	NA	NA	NC
2-METHYLNAPHTHALENE	2870	19000	3.8 - 19000	14237	214	330	98 - 330	164.3
4-METHYLPHENOL	49	49	49 - 49	NC	NA	NA	NA	NC
ACENAPHTHENE	10600	100000	2.92 - 100000	66575	782	2500	37 - 2500	858
ACENAPHTHYLENE	385	3300	5.4 - 3300	2208	260	260	260 - 260	NC
ANTHRACENE	16500	140000	5 - 140000	96434	914	5200	46 - 5200	1401
BENZO(A)ANTHRACENE	29900	210000	6.7 - 210000	159125	1020	8400	36 - 8400	3984
BENZO(A)PYRENE	22900	160000	3.02 - 160000	122916	891	6700	65 - 6700	4219
BENZO(B)FLUORANTHENE	28000	170000	7.15 - 170000	141941	1100	8200	100 - 8200	5162
BENZO(G,H,I)PERYLENE	14100	96000	34 - 96000	72380	655	4700	55 - 4700	2953
BENZO(K)FLUORANTHENE	12000	74000	2.78 - 74000	61848	609	4600	44 - 4600	2894
BIS(2-ETHYLHEXYL)PHTHALATE	106	320	49 - 320	149.2	NA	NA	NA	NC
BUTYL BENZYL PHTHALATE	74	74	74 - 74	NC	NA	NA	NA	NC
CARBAZOLE	10500	65000	40 - 65000	46206	NA	NA	NA	NC
CHRYSENE	27200	190000	7.7 - 190000	144520	1010	8100	41 - 8100	3860
DIBENZO(A,H)ANTHRACENE	3740	26000	10 - 26000	19299	470	2000	39 - 2000	1304
DIBENZOFURAN	13600	47000	120 - 47000	11706	NA	NA	NA	NC
DI-N-BUTYL PHTHALATE	42	45	39 - 45	47.22	NA	NA	NA	NC
FLUORANTHENE	62400	530000	3.6 - 530000	259154	2070	17000	57 - 17000	15803
FLUORENE	9750	77000	3.8 - 77000	53607	696	2400	41 - 2400	647.2
HIGH MOLECULAR WEIGHT PAHS	239000	1910000	3.6 - 1910000	577737	9600	79300	187 - 79300	73490
INDENO(1,2,3-CD)PYRENE	13200	92000	2.78 - 92000	71258	625	4600	72 - 4600	2878
LOW MOLECULAR WEIGHT PAHS	102000	840000	40.2 - 840000	586455	2720	24400	40 - 24400	22657
NAPHTHALENE	5910	44000	4.35 - 44000	33402	500	730	270 - 730	730
PENTACHLOROPHENOL	270	270	270 - 270	NC	NA	NA	NA	NC
PHENANTHRENE	56600	460000	22.5 - 460000	322702	1550	13000	40 - 13000	12135
PYRENE	48400	360000	16.5 - 360000	264099	1850	15000	53 - 15000	13932
TOTAL CARCINOGENIC PAHS-HALFND	137000	922000	31.8 - 922000	719134	5160	42600	252 - 42600	20173
TOTAL CARCINOGENIC PAHS-POS	137000	922000	27.5 - 922000	719134	5130	42600	77 - 42600	39432
TOTAL PAHS	329000	2750000	3.6 - 2750000	822368	12300	104000	227 - 104000	96376
VOLATILES (UG/KG)	VOCs not analyzed in soil during Phase 2 investigations							

For the purposes of this comparison, Total Petroleum Hydrocarbons is considered to be comparable to extractable petroleum hydrocarbons
NA - Not applicable, analyte was not sought in the data set presented
NC - Not calculated
ND - Analyte not detected in the data set presented.
Phase 1 UCLs recalculated using the most recent version of USEPA ProUCL software
Yellow highlights indicate that the 95% UCL value from Phase 2 exceeds the 95% UCL value from Phase 1.
Orange highlights indicate the Phase 2 UCL is more than 2x the Phase 1 UCL.

TABLE 7-2
SUMMARY STATISTICS FOR PHASE 1 AND PHASE 2 INVESTIGATIONS
SUBSURFACE SOIL
PHASE 2 REMEDIAL INVESTIGATION
SITE 17 GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

	PHASE I				PHASE II			
PARAMETER	**Avg Of Detects**	**Max**	**Range Of Detects**	**UCL**	**Avg Of Detects**	**Max**	**Range Of Detects**	**UCL**
METALS (MG/KG)								
ALUMINUM	7240	19900	3260 - 19900	7913	6650	9490	3610 - 9490	7125
ANTIMONY	1.94	15.4	0.068 - 15.4	1.253	ND			NC
ARSENIC	3.4	23.1	1.3 - 23.1	5.118	2.11	10.1	0.57 - 10.1	2.577
BARIUM	25.7	273	7.5 - 273	44.54	23.2	37.5	11.6 - 37.5	25.67
BERYLLIUM	0.235	1	0.073 - 1	0.256	0.248	0.71	0.12 - 0.71	0.297
CADMIUM	269	5670	0.038 - 5670	619.5	3.41	22.6	0.11 - 22.6	11.68
CALCIUM	3710	68200	453 - 68200	9739	1140	7260	369 - 7260	2247
CHROMIUM	17.1	340	4.7 - 340	38.86	10.6	22.6	3.9 - 22.6	11.88
COBALT	6.93	26.1	2.2 - 26.1	7.8	5.48	12.3	3.2 - 12.3	6.16
COPPER	31.4	424	7.2 - 424	64.1	20	84.8	5.8 - 84.8	35.55
CYANIDE	0.34	0.54	0.14 - 0.54	0.16	NA			NC
IRON	18500	181000	6270 - 181000	30462	15900	22300	8470 - 22300	17033
LEAD	67.4	2700	3.3 - 2700	242.5	16.9	111	4.8 - 111	35.58
MAGNESIUM	3220	12900	1360 - 12900	3616	2610	3700	1130 - 3700	2808
MANGANESE	158	601	64.1 - 601	176.9	171	411	87.6 - 411	196.2
MERCURY	0.0444	0.27	0.0082 - 0.27	0.0244	0.0242	0.086	0.0065 - 0.086	0.0238
NICKEL	17	56.8	4.5 - 56.8	18.98	10.9	22.2	5.6 - 22.2	12.15
POTASSIUM	751	3950	249 - 3950	1012	913	2240	423 - 2240	1062
SELENIUM	ND	ND	ND	NC	0.63	0.63	0.63 - 0.63	NC
SILVER	ND	ND	ND	NC	0.079	0.079	0.079 - 0.079	NC
SODIUM	293	2710	22.1 - 2710	526.7	77.8	544	17.4 - 544	189.7
THALLIUM	ND	ND	ND	NC	0.353	0.58	0.18 - 0.58	0.58
VANADIUM	13.8	71.6	5.5 - 71.6	15.99	13.2	24	5.7 - 24	14.4
ZINC	59.1	653	12.1 - 653	113.8	36	99	20.5 - 99	41.81
PESTICIDES/PCBS (UG/KG)								
4,4'-DDD	48	48	48 - 48	NC	NA	NA	NA	NC
4,4'-DDE	4.44	5.18	3.7 - 5.18	3.78	NA	NA	NA	NC
4,4'-DDT	30	30	30 - 30	NC	NA	NA	NA	NC
ALPHA-BHC	3	3	3 - 3	NC	NA	NA	NA	NC
ALPHA-CHLORDANE	3.7	4.9	2.5 - 4.9	2.62	NA	NA	NA	NC
AROCLOR-1016	40	40	40 - 40	NC	ND	ND	ND	ND
AROCLOR-1254	308	460	140 - 460	390	ND	ND	ND	ND
AROCLOR-1260	326	600	51 - 600	109.3	82	82	82 - 82	NC
BETA-BHC	2.6	2.6	2.6 - 2.6	NC	NA	NA	NA	NC
ENDOSULFAN I	2.88	2.88	2.88 - 2.88	NC	NA	NA	NA	NC
ENDOSULFAN SULFATE	104	140	67 - 140	140	NA	NA	NA	NC
ENDRIN	7.01	7.92	6.1 - 7.92	6.191	NA	NA	NA	NC
ENDRIN ALDEHYDE	20	68	4.6 - 68	8.025	NA	NA	NA	NC
ENDRIN KETONE	70.2	340	5.1 - 340	36.51	NA	NA	NA	NC
HEPTACHLOR EPOXIDE	20	20	20 - 20	NC	NA	NA	NA	NC
METHOXYCHLOR	148	480	19.5 - 480	40.34	NA	NA	NA	NC
TOTAL AROCLOR	279	600	40 - 600	169.7	82	82	82 - 82	NC
TOTAL CHLORDANE	3.7	4.9	2.5 - 4.9	4.9	NA	NA	NA	NC
TOTAL DDD/DDE/DDT	21.7	48	3.7 - 48	31.07	NA	NA	NA	NC

TABLE 7-2
SUMMARY STATISTICS FOR PHASE 1 AND PHASE 2 INVESTIGATIONS
SUBSURFACE SOIL
PHASE 2 REMEDIAL INVESTIGATION
SITE 17 GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

	PHASE I				PHASE II			
PARAMETER	**Avg Of Detects**	**Max**	**Range Of Detects**	**UCL**	**Avg Of Detects**	**Max**	**Range Of Detects**	**UCL**
PETROLEUM HYDROCARBONS (MG/KG)								
EXTRACTABLE PETROLEUM HYDROCARBONS	494	4800	15 - 4800	662.2	NA	NA	NA	NC
TOTAL PETROLEUM HYDROCARBONS	NA			NC	429	1200	32 - 1200	633.6
SEMIVOLATILES (UG/KG)								
1,1-BIPHENYL	739	4300	45 - 4300	293.5	NA	NA	NA	NC
2-METHYLNAPHTHALENE	705	13000	4.7 - 13000	1544	ND			NC
4-METHYLPHENOL	660	660	660 - 660	NC	NA	NA	NA	NC
ACENAPHTHENE	2110	52000	4.1 - 52000	6006	106	200	40 - 200	135.2
ACENAPHTHYLENE	143	1800	4 - 1800	168.5	ND			NC
ANTHRACENE	3540	94000	3.7 - 94000	10913	91	120	73 - 120	90.67
BENZALDEHYDE	79	79	79 - 79	NC	NA	NA	NA	NC
BENZO(A)ANTHRACENE	5310	140000	3.6 - 140000	16656	133	310	40 - 310	121.9
BENZO(A)PYRENE	4740	110000	3.2 - 110000	13093	142	300	42 - 300	116.9
BENZO(B)FLUORANTHENE	4700	100000	2.8 - 100000	12755	143	360	49 - 360	124.5
BENZO(G,H,I)PERYLENE	1950	36000	4.5 - 36000	3445	92.1	180	40 - 180	78.56
BENZO(K)FLUORANTHENE	1980	37000	4.72 - 37000	3541	85.7	230	36 - 230	77
BIS(2-ETHYLHEXYL)PHTHALATE	92.7	270	38 - 270	105.6	NA	NA	NA	NC
BUTYL BENZYL PHTHALATE	56	56	56 - 56	NC	NA	NA	NA	NC
CARBAZOLE	3000	37000	41 - 37000	3403	NA	NA	NA	NC
CHRYSENE	4950	130000	4.2 - 130000	15358	151	370	46 - 370	132.4
DIBENZO(A,H)ANTHRACENE	497	8000	3.38 - 8000	810.6	ND			NC
DIBENZOFURAN	3550	39000	43 - 39000	3549	NA	NA	NA	NC
DI-N-BUTYL PHTHALATE	67.7	150	39 - 150	80.5	NA	NA	NA	NC
FLUORANTHENE	11200	370000	3.9 - 370000	44043	245	760	39 - 760	243.1
FLUORENE	2520	61000	4 - 61000	7031	197	400	42 - 400	400
HIGH MOLECULAR WEIGHT PAHS	38200	1220000	3.9 - 1220000	146523	942	3150	39 - 3150	957
INDENO(1,2,3-CD)PYRENE	1900	34000	4.4 - 34000	4346	84.8	150	44 - 150	88.37
LOW MOLECULAR WEIGHT PAHS	18200	626000	4.2 - 626000	72442	319	1430	37 - 1430	579.9
NAPHTHALENE	1680	44000	3.6 - 44000	5014	250	250	250 - 250	NC
PHENANTHRENE	10600	360000	4.2 - 360000	41854	196	490	37 - 490	170.9
PHENOL	410	610	210 - 610	610	NA	NA	NA	NC
PYRENE	8530	260000	3.8 - 260000	30977	250	880	42 - 880	240.8
TOTAL CARCINOGENIC PAHS-HALFND	22300	559000	15.2 - 559000	67716	669	1760	267 - 1760	611.2
TOTAL CARCINOGENIC PAHS-POS	22300	559000	6.4 - 559000	67712	581	1720	87 - 1720	495.1
TOTAL PAHS	54700	1850000	3.9 - 1850000	219111	1190	3680	39 - 3680	1199
VOLATILES (UG/KG)	VOCs not analyzed in soil during phase 2 investigations							

For the purposes of this comparison, Total Petroleum Hydrocarbons is considered to be comparable to extractable petroleum hydrocarbons.
NA - Not applicable, analyte was not sought in the data set presented
NC - Not calculated
ND - Analyte not detected in the data set presented.
Phase 1 UCLs recalculated using the most recent version of USEPA ProUCL software
Yellow highlights indicate that the 95% UCL value from Phase 2 exceeds the 95% UCL value from Phase 1.
Orange highlights indicate the Phase 2 UCL is more than 2x the Phase 1 UCL.

TABLE 7-3
SUMMARY STATISTICS FOR PHASE 1 AND PHASE 2 INVESTIGATIONS
CLAM AND MUSSEL TISSUE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17 GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

	PHASE I				PHASE II			
PARAMETER	**Avg Of Detects**	**Max**	**Range Of Detects**	**UCL**	**Avg Of Detects**	**Max**	**Range Of Detects**	**UCL**
METALS (MG/KG)								
ALUMINUM	ND	ND	ND	NC	23.6	38.8	7.6 - 38.8	31.21
ARSENIC	2.06	4.2	0.75 - 4.2	2.421	3.09	3.8	2.1 - 3.8	3.528
BARIUM	ND	ND	ND	NC	0.573	0.754	0.255 - 0.754	0.66
BERYLLIUM	0.00732	0.012	0.0055 - 0.012	0.00681	ND	ND	ND	NC
CADMIUM	0.184	0.73	0.062 - 0.73	0.219	0.171	0.198	0.123 - 0.198	0.189
CALCIUM	1180	8140	188 - 8140	2907	2420	4540	751 - 4540	3290
CHROMIUM	1.26	6.1	0.14 - 6.1	1.334	0.306	0.533	0.174 - 0.533	0.392
COBALT	0.13	0.21	0.032 - 0.21	0.135	0.126	0.176	0.087 - 0.176	0.149
COPPER	1.41	2.1	0.59 - 2.1	1.392	1.99	2.7	1.4 - 2.7	2.305
IRON	46.7	73.7	19.9 - 73.7	48.64	64.6	99.6	26 - 99.6	83.67
LEAD	0.659	1.1	0.218 - 1.1	1.1	0.493	1.4	0.216 - 1.4	0.951
MAGNESIUM	665	799	464 - 799	698.3	704	838	609 - 838	757.3
MANGANESE	11.6	38.6	1.5 - 38.6	8.802	7.09	12.1	3 - 12.1	9.609
MERCURY	0.0114	0.022	0.0051 - 0.022	0.0113	0.0129	0.016	0.006 - 0.016	0.015
NICKEL	0.475	0.59	0.405 - 0.59	0.478	0.399	0.59	0.269 - 0.59	0.51
POTASSIUM	2340	2900	1760 - 2900	2463	2560	3120	2160 - 3120	2762
SELENIUM	ND	ND	ND	NC	0.768	0.876	0.67 - 0.876	0.82
SILVER	ND	ND	ND	NC	0.204	0.48	0.012 - 0.48	0.325
SODIUM	3920	4870	2610 - 4870	4154	4270	5560	3510 - 5560	4682
THALLIUM	0.126	0.18	0.072 - 0.18	0.18	ND	ND	ND	NC
VANADIUM	0.346	1.2	0.11 - 1.2	0.411	0.223	0.294	0.19 - 0.294	0.245
ZINC	14.8	36.1	7.1 - 36.1	17.42	16.4	19.5	15.1 - 19.5	17.53

TABLE 7-3
SUMMARY STATISTICS FOR PHASE 1 AND PHASE 2 INVESTIGATIONS
CLAM AND MUSSEL TISSUE
PHASE 2 REMEDIAL INVESTIGATION
SITE 17 GOULD ISLAND
NAVSTA NEWPORT, NEWPORT RI

	PHASE I				PHASE II			
PARAMETER	**Avg Of Detects**	**Max**	**Range Of Detects**	**UCL**	**Avg Of Detects**	**Max**	**Range Of Detects**	**UCL**
PCB HOMOLOGS (UG/KG)								
DICHLOROBIPHENYLS	NA	NA	NA	NC	2.1	2.1	2.1 - 2.1	NC
HEPTACHLOROBIPHENYLS	NA	NA	NA	NC	11.8	21	4.7 - 21	14.18
HEXACHLOROBIPHENYL	NA	NA	NA	NC	26.2	81	6.9 - 81	48.51
PENTACHLOROBIPHENYLS	NA	NA	NA	NC	9.25	14	4 - 14	14
TETRACHLOROBIPHENYLS	NA	NA	NA	NC	3.4	5.7	1.1 - 5.7	5.7
TOTAL PCB HOMOLOGS	NA	NA	NA	NC	39.3	81	6.9 - 81	54.77
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NC	54.4	137	12.5 - 137	80.17
PESTICIDES/PCBS (UG/KG)								
AROCLOR-1260	217	440	98 - 440	200.5	NA	NA	NA	NC
BETA-BHC	6.6	6.6	6.6 - 6.6	NC	NA	NA	NA	NC
ENDRIN	13	13	13 - 13	NC	NA	NA	NA	NC
ENDRIN ALDEHYDE	13	13	13 - 13	NC	NA	NA	NA	NC
GAMMA-BHC (LINDANE)	2.5	2.5	2.5 - 2.5	NC	NA	NA	NA	NC
GAMMA-CHLORDANE	8	8	8 - 8	NC	NA	NA	NA	NC
TOTAL AROCLOR	217	440	98 - 440	201	NA	NA	NA	NC
TOTAL CHLORDANE	8	8	8 - 8	NC	NA	NA	NA	NC
SEMIVOLATILES (UG/KG)	SVOCs not analyzed in Biota during phase 2 investigations							

NA - Not applicable, analyte was not sought in the data set presented

NC - Not calculated

ND - Analyte not detected in the data set presented.

For the purposes of this comparison, Total Aroclor is considered to be comparable to Total PCB homologues with 0.5 x detection limit used for ND values

Phase 1 UCLs recalculated using the most recent version of USEPA ProUCL software

Yellow highlights indicate that the 95% UCL value from Phase 2 exceeds the 95% UCL value from Phase 1.

Orange highlights indicate the Phase 2 UCL is more than 2x the Phase 1 UCL.

FIGURES

I:\00949\0610\GI_LOCUS.MXD DWM 11/04/10

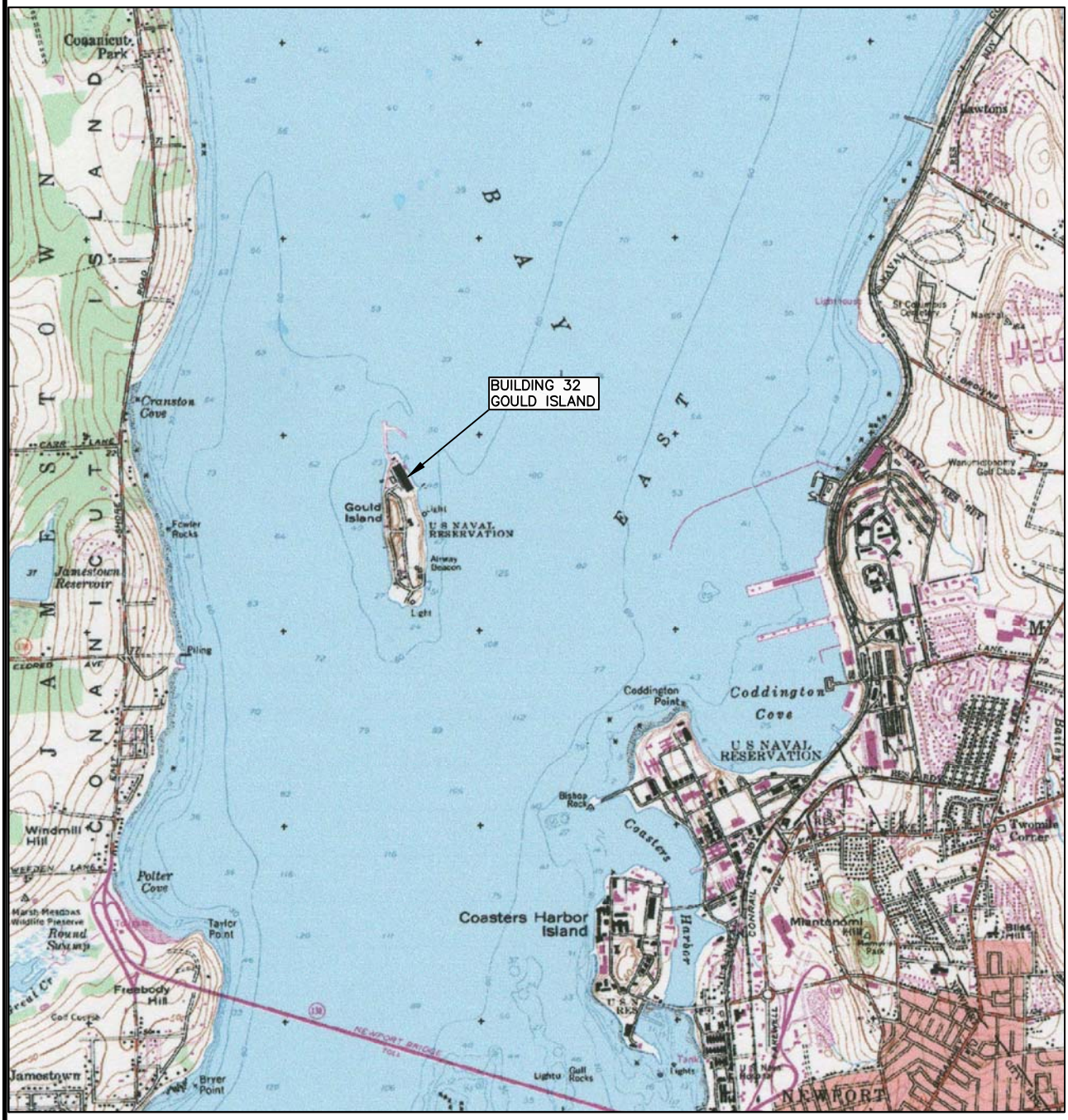
SOURCE:
BASE MAP IS A PORTION OF THE FOLLOWING 7.5 x 15 MINUTE USGS QUADRANGLE: PRUDENCE ISLAND, RHODE ISLAND, 1955, PHOTOREVISED 1970 AND 1975.

TETRA TECH

NAVSTA NEWPORT
SITE 17: BUILDING 32, GOULD ISLAND
PHASE 2 REMEDIAL INVESTIGATION REPORT
NAVSTA NEWPORT, RHODE ISLAND

SCALE	
AS NOTED	
FILE	
\..\GI_LOCUS.MXD	
REV	DATE
0	11/04/10
FIGURE NUMBER	
FIGURE NO. 1-1	

ACAD: I: \00949\0630\GI_USGS.DWG 5/22/2012 DWM



BASE MAP IS A PORTION OF THE FOLLOWING 7.5 X 15 MINUTE U.S.G.S. QUADRANGLE:
PRUDENCE ISLAND, RHODE ISLAND, 1955, PHOTOREVISED 1970 AND 1975

GRAPHIC SCALE
0 0.5 MILE 1 MILE

QUADRANGLE LOCATION

TETRA TECH

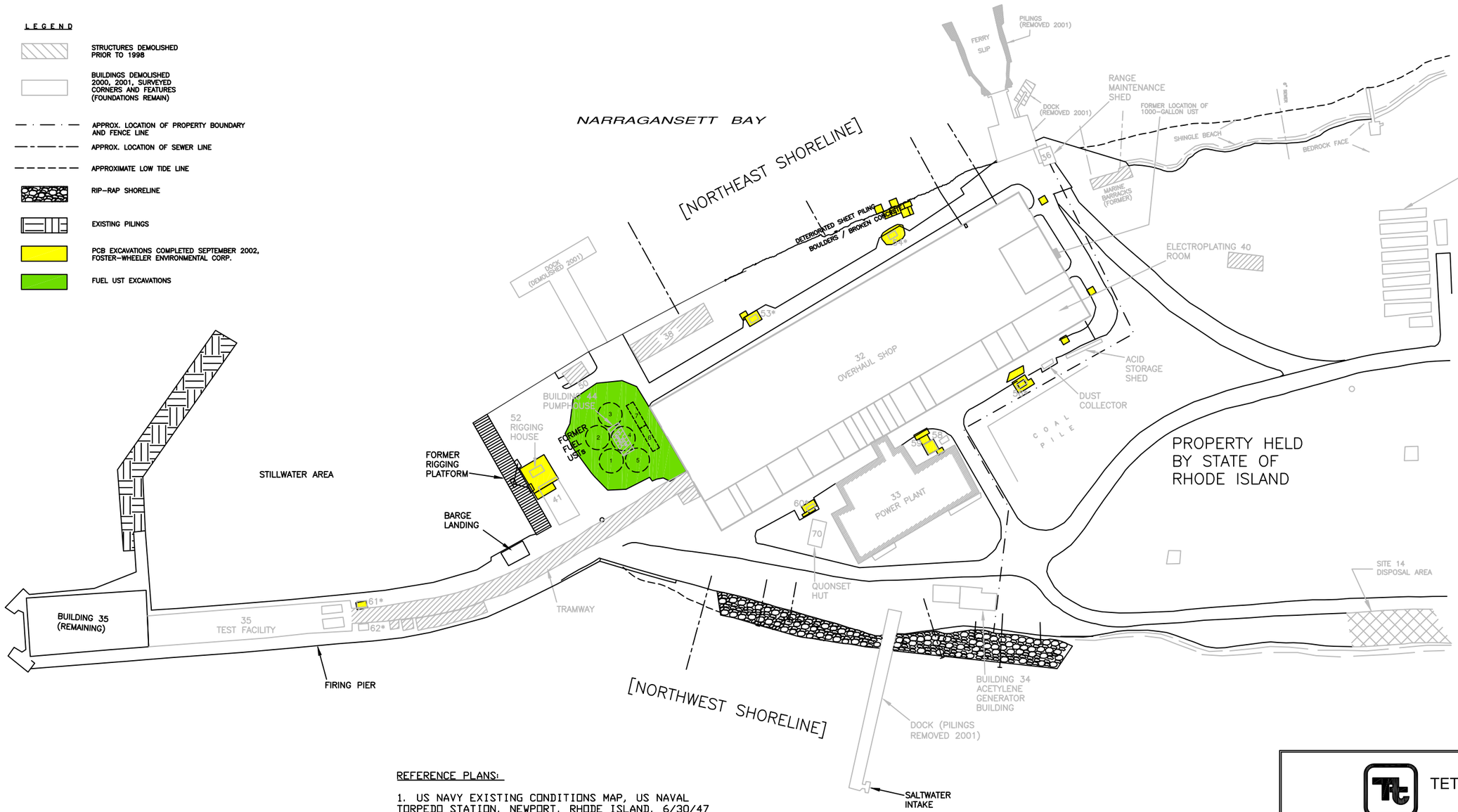
SITE LOCUS
SITE 17: BUILDING 32, GOULD ISLAND
PHASE 2 REMEDIAL INVESTIGATION REPORT
NAVSTA NEWPORT, RHODE ISLAND

SCALE	AS NOTED
FILE	I: \..\GI_USGS.DWG
REV	0
DATE	5/22/12
FIGURE NUMBER	1-2

ACAD:I:\00949\0630\GI_BASE_MAP.DWG 5/22/12 DWM

LEGEND

- STRUCTURES DEMOLISHED PRIOR TO 1998
- BUILDINGS DEMOLISHED 2000, 2001, SURVEYED CORNERS AND FEATURES (FOUNDATIONS REMAIN)
- APPROX. LOCATION OF PROPERTY BOUNDARY AND FENCE LINE
- APPROX. LOCATION OF SEWER LINE
- APPROXIMATE LOW TIDE LINE
- RIP-RAP SHORELINE
- EXISTING PILINGS
- PCB EXCAVATIONS COMPLETED SEPTEMBER 2002, FOSTER-WHEELER ENVIRONMENTAL CORP.
- FUEL UST EXCAVATIONS



NOTES:

1. PLAN NOT TO BE USED FOR DESIGN.
2. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
3. PHYSICAL FEATURES SHOWN MAY NOT DEPICT CURRENT CONDITIONS

REFERENCE PLANS:

1. US NAVY EXISTING CONDITIONS MAP, US NAVAL TORPEDO STATION, NEWPORT, RHODE ISLAND, 6/30/47
2. DRAINS, TRENCHES, ETC. GOULD ISLAND BUILDING 32 SITE, LOUIS FEDERICI & ASSOCIATES FOR TETRA TECH, NUS INC. CTO 286, LFA#970706, 4/25/00
3. GEOTECHNICAL SURVEY PLAN AT FORMER BUILDING 44 AND 32, US NAVAL BASE ON GOULD ISLAND, LOUIS FEDERICI & ASSOCIATES FOR BROWN & ROOT ENVIRONMENTAL, 9/8/97, DWG#970706-03
4. LOCATION OF MONITORING WELLS AT BUILDING 32 - GOULD ISLAND, U.S. NAVAL BASE NEWPORT, RHODE ISLAND, LOUIS FEDERICI & ASSOCIATES FOR TETRA TECH, NUS INC., 5/9/00

GRAPHIC SCALE

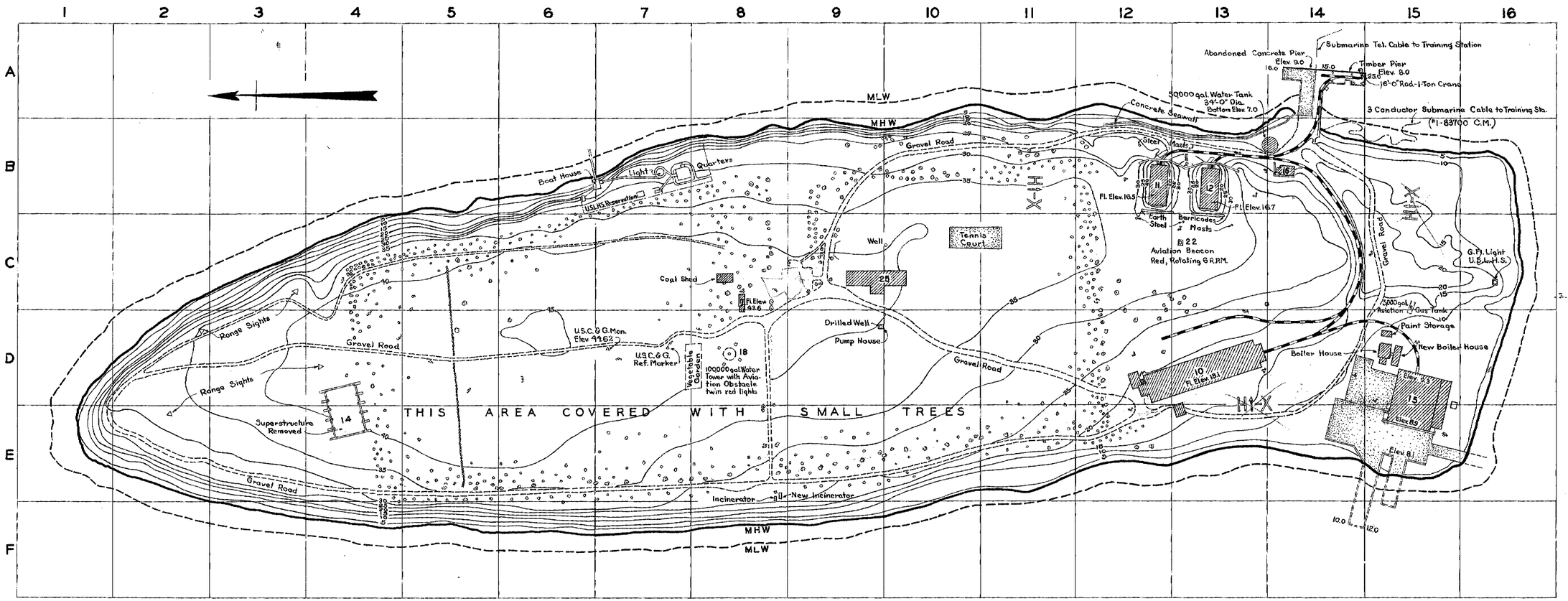
0' 150' 300'

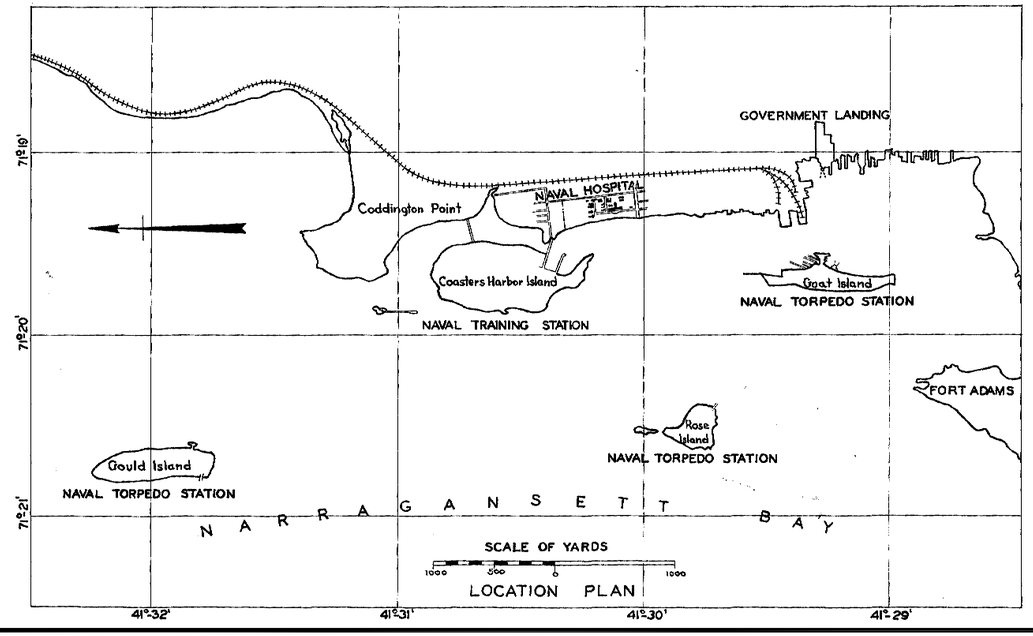
TETRA TECH

BASE MAP
SITE 17: BUILDING 32, GOULD ISLAND
PHASE 2 REMEDIAL INVESTIGATION REPORT
NAVSTA NEWPORT, RHODE ISLAND

FILE	SCALE
\..\GI_BASE_MAP.DWG	AS NOTED
FIGURE NUMBER 1-3	REV 0 / DATE 5/22/12

ACAD:I:\00949\0630\GI_HIST_SHORE.DWG 5/22/12 DWM





DEPT.	Nº	LOC.	DESIGNATION
"	17	C-8	Coal Shed
S	10	D-13	Torpedo Storehouse
"	11	B-12	Warhead "
"	12	B-13	" "
Ma.	16	B-14	Waiting Room
A	14	E-4	Hanger Foundation
"	15	D-15	Seaplane Hanger
Mil.	25	C-9	Brks. for Enlisted Personnel
	22	C-13	Aviation Beacon
	18	D-8	Water Tower

Mil. = Military, Ma. = Maintenance
S. = Supply A. = Aviation

LEGEND	
Railroad	
Hydrant	
Power Pole	
Electric Light	

ELEVATIONS	
Mean High Water	+3.7
Mean Low Water	0.0

AREAS	
Total Area To M.L.W.	51.85 Acres.
Area to M.H.W. exclusive of U.S.L.H.S. Reservation	45.85 "
Area of U.S.L.H.S. Reservation	0.62 "

SOURCE: MAP OF GOULD ISLAND, U.S. NAVAL TORPEDO STATION SHOWING CONDITIONS ON JUNE 30, 1941, NEWPORT, R.I., U.S. NAVY, CORRECTED APRIL 1, 1943

TETRA TECH

HISTORICAL SHORELINE
SITE 17: BUILDING 32, GOULD ISLAND
PHASE 2 REMEDIAL INVESTIGATION REPORT
NAVSTA NEWPORT, RHODE ISLAND

FILE	SCALE
I:\..\GI_HIST_SHORE.DWG	AS NOTED
FIGURE NUMBER 1-4	**REV** 0 **DATE** 5/22/12

ACAD:I:\00949\0630\GI_SB_LOCS.DWG 6/17/11 DWM

LEGEND

STRUCTURES DEMOLISHED PRIOR TO 1998

BUILDINGS DEMOLISHED 2000, 2001, SURVEYED CORNERS AND FEATURES (FOUNDATIONS REMAIN)

PROPERTY BOUNDARY

OUTFALL PIPES

GRAPHIC SCALE
0′ 60′ 120′

SOIL BORING (2005)
BEDROCK WELL (2005)
OVERBURDEN WELL (2005)
TP-1 TEST PIT WITH IDENTIFIER (2005)
CONCRETE SAMPLE STATION (2005)
SOUTHWEST CORNER SOIL BORING LOCATIONS (2010)
RIGGING PLATFORM SOIL BORING LOCATIONS (2010)
DRAIN LINES
PLANNED FLOOR DRAIN
MANHOLE

N

NARRAGANSETT BAY

SHINGLE BEACH

DOCK (REMOVED 2001)

FORMER OUTFALL

FORMER LOCATION OF 1000-GALLON UST

MARINE BARRACKS (FORMER)

6" ACID RESISTANT LINE

8" CI

DETERIORATED SHEET PILING

BOULDERS / BROKEN CONCRETE

DOCK (DEMOLISHED 2001)

BUILDING 44 PUMPHOUSE

52 RIGGING HOUSE

FORMER RIGGING PLATFORM

BARGE LANDING

TRAMWAY

FORMER FUEL USTs

38 OVERHAUL SHOP

32 OVERHAUL SHOP

33 POWER PLANT

54 53 50 52 58 59 60 70

TP-1 TP-2 TP-3 TP-4 TP-5 TP-7 TP-8 TP-9 TP-10A TP-10B TP-10C TP-11A TP-11B TP-11C TP-12 TP-13

SB328 SB320 SB334 SB319 SB318 SB327 SB326 SB325 SB324 SB323 SB322 SB317 SB316 SB335 SB336 SB315 SB333 SB321 SB332 SB338 SB337 SB312 SB331/CO301 SB311/CO302 SB314 SB305/MW305B SB309 SB310 SB313

MW303S MW303B MW300S MW300B MW306S MW306B MW305S MW304B MW304S MW302S MW302B MW301B MW301S

MH-01 MH-02 MH-03 MH-04 MH-05

SB-401 SB-402 SB-403 SB-404 SB-405 SB-406 SB-407 SB-408 SB-409 SB-410 SB-411 SB-412 SB-413

ENGINE ROOM
MOTOR GENERATOR ROOM
ACID DIPPING ROOM
ACID STORAGE SHED
ELECTROPLATING ROOM
BUILDING 57 DUST COLLECTOR
SAND BLASTING BOOTH
GRO OVERHAUL ROOM
MEN'S LOCKER ROOM
MEN'S TOILETS
DYNAMOMETER ROOM
CAFETERIA
REST ROOM
DISPENSARY
OFFICE
HEAD REPAIR SHOP
AUW SHOP
TOOL SHOP
Torpedo Rack
DOOR
COAL PILE
1,000-GAL. SEPTIC TANK
LEACH FIELD
QUONSET HUT

Hydro Test Tank
Pit
East Solvent Tank
West Solvent Tank
Pit #6
East Equip. Trench 12" Deep
West Equip. Trench 12" Deep
Equip. Trench 12" Deep
Buoyancy Trench
FORMER ABOVE GROUND MIXING TANK

TP-5 AREA

TETRA TECH

SOIL BORING SAMPLE LOCATIONS
SITE 17, BUILDING 32 GOULD ISLAND
PHASE 2 REMEDIAL INVESTIGATION REPORT
NAVSTA NEWPORT, RHODE ISLAND

FILE	SCALE
\..\GI_SB_LOCS.DWG	AS NOTED
FIGURE NUMBER 2-1	REV 0 / DATE 6/17/11

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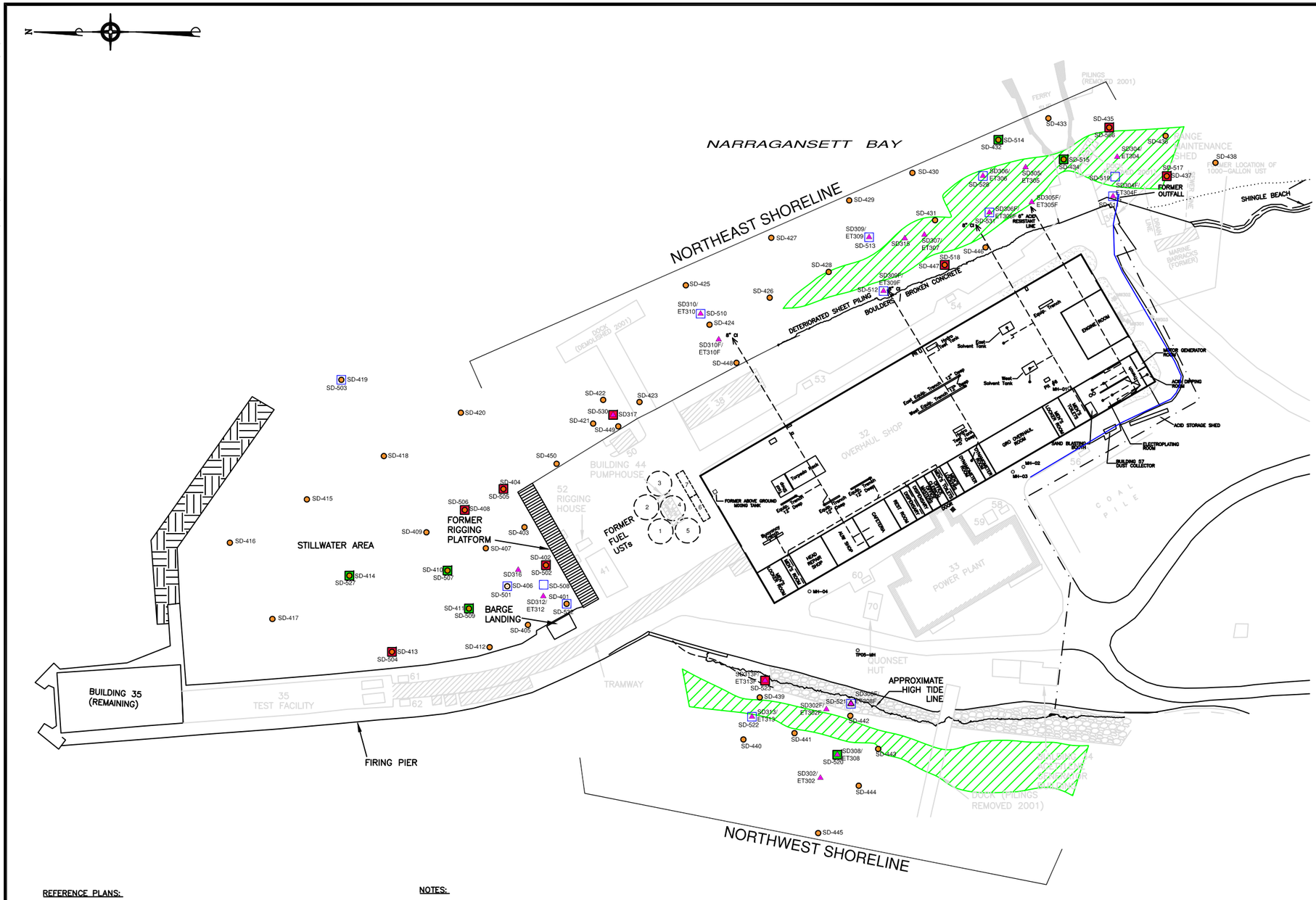


ADDITIONAL SAMPLE LOCATIONS NOT ON MAP

SOUTH SHORELINE:

SD314

SD-529

JAMESTOWN REFERENCE AREA (SEE FIGURE 2-4)

- JPC-01, SD-524
- JPC-02, SD-525
- JPC-03
- JCC-01
- JCC-01
- JCC-01, SD-526

LEGEND

- STRUCTURES DEMOLISHED PRIOR TO 1998
- BUILDINGS DEMOLISHED 2000, 2001, SURVEYED CORNERS AND FEATURES (FOUNDATIONS REMAIN)
- PROPERTY BOUNDARY
- WASTE DRAIN PIPES
- APPROXIMATE LOW TIDE LINE
- EXISTING PILINGS
- WASTE DRAIN LINES
- PLANNED DRAIN LINE
- PLANNED FLOOR DRAIN
- MH-01 MANHOLE WITH IDENTIFIER
- PHASE I RI SEDIMENT SAMPLE LOCATION
- 2009 SEDIMENT SAMPLE STATION
- 2010 BERA SEDIMENT SAMPLE STATION
- CLAM/MUSSEL SAMPLE LOCATION (2010)
- CRAB SAMPLE LOCATION (2010)
- CLAM/MUSSELL AND CRAB SAMPLE LOCATION (2010)
- EEL GRASS BEDS – CONTIGUOUS EXTENT INTERPRETED BY EYAK (2005)

REFERENCE PLANS:

1. US NAVY EXISTING CONDITIONS MAP, US NAVAL TORPEDO STATION, NEWPORT, RHODE ISLAND, 6/30/47
2. DRAINS, TRENCHES, ETC. GOULD ISLAND BUILDING 32 SITE, LOUIS FEDERICI & ASSOCIATES FOR TETRA TECH, NUS INC. CTO 286, LFA#970706, 4/25/00
3. GEOTECHNICAL SURVEY PLAN AT FORMER BUILDING 44 AND 32, US NAVAL BASE ON GOULD ISLAND, LOUIS FEDERICI & ASSOCIATES FOR BROWN & ROOT ENVIRONMENTAL, 9/8/97, DWG#970706-03
4. LOCATION OF MONITORING WELLS AT BUILDING 32 – GOULD ISLAND, U.S. NAVAL BASE NEWPORT, RHODE ISLAND, LOUIS FEDERICI & ASSOCIATES FOR TETRA TECH, NUS INC., 05/09/00.
5. U.S. NAVAL OPERATING BASE, NEWPORT, R.I. TORPEDO STATION GOULD ISLAND OVERHAUL SHOP PLUMBING FLOOR PLAN, CONT. NO. 4994, DRAWING P-201, DATED MARCH 14, 1942, BY JOHN BRACKETT, CONSULTING ENGINEER.

NOTES:

1. PLAN NOT TO BE USED FOR DESIGN.
2. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
3. PHYSICAL FEATURES SHOWN MAY NOT DEPICT CURRENT CONDITIONS
4. THE TRANSFORMER VAULTS AND BUILDINGS 53, 54, 56, 60, 61, AND 62 WERE DEMOLISHED IN 2001.
5. VERTICAL = LOCAL MEAN LOW WATER (NAVY BENCH MARK H-2, GOULD ISLAND TORPEDO STATION)
6. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM, R.I. STATE PLANE 1927.

GRAPHIC SCALE

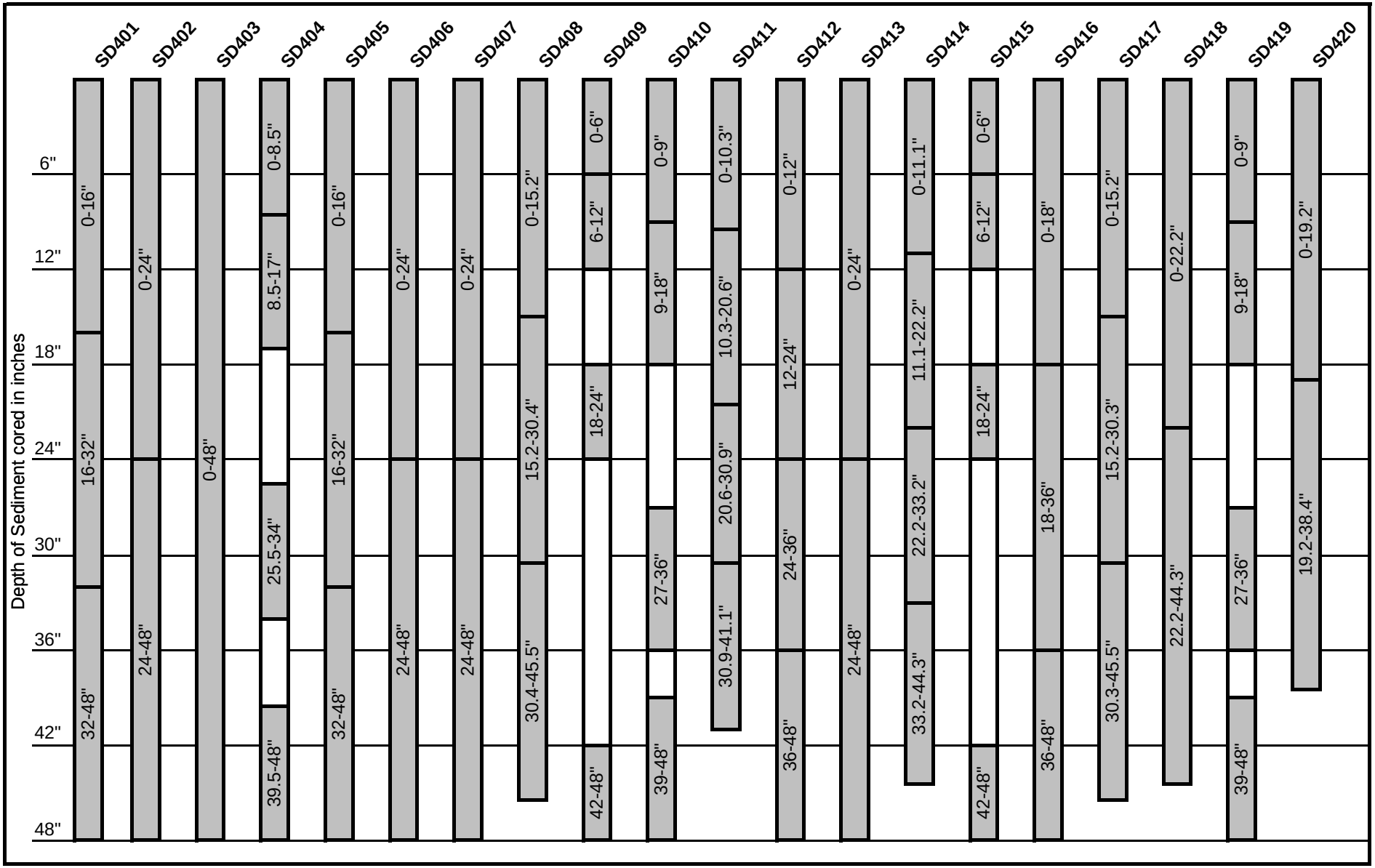
0' 150' 300'

TETRA TECH

SEDIMENT AND BIOTA SAMPLE STATIONS SITE 17: BUILDING 32, GOULD ISLAND PHASE 2 REMEDIAL INVESTIGATION REPORT NAVSTA NEWPORT, RHODE ISLAND

FILE	SCALE
\..\GI_NEW_SED_BIOTA_SAMP.DWG	AS NOTED
FIGURE NUMBER 2-2	**REV** 0 **DATE** 5/22/12

FIGURE 2-3
SEDIMENT CORE SAMPLING INTERVALS
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT,
JAMESTOWN RI



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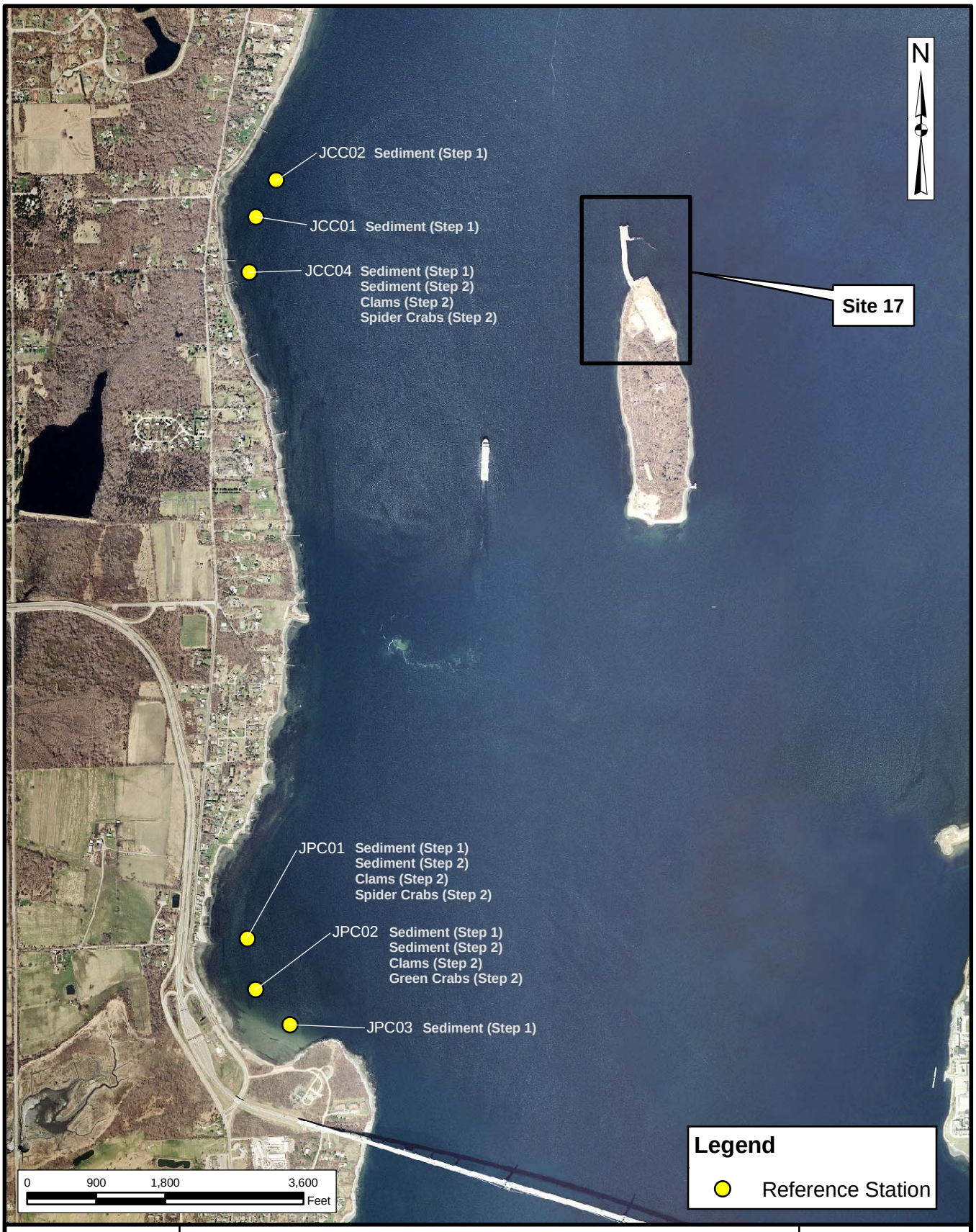
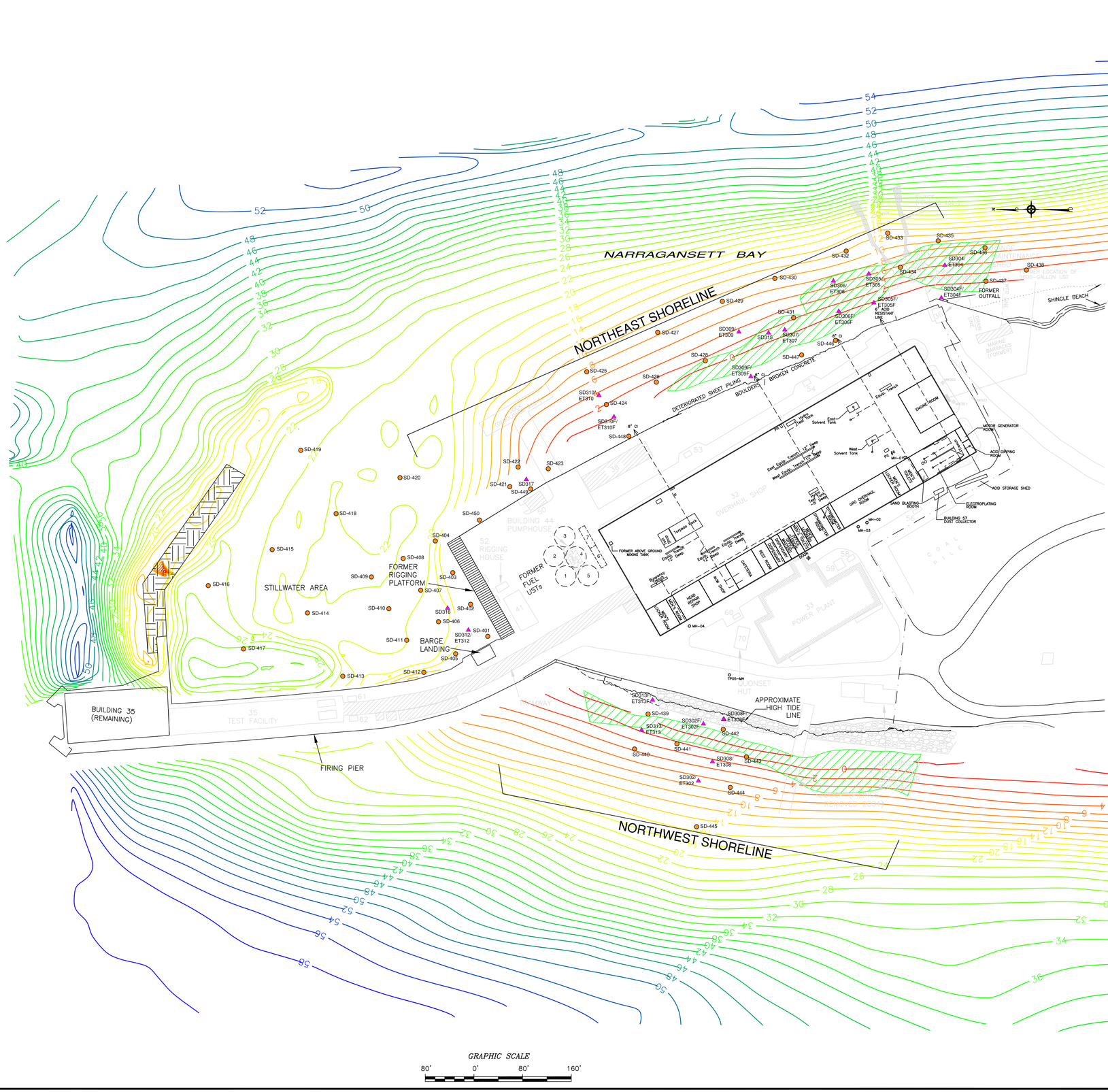


TETRA TECH

REFERENCE SAMPLE LOCATIONS
SITE 17: GOULD ISLAND
PHASE 2 REMEDIAL INVESTIGATION REPORT
NAVSTA NEWPORT, RHODE ISLAND

SCALE	AS NOTED
FILE	G:\..\GI_BACK_SAMP.MXD
REV	0
DATE	10/17/11
FIGURE NUMBER	2-4



N

L E G E N D

- STRUCTURES DEMOLISHED PRIOR TO 1998
- BUILDINGS DEMOLISHED 2000, 2001, SURVEYED CORNERS AND FEATURES (FOUNDATIONS REMAIN)
- PROPERTY BOUNDARY
- WASTE DRAIN PIPES
- APPROXIMATE LOW TIDE LINE
- EXISTING PILINGS
- PLANNED DRAIN LINE
- PLANNED FLOOR DRAIN
- MH-01 MANHOLE WITH IDENTIFIER
- PHASE I RI SEDIMENT SAMPLE LOCATION
- PROPOSED SEDIMENT/BIOTA SAMPLE LOCATION
- EEL GRASS BEDS – CONTIGUOUS EXTENT INTERPRETED BY EYAK (2005)

REFERENCE PLANS:

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2. DRAINS, TRENCHES, ETC. GOULD ISLAND BUILDING 32 SITE, LOUIS FEDERICI & ASSOCIATES FOR TETRA TECH, NUS INC. CTO 286, LFA#970706, 4/25/00

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NOTES:

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2. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.

3. PHYSICAL FEATURES SHOWN MAY NOT DEPICT CURRENT CONDITIONS

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6. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM, R.I. STATE PLANE 1927.

TETRA TECH

BATHYMETRIC SURVEY
SITE 17, BUILDING 32 GOULD ISLAND
PHASE 2 REMEDIAL INVESTIGATION REPORT
NAVSTA NEWPORT, RHODE ISLAND

FILE	SCALE
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FIGURE NUMBER: FIGURE NO. 3-1	REV: 0 DATE: 5/22/12

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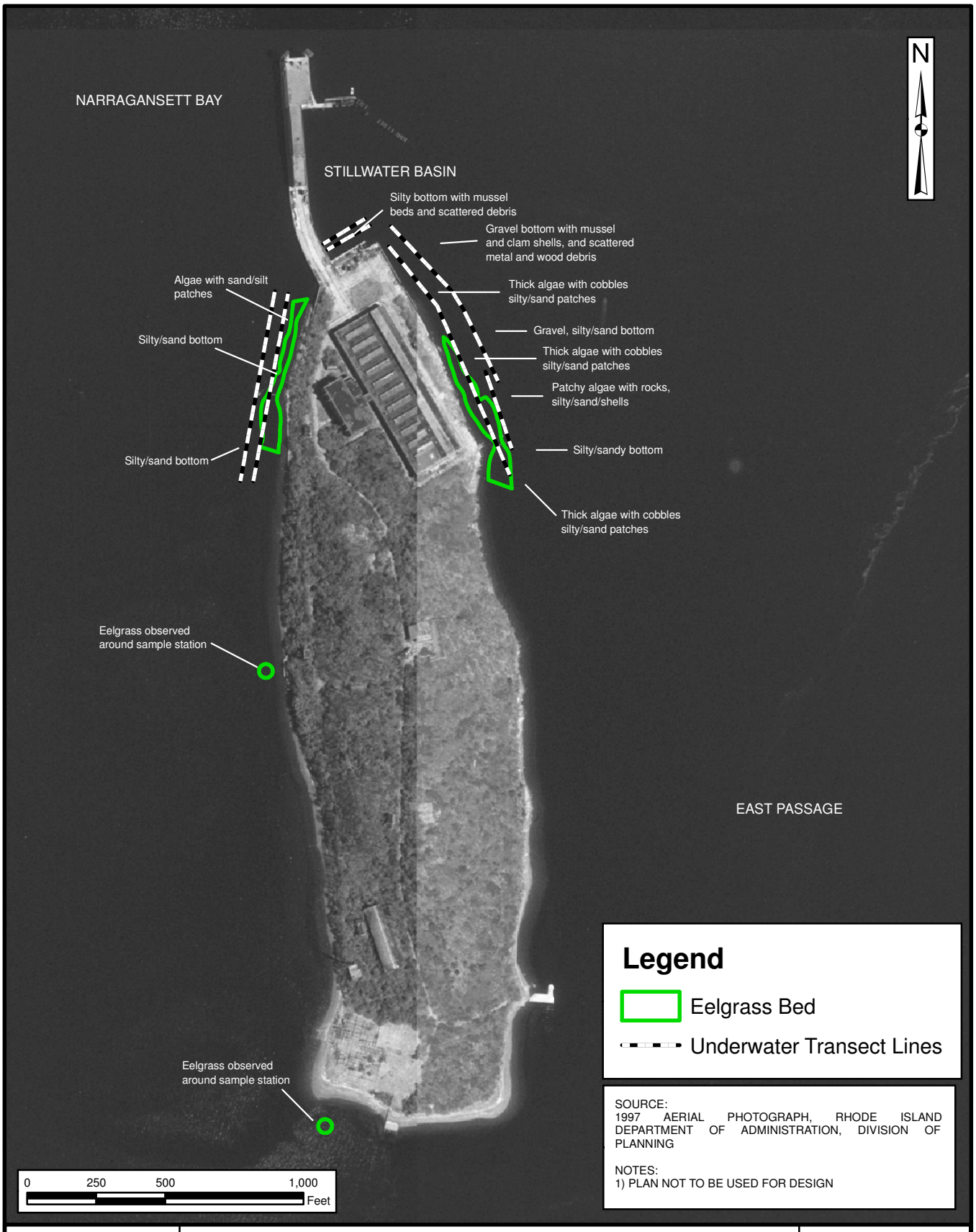
I:\00949\0610\GI_SUBTIDAL.MXD DWM 11/05/10



TETRA TECH

SUBTIDAL SURVEY AREAS AND SIGNIFICANT FINDINGS
SITE 17: BUILDING 32, GOULD ISLAND
PHASE 2 REMEDIAL INVESTIGATION REPORT
NAVSTA NEWPORT, RHODE ISLAND

SCALE	
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FILE	
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REV	DATE
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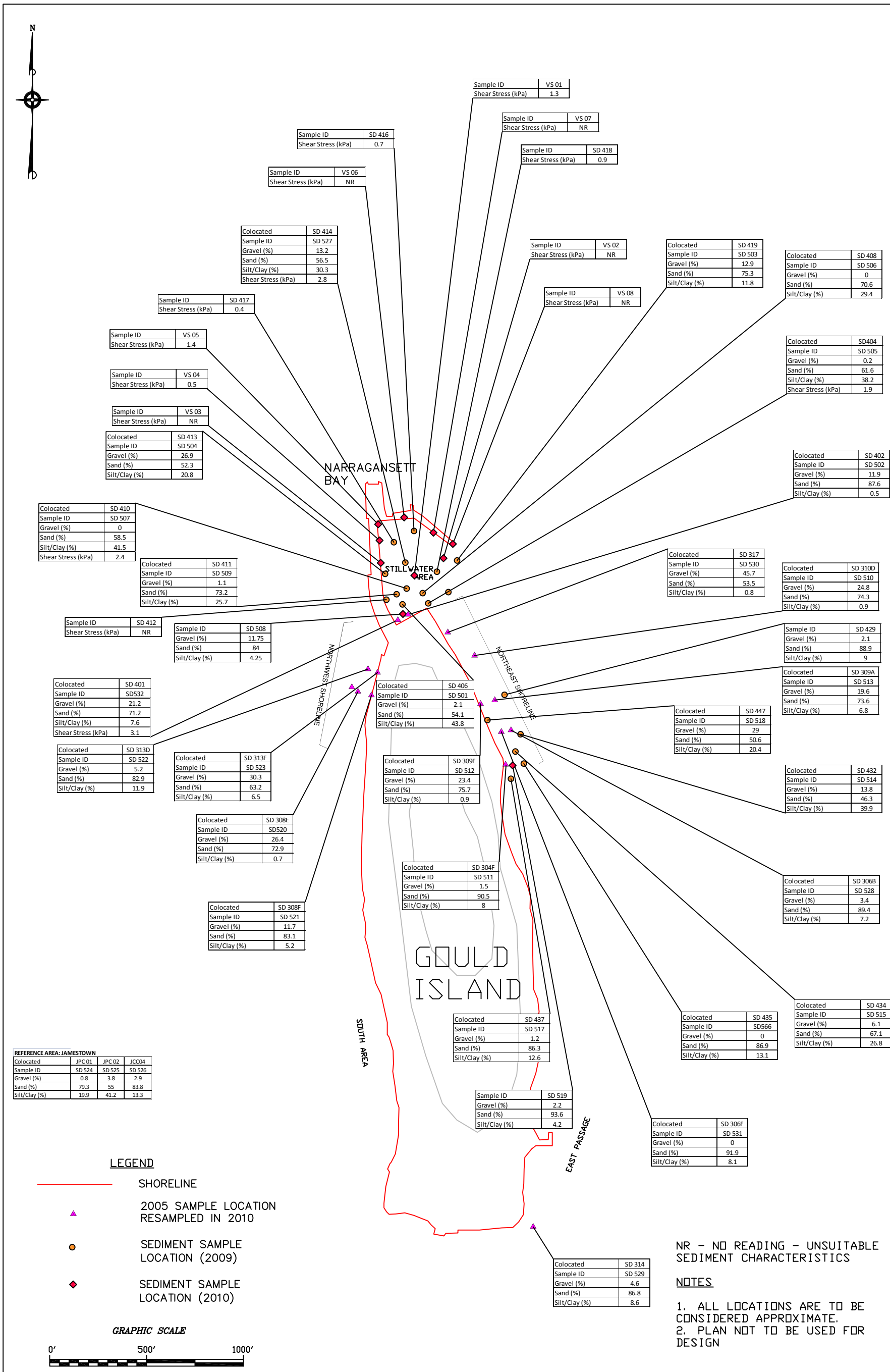
FIGURE NUMBER	
FIGURE NO. 3-2	



SEDIMENT SAMPLES, 2009 AND 2010: PHYSICAL DATA SUMMARY

FIGURE 3–3

SITE 17: BUILDING 32, GOULD ISLAND

NAVSTA NEWPORT, RHODE ISLAND

DRAWN BY:	D.W. MACDOUGALL	REV.:	1
CHECKED BY:	M. HORTON	DATE:	November 5, 2010
SCALE:	AS NOTED	FILE NO.:	I:\00949\0610\GI_SED_TAG.DWG

TETRA TECH

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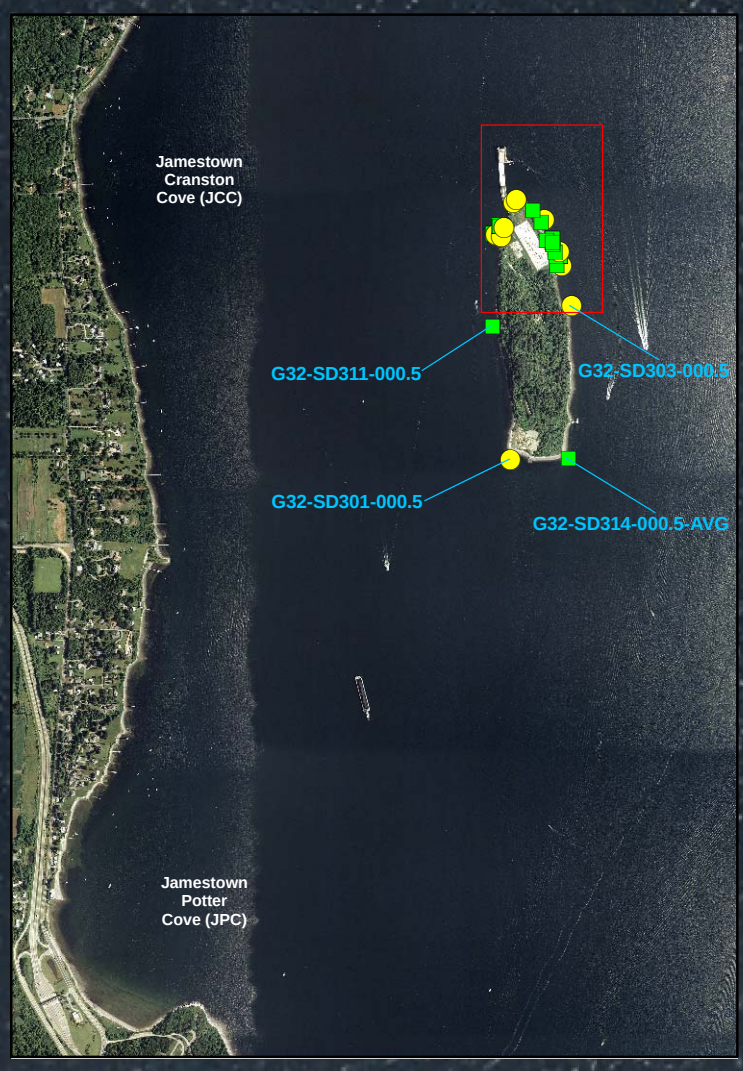

N

G32-SD312-000.5
G32-SD316-000.5
G32-SD317-000.5
G32-SD310A-000.5
G32-SD310B-000.5
G32-SD310C-000.5
G32-SD310D-000.5
G32-SD310E-000.5
G32-SD310F-000.5
G32-SD313A-000.5
G32-SD313B-000.5
G32-SD313C-000.5
G32-SD313D-000.5
G32-SD313E-000.5
G32-SD313F-000.5
G32-SD302F-000.5
G32-SD308F-000.5
G32-SD309F-000.5
G32-SD309A-000.5
G32-SD309B-000.5
G32-SD309C-000.5
G32-SD309D-000.5
G32-SD309E-000.5
G32-SD302A-000.5
G32-SD302B-000.5
G32-SD302C-000.5
G32-SD302D-000.5
G32-SD302E-000.5
G32-SD315-000.5
G32-SD307-000.5
G32-SD308A-000.5
G32-SD308B-000.5
G32-SD308C-000.5
G32-SD308D-000.5
G32-SD308E-000.5
G32-SD306F-000.5
G32-SD306A-000.5
G32-SD306B-000.5
G32-SD306C-000.5
G32-SD306D-000.5
G32-SD306E-000.5
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G32-SD305B-000.5
G32-SD305C-000.5
G32-SD305D-000.5
G32-SD305E-000.5
G32-SD305F-000.5
G32-SD304A-000.5
G32-SD304B-000.5
G32-SD304C-000.5
G32-SD304D-000.5
G32-SD304E-000.5
G32-SD304F-000.5

Legend

Concentrations Exceeding Project Action Limits (µg/kg)*

- < 4,022 (ERL)
- 4,022 - 44,942 (ERM)

Notes:
PAL for Total PAHs = NOAA ERL
ERL = 4,022 µg/kg
ERM = 44,942 µg/kg
Orthophoto: RIGIS, 2009.
* For locations where more than one sample was collected, the maximum concentration was used for presentation.

0 100 200 400 Feet

TETRA TECH

Total PAHs in Surface Sediment 2005
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-1A	REV 1 / DATE 03-04-2011

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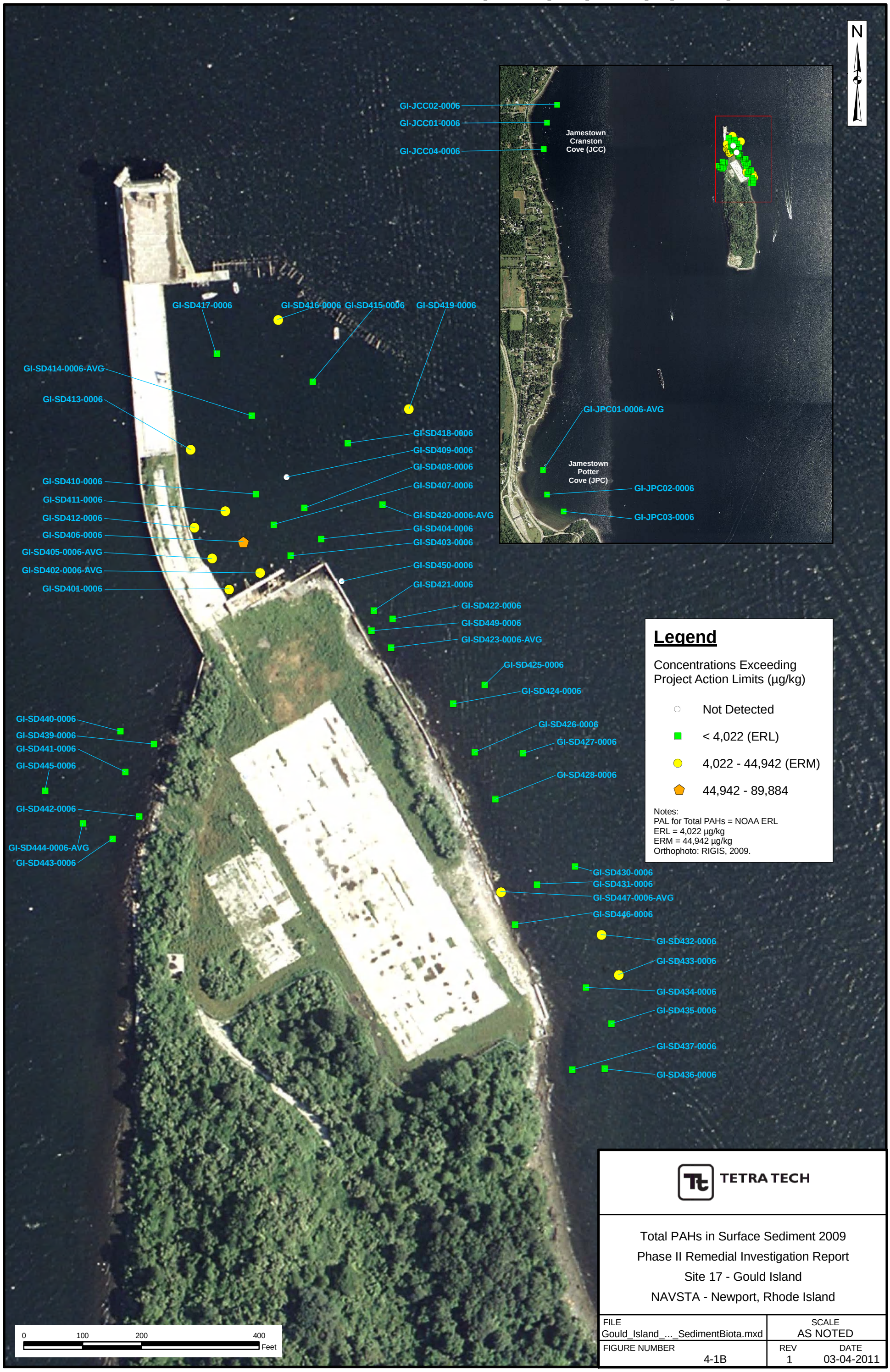

Legend

Concentrations Exceeding Project Action Limits (µg/kg)

- Not Detected
- < 4,022 (ERL)
- 4,022 - 44,942 (ERM)
- 44,942 - 89,884

Notes:
PAL for Total PAHs = NOAA ERL
ERL = 4,022 µg/kg
ERM = 44,942 µg/kg
Orthophoto: RIGIS, 2009.

TETRA TECH

Total PAHs in Surface Sediment 2009
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-1B	REV 1 / DATE 03-04-2011

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N

Jamestown Cranston Cove (JCC)

Jamestown Potter Cove (JPC)

GS-SD526-0006
GS-SD311-0006
GS-SD529-0006
GS-SD524-0006
GS-SD525-0006
GI-SD504-0006
GI-SD527-0006
GI-SD507-0006
GI-SD503-0006
GI-SD509-0006-AVG
GI-SD506-0006
GI-SD508-0006-AVG
GI-SD501-0006
GI-SD505-0006
GI-SD502-0006
GI-SD532-0006
GI-SD530-0006
GI-SD522-0006
GI-SD523-0006
GI-SD510-0006
GI-SD521-0006
GI-SD520-0006
GI-SD512-0006
GI-SD513-0006
GI-SD429-0006
GI-SD518-0006
GI-SD531-0006
GI-SD528-0006
GI-SD514-0006
GI-SD515-0006
GI-SD511-0006
GI-SD566-0006
GI-SD304-0006
GI-SD519-0006
GI-SD517-0006-AVG
GI-SD438-0006

Legend

Concentrations Exceeding Project Action Limits (µg/kg)

- < 4,022 (ERL)
- 4,022 - 44,942 (ERM)
- 44,942 - 89,884

Notes:
PAL for Total PAHs = NOAA ERL
ERL = 4,022 µg/kg
ERM = 44,942 µg/kg
Orthophoto: RIGIS, 2009.

0 100 200 400 Feet

TETRA TECH

Total PAHs in Surface Sediment 2010
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-1C	REV 1 / DATE 03-04-2011

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N

Jamestown
Cranston
Cove (JCC)

G32-SD311-0.51.0
G32-SD303-0.51.0
G32-SD301-0.51.0
G32-SD314-0.51.0

Jamestown
Potter
Cove (JPC)

GI-SD417-0006
GI-SD416-0006
GI-SD415-0612
GI-SD419-0006
GI-SD419-0612
GI-SD414-0006-AVG
GI-SD414-0612
GI-SD413-0006
GI-SD410-0006
GI-SD410-0612
GI-SD411-0006
GI-SD411-0612
GI-SD412-0006
GI-SD406-0006
GI-SD405-0006-AVG
G32-SD312-0.51.0
GI-SD401-0006
GI-SD418-0006
GI-SD409-0612
GI-SD408-0006
GI-SD407-0006
GI-SD420-0006-AVG
GI-SD404-0006
GI-SD404-0612
G32-SD316-0.51.0
GI-SD403-0006
GI-SD402-0006-AVG

G32-SD306C-0.51.0
G32-SD305D-0.51.0
G32-SD304D-0.51.0

Legend

Concentrations Exceeding
Project Action Limits (µg/kg)

- < 4,022 (ERL)
- 4,022 - 44,942 (ERM)
- 44,942 - 89,884

Notes:
PAL for Total PAHs = NOAA ERL
ERL = 4,022 µg/kg
ERM = 44,942 µg/kg
Orthophoto: RIGIS, 2009.

0 100 200 400
Feet

TETRA TECH

Total PAHs in Sediment 6 to 12 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
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FIGURE NUMBER 4-2	REV 1 / DATE 03-04-2011

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TETRA TECH

Total PAHs in Sediment 12 to 24 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-3	REV 1 / DATE 03-03-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTAPAHS24TO36.MXD NEC 03-04-2011

N

Jamestown Cranston Cove (JCC)

Jamestown Potter Cove (JPC)

GI-SD417-0612
GI-SD417-1218
GI-SD416-0612
GI-SD419-1824
GI-SD414-1218
GI-SD414-1824-AVG
GI-SD413-0612
GI-SD418-0612
GI-SD410-1824
GI-SD411-1218
GI-SD411-1824
GI-SD408-0612
GI-SD408-1218
GI-SD412-1218
GI-SD407-0612
GI-SD420-0612
GI-SD406-0612
GI-SD404-1824
GI-SD405-0612
GI-SD405-1218
GI-SD403-0006
GI-SD402-0612
GI-SD401-0612
GI-SD401-1218

Legend

Concentrations Exceeding Project Action Limits (µg/kg)

- < 4,022 (ERL)
- 4,022 - 44,942 (ERM)

Notes:
PAL for Total PAHs = NOAA ERL
ERL = 4,022 µg/kg
ERM = 44,942 µg/kg
Orthophoto: RIGIS, 2009.

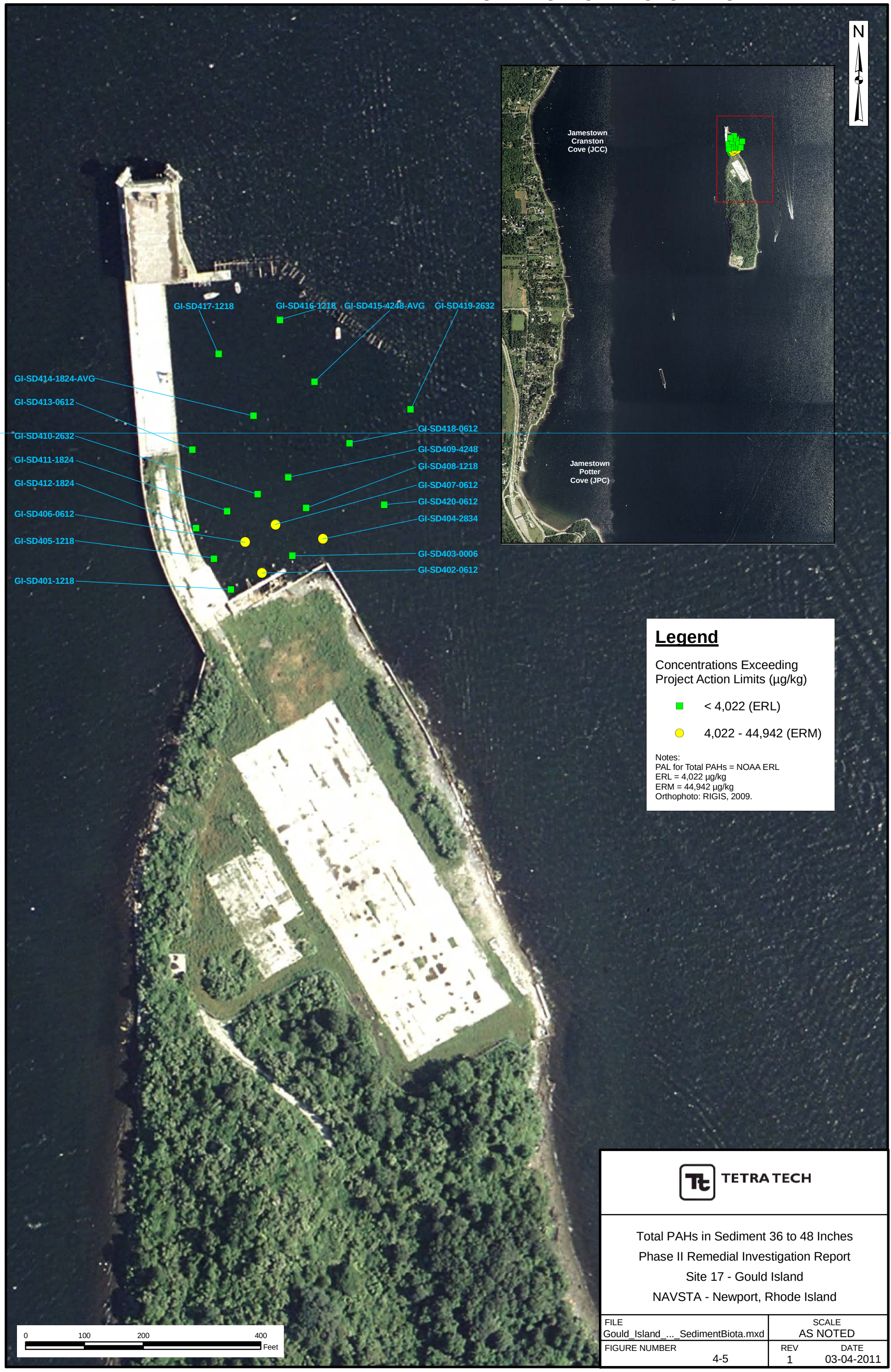
0 100 200 400 Feet

TETRA TECH

Total PAHs in Sediment 24 to 36 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-4	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTAPAHS36TO48.MXD NEC 03-04-2011



Legend

Concentrations Exceeding Project Action Limits (µg/kg)

- < 4,022 (ERL)
- 4,022 - 44,942 (ERM)

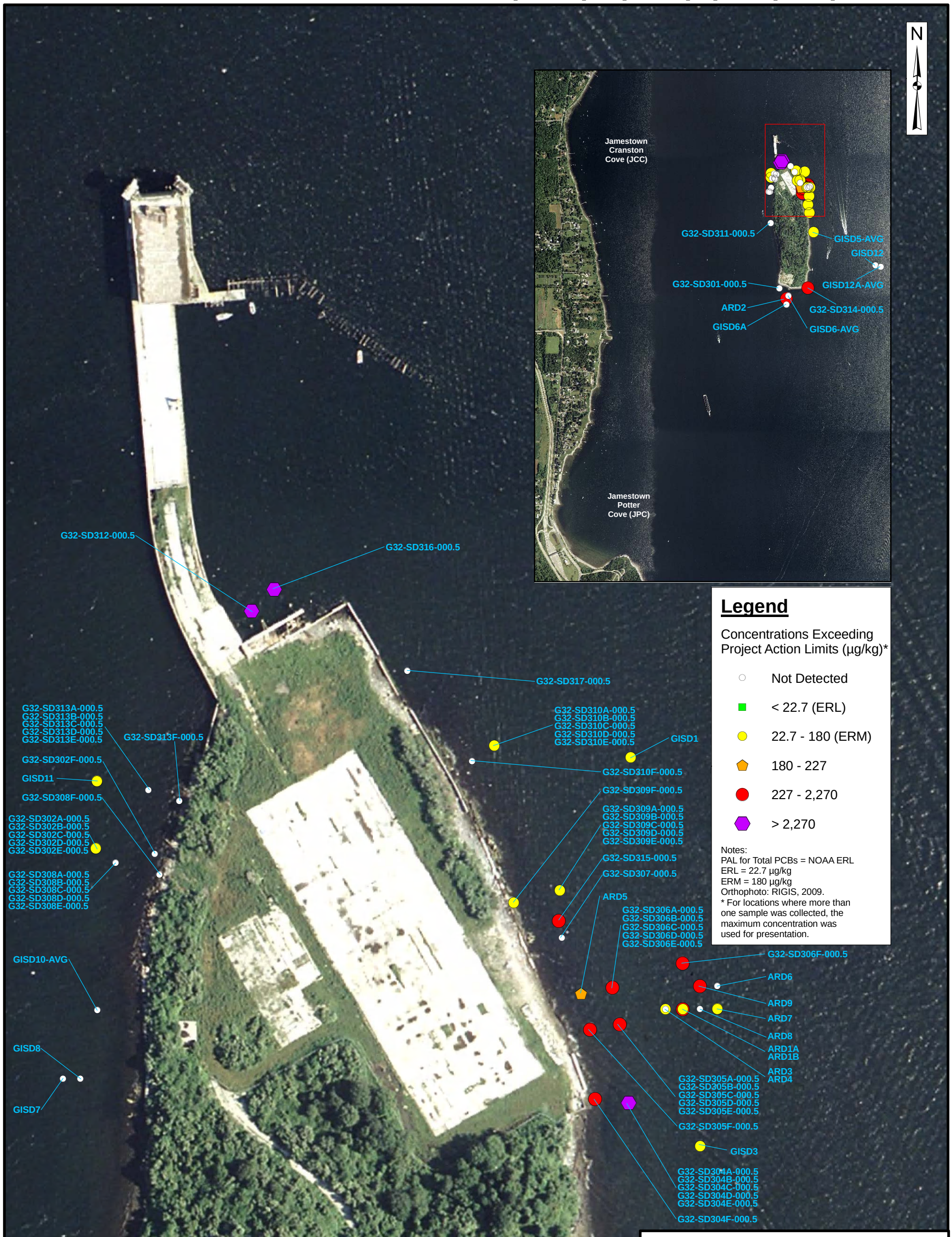
Notes:
PAL for Total PAHs = NOAA ERL
ERL = 4,022 µg/kg
ERM = 44,942 µg/kg
Orthophoto: RIGIS, 2009.

TETRA TECH

Total PAHs in Sediment 36 to 48 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-5	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_SSPCBS2005.MXD NEC 03-15-2011



Legend

Concentrations Exceeding Project Action Limits (µg/kg)*

- Not Detected
- < 22.7 (ERL)
- 22.7 - 180 (ERM)
- 180 - 227
- 227 - 2,270
- > 2,270

Notes:
PAL for Total PCBs = NOAA ERL
ERL = 22.7 µg/kg
ERM = 180 µg/kg
Orthophoto: RIGIS, 2009.
* For locations where more than one sample was collected, the maximum concentration was used for presentation.

TETRA TECH

Total PCBs in Surface Sediment 2003 and 2005
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-6A	REV 1 / DATE 03-15-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTASSPBCS2009.MXD NEC 03-04-2011

N

GI-JCC02-0006
GI-JCC01-0006
GI-JCC04-0006
Jamestown Cranston Cove (JCC)
GI-SD417-0006
GI-SD416-0006
GI-SD415-0006
GI-SD419-0006
GI-SD414-0006-AVG
GI-SD413-0006
GI-JPC01-0006-AVG
GI-SD418-0006
GI-SD409-0006
GI-SD408-0006
GI-SD407-0006
GI-SD410-0006
GI-SD411-0006
GI-SD412-0006
GI-SD420-0006-AVG
GI-SD406-0006
GI-SD404-0006
GI-SD405-0006-AVG
GI-SD403-0006
GI-SD402-0006-AVG
GI-SD450-0006
GI-SD401-0006
GI-SD421-0006
GI-SD422-0006
GI-SD449-0006
GI-SD423-0006-AVG
GI-SD425-0006
GI-SD424-0006
GI-SD440-0006
GI-SD439-0006
GI-SD441-0006
GI-SD426-0006
GI-SD427-0006
GI-SD445-0006
GI-SD428-0006
GI-SD442-0006
GI-SD444-0006-AVG
GI-SD443-0006
GI-SD430-0006
GI-SD431-0006
GI-SD447-0006-AVG
GI-SD446-0006
GI-SD432-0006
GI-SD433-0006
GI-SD434-0006
GI-SD435-0006
GI-SD437-0006
GI-SD436-0006
Jamestown Potter Cove (JPC)
GI-JPC02-0006
GI-JPC03-0006

Legend

Concentrations Exceeding Project Action Limits (µg/kg)

- Not Detected
- < 22.7 (ERL)
- 22.7 - 180 (ERM)
- 180 - 227
- 227 - 2,270
- > 2,270

Notes:
PAL for Total PCBs = NOAA ERL
ERL = 22.7 µg/kg
ERM = 180 µg/kg
Orthophoto: RIGIS, 2009.

0 100 200 400 Feet

TETRA TECH

Total PCBs in Surface Sediment 2009
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER	REV / DATE
4-6B	1 / 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_SSPCBS2010.MXD NEC 03-04-2011

N

Jamestown Cranston Cove (JCC)

Jamestown Potter Cove (JPC)

GS-SD526-0006
GS-SD311-0006
GS-SD529-0006
GS-SD524-0006
GS-SD525-0006
GI-SD504-0006
GI-SD527-0006
GI-SD507-0006
GI-SD503-0006
GI-SD509-0006-AVG
GI-SD506-0006
GI-SD508-0006-AVG
GI-SD501-0006
GI-SD505-0006
GI-SD502-0006
GI-SD532-0006
GI-SD530-0006
GI-SD522-0006
GI-SD523-0006
GI-SD510-0006
GI-SD521-0006
GI-SD520-0006
GI-SD512-0006
GI-SD513-0006
GI-SD429-0006
GI-SD518-0006
GI-SD531-0006
GI-SD528-0006
GI-SD514-0006
GI-SD515-0006
GI-SD511-0006
GI-SD566-0006
GI-SD304-0006
GI-SD519-0006
GI-SD517-0006-AVG
GI-SD438-0006

Legend

Concentrations Exceeding Project Action Limits (µg/kg)

- Not Detected
- < 22.7 (ERL)
- 22.7 - 180 (ERM)
- 180 - 227
- 227 - 2,270
- > 2,270

Notes:
PAL for Total PCBs = NOAA ERL
ERL = 22.7 µg/kg
ERM = 180 µg/kg
Orthophoto: RIGIS, 2009.

0 100 200 400 Feet

TETRA TECH

Total PCBs in Surface Sediment 2010
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-6C	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_PCBS6TO12.MXD NEC 03-04-2011

N

Jamestown
Cranston
Cove (JCC)

Jamestown
Potter
Cove (JPC)

GI-SD417-0006
GI-SD416-0006
GI-SD415-0612
GI-SD419-0006
GI-SD419-0612
GI-SD414-0006-AVG
GI-SD414-0612
GI-SD413-0006
GI-SD418-0006
GI-SD410-0006
GI-SD410-0612
GI-SD409-0612
GI-SD411-0006
GI-SD411-0612
GI-SD408-0006
GI-SD412-0006
GI-SD407-0006
GI-SD420-0006-AVG
GI-SD406-0006
GI-SD404-0006
GI-SD404-0612
G32-SD316-0.51.0
GI-SD405-0006-AVG
GI-SD403-0006
G32-SD312-0.51.0
GI-SD402-0006-AVG
GI-SD401-0006

G32-SD311-0.51.0
G32-SD303-0.51.0
G32-SD301-0.51.0
G32-SD314-0.51.0

G32-SD306C-0.51.0
G32-SD305D-0.51.0
G32-SD304D-0.51.0

Legend

Concentrations Exceeding Project Action Limits (µg/kg)

- Not Detected
- < 22.7 (ERL)
- 22.7 - 180 (ERM)
- 180 - 227
- 227 - 2,270
- > 2,270

Notes:
PAL for Total PCBs = NOAA ERL
ERL = 22.7 µg/kg
ERM = 180 µg/kg
Orthophoto: RIGIS, 2009.

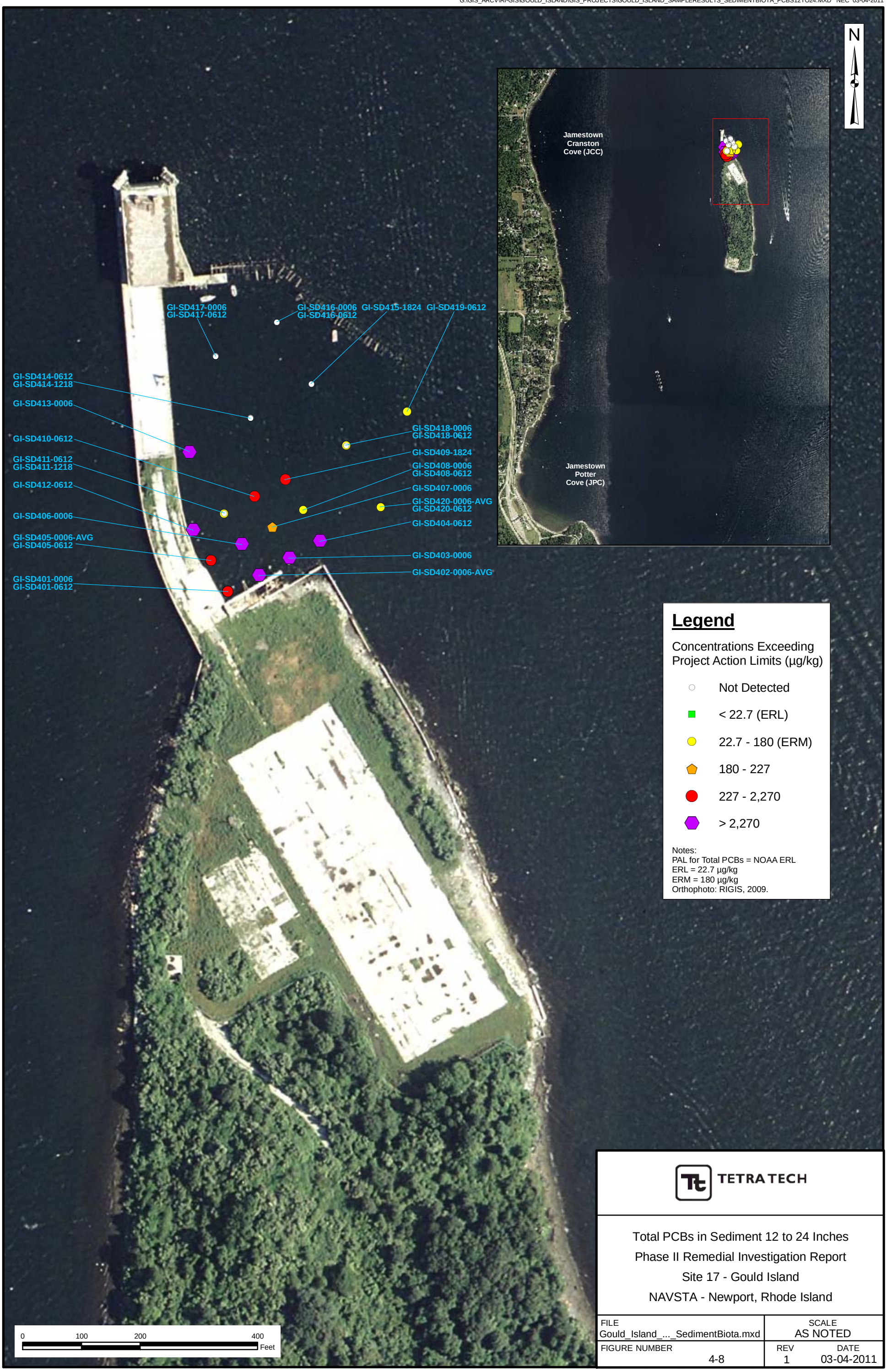
0 100 200 400 Feet

TETRA TECH

Total PCBs in Sediment 6 to 12 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-7	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_PCBS12TO24.MXD NEC 03-04-2011

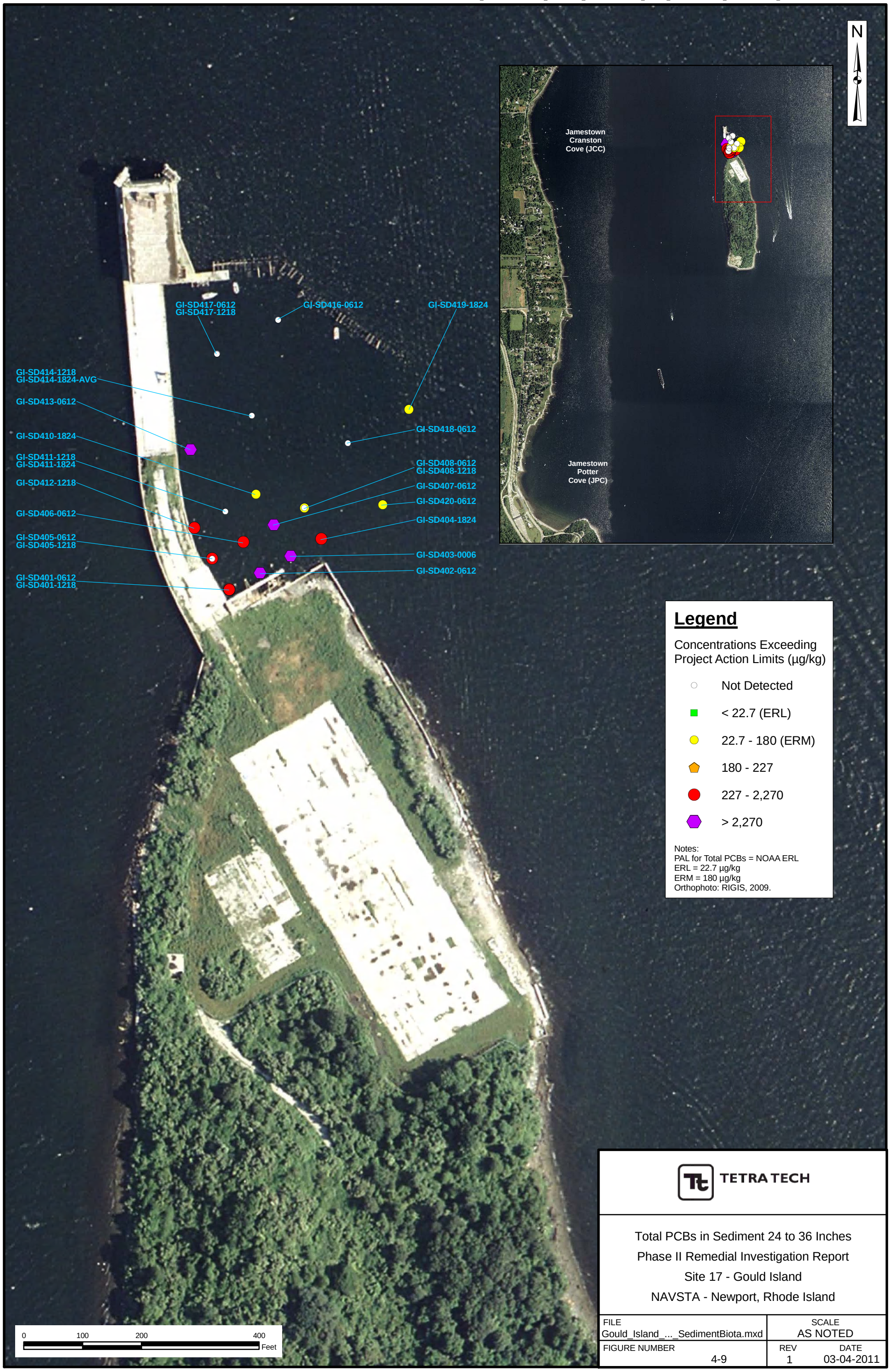


TETRA TECH

Total PCBs in Sediment 12 to 24 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-8	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_PCBS24TO36.MXD NEC 03-04-2011

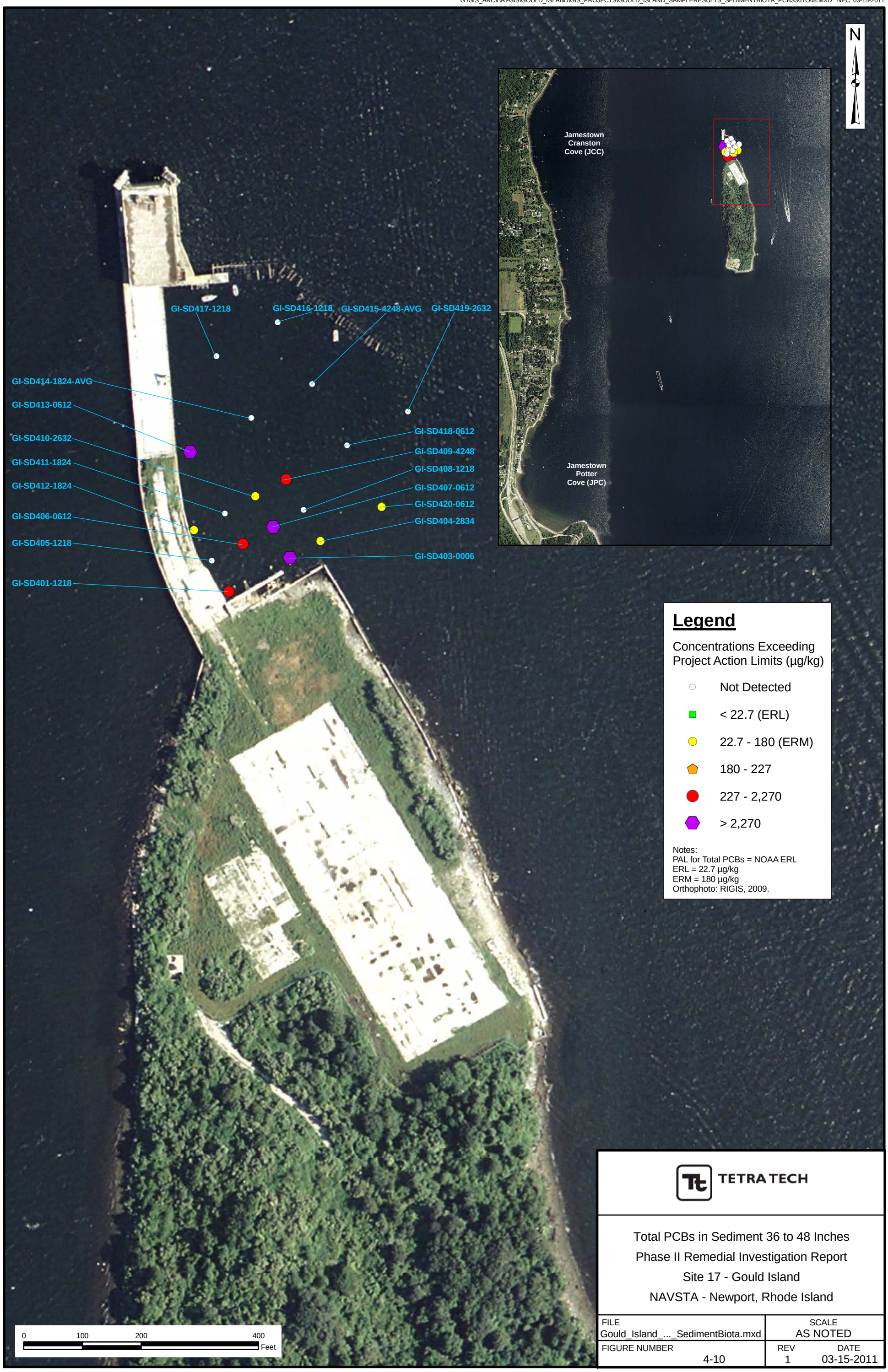


TETRA TECH

Total PCBs in Sediment 24 to 36 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-9	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_PCBS36TO48.MXD NEC 03-15-2011

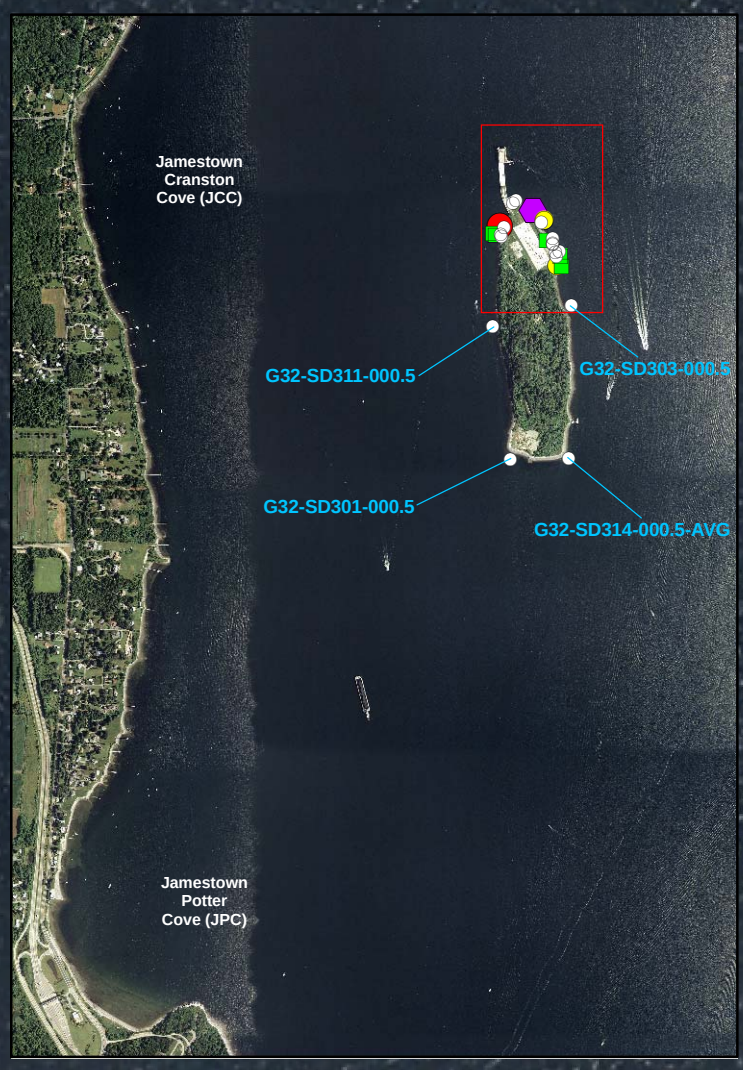


TETRA TECH

Total PCBs in Sediment 36 to 48 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-10	REV 1 / DATE 03-15-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_SSCAD2005.MXD NEC 03-15-2011



N

G32-SD312-000.5
G32-SD316-000.5
G32-SD317-000.5
G32-SD310A-000.5
G32-SD310B-000.5
G32-SD310C-000.5
G32-SD310D-000.5
G32-SD310E-000.5
G32-SD310F-000.5
G32-SD313A-000.5
G32-SD313B-000.5
G32-SD313C-000.5
G32-SD313D-000.5
G32-SD313E-000.5
G32-SD313F-000.5
G32-SD302F-000.5
G32-SD308F-000.5
G32-SD309F-000.5
G32-SD309A-000.5
G32-SD309B-000.5
G32-SD309C-000.5
G32-SD309D-000.5
G32-SD309E-000.5
G32-SD302A-000.5
G32-SD302B-000.5
G32-SD302C-000.5
G32-SD302D-000.5
G32-SD302E-000.5
G32-SD308A-000.5
G32-SD308B-000.5
G32-SD308C-000.5
G32-SD308D-000.5
G32-SD308E-000.5
G32-SD315-000.5
G32-SD307-000.5
G32-SD306F-000.5
G32-SD306A-000.5
G32-SD306B-000.5
G32-SD306C-000.5
G32-SD306D-000.5
G32-SD306E-000.5
G32-SD305A-000.5
G32-SD305B-000.5
G32-SD305C-000.5
G32-SD305D-000.5
G32-SD305E-000.5
G32-SD305F-000.5
G32-SD304A-000.5
G32-SD304B-000.5
G32-SD304C-000.5
G32-SD304D-000.5
G32-SD304E-000.5
G32-SD304F-000.5

Legend

Concentrations Exceeding Project Action Limits (mg/kg)*

- Not Detected
- < 1.2 (ERL)
- 1.2 - 9.6 (ERM)
- 9.6 - 12
- 12 - 120
- > 120

Notes:
PAL for Total Cadmium = NOAA ERL
ERL = 1.2 mg/kg
ERM = 9.6 mg/kg
Orthophoto: RIGIS, 2009.
* For locations where more than one sample was collected, the maximum concentration was used for presentation.

0 100 200 400 Feet

TETRA TECH

Total Cadmium in Surface Sediment 2005
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-11A	REV 1 / DATE 03-15-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_SSCAD2009.MXD NEC 03-04-2011

N

GI-JCC02-0006
GI-JCC01-0006
GI-JCC04-0006

Jamestown
Cranston
Cove (JCC)

GI-SD417-0006
GI-SD416-0006
GI-SD415-0006
GI-SD419-0006
GI-SD414-0006-AVG
GI-SD413-0006
GI-SD418-0006
GI-SD409-0006
GI-SD408-0006
GI-SD407-0006
GI-SD420-0006-AVG
GI-SD410-0006
GI-SD411-0006
GI-SD412-0006
GI-SD404-0006
GI-SD406-0006
GI-SD403-0006
GI-SD405-0006-AVG
GI-SD450-0006
GI-SD402-0006-AVG
GI-SD421-0006
GI-SD401-0006
GI-SD422-0006
GI-SD449-0006
GI-SD423-0006-AVG
GI-SD425-0006
GI-SD424-0006
GI-SD440-0006
GI-SD426-0006
GI-SD439-0006
GI-SD427-0006
GI-SD441-0006
GI-SD445-0006
GI-SD428-0006
GI-SD442-0006
GI-SD444-0006-AVG
GI-SD443-0006
GI-SD430-0006
GI-SD431-0006
GI-SD447-0006-AVG
GI-SD446-0006
GI-SD432-0006
GI-SD433-0006
GI-SD434-0006
GI-SD435-0006
GI-SD437-0006
GI-SD436-0006

GI-JPC01-0006-AVG

Jamestown
Potter
Cove (JPC)

GI-JPC02-0006
GI-JPC03-0006

Legend

Concentrations Exceeding Project Action Limits (mg/kg)

- Not Detected
- < 1.2 (ERL)

Notes:
PAL for Total Cadmium = NOAA ERL
ERL = 1.2 mg/kg
ERM = 9.6 mg/kg
Orthophoto: RIGIS, 2009.

0 100 200 400 Feet

TETRA TECH

Total Cadmium in Surface Sediment 2009
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-11B	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_SSCAD2010.MXD NEC 03-04-2011

N

GS-SD526-0006

Jamestown
Cranston
Cove (JCC)

GS-SD311-0006

GS-SD529-0006

GS-SD524-0006

Jamestown
Potter
Cove (JPC)

GS-SD525-0006

GI-SD504-0006 GI-SD527-0006 GI-SD507-0006 GI-SD503-0006

GI-SD509-0006-AVG

GI-SD506-0006

GI-SD508-0006-AVG

GI-SD501-0006

GI-SD505-0006

GI-SD502-0006

GI-SD532-0006

GI-SD530-0006

GI-SD522-0006 GI-SD523-0006

GI-SD510-0006

GI-SD521-0006

GI-SD520-0006

GI-SD512-0006

GI-SD513-0006

GI-SD429-0006

GI-SD518-0006

GI-SD531-0006

GI-SD528-0006

GI-SD514-0006

GI-SD515-0006

GI-SD511-0006

GI-SD566-0006

GI-SD304-0006

GI-SD519-0006

GI-SD517-0006-AVG

GI-SD438-0006

Legend

Concentrations Exceeding Project Action Limits (mg/kg)

- Not Detected
- < 1.2 (ERL)

Notes:
PAL for Total Cadmium = NOAA ERL
ERL = 1.2 mg/kg
ERM = 9.6 mg/kg
Orthophoto: RIGIS, 2009.

0 100 200 400 Feet

TETRA TECH

Total Cadmium in Surface Sediment 2010
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-11C	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_CAD6TO12.MXD NEC 03-04-2011

N

Jamestown
Cranston
Cove (JCC)

Jamestown
Potter
Cove (JPC)

G32-SD311-0.51.0
G32-SD303-0.51.0
G32-SD301-0.51.0
G32-SD314-0.51.0

GI-SD417-0006
GI-SD416-0006
GI-SD415-0612
GI-SD419-0006
GI-SD419-0612
GI-SD414-0006-AVG
GI-SD414-0612
GI-SD413-0006
GI-SD410-0006
GI-SD410-0612
GI-SD411-0006
GI-SD411-0612
GI-SD412-0006
GI-SD406-0006
GI-SD405-0006-AVG
G32-SD312-0.51.0
GI-SD401-0006
GI-SD418-0006
GI-SD409-0612
GI-SD408-0006
GI-SD407-0006
GI-SD420-0006-AVG
GI-SD404-0006
GI-SD404-0612
G32-SD316-0.51.0
GI-SD403-0006
GI-SD402-0006-AVG

G32-SD306C-0.51.0
G32-SD305D-0.51.0
G32-SD304D-0.51.0

Legend

Concentrations Exceeding Project Action Limits (mg/kg)

- Not Detected
- < 1.2 (ERL)

Notes:
PAL for Total Cadmium = NOAA ERL
ERL = 1.2 mg/kg
ERM = 9.6 mg/kg
Orthophoto: RIGIS, 2009.

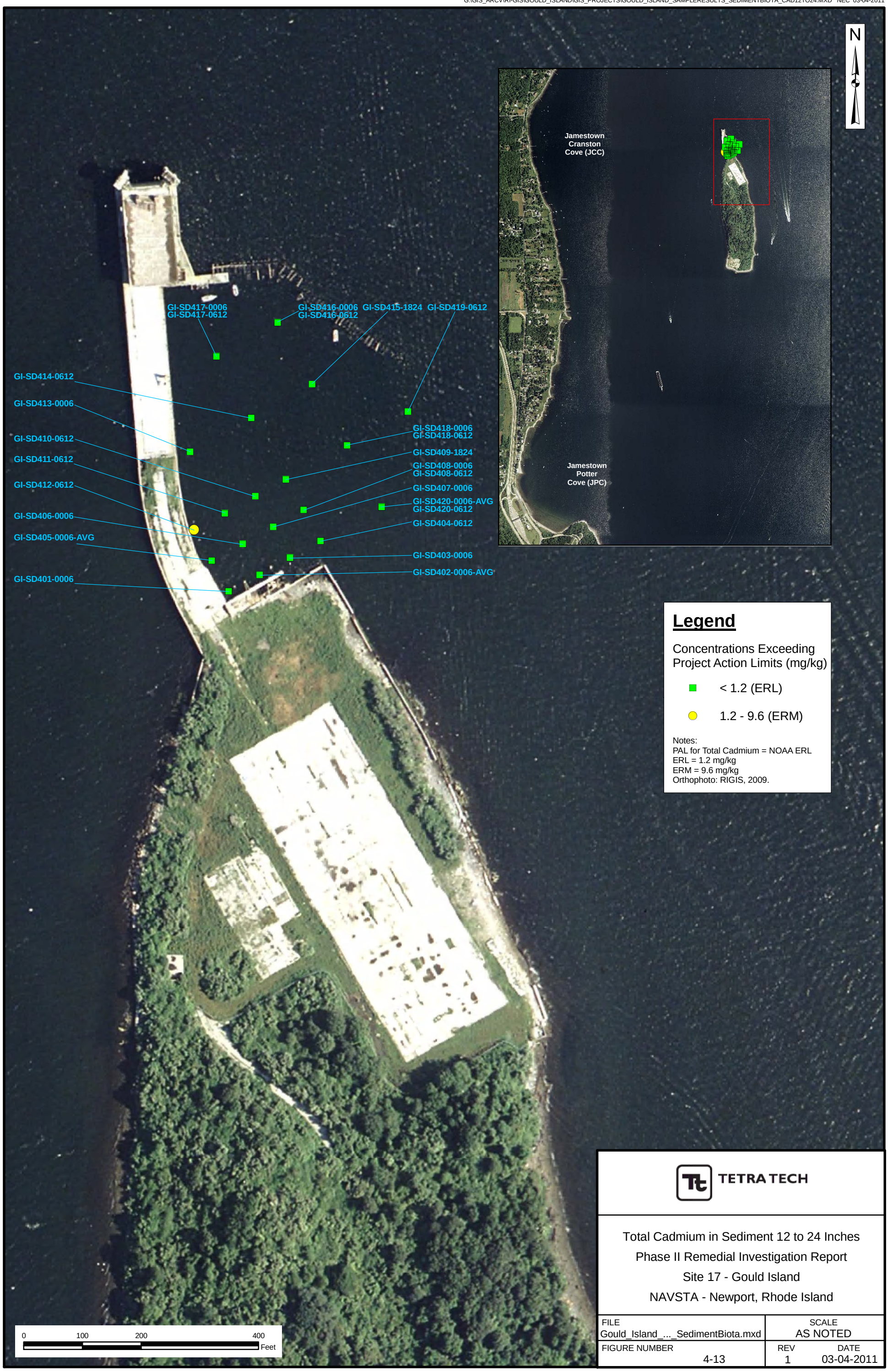
0 100 200 400 Feet

TETRA TECH

Total Cadmium in Sediment 6 to 12 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-12	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_CAD12TO24.MXD NEC 03-04-2011

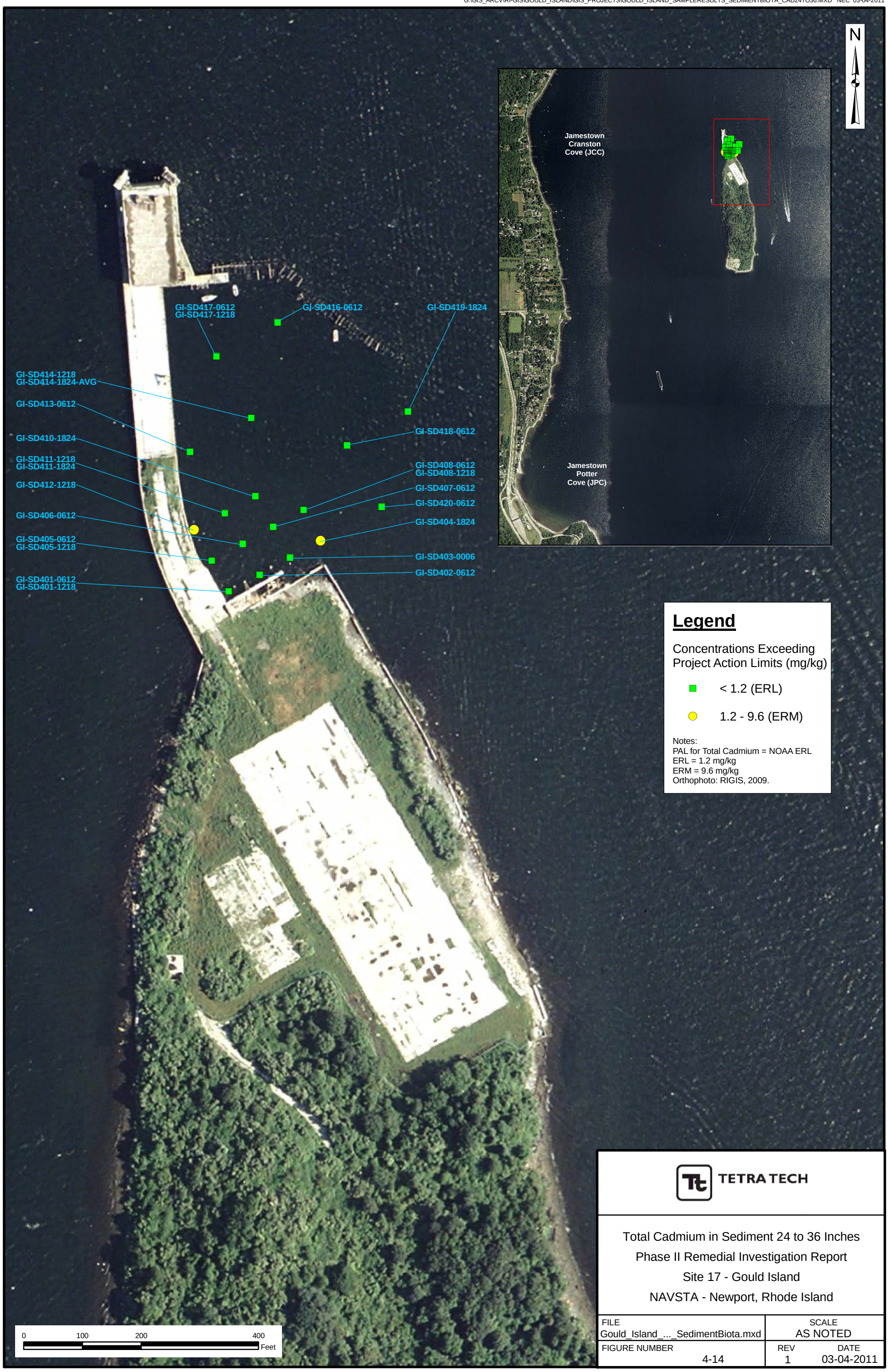


TETRA TECH

Total Cadmium in Sediment 12 to 24 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-13	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_CAD24TO36.MXD NEC 03-04-2011



TETRA TECH

Total Cadmium in Sediment 24 to 36 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-14	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_CAD36TO48.MXD NEC 03-04-2011

N

Jamestown
Cranston
Cove (JCC)

Jamestown
Potter
Cove (JPC)

GI-SD417-1218
GI-SD416-1218
GI-SD415-4248-AVG
GI-SD419-2632
GI-SD414-1824-AVG
GI-SD413-0612
GI-SD410-2632
GI-SD411-1824
GI-SD412-1824
GI-SD406-0612
GI-SD405-1218
GI-SD401-1218
GI-SD418-0612
GI-SD409-4248
GI-SD408-1218
GI-SD407-0612
GI-SD420-0612
GI-SD404-2834
GI-SD403-0006
GI-SD402-0612

Legend

Concentrations Exceeding Project Action Limits (mg/kg)

- < 1.2 (ERL)

Notes:
PAL for Total Cadmium = NOAA ERL
ERL = 1.2 mg/kg
ERM = 9.6 mg/kg
Orthophoto: RIGIS, 2009.

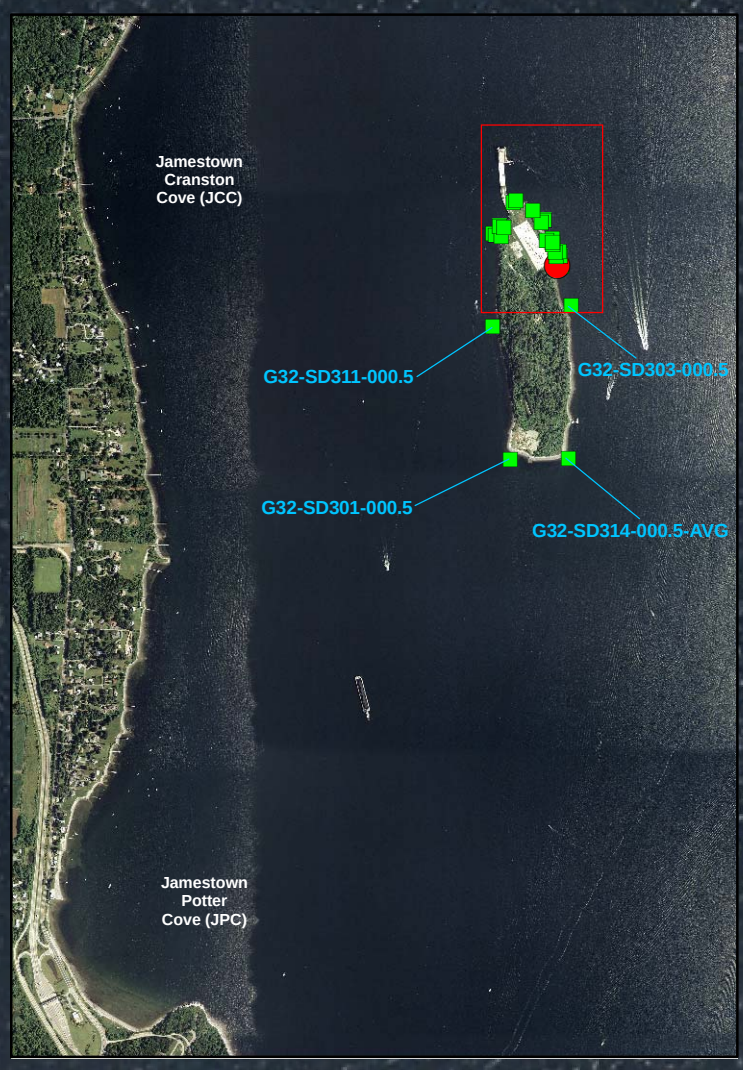
0 100 200 400 Feet

TETRA TECH

Total Cadmium in Sediment 36 to 48 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-15	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_SSCHROM2005.MXD NEC 03-15-2011



N

G32-SD312-000.5
G32-SD316-000.5
G32-SD317-000.5
G32-SD310A-000.5
G32-SD310B-000.5
G32-SD310C-000.5
G32-SD310D-000.5
G32-SD310E-000.5
G32-SD310F-000.5
G32-SD313A-000.5
G32-SD313B-000.5
G32-SD313C-000.5
G32-SD313D-000.5
G32-SD313E-000.5
G32-SD313F-000.5
G32-SD302F-000.5
G32-SD308F-000.5
G32-SD309F-000.5
G32-SD309A-000.5
G32-SD309B-000.5
G32-SD309C-000.5
G32-SD309D-000.5
G32-SD309E-000.5
G32-SD302A-000.5
G32-SD302B-000.5
G32-SD302C-000.5
G32-SD302D-000.5
G32-SD302E-000.5
G32-SD308A-000.5
G32-SD308B-000.5
G32-SD308C-000.5
G32-SD308D-000.5
G32-SD308E-000.5
G32-SD315-000.5
G32-SD307-000.5
G32-SD306F-000.5
G32-SD306A-000.5
G32-SD306B-000.5
G32-SD306C-000.5
G32-SD306D-000.5
G32-SD306E-000.5
G32-SD305A-000.5
G32-SD305B-000.5
G32-SD305C-000.5
G32-SD305D-000.5
G32-SD305E-000.5
G32-SD305F-000.5
G32-SD304A-000.5
G32-SD304B-000.5
G32-SD304C-000.5
G32-SD304D-000.5
G32-SD304E-000.5
G32-SD304F-000.5

Legend

Concentrations Exceeding Project Action Limits (mg/kg)*

- < 81 (ERL)
- 81 - 370 (ERM)
- 370 - 810
- 810 - 8,100

Notes:
PAL for Total Chromium = NOAA ERL
ERL = 81 mg/kg
ERM = 370 mg/kg
Orthophoto: RIGIS, 2009.
* For locations where more than one sample was collected, the maximum concentration was used for presentation.

0 100 200 400 Feet

TETRA TECH

Total Chromium in Surface Sediment 2005
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-16A	REV 1 / DATE 03-15-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_SSCHROM2009.MXD NEC 03-15-2011

N

GI-JCC02-0006
GI-JCC01-0006
GI-JCC04-0006
Jamestown Cranston Cove (JCC)

GI-SD417-0006
GI-SD416-0006
GI-SD415-0006
GI-SD419-0006
GI-SD414-0006-AVG
GI-SD413-0006
GI-SD418-0006
GI-SD409-0006
GI-SD408-0006
GI-SD407-0006
GI-SD410-0006
GI-SD411-0006
GI-SD412-0006
GI-SD420-0006-AVG
GI-SD406-0006
GI-SD404-0006
GI-SD405-0006-AVG
GI-SD403-0006
GI-SD402-0006-AVG
GI-SD450-0006
GI-SD401-0006
GI-SD421-0006
GI-SD422-0006
GI-SD449-0006
GI-SD423-0006-AVG
GI-SD425-0006
GI-SD424-0006
GI-SD440-0006
GI-SD439-0006
GI-SD441-0006
GI-SD426-0006
GI-SD427-0006
GI-SD445-0006
GI-SD428-0006
GI-SD442-0006
GI-SD444-0006-AVG
GI-SD443-0006
GI-SD430-0006
GI-SD431-0006
GI-SD447-0006-AVG
GI-SD446-0006
GI-SD432-0006
GI-SD433-0006
GI-SD434-0006
GI-SD435-0006
GI-SD437-0006
GI-SD436-0006

GI-JPC01-0006-AVG
Jamestown Potter Cove (JPC)
GI-JPC02-0006
GI-JPC03-0006

Legend

Concentrations Exceeding Project Action Limits (mg/kg)

< 81 (ERL)

Notes:
PAL for Total Chromium = NOAA ERL
ERL = 81 mg/kg
ERM = 370 mg/kg
Orthophoto: RIGIS, 2009.

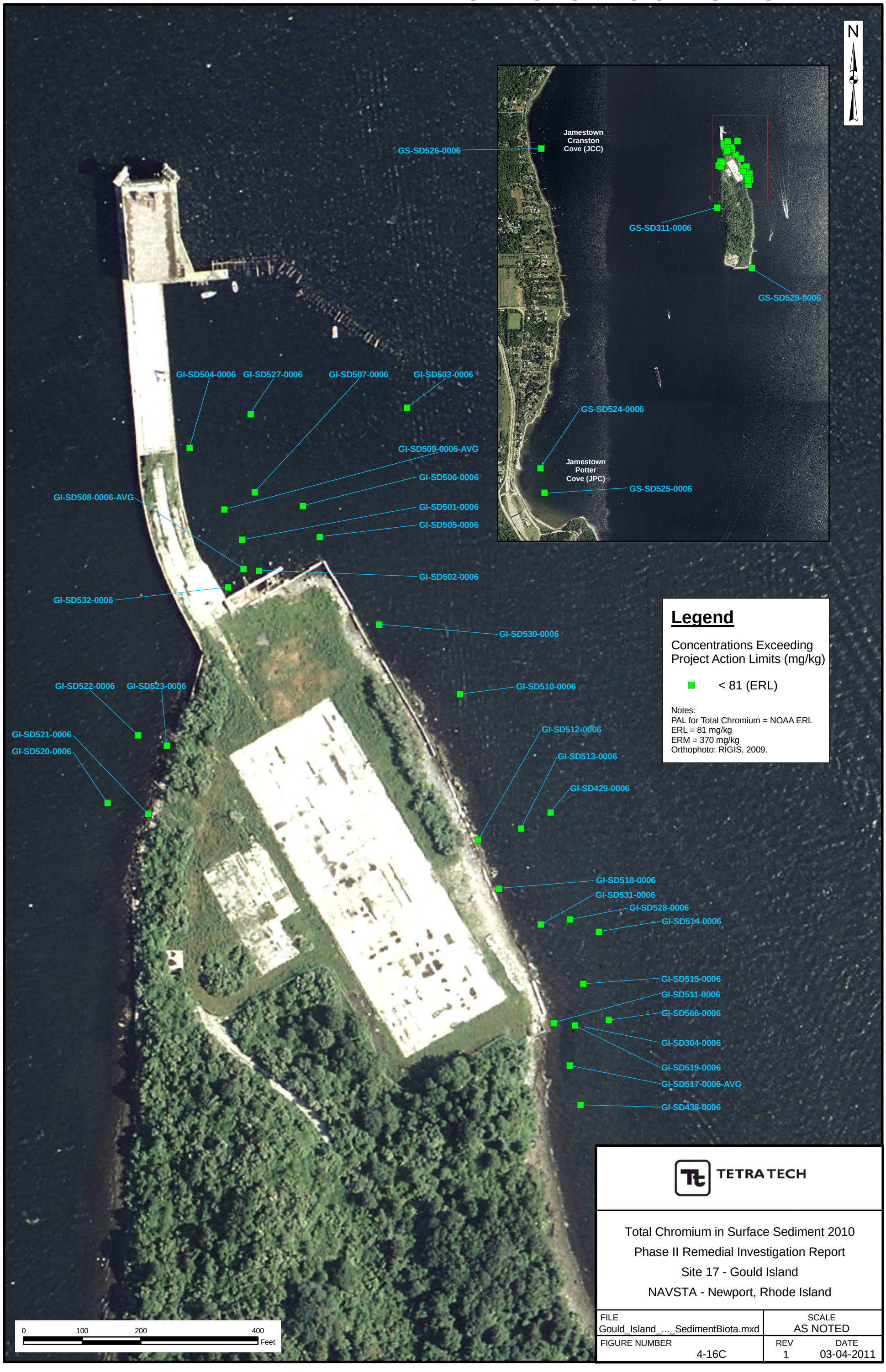
0 100 200 400 Feet

TETRA TECH

Total Chromium in Surface Sediment 2009
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-16B	REV 1 / DATE 03-15-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_SSCHROM2010.MXD NEC 03-04-2011

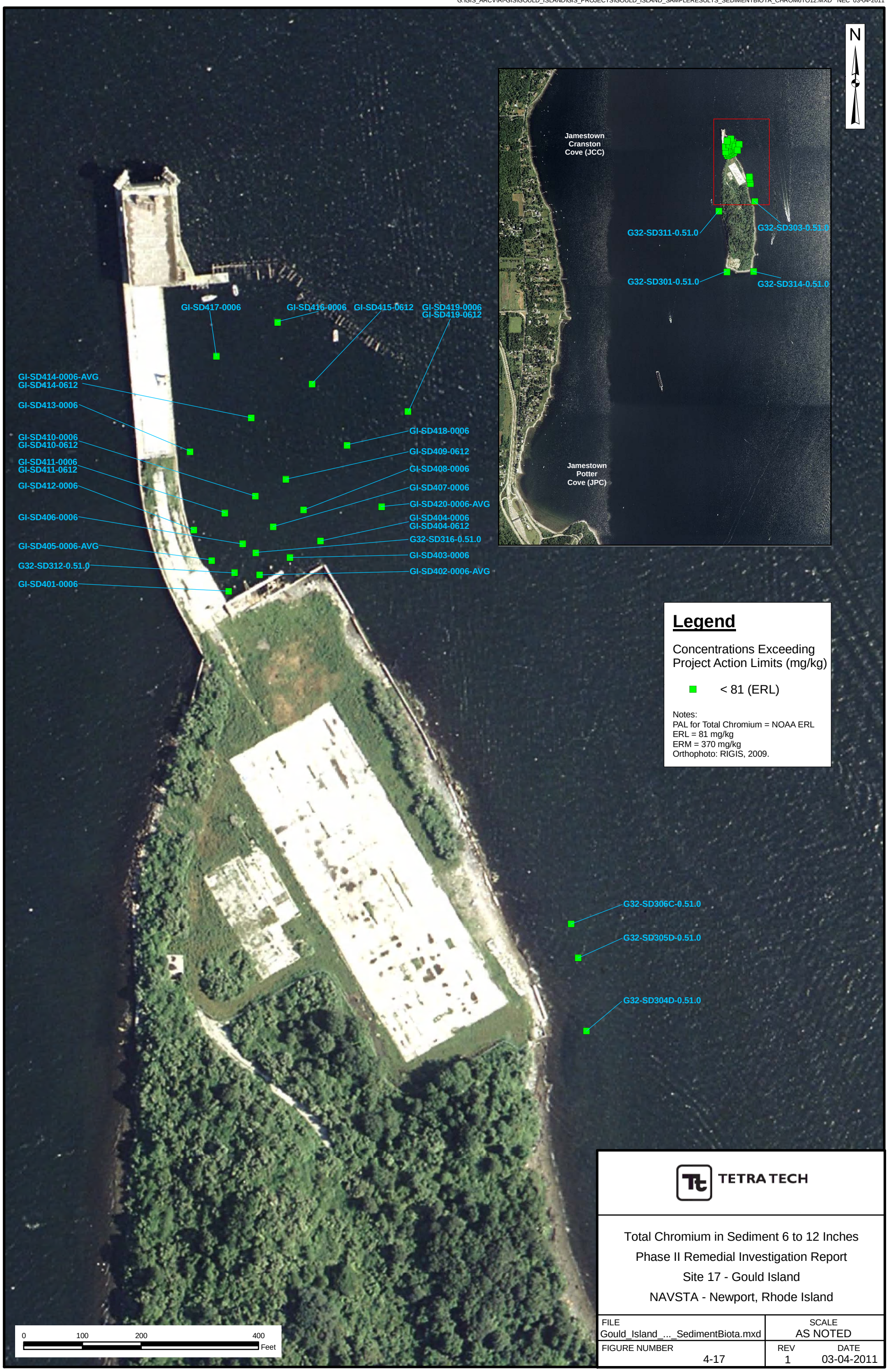


TETRA TECH

Total Chromium in Surface Sediment 2010
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-16C	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_CHROM6TO12.MXD NEC 03-04-2011



TETRA TECH

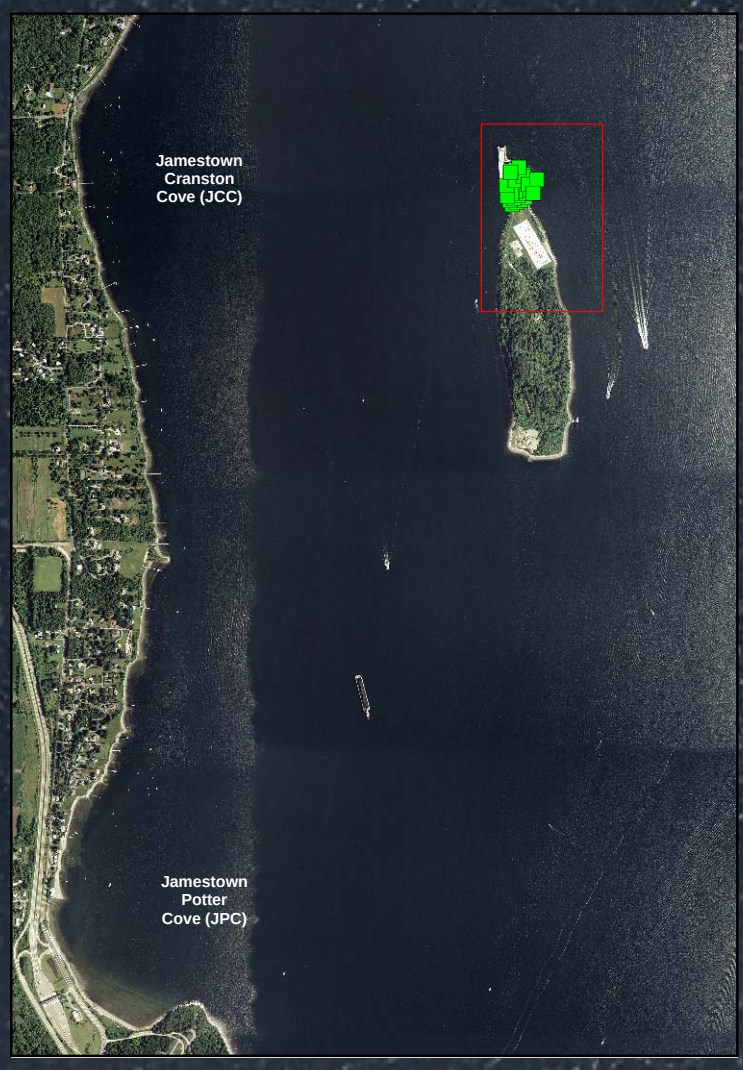
Total Chromium in Sediment 6 to 12 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-17	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_CHROM12TO24.MXD NEC 03-04-2011

N

GI-SD417-0006
GI-SD417-0612
GI-SD416-0006
GI-SD416-0612
GI-SD415-1824
GI-SD419-0612
GI-SD414-0612
GI-SD414-1218
GI-SD413-0006
GI-SD410-0612
GI-SD411-0612
GI-SD411-1218
GI-SD412-0612
GI-SD406-0006
GI-SD405-0006-AVG
GI-SD405-0612
GI-SD401-0006
GI-SD401-0612
GI-SD418-0006
GI-SD418-0612
GI-SD409-1824
GI-SD408-0006
GI-SD408-0612
GI-SD407-0006
GI-SD420-0006-AVG
GI-SD420-0612
GI-SD404-0612
GI-SD403-0006
GI-SD402-0006-AVG



Legend

Concentrations Exceeding Project Action Limits (mg/kg)

- < 81 (ERL)

Notes:
PAL for Total Chromium = NOAA ERL
ERL = 81 mg/kg
ERM = 370 mg/kg
Orthophoto: RIGIS, 2009.

0 100 200 400 Feet

TETRA TECH

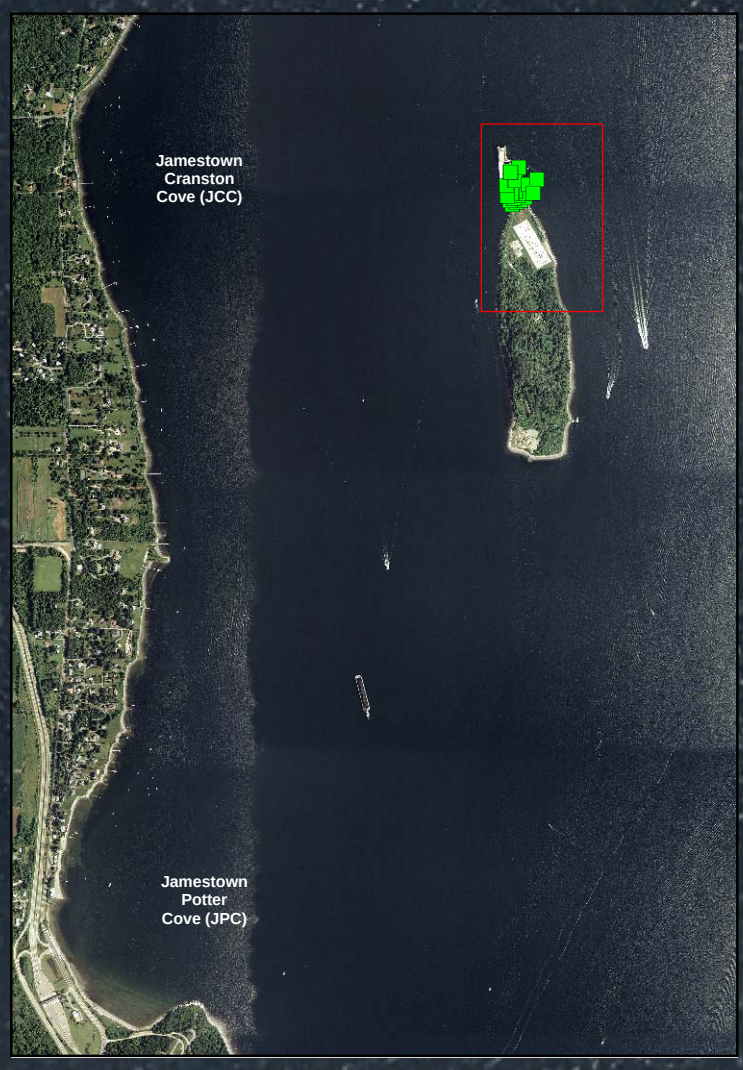
Total Chromium in Sediment 12 to 24 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-18	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_CHROM24TO36.MXD NEC 03-04-2011

N

GI-SD417-0612
GI-SD417-1218
GI-SD416-0612
GI-SD419-1824
GI-SD414-1218
GI-SD414-1824-AVG
GI-SD413-0612
GI-SD418-0612
GI-SD410-1824
GI-SD411-1218
GI-SD411-1824
GI-SD408-0612
GI-SD408-1218
GI-SD412-1218
GI-SD407-0612
GI-SD420-0612
GI-SD406-0612
GI-SD404-1824
GI-SD405-0612
GI-SD405-1218
GI-SD403-0006
GI-SD402-0612
GI-SD401-0612
GI-SD401-1218



Legend

Concentrations Exceeding Project Action Limits (mg/kg)

< 81 (ERL)

Notes:
PAL for Total Chromium = NOAA ERL
ERL = 81 mg/kg
ERM = 370 mg/kg
Orthophoto: RIGIS, 2009.

0 100 200 400 Feet

TETRA TECH

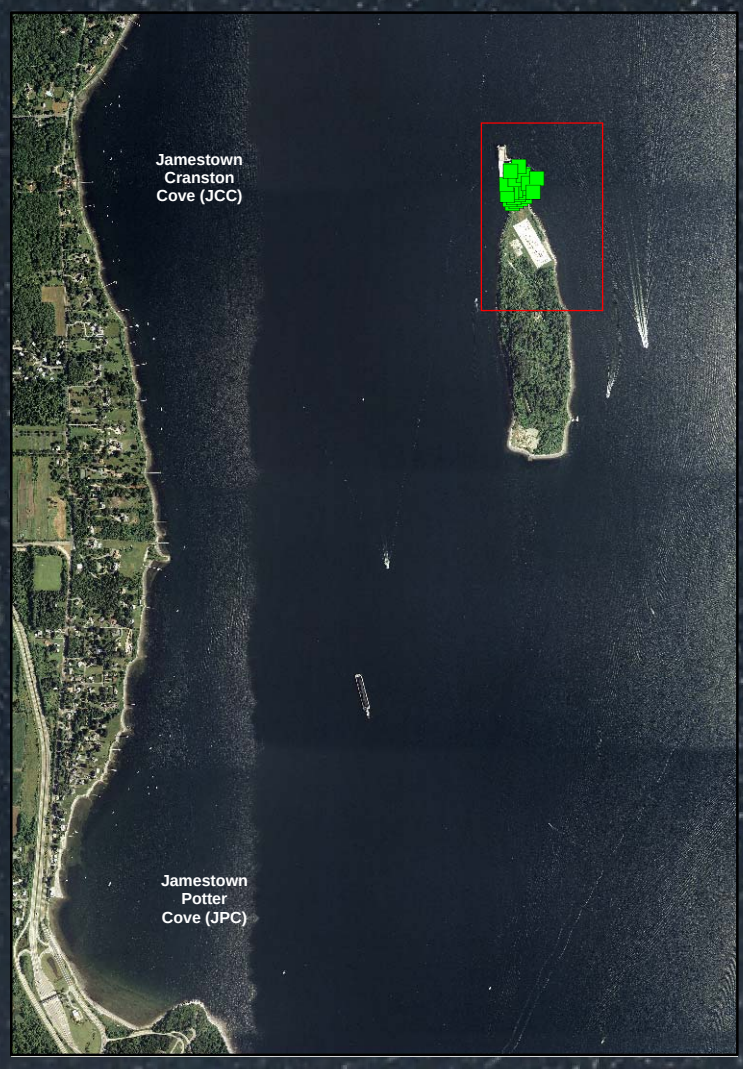
Total Chromium in Sediment 24 to 36 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-19	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_CHROM36TO48.MXD NEC 03-04-2011

N

GI-SD417-1218
GI-SD416-1218
GI-SD415-4248-AVG
GI-SD419-2632
GI-SD414-1824-AVG
GI-SD413-0612
GI-SD410-2632
GI-SD411-1824
GI-SD412-1824
GI-SD406-0612
GI-SD405-1218
GI-SD401-1218
GI-SD418-0612
GI-SD409-4248
GI-SD408-1218
GI-SD407-0612
GI-SD420-0612
GI-SD404-2834
GI-SD403-0006
GI-SD402-0612



Legend

Concentrations Exceeding Project Action Limits (mg/kg)

< 81 (ERL)

Notes:
PAL for Total Chromium = NOAA ERL
ERL = 81 mg/kg
ERM = 370 mg/kg
Orthophoto: RIGIS, 2009.

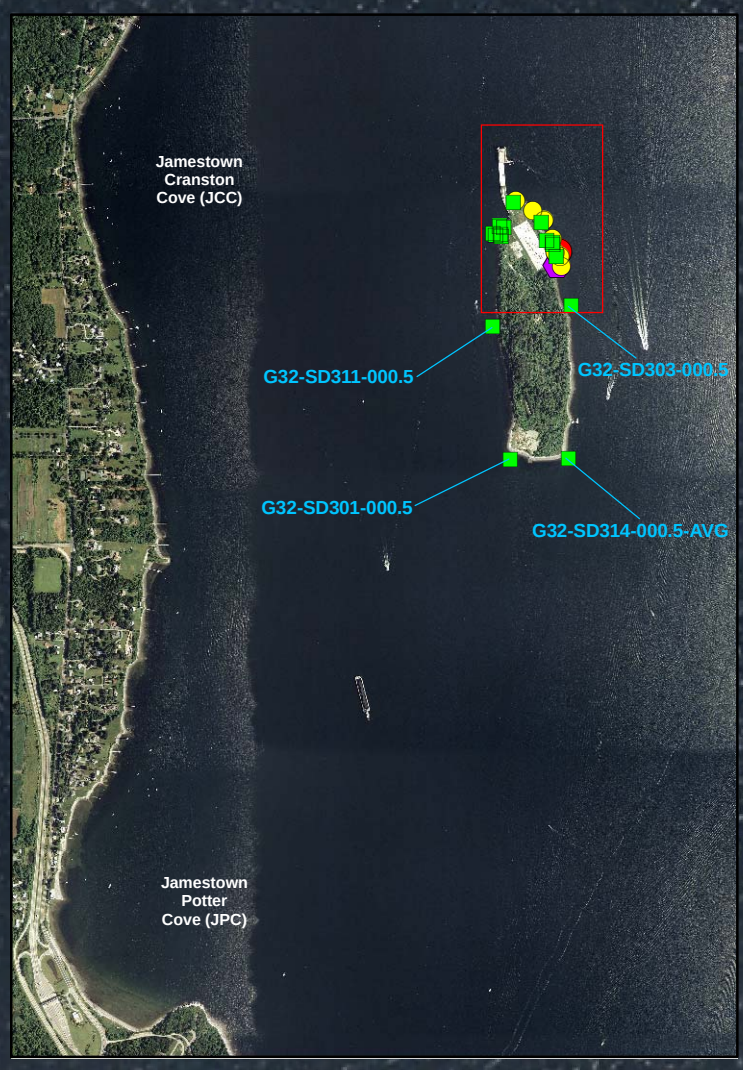
0 100 200 400 Feet

TETRA TECH

Total Chromium in Sediment 36 to 48 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-20	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_SSLEAD2005.MXD NEC 03-15-2011



N

G32-SD312-000.5
G32-SD316-000.5
G32-SD317-000.5
G32-SD310A-000.5
G32-SD310B-000.5
G32-SD310C-000.5
G32-SD310D-000.5
G32-SD310E-000.5
G32-SD310F-000.5
G32-SD313A-000.5
G32-SD313B-000.5
G32-SD313C-000.5
G32-SD313D-000.5
G32-SD313E-000.5
G32-SD313F-000.5
G32-SD302F-000.5
G32-SD308F-000.5
G32-SD309F-000.5
G32-SD309A-000.5
G32-SD309B-000.5
G32-SD309C-000.5
G32-SD309D-000.5
G32-SD309E-000.5
G32-SD302A-000.5
G32-SD302B-000.5
G32-SD302C-000.5
G32-SD302D-000.5
G32-SD302E-000.5
G32-SD308A-000.5
G32-SD308B-000.5
G32-SD308C-000.5
G32-SD308D-000.5
G32-SD308E-000.5
G32-SD315-000.5
G32-SD307-000.5
G32-SD306F-000.5
G32-SD306A-000.5
G32-SD306B-000.5
G32-SD306C-000.5
G32-SD306D-000.5
G32-SD306E-000.5
G32-SD305A-000.5
G32-SD305B-000.5
G32-SD305C-000.5
G32-SD305D-000.5
G32-SD305E-000.5
G32-SD305F-000.5
G32-SD304A-000.5
G32-SD304B-000.5
G32-SD304C-000.5
G32-SD304D-000.5
G32-SD304E-000.5
G32-SD304F-000.5

Legend

Concentrations Exceeding Project Action Limits (mg/kg)*

- < 47 (ERL)
- 47 - 218 (ERM)
- 218 - 470
- 470 - 4,700
- > 4,700

Notes:
PAL for Total Lead = NOAA ERL
ERL = 47 mg/kg
ERM = 218 mg/kg
Orthophoto: RIGIS, 2009.
* For locations where more than one sample was collected, the maximum concentration was used for presentation.

0 100 200 400 Feet

TETRA TECH

Total Lead in Surface Sediment 2005
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE	
Gould_Island_..._SedimentBiota.mxd	AS NOTED	
FIGURE NUMBER	REV	DATE
4-21A	1	03-15-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_SSLEAD2009.MXD NEC 03-04-2011

N

GI-JCC02-0006
GI-JCC01-0006
GI-JCC04-0006
Jamestown Cranston Cove (JCC)
GI-SD417-0006
GI-SD416-0006
GI-SD415-0006
GI-SD419-0006
GI-SD414-0006-AVG
GI-SD413-0006
GI-JPC01-0006-AVG
GI-SD418-0006
GI-SD409-0006
GI-SD408-0006
GI-SD407-0006
Jamestown Potter Cove (JPC)
GI-JPC02-0006
GI-JPC03-0006
GI-SD410-0006
GI-SD411-0006
GI-SD412-0006
GI-SD406-0006
GI-SD405-0006-AVG
GI-SD402-0006-AVG
GI-SD401-0006
GI-SD420-0006-AVG
GI-SD404-0006
GI-SD403-0006
GI-SD450-0006
GI-SD421-0006
GI-SD422-0006
GI-SD449-0006
GI-SD423-0006-AVG
GI-SD425-0006
GI-SD424-0006
GI-SD426-0006
GI-SD427-0006
GI-SD428-0006
GI-SD440-0006
GI-SD439-0006
GI-SD441-0006
GI-SD445-0006
GI-SD442-0006
GI-SD444-0006-AVG
GI-SD443-0006
GI-SD430-0006
GI-SD431-0006
GI-SD447-0006-AVG
GI-SD446-0006
GI-SD432-0006
GI-SD433-0006
GI-SD434-0006
GI-SD435-0006
GI-SD437-0006
GI-SD436-0006

Legend

Concentrations Exceeding Project Action Limits (mg/kg)

- < 47 (ERL)
- 47 - 218 (ERM)

Notes:
PAL for Total Lead = NOAA ERL
ERL = 47 mg/kg
ERM = 218 mg/kg
Orthophoto: RIGIS, 2009.

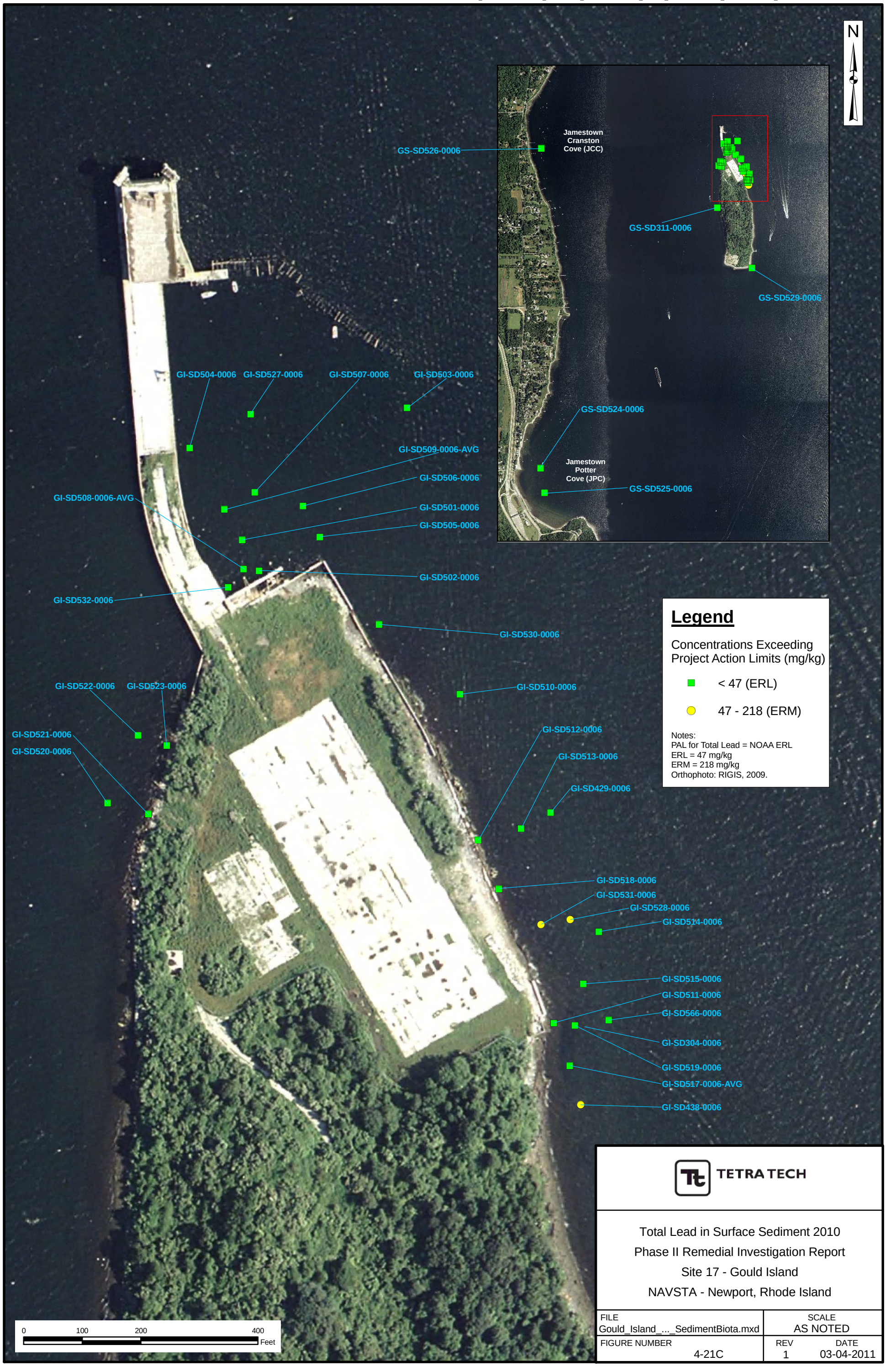
0 100 200 400 Feet

TETRA TECH

Total Lead in Surface Sediment 2009
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-21B	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_SSLEAD2010.MXD NEC 03-04-2011

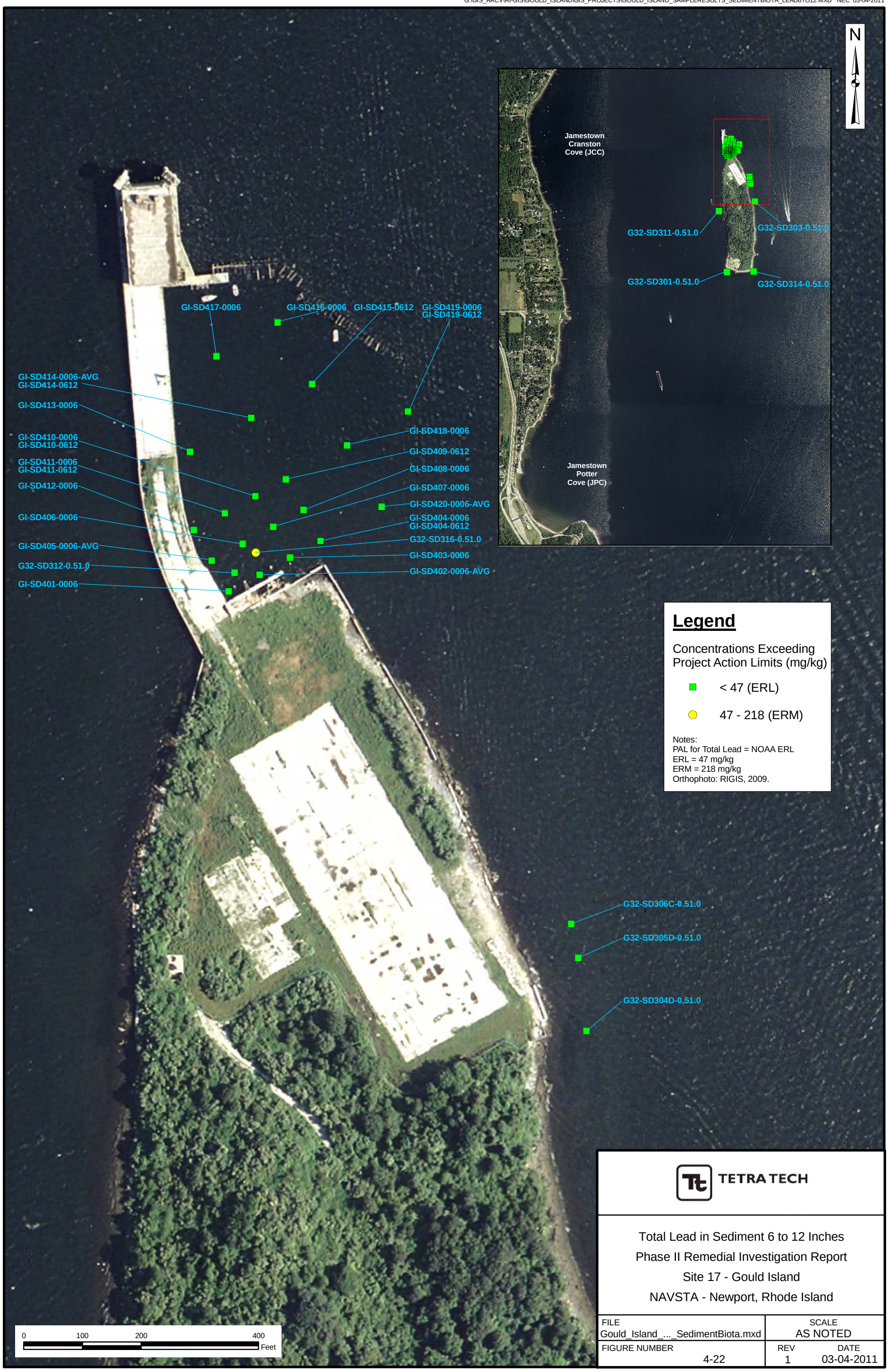


TETRA TECH

Total Lead in Surface Sediment 2010
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-21C	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_LEAD6TO12.MXD NEC 03-04-2011



TETRA TECH

Total Lead in Sediment 6 to 12 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-22	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_LEAD12TO24.MXD NEC 03-04-2011

N

GI-SD417-0006
GI-SD417-0612
GI-SD416-0006
GI-SD416-0612
GI-SD415-1824
GI-SD419-0612
GI-SD414-0612
GI-SD414-1218
GI-SD413-0006
GI-SD410-0612
GI-SD411-0612
GI-SD411-1218
GI-SD412-0612
GI-SD406-0006
GI-SD405-0006-AVG
GI-SD405-0612
GI-SD401-0006
GI-SD401-0612
GI-SD418-0006
GI-SD418-0612
GI-SD409-1824
GI-SD408-0006
GI-SD408-0612
GI-SD407-0006
GI-SD420-0006-AVG
GI-SD420-0612
GI-SD404-0612
GI-SD403-0006
GI-SD402-0006-AVG

Jamestown
Cranston
Cove (JCC)

Jamestown
Potter
Cove (JPC)

Legend

Concentrations Exceeding Project Action Limits (mg/kg)

- < 47 (ERL)
- 47 - 218 (ERM)
- 218 - 470

Notes:
PAL for Total Lead = NOAA ERL
ERL = 47 mg/kg
ERM = 218 mg/kg
Orthophoto: RIGIS, 2009.

0 100 200 400
Feet

TETRA TECH

Total Lead in Sediment 12 to 24 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-23	REV 1 / DATE 03-04-2011

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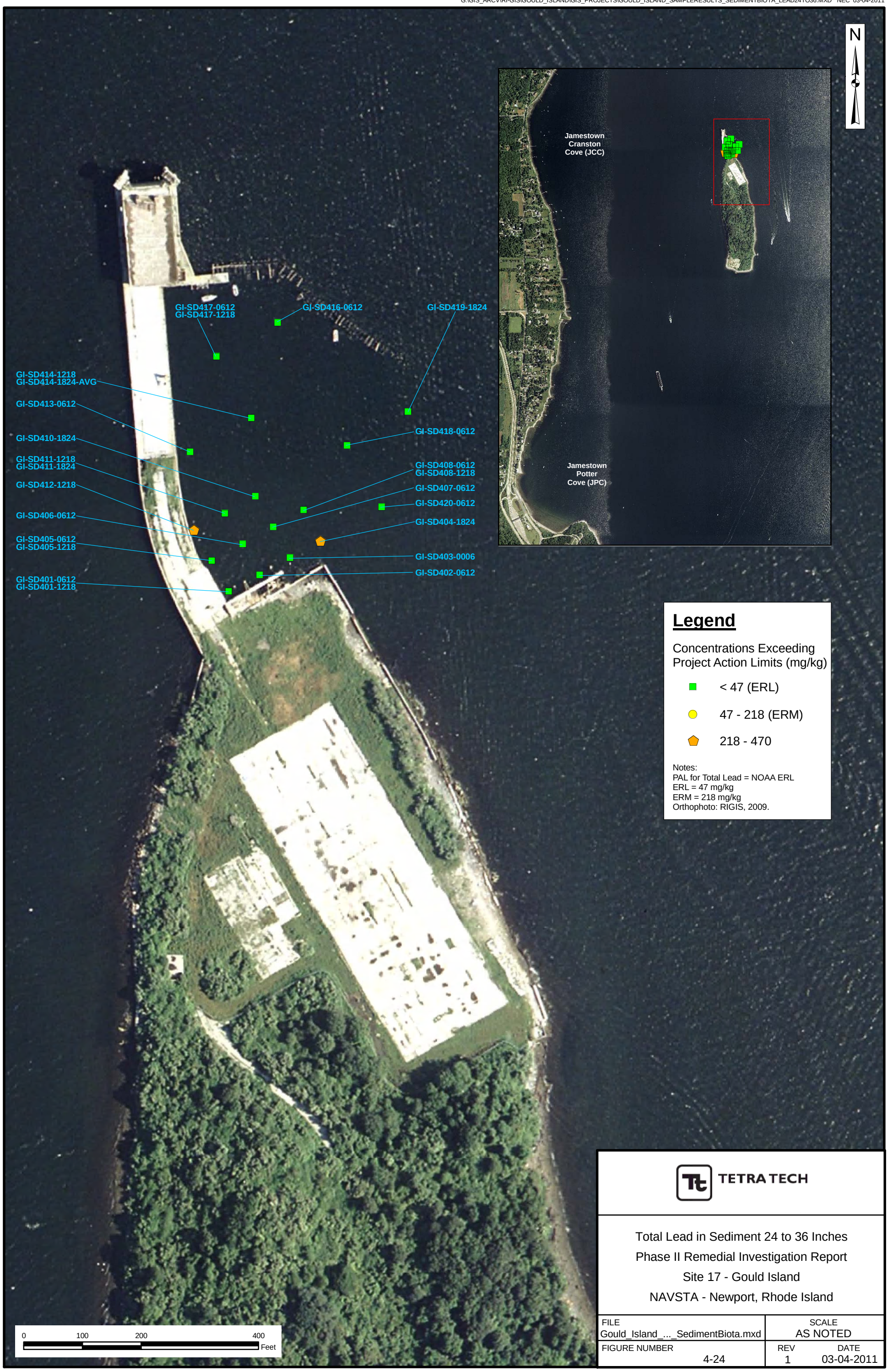


Legend

Concentrations Exceeding Project Action Limits (mg/kg)

- < 47 (ERL)
- 47 - 218 (ERM)
- 218 - 470

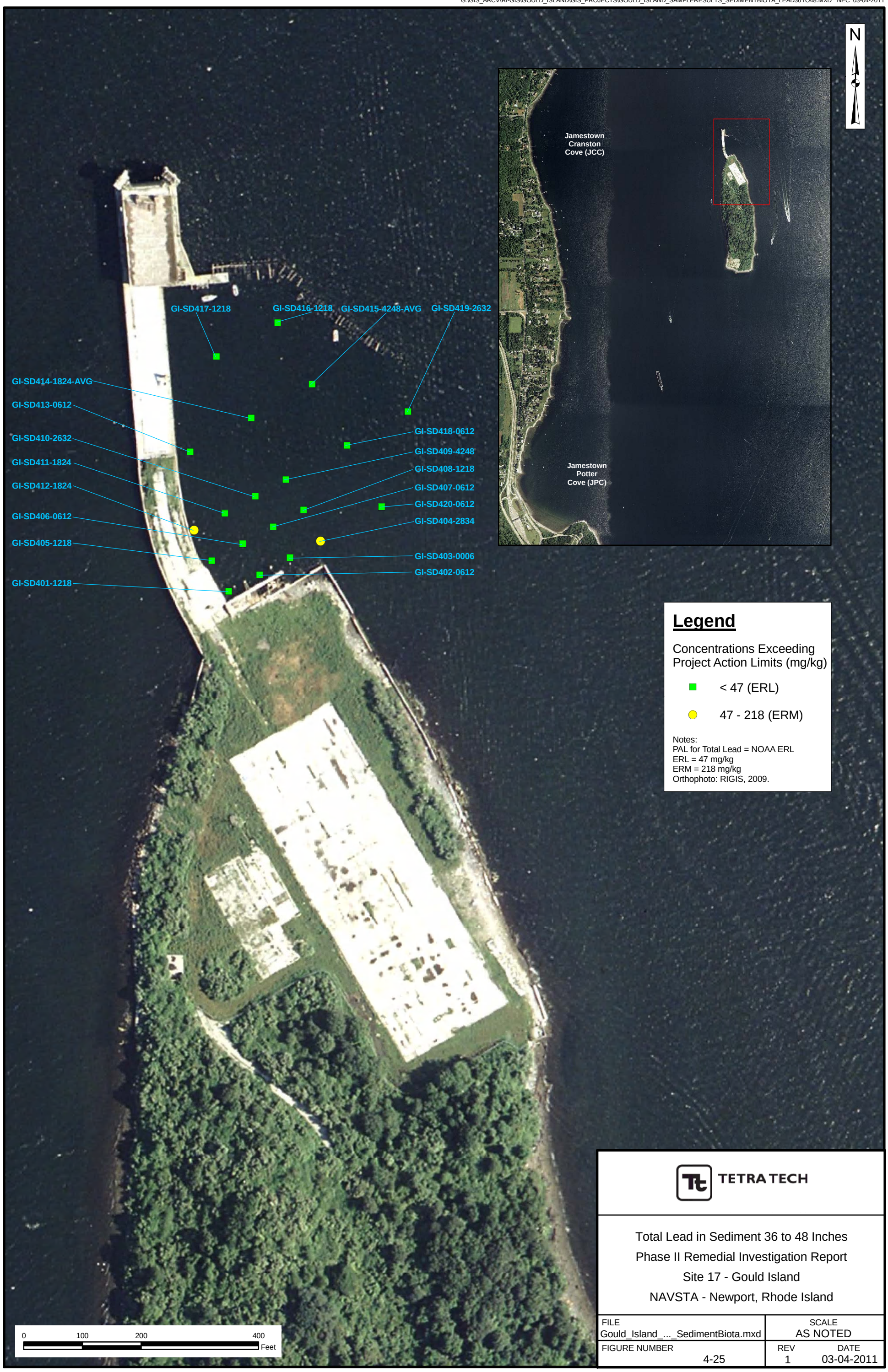
Notes:
PAL for Total Lead = NOAA ERL
ERL = 47 mg/kg
ERM = 218 mg/kg
Orthophoto: RIGIS, 2009.

TETRA TECH

Total Lead in Sediment 24 to 36 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-24	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_LEAD36TO48.MXD NEC 03-04-2011

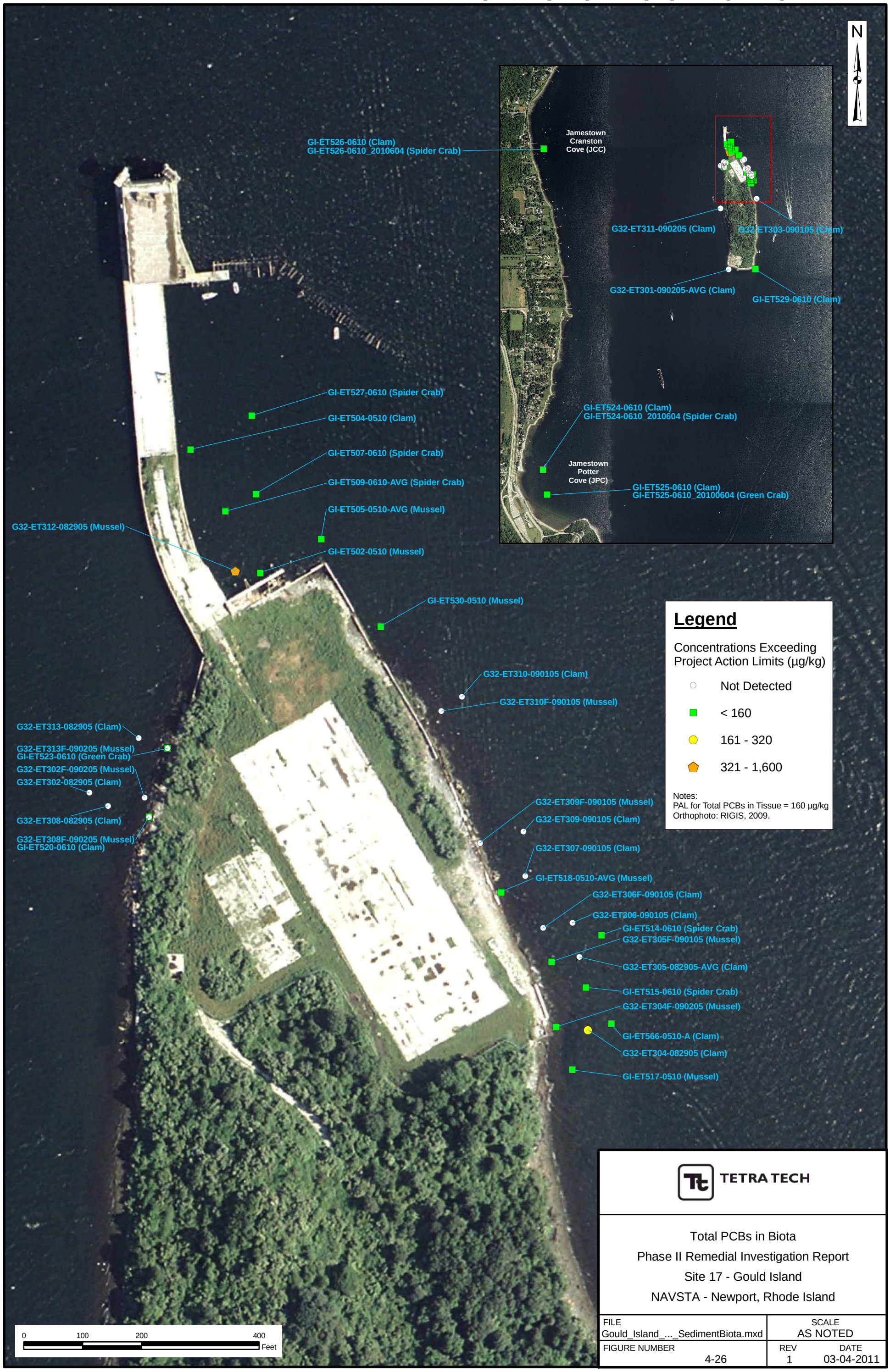


TETRA TECH

Total Lead in Sediment 36 to 48 Inches
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-25	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_PCBSBIOTA.MXD NEC 03-04-2011



TETRA TECH

Total PCBs in Biota
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-26	REV 1 / DATE 03-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_CADBIOTA.MXD NEC 03-04-2011

TETRA TECH

Total Cadmium in Biota

Phase II Remedial Investigation Report

Site 17 - Gould Island

NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-27	REV 1 / DATE 03-04-2011

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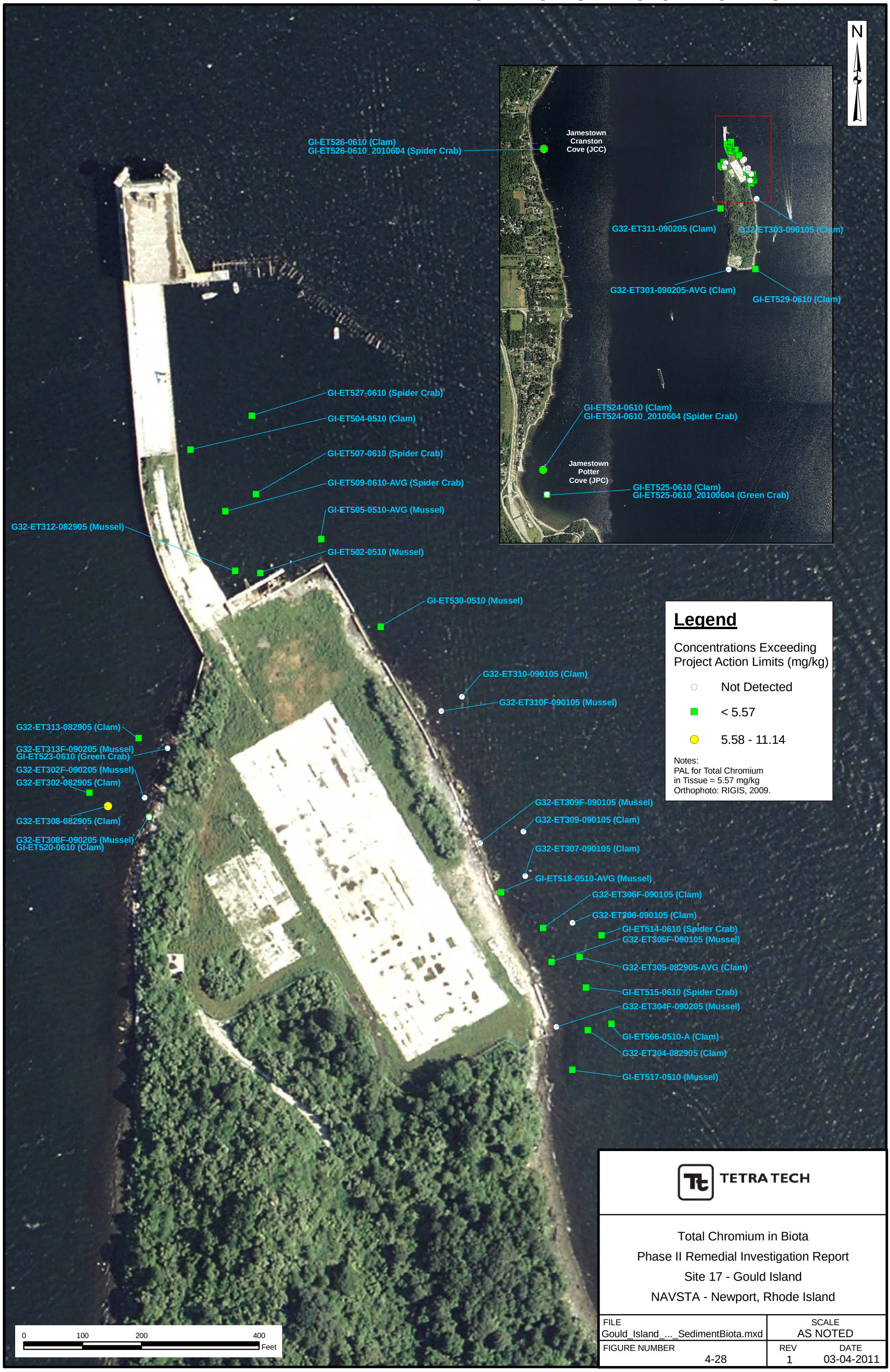

TETRA TECH

Total Chromium in Biota

Phase II Remedial Investigation Report

Site 17 - Gould Island

NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-28	REV 1 / DATE 03-04-2011

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TETRA TECH

Total Lead in Biota

Phase II Remedial Investigation Report

Site 17 - Gould Island

NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 4-29	REV 1 / DATE 03-04-2011

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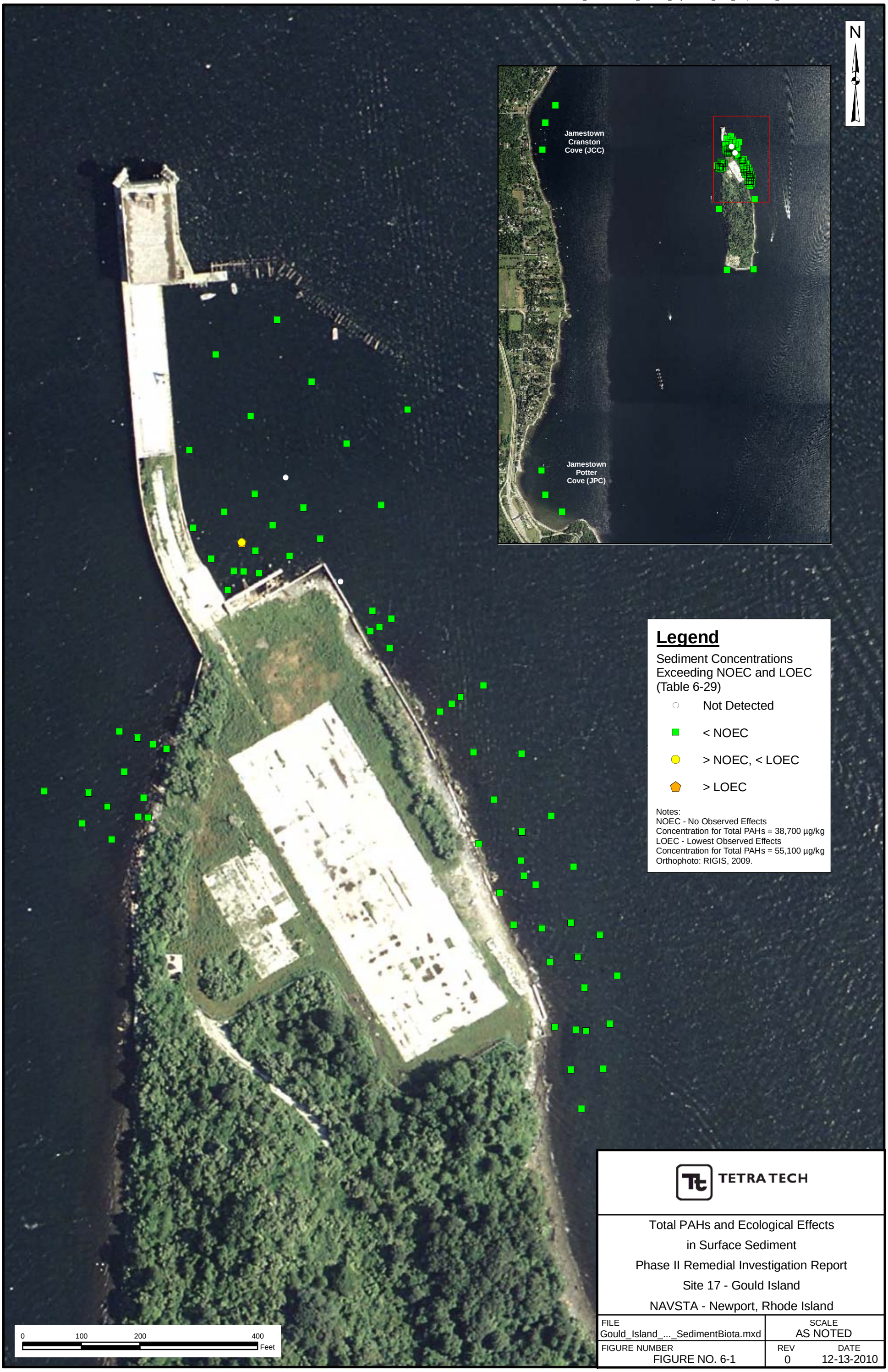

TETRA TECH

Total PAHs and Ecological Effects
in Surface Sediment
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE	
Gould_Island_..._SedimentBiota.mxd	AS NOTED	
FIGURE NUMBER	REV	DATE
FIGURE NO. 6-1	0	12-13-2010

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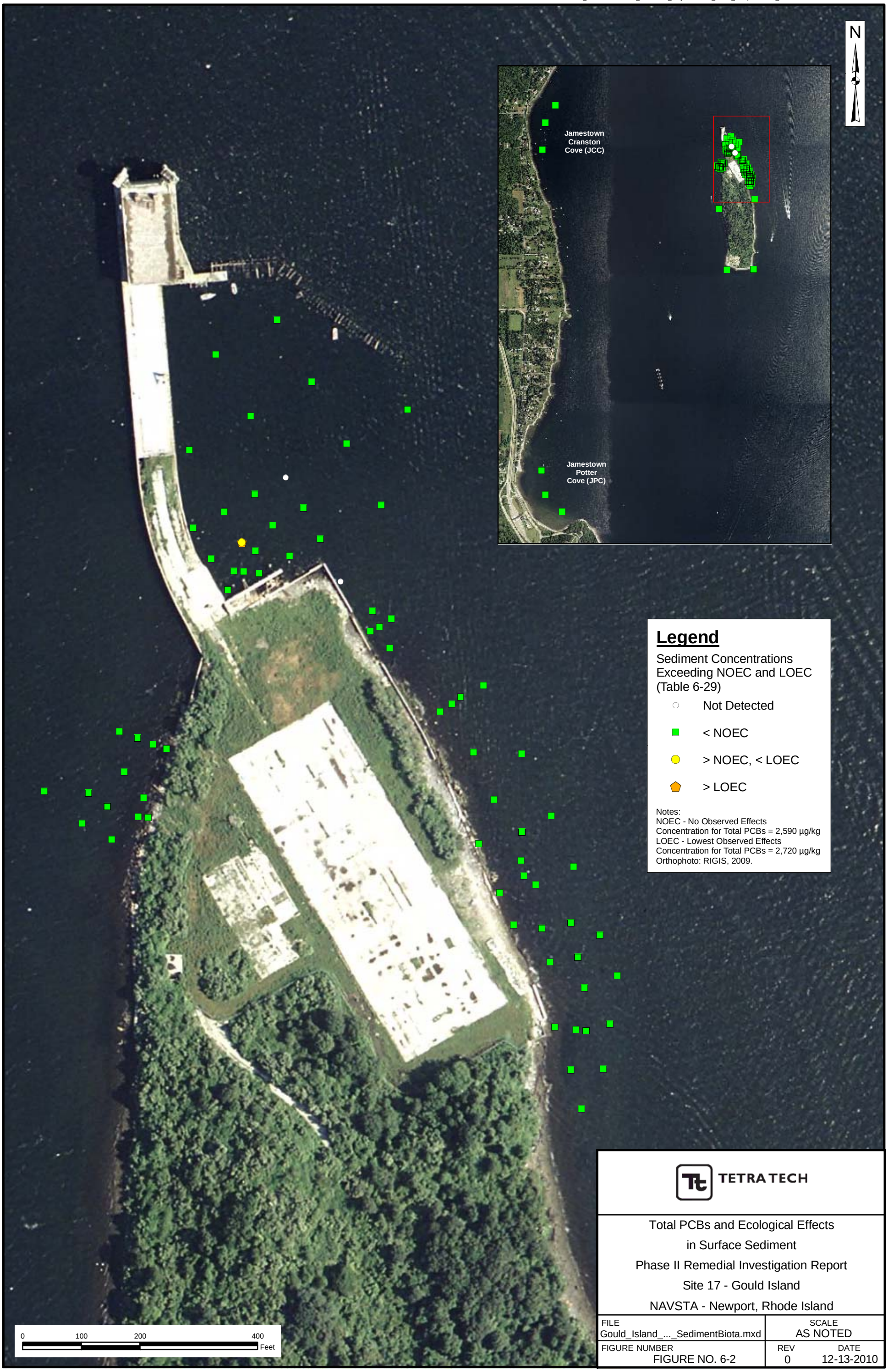


TETRA TECH

Total PCBs and Ecological Effects
in Surface Sediment
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER	REV / DATE
FIGURE NO. 6-2	0 / 12-13-2010

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\ERMQ\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_FIG6_3A.MXD NEC 08-04-2011

N

Jamestown Cranston Cove (JCC)

Jamestown Potter Cove (JPC)

GI-SD413-0006

GI-SD410-0006
GI-SD507-0006

GI-SD412-0006

GI-SD406-0006
GI-SD501-0006

GI-SD316-000.5

G32-SD312-000.5

GI-SD403-0006

GI-SD402-0006-AVG

GI-SD317-000.5

G32-SD304F-000.5

G32-SD304C-000.5

Legend

Average ERMQ Values Calculated for Sediment (unitless) (Appendix G-8 and Table 6-29)

- < NOEC
- > NOEC, < LOEC
- > LOEC

Notes:
ERMQ - Effects Range Median Quotient
NOEC - No Observed Effects Concentration = 1.59
LOEC - Lowest Observed Effects Concentrations = 2.29
Details on results of measured toxicity are presented on Table 6-14.
Orthophoto: RIGIS, 2009.

0 100 200 400 Feet

TETRA TECH

Average Effects-Range Median Quotient (ERMQ) in Surface Sediment

Phase II Remedial Investigation Report

Site 17 - Gould Island

NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 6-3A	REV 1 / DATE 08-04-2011

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\ERMQ\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_FIG6_3B.MXD NEC/DWM 05/18/12

N

Jamestown Cranston Cove (JCC)

Jamestown Potter Cove (JPC)

GS-SD526-0006
GS-SD311-0006
GS-SD529-0006
GS-SD524-0006
GS-SD525-0006

GI-SD509-0006	Duplicate
Test	Toxicity
Survival	X
Growth	XX XX
Reproduction	X

GI-SD527-0006

GI-SD503-0006	
Test	Toxicity
Survival	
Growth	X
Reproduction	

GI-SD501-0006	
Test	Toxicity
Survival	
Growth	
Reproduction	XX

GI-SD508-0006	
Test	Toxicity
Survival	
Growth	
Reproduction	X

GI-SD506-0006

GI-SD505-0006	
Test	Toxicity
Survival	
Growth	X
Reproduction	

GI-SD523-0006	
Test	Toxicity
Survival	
Growth	
Reproduction	X

GI-SD510-0006

GI-SD512-0006	
Test	Toxicity
Survival	
Growth	XX
Reproduction	

GI-SD522-0006
GI-SD521-0006
GI-SD513-0006
GI-SD429-0006

GI-SD520-0006	
Test	Toxicity
Survival	X
Growth	
Reproduction	X

GI-SD518-0006	
Test	Toxicity
Survival	
Growth	XX
Reproduction	XX

GI-SD528-0006
GI-SD514-0006
GI-SD531-0006
GI-SD515-0006

GI-SD566-0006	
Test	Toxicity
Survival	X
Growth	
Reproduction	

GI-SD519-0006
GI-SD517-0006-AVG
GI-SD438-0006

Legend

Average ERMQ Values Calculated for Sediment (unitless) (Appendix G-8 and Table 6-29)

- < NOEC
- > NOEC, < LOEC
- > LOEC

Notes:
X - Sample was considered toxic for one measure of the effect cited
XX - Sample was considered toxic for two measures of the effect cited
ERMQ - Effects Range Median Quotient
NOEC - No Observed Effects Concentration = 1.59
LOEC - Lowest Observed Effects Concentrations = 2.29
BLUE Sample IDs = Samples collected for toxicity testing (Table 6-14).
RED Sample IDs = Other samples where ERMQ > 1.59 (See Appendix G-8).
Details on results of measured toxicity are presented on Table 6-14.
Orthophoto: RIGIS, 2009.

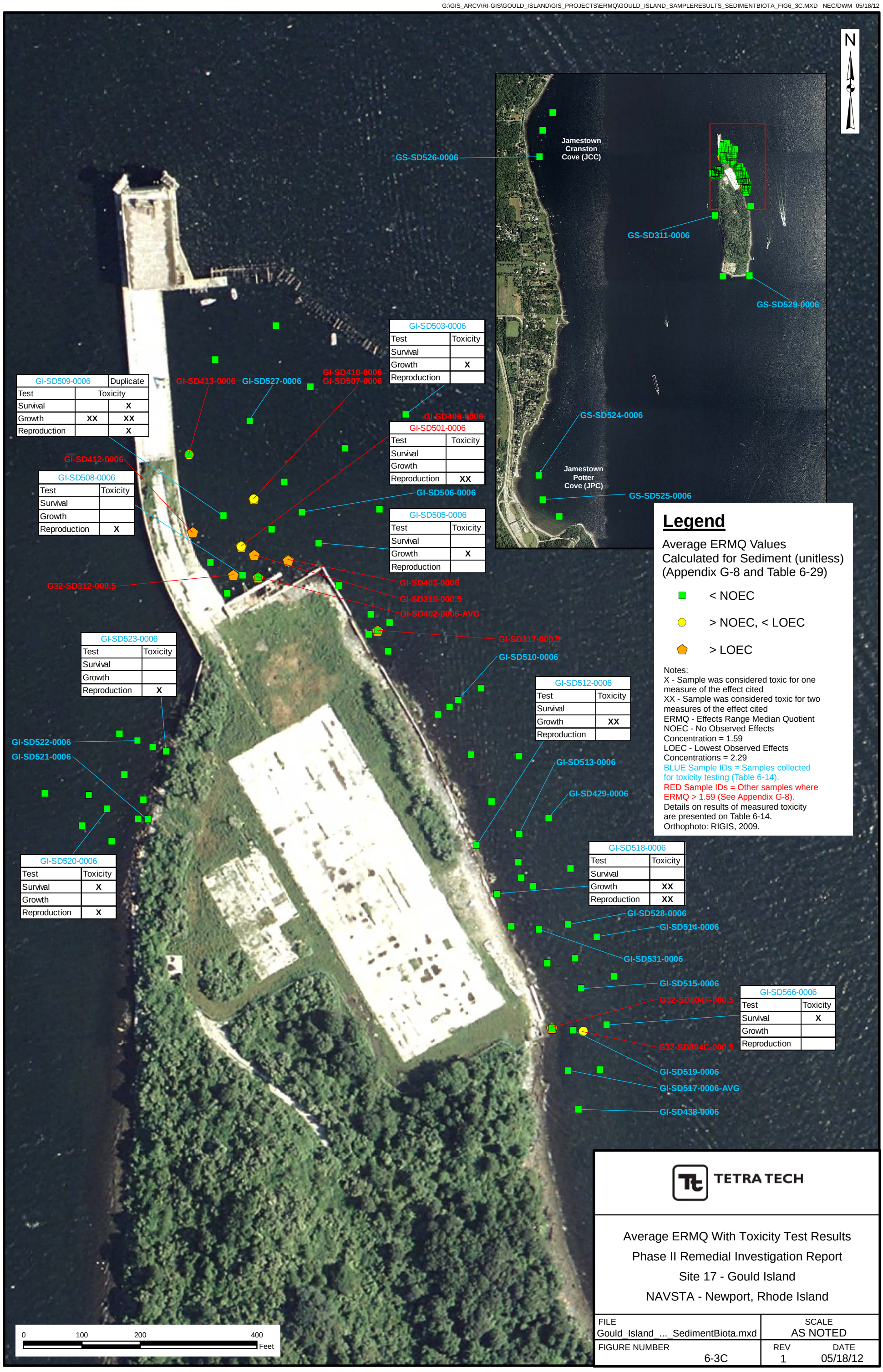
0 100 200 400 Feet

TETRA TECH

Summary of Toxicity Test Results
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 6-3B	REV 1 / DATE 05/18/12

G:\GIS_ARCV\RI-GIS\GOULD_ISLAND\GIS_PROJECTS\ERMQ\GOULD_ISLAND_SAMPLERESULTS_SEDIMENTBIOTA_FIG6_3C.MXD NEC/DWM 05/18/12



Legend

Average ERMQ Values Calculated for Sediment (unitless) (Appendix G-8 and Table 6-29)

- < NOEC
- > NOEC, < LOEC
- > LOEC

Notes:
X - Sample was considered toxic for one measure of the effect cited
XX - Sample was considered toxic for two measures of the effect cited
ERMQ - Effects Range Median Quotient
NOEC - No Observed Effects Concentration = 1.59
LOEC - Lowest Observed Effects Concentrations = 2.29
BLUE Sample IDs = Samples collected for toxicity testing (Table 6-14).
RED Sample IDs = Other samples where ERMQ > 1.59 (See Appendix G-8).
Details on results of measured toxicity are presented on Table 6-14.
Orthophoto: RIGIS, 2009.

TETRA TECH

Average ERMQ With Toxicity Test Results
Phase II Remedial Investigation Report
Site 17 - Gould Island
NAVSTA - Newport, Rhode Island

FILE	SCALE
Gould_Island_..._SedimentBiota.mxd	AS NOTED
FIGURE NUMBER 6-3C	REV 1 / DATE 05/18/12

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APPENDIX A

PLANNING DOCUMENTATION

A-1 PLANNING DOCUMENTATION, STEP 2 SAMPLE COLLECTION

Meeting Notes
Conference Call on Gould Island
2/25/10 10:00 AM – 11:40 AM
NAVSTA Newport, Newport Rhode Island

Attachments:

1. Revised Table 4-1 showing selected sample stations and key data

Participating:
Dave Barclift, NAVFAC
Aaron Bernhardt, Tetra Tech
Todd Finlayson, Gannett Fleming
Bart Hoskins,USEPA
Winoma Johnson, NAVFAC
Kymberlee Keckler, USEPA
Greg Kemp, Gannett Fleming
Paul Kulpa, RIDEM
Cornelia Mueller, NAVSTA
Stephen Parker, Tetra Tech

The meeting convened at 10:00 AM

S. Parker stated that the purpose of the meeting was to review the recommendations made in the technical memorandum for BERA sediment sampling and to reach agreement on the stations for the BERA steps to be conducted this spring.

S. Parker reviewed the steps involved in the selection process, as described in Figure 11-4 of the QAPP and in the summary memo.

Comments from EPA were clarified by G. Kemp – Greg stated that they would expect that the extent of toxicity would be used to direct a remedial design. S. Parker clarified that this is not the process in the QAPP as described. The process that will be followed at this site is to use the toxicity data to calculate risk, then back-calculate COC-specific cleanup goals (PRGs), and use chemistry data to outline the area that exceeds these goals. So arrangement of toxicity samples geographically is not as important as is getting the proper concentrations of contaminants in those samples so that good dose-response curves can be developed for the contaminants.

S. Parker noted that the Navy had reviewed the stations requested by the EPA and does not disagree, but noted that they break from the planned distribution in the SAP that everyone previously agreed to. Particularly, although the SAP indicated that three stations should be located in the south area, the recommendation by EPA calls for only one from that area. Additionally, some samples are removed from the Northwest shoreline, and moved to the Stillwater area and Northeast shoreline. Everyone on the call stated that this rearrangement was acceptable, except P. Kulpa, who said he had to discuss this with his risk assessor.

After extended discussion on the locations of samples to collect the following was agreed:

- Stations 418 and 315 proposed for sampling by EPA were eliminated as stations to be sampled
- A new station to be located approximately half-way between SD304F and SD304 would be sampled per NOAA request
- A new station to be located approximately half way between SD402 and SD312 would be sampled per RIDEM request.
- A total number of stations was revised to 32 for chemistry and toxicity.

P. Kulpa stated that he did not disagree with the changes discussed today, but he noted that he would have to discuss the locations of the new stations with Chris Deacutis who was not available today.

P. Kulpa stated that his office would provide comments to the memorandum on March 4.

W. Johnson & S. Parker stated that the decisions made at this meeting would be documented in meeting notes and field change modification.

Meeting adjourned at 11:40 AM.

TABLE 4-1
SELECTED ECOLOGICAL SEDIMENT SAMPLE LOCATIONS
SITE 17, GOULD ISLAND
NAVSTA NEWPORT, JAMESTOWN RI

			STILLWATER AREA										NORTHEAST SHORELINE AREA										
			501	502	503	504	505	506	507	509	527	508	510	511	512	513	519	528	514	515	566	517	518
PARAMETER	ERL	ERM	SD406	SD402	SD419	SD413	SD404	SD408	SD410	SD411	SD414 (avg)	New Location	SD310D	SD304F	SD309F (avg)	SD309A	New Location	SD306B	SD432	SD434	SD435	SD437	SD447 (avg)
TOTAL PAHs (UG/KG)	4022	44792	**80301**	**7218.25**	**11198**	**5588**	1852.4	396.5	944.9	**4787**	2221	New Location based on RIDEM Request	**20167.8**	3096.3	2441.9	642.3	New Location based on NOAA Request	389.6	**6484.5**	3564.3	1277	1293.6	**4143.25**
TOTAL AROCLOR (UG/KG)	22.7	180	**5100**	**20500**	**61**	**2800**	**2000**	**160**	**4100**	**570**	**390**		43U	**360**	**93.25**	33U		**100**	**360**	**400**	**890**	**310**	**185**
ANTIMONY (MG/KG)	2	25	0.85N	0.275BNN	0.38BN	0.48BN	0.18BN	0.12BN	0.13BN	0.12BN	0.23BNN		0.32UJ	**43.5J**	0.0985UJ	**2.7J**		0.055UJ	0.084UN	0.21BN	0.21BN	0.085UN	0.275BNN
CADIMUM (MG/KG)	1.2	9.6	0.14	0.21	0.3	0.77	0.16	0.0087B	0.081B	0.1B	0.195		0.11UJ	**1.6J**	0.9125J	0.0053UJ		0.3UJ	0.011B*	0.26*	0.091B*	0.16*	0.14*
CHROMIUM (MG/KG)	81	370	11.2NE	10.05NEE	25.7E	23.1E	12.9NE	6E	7.6E	6.2E	16.4R		10.5	**3910**	14.4J	11.8J		12.5	6.2E	25.8E	9.4E	9.4E	10.45E
COPPER (MG/KG)	34	270	20NE	20.05NEE	25.5NE	**37.4N**	19.1NE	7.3E	9.5NE	8.9NE	25E		14.7	**46.8**	30.55	11.6J		20.7	7.2E	21.4E	11.8E	9.6E	26.55E
LEAD (MG/KG)	46.7	218	19.7NE	9.9NEE	28NE	27N*E	21.4NE	5E	7.4NE	6NE	21.65E		13.2J	**21200**	32.8J	14.9J		**690J**	13.2NE	9.3NE	14.7NE	24.3NE	17.6NEE
MERCURY (MG/KG)	0.15	0.71	0.059	0.0275	0.13	0.075	0.057	0.0087B	0.032B	0.0099B	0.0955		0.036J	0.0077UJ	0.0305U	0.03J		0.066J	0.02B	0.021B	0.025B	0.029B	0.02525
NICKEL (MG/KG)	20.9	51.6	6.5NE	9.3NEE	12.9E	13.3*E	6.3NE	5.6E	5.5E	4.6E	8.1E		5.9J	10.8J	9.925J	8.1J		9.8J	3.8E	15.4E	5.1E	5.9E	11.5E
SELENIUM (MG/KG)		1[(1)]	0.36UN	0.355UNN	0.64B	0.39U	0.39UN	0.81	0.98	0.98	0.935		0.067UJ	0.067UJ	0.0675UJ	7.9J		0.066UJ	0.36U	0.38U	0.38U	0.37U	0.37B
ZINC (MG/KG)	150	410	54.6NE	50.6NEE	72.2*E	**237E**	39.9NE	16E	20.1*E	16.7*E	80.15E		51.6J	54.4J	**195J**	46.2J		131J	19.3E	21.1E	21.1E	28.1E	42.8E

			REFERENCE AREA			FORMER HIGH CONC.			NORTHWEST				SOUTH
			524	525	526	530	531	532	520	521	522	523	529
PARAMETER	ERL	ERM	JPC01	JPC02	JCC04	SD317	SD306F	SD401	SD308E	SD308F	SD313D (avg)	SD313F	SD314 (avg)
TOTAL PAHs (UG/KG)	4022	44792				237	681.1	**7903.1**	**15679.9**	**10597**	1419.95	**15295**	2721.45
TOTAL AROCLOR (UG/KG)	22.7	180				39U	**190**	**980**	33U	33U	33U	33U	**230**
ANTIMONY (MG/KG)	2	25	0.108BNN	0.2BN	0.082UN	0.46UJ	0.82UJ	0.36BN	0.41U	0.56UJ	0.52U	2UJ	0.0565UJ
CADIMUM (MG/KG)	1.2	9.6	0.059 B	0.18	0.063 B	**398**	0.21UJ	0.34	0.46UJ	0.41UJ	**12.3J**	0.6UJ	0.0745UJ
CHROMIUM (MG/KG)	81	370	9.65 E	13.5 E	11.2 E	72.1	16.7J	10.1E	10.4	9.3J	13.15	37.7J	13.6J
COPPER (MG/KG)	34	270	6.45 E	11.3 E	7.2 E	**36.5**	32.6	13.9N	10.1J	26.4	27.25J	**64.4**	13.35
LEAD (MG/KG)	46.7	218	8.1 E	13.7 E	8.7 E	**56.4J**	**177**	10.3N*E	11.8J	18.9J	16.55J	17.9J	13.25J
MERCURY (MG/KG)	0.15	0.71	0.022 B	0.058	0.022 B	0.0099J	**0.74**	0.016B	0.011UJ	0.0095UJ	0.017UJ	0.008UJ	0.0305U
NICKEL (MG/KG)	20.9	51.6	5.7 E	7.4 E	8.2 E	8.7J	8.7J	8.6*E	6.8J	6.4J	9.95J	**47.4J**	9.8J
SELENIUM (MG/KG)		1[(1)]	0.54B	0.73B	0.55B	0.065UJ	0.068UJ	0.42B	0.063U	0.067UJ	0.0705U	0.066UJ	0.068UJ
ZINC (MG/KG)	150	410	29.3 E	46 E	30.5 E	145J	64.4J	32.9E	32J	34.7J	38.4J	39.7J	40.7J
					AREA	NE	NE	STW					

Note: All Samples are surface sediment samples at location indicated

BOLD Exceedance of ER-L or ER-M

Parameter Concentration Used for Selection

1 - Apparent Effects Threshold

Chosen by EPA

ACAD: \00949\0310\GI_SED_BIOTA_SAMP.DWG 04/08/10 DWM

LEGEND

- STRUCTURES DEMOLISHED PRIOR TO 1998
- BUILDINGS DEMOLISHED 2000, 2001, SURVEYED CORNERS AND FEATURES (FOUNDATIONS REMAIN)
- PROPERTY BOUNDARY
- WASTE DRAIN PIPES
- APPROXIMATE LOW TIDE LINE
- PLANNED DRAIN LINE
- PLANNED FLOOR DRAIN
- MANHOLE WITH IDENTIFIER
- PHASE I RI SEDIMENT SAMPLE LOCATION (2005)
- PHASE II, STEP 1 SEDIMENT SAMPLE LOCATION (2009)
- EEL GRASS BEDS – CONTIGUOUS EXTENT INTERPRETED BY EYAK (2005)
- SELECTED BERA LOCATION (NAVY PROPOSAL)
- SELECTED BERA LOCATION (EPA REQUEST)
- NEW SEDIMENT LOCATION PER RIDEM OR NOAA REQUEST

NARRAGANSETT BAY

NORTHEAST SHORELINE

NORTHWEST SHORELINE

SD-419 SD-420 SD-418 SD-415 SD-416 SD-417 SD-414 SD-410 SD-411 SD-413 SD-412 SD-422 SD-423 SD-421 SD-449 SD-450 SD-404 SD-408 SD-409 SD-403 SD-407 SD-402 SD-509 SD-401 SD-405 SD-425 SD-426 SD-424 SD-448 SD-427 SD-428 SD-429 SD-430 SD-431 SD-432 SD-433 SD-434 SD-435 SD-436 SD-519 SD-437 SD-438 SD-439 SD-440 SD-441 SD-442 SD-443 SD-444 SD-445

SD310/ ET310 · SD310F/ ET310F · SD309/ ET309 · SD315 · SD307/ ET307 · SD308F/ ET308F · SD305/ ET305 · SD305F/ ET305F · SD304/ ET304 · SD304F/ ET304F · SD312/ ET312 · SD313/ ET313 · SD313F/ ET313F · SD302F/ ET302F · SD308/ ET308 · SD302/ ET302

BREAKWATER RUINS

STILLWATER AREA

FORMER RIGGING PLATFORM

BARGE LANDING

FIRING PIER

BUILDING 35 (REMAINING)

35 TEST FACILITY

BUILDING 44 PUMPHOUSE

52 RIGGING HOUSE

FORMER FUEL USTs

DOCK (DEMOLISHED 2001)

32 OVERHAUL SHOP

33 POWER PLANT

TRAMWAY

QUONSET HUT

DOCK PILINGS REMOVED 2001

PILINGS (REMOVED 2001)

FERRY

MARINE BARRACKS (FORMER)

COAL PILE

DRAIN

FORMER OUTFALL

FORMER LOCATION OF 1000-GALLON UST

SHINGLE BEACH

DETERIORATED SHEET PILING

BOULDERS / BROKEN CONCRETE

APPROXIMATE HIGH TIDE LINE

ENGINE ROOM · MOTOR GENERATOR ROOM · ACID DIPPING ROOM · ACID STORAGE SHED · ELECTROPLATING ROOM · SAND BLASTING BOOTH · OXIDIZING ROOM · BUILDING 32 DUST COLLECTOR · FORMER ABOVE GROUND MIXING TANK · MH-01 · MH-02 · MH-03 · MH-04 · TP25-MH

REFERENCE PLANS:

1. US NAVY EXISTING CONDITIONS MAP, US NAVAL TORPEDO STATION, NEWPORT, RHODE ISLAND, 6/30/47
2. DRAINS, TRENCHES, ETC. GOULD ISLAND BUILDING 32 SITE, LOUIS FEDERICI & ASSOCIATES FOR TETRA TECH, NUS INC. CTO 288, LFA@970706, 4/25/00
3. GEOTECHNICAL SURVEY PLAN AT FORMER BUILDING 44 AND 32, US NAVAL BASE ON GOULD ISLAND, LOUIS FEDERICI & ASSOCIATES FOR BROWN & ROOT ENVIRONMENTAL, 9/8/97, DWG@970706-03
4. LOCATION OF MONITORING WELLS AT BUILDING 32 – GOULD ISLAND, U.S. NAVAL BASE NEWPORT, RHODE ISLAND, LOUIS FEDERICI & ASSOCIATES FOR TETRA TECH, NUS INC., 05/09/00.
5. U.S. NAVAL OPERATING BASE, NEWPORT, R.I. TORPEDO STATION GOULD ISLAND OVERHAUL SHOP PLUMBING FLOOR PLAN, CONT. NO. 4694, DRAWING P-201, DATED MARCH 14, 1942, BY JOHN BRACKETT, CONSULTING ENGINEER.

NOTES:

1. PLAN NOT TO BE USED FOR DESIGN.
2. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
3. PHYSICAL FEATURES SHOWN MAY NOT DEPICT CURRENT CONDITIONS
4. THE TRANSFORMER VAULTS AND BUILDINGS 53, 54, 56, 60, 61, AND 62 WERE DEMOLISHED IN 2001.
5. VERTICAL = LOCAL MEAN LOW WATER (NAVY BENCH MARK H-2, GOULD ISLAND TORPEDO STATION)
6. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM, R.I. STATE PLANE 1927.

GRAPHIC SCALE
50' 0' 50' 100'

TETRA TECNUS, INC.

SEDIMENT AND BIOTA SAMPLE LOCATIONS

SITE 17, BUILDING 32 GOULD ISLAND

NAVSTA NEWPORT, RHODE ISLAND

FILE	SCALE
\..\GI_SED_BIOTA_SAMP.DWG	AS NOTED
FIGURE NUMBER 2-1B	REV 1 · DATE 04/08/10

Parker, Stephen

From: Parker, Stephen
Sent: Thursday, April 08, 2010 12:54 PM
To: 'Keckler.Kymberlee@epamail.epa.gov'
Cc: Bernhardt, Aaron; Hoskins.Bart@epamail.epa.gov; Mueller, Cornelia A CIV NAVFAC MIDLANT; Barclift, David J CIV NAVFAC LANT, PNBC; Finkelstein.Ken@epamail.epa.gov; Kemp, Gregory M.; Horton, Mike; Paul Kulpa; Finlayson, R. Todd; Johnson, Winoma A CIV NAVFAC MidLant
Subject: RE: FMR - Revised Gould Island Sediment Sample Stations
Attachments: Gould Phase 2 RI FMR_3r.pdf

Kymberlee – you are correct. The FMR has been revised and attached for everyone's records.

Stephen S. Parker

PLEASE NOTE: This message, including any attachments, may include privileged, confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

From: Keckler.Kymberlee@epamail.epa.gov [mailto:Keckler.Kymberlee@epamail.epa.gov]
Sent: Thursday, April 08, 2010 8:45 AM
To: Parker, Stephen
Cc: Bernhardt, Aaron; Hoskins.Bart@epamail.epa.gov; Mueller, Cornelia A CIV NAVFAC MIDLANT; Barclift, David J CIV NAVFAC LANT, PNBC; Finkelstein.Ken@epamail.epa.gov; Kemp, Gregory M.; Horton, Mike; Paul Kulpa; Finlayson, R. Todd; Johnson, Winoma A CIV NAVFAC MidLant
Subject: Re: FMR - Revised Gould Island Sediment Sample Stations

On Figure 2-1B, station SD304 has been selected (circled in green) for tox testing rather than SD 304F which was the station we agreed on and was also originally selected by Navy. Table 4-1 correctly lists SD304F and does not include SD304. Please correct Figure 2-1B. Everything else looks OK, thanks.

Kymberlee Keckler, Chemical Engineer
Federal Facilities Superfund Section
U.S. Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100
Mail Code: OSRR07-3
Boston, MA 02109-3912

Telephone: 617.918.1385
Facsimile: 617.918.0385
E-mail: keckler.kymberlee@epa.gov

From: "Parker, Stephen" <Stephen.Parker@tetratech.com>
To: Kymberlee Keckler/R1/USEPA/US@EPA, Paul Kulpa <paul.kulpa@DEM.RI.GOV>
Cc: Finkelstein.Ken@mintra.epa.gov, Bart Hoskins/R1/USEPA/US@EPA, "Johnson, Winoma A CIV NAVFAC MidLant" <winoma.johnson@navy.mil>, "Bernhardt, Aaron" <Aaron.Bernhardt@tetratech.com>, "Finlayson, R. Todd" <rtfinlayson@GFNET.com>, "Kemp, Gregory M." <gkemp@GFNET.com>, "Mueller, Cornelia A CIV NAVFAC MIDLANT" <cornelia.mueller@navy.mil>, "Barclift, David J CIV NAVFAC LANT, PNBC" <david.barclift@navy.mil>, "Horton, Mike" <Mike.Horton@tetratech.com>
Date: 03/30/2010 03:50 PM
Subject: FMR - Revised Gould Island Sediment Sample Stations

A-2 FIELD MODIFICATION RECORDS

TETRA TECH NUS, INC.

FIELD MODIFICATION RECORD

FMR G00949-1

Site Name: Site 17, Gould Island Location: Jamestown RI

Project Number: CTO 458 112600949 Task Assignment: 0000.0330

To: Steve Parker Location: Wilmington MA Date: 9/29/09

Description: No sediment was collected with the ponar dredge during the week of 9/20/09 at sediment sample locations SD421, SD423, SD424, SD426, SD431, SD438, SD439, SD440, SD441, SD442 & SD448. ~~Reasons~~

Reason for Change: At locations mentioned above the sampling device specified in the SAP (Ponar Dredge or equivalent) could not recover material for one of 3 reasons: Hard Bottom, blanket of shells and stones, or thick vegetation.

Recommended Action: Choose new sampling equipment/method and retry sampling at locations mentioned above, probably best to try the vibracore since it will be out there to sample in the stillwater area

Field Operations Leader (Signature): [signature] Date: 9/29/09

Disposition/Action: Resample stations noted above w/ vibracore rig

Project Manager (Signature): [signature] Date: 9/29/09

Distribution:

		Others as Required:
Program Manager:	Trepanaski	
Project Manager:	Porter	W. Johnson
Quality Assurance Officer:	Johnston	P. Kulpa
Field Operations Leader:	Horton	K. Keuler
Project File:	G00949-4.4	

TtNUS Form 0003

FMR 600949-02

TETRA TECH NUS, INC.

FIELD MODIFICATION RECORD

Site Name: Site 17, Gould Island Location: Jamestown RI

Project Number: CTO458 112600949 Task Assignment: 0000.0330

To: Steve Parker Location: Wilmington Date: ~~9/~~ 10/2/09

Description: In the SAP worksheet 14 indicated that sediment cores collected in the stillwater area will be sampled at the 18-24" interval, worksheet 17 indicates that the sample will be collected at the 12-24" interval.

Reason for Change: Discrepancy in SAP

Recommended Action: Sample 18-24", this way all samples from the core will be from 6" intervals.

Field Operations Leader (Signature): [signature] Date: 10/2/09

Disposition/Action: Six inch sections will provide better resolution. Implement as described above

Project Manager (Signature): [signature] Date: 10/2/09

Distribution:

		Others as Required:
Program Manager:	Drefanuski	W. Johnson
Project Manager:	Parker	P. Kulpa
Quality Assurance Officer:	Johnston	K. Kedeter
Field Operations Leader:	Hunter	
Project File:	600949-4.4	

TtNUS Form 0003

TETRA TECH NUS INC.

FIELD MODIFICATION RECORD

FMR 600949-3

Site Name: Site 17, Gould Island Location: Jamestown RI

Project Number: CTO 458 112600949 Task Assignment:

To: Stephen Parker Location: Wilmington Date: 3/26/10

Description: Revise "ecological" sediment/biota sample stations based on Step 1 data collected for bulk sediment chemistry, documented in the Technical Memorandum "Evaluation and Recommendation for Sample Stations, Ecological Sampling in Support of The Baseline ERA" Draft, 2/1/10

Reason for Change: Regulatory request - refer to Meeting Notes from the conference call held February 25, 2010 and attachments documenting requests and agreements.

Recommended Action: Implement sampling per agreements made 2/25/10

Field Operations Leader (Signature): _____ Date: _____

Disposition/Action:

Implement sampling per agreements made 2/25/10 Reference Table 4-1 "Selected Ecological Sediment Sample Locations and Figures 2-1A and 2-1B which depict these Locations.

Project Manager (Signature): [signature] Date: 3/26/10

(Attachments) - Table 4-1
Figure 2-1A, Figure 2-1B

Distribution:

		Others as Required:
Program Manager:	J. Trepanowski	A. Bernhardt
Project Manager:	S. Parker	K. Keckler
Quality Assurance Officer:	T. Johnston	P. Hulpa
Field Operations Leader:	M. Horton	K. Finkelstein
Project File:	600949	D. Barclift

Tt NUS Form 0003

TETRA TECH NUS INC.

FIELD MODIFICATION RECORD

FMR 600949-4R

Site Name: Site 17, Gould Island Location: Jamestown RI

Project Number: CTO 458 600949 Task Assignment: Phase 2RI, BERA

To: Project staff Location: Wilmington Date: 4/12/10

Description: Selected biota sample stations revised. New selections made based on conf. call 2/25/10, Stations previously sampled for clams/mussels were not selected for re-sampling, species selected based on expected species present.

Reason for Change: Biota stations predicted in the SAP/QAPP were based on distributions that were revised by regulatory requests during conference call 2/25/10.

Recommended Action: Target biota sample stations to those provided on attached table & figure.

Field Operations Leader (Signature): _____ Date: _____

Disposition/Action:

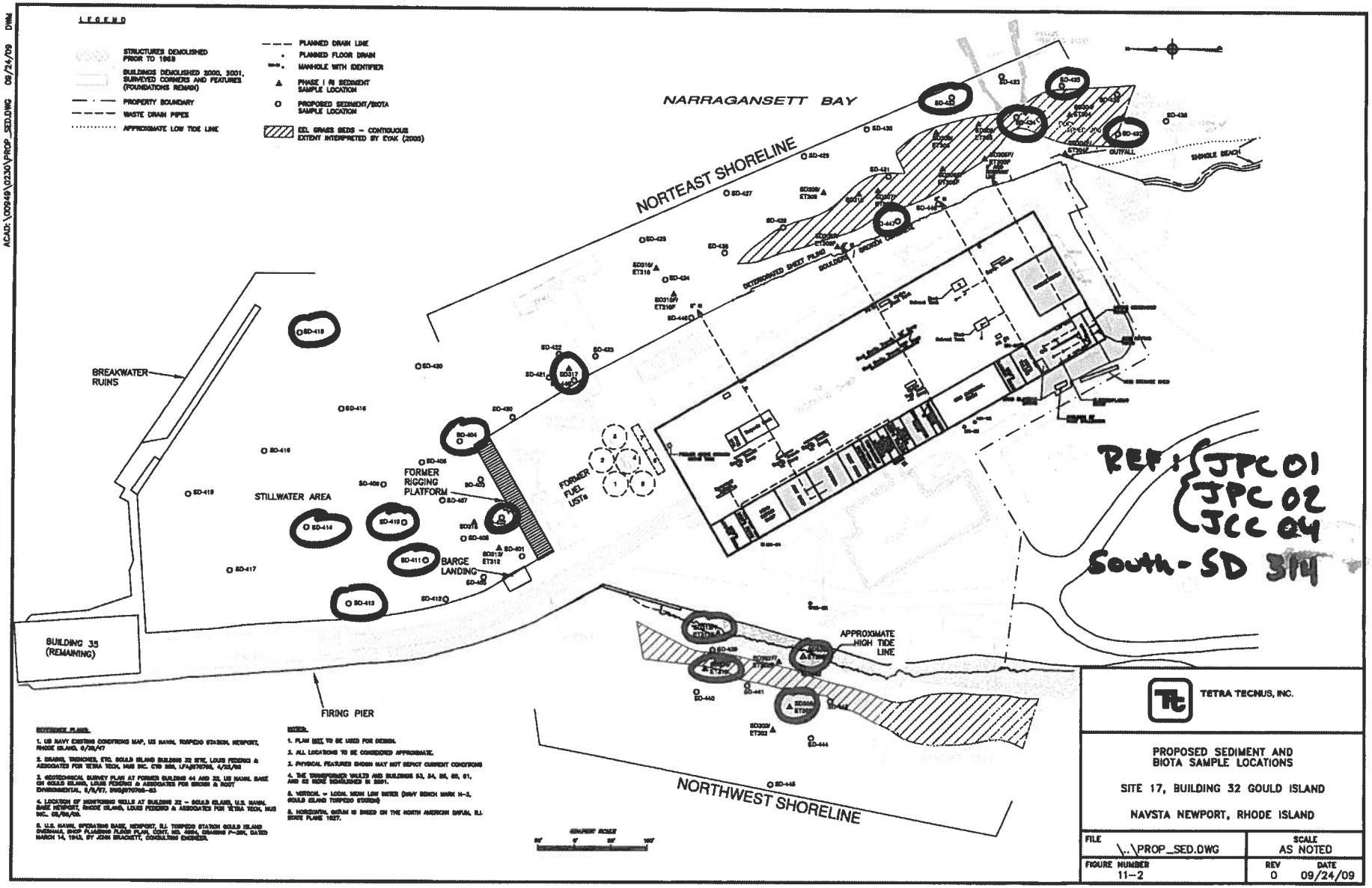
Implement as stated above. Other information for biota collection in SAP (Page 52, Page 96, etc) remains unchanged.

Project Manager (Signature): _____ Date: 4/12/10

Distribution:

		Others as Required:
Program Manager:	Trepanowski	
Project Manager:	Parker	Bernhardt
Quality Assurance Officer:	Johnston	Anderson
Field Operations Leader:	Horton	Campbell
Project File:	600949	

Tt NUS Form 0003



REFERENCE PLANS:

1. US NAVY EXISTING CONDITIONS MAP, US NAVAL TORPEDO STATION, NEWPORT, RHODE ISLAND, 6/26/47
2. DRAINS, TRENCHES, ETC. GOULD ISLAND BUILDING 32 SITE, LOUIS FEDERICI & ASSOCIATES FOR TETRA TECH, NUS INC. CTO 086, LFA/ET0705, 4/25/05
3. GEOTECHNICAL SURVEY PLAN AT FORMER BUILDING 44 AND 32, US NAVAL BASE ON GOULD ISLAND, LOUIS FEDERICI & ASSOCIATES FOR ENSOL & NAVY ENVIRONMENTAL, 5/5/97, DWG#7076-03
4. LOCATION OF MONITORING WELLS AT BUILDING 32 – GOULD ISLAND, U.S. NAVAL BASE NEWPORT, RHODE ISLAND, LOUIS FEDERICI & ASSOCIATES FOR TETRA TECH, NUS INC., 05/06/05.
5. U.S. NAVAL OPERATING BASE, NEWPORT, R.I. TORPEDO STATION GOULD ISLAND OVERHEAD SHOP PLANNING FLOOR PLAN, CONT. NO. 4884, DRAWING P-384, DATED MARCH 14, 1942, BY JOHN BRACKETT, CONSULTING ENGINEER.

NOTES:

1. PLAN NOT TO BE USED FOR DESIGN.
2. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
3. PHYSICAL FEATURES SHOWN MAY NOT DEPICT CURRENT CONDITIONS
4. THE TRANSFORMER VAULTS AND BUILDINGS 53, 54, 55, 60, 61, AND 62 WERE DEMOLISHED IN 2001.
5. VERTICAL = LOCAL MEAN LOW WATER (NAVY BENCH MARK H-2, GOULD ISLAND TORPEDO STATION)
6. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM, R.I. STATE PLANE 1927.

GRAPHIC SCALE

TETRA TECNUS, INC.

PROPOSED SEDIMENT AND BIOTA SAMPLE LOCATIONS

SITE 17, BUILDING 32 GOULD ISLAND

NAVSTA NEWPORT, RHODE ISLAND

FILE	SCALE
\..\PROP_SED.DWG	AS NOTED
FIGURE NUMBER 11-2	REV 0 / DATE 09/24/09

ACAD: \00949\0230\PROP_SED.DWG 09/24/09 DWM

FMR G00949-4 Target Biota Sample Stations
Phase 2 RI and BERA, Gould Island

	Old Station ID	New Station ID	Clams	Mussels	Crab	Notes
Stillwater Area	402	502 ✓			X	Mussels collected nearby in 2005 *
	419	503 ✓	X			fringe of study area
	413	504 ✓		X		Near wharf, high silt, clams not anticipated**
	404	505 ✓	X			boundary of stillwater - NE shoreline
	410	507 ✓			X	Impact area, near 411
	411	509 ✓			X	Impact area, near 410
	414	527 ✓			X	center of stillwater area
Northeast Shoreline	432	514 ✓			X	Near electroplating outfalls
	434	515 ✓			X	Near electroplating outfalls
	435	566 ✓			X	Near electroplating outfalls
	437	517 ✓		X		Nearshore station, clams not anticipated**
	447	447		X		Nearshore station, clams not anticipated**
	317	530 ✓		X		Nearshore station, clams not found in 2005**
Northwest Shoreline	308E	520 ✓		X		Clams collected in 2005
	308F	521 ✓			X	Mussels collected in 2005*
	313D	522 ✓		X		Clams collected in 2005
	313F	523 ✓			X	Mussels collected in 2005*
Ref Area	JPC01	524 ✓	X		X	two species, per QAPP
	JPC02	525 ✓	X		X	two species, per QAPP
	JCC04	526 ✓	X		X	two species, per QAPP
South	314	529 ✓	X			No biota from south area to date

* - Clams not found in this area during 2005 Phase 1 RI.
** - Although clams are not anticipated, they are preferred over mussels and will be collected if found

TETRA TECH NUS
FIELD TASK MODIFICATION REQUEST FORM

NAVSTA NEWPORT	112600949 CTO 458	600949 5
Project/Installation Name	CTO & Project Number	Task Mod. Number
SAP (TENUS 2009)	Site 17, Gould Island	9/29/10
Modification To (e.g. Work Plan)	Site/Sample Location	Date

Activity Description: Upon retrieval of crab traps during biota sampling. few green crabs were available from traps, but an abundance of spided crabs were available, sampled spider crabs at locations where green crabs were not available

Reason for Change: No green crabs available

Recommended Disposition: Continue sampling of crabs using spider crabs as secondary species if no green crabs available

-agreed to by EPA & RIDEM - Email from S. Parker 6/4/2010

Field Operations Leader (Signature) — Date: 9/29/10

Approved Disposition:
Implement as stated above

Project/Task Order Manager (Signature) — Date: 9/29/10

Distribution:

Program/Project File –
Project/Task Order Manager –
Field Operations Leader –

Other: J. Trepanowski,
S. Parker
M Horton
W. Johnston
T. Johnston
K. Keller
G. Jablonski

APPENDIX B

FIELD RECORDS

B-1 BORING LOGS

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB401
START DATE: 06/02/10
COMPLETION: DATE: 06/02/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	2 3	1.3 / 2.0	GI-SB401-0606 0800 GI-SB401-1218 0803	Topsoil FILL	~~Sat~~ V. loose ~~GP~~	Brown	Sand(F) & Silt (Topsoil) (0.0-0.4) Sand(F-M) & Silt (0.0-0.7)	~~SM~~ ~~GP~~ SM	Moist	S=0.0
2	9 20				M. Dense	Gray	Sand(F), Some Silt & Gravel (0.7-1.3)	SM		H=0.0
	14 22	1.4 / 2.0	GI-SB401-2430 0805 GI-SB401-4248 0810		M. Dense	Gray	SAA (0.0-1.0)	SM	Moist	S=0.0
4	27 30				↓	↓	Sand(F) & Silt, Some gravel (1.0-1.4)	↓		H=0.0
	10 12	1.8 / 2.0			M. Dense	Gray	SAA (0.0-0.6) - Cobble (0.6-0.7)	SM	Moist	S=0.0
6	22 51				Dense	Gray/Brown	Sand(F-M), Some Silt & Gravel - Fe Staining (0.7-1.8)	↓	Wet @ 1.0	H=0.0
	59 64/3"	7" / ~~9"~~ 2.0			V. Dense	Gray/Brown	Sand(F) & Silt, T-gravel (0.0-9")	SM	Wet	S=0.0
8				TILL	↓	↓	↓	↓		H=0.0
	22 23	2.0 / 2.0			M. Dense	Gray	Sand(F), Some Silt & Gravel (0.0-2.0)	SM	Wet	S=0.0
10	44 61				V. Dense	↓	↓	↓	Moist (1.6-2.0)	H=0.0
	16 24	1.5 / 2.0			M. Dense	Brown/Gray	SAA (0.0-0.7)	SM	Moist	S=0.0
12	28 32				↓	Gray	SAA (0.7-1.5)	↓	↓	H=0.0
	27 44	1.5 / 1.9			Dense	Gray	Sand(F), Some Silt, T-Gravel (0.0-1.5)	SM	Moist ~~Wet~~ BG	S=0.0
14	56 64/2"				V. Dense	↓	↓	↓		H=0.0
	17 60 2"	0.3 / 0.3			Dense	Gray	SAA (0.0-0.3) - Rock in Shoe	SM	Wet	S=0.0
16					V. Dense	↓		↓		H=0.0

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY:
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB401
START DATE: 06/02/10
COMPLETION: DATE: 06/02/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	24				M. Dense	Gray	SAA (0.0-1.0)	SM	wet	S= 0.0
	17	1.4		TILL						
18	20	/2.0			Dense	↓	Sand(f-m), T-Silt (1.0-1.2)	SP		H= 0.0
	48									
		/		EOB			Sand(F) & Silt (1.2-1.4)	SM	Moist	
		/								
		/								
		/								
		/								
		/								
		/								

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: GI-SB401

TtNUS Form 0018

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB402
START DATE: 06/02/10
COMPLETION: DATE: 06/02/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	2			TOPSOIL						
	2	1.2 / 2.0	GI-SB402-0006 1217	Fill	V. Loose	Brown	Sand(F), Silt, little gravel (0.0-0.3)	SM	Moist	S=0.0
2	2		GI-SB402-1218 1220		↓	Lt. Brown	Sand(F-M) & Gravel, Some Silt (0.3-1.2)	GP	↓	H=0.0
	2					—	No Recovery - wood in tip	—		—
	3	/								
4	3					—	Petroleum odor on wood - Try again	—		—
	3									
	2		GI-SB402-2430 1235		V. Loose	Lt. Brown	SAA (0.0-0.3)	GP	Wet	S=1.5
	3	0.8 / 2.0								
4	2		GI-SB402-4248 1240		↓	Gray	Sand(F) - Some Silt & Gravel (0.3-0.8)	SM	moist. Petroleum odor	H=30
	3									
	4			TILL	Loose	Gray	SAA (0.0-1.1)	SM	moist/ wet	S=100
	8	1.1 / 2.0								
6	9				M. Dense	↓	↓	↓	Petro. odor	H=333
	12									
	15	1.2 / 1.5			M. Dense	Gray	SAA (0.0-1.2) - rock in tip	SM	moist/wet	S=0.5
8	60/5"				V. Dense	↓	↓	↓	Slight Petro odor	H=129
	18									
	27	1.0 / 1.75			M. Dense	Gray	SAA (0.0-1.0)	SM	moist/wet	S=0.0
10	39				Dense	↓	↓	↓	Slight Petro odor	H=60.7
	60/3"									
	13									
	24	1.3 / 2.0			M. Dense	Gray	SAA (0.0-1.3)	SM	moist/wet	S=0.0
12	36				Dense	↓	↓	↓		H=6.1
	40									
	80/6"									
		0.4 / 0.5		EOB	↓	Gray	SAA (0.0-0.4)	SM	moist/wet	S=0.0
14										H=3.8

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: GI-SB402

TtNUS Form 0018

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB403
START DATE: 06/02/10
COMPLETION: DATE: 06/02/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	3		GI-SB403-0006 1350	Top Soil						
	4	1.5 / 2.0	GI-SB403-1218 1355 (DUP04)		Loose	Brown	Sand(F), Some Silt (0.0-0.3), roots - TOPSOIL	SM	Moist	S=0.0
2	4			FILL	↓	Gray/Black	Sand(F), Some Silt, little gravel (0.3-1.5)	↓	↓ Few Coal Fragments	H=0.0
	15		GI-SB403-2430 1405		M. Dnse	Gray/Black	SAA (0.0-0.6)	SM	Moist	S=0.0
	19	1.3 / 2.0	GI-SB403-4248 1408							
4	22				↓	↓	Sand(F), Some Silt & gravel (0.6-1.3)	↓	↓	H=0.0
	30									
	13				M. Dnse	Gray/Black	SAA (0.0-0.9)	SM	Moist	S=0.0
	17	1.2 / 2.0								
6	19				↓	Gray/Brown	Sand(F), little Silt (0.9-1.2)	SP	↓	H=0.0
	24									
	62				V. Dnse	Lt. Brown	Cobble (0.0-0.4)		Dry	S=0.0
	70/5"	0.9 / 1.0		TILL						
8					↓	Gray/Brown	Sand(F), Some Silt & gravel, Fe Staining (0.4-0.9)	SM	Moist	H=0.0
	22				Dnse	Gray/Brown	Sand(F), Some Silt, little gravel Fe Staining (0.0-1.4)	SM	Wet	S=0.0
	37	1.4 / 2.0								
10	30				↓	↓	↓	↓	↓	H=0.0
	44									
	17				M. Dnse	Gray	Sand(F), Some Silt & gravel, T-M Sand (0.0-1.1)	SM	Wet	S=0.0
	23	1.1 / 2.0								
12	25				↓	↓	↓	↓	↓	H=0.0
	30									
	12				M. Dnse	Gray	Sand(F), Some Silt & gravel (0.0-0.4)	SM	Wet	S=0.0
	13	0.4 / 2.0								
14	22				↓	↓	↓	↓	↓	H=0.0
	24									
		/		EOB						

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: GI-SB403

TtNUS Form 0018

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB404
START DATE: 06/03/10
COMPLETION: DATE: 06/03/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	3 3	1.2 / 2.0	GI-SB404-0006 0825 GI-SB404-1218 0830 (DUP05)	TOPSOIL	Very Loose	Brown	Sand(F), Some Silt (0.0-0.3')	SM	Dry	S=0.0
2	2 2			FILL	↓	Gray	Sand(F), Some Silt, little gravel (0.3-1.2)	↓	↓	H=1.7
	3 3	1.0 / 2.0	GI-SB404-2430 0837 GI-SB404-4248 0840			Gray	Sand (F-M), Some gravel, T-Silt,	GP	Wet Petroleum odor	S=4.4
4	3 3				↓	↓	brick, Coal Fragments (0.0-1.0')	↓	↓	H=135
	12 22	1.4 / 2.0			M. Dense	Gray	Sand(F), Some Silt & Gravel (0.0-1.4')	SM	Moist Petroleum odor	S=46
6	24 28				↓	↓	Cobble @ 1.1-1.3'	↓	↓	H=800
	27 60/4"	8" / 10"			Dense	Gray	Sand(F), Some Silt, little gravel (0.0-8")	SM	Moist Very Slight Petro odor	S=0.0
8				TILL	↓	↓	↓	↓	↓	H=2.0
	27 42	1.6 / 2.0			Dense	Gray	SAA (0.0-1.6')	SM	Damp	S=0.0
10	46 52				↓	↓	↓	↓	↓	H=0.0
	27 36	0.4 / 2.0			Dense	Gray	SAA (0.0-0.4')	SM	Damp	S=0.0
12	44 40				↓	↓	↓	↓	↓	H=0.0
		/		EOB						
		/								

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: SB-404

TtNUS Form 0018

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB405
START DATE: 06/03/10
COMPLETION: DATE: 06/03/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	2 3	1.2 / 2.0	GI-SB405-0006 0940 (QC) GI-SB405-1218 0945	TOPSOIL	Very loose	Brown	Sand(F), Some Silt, roots (0.0-0.3)	SM	Dry	S=0.0
2	3 4				↓	Gray	Sand(F-M), little Silt, Coal Frag. (0.3-1.2)	GP	Damp	H=0.0
	3 3	1.3 / 2.0	GI-SB405-2430 0955 GI-SB405-4248 1000	FILL	Very loose	Gray	Sand(F), Some Silt, little gravel (0.0-1.3)	SM	Wet	S=0.0
4	3 4				↓	↓	↓	↓	↓	H=0.0
	7 13	1.1 / 2.0			Loose	Gray	SAA (0.0-1.1)	SM	Wet (Top 6")	S=0.0
6	29 46				Dense	↓	Cobble at 0.8'	↓	Moist	H=0.0
	44 37	1.5 / 2.0			Dense	Gray	Sand(F), Some Silt & Gravel (0.0-1.5)	SM	Moist	S=0.0
8	39 22			TILL	↓	↓	↓	↓	↓	H=0.0
	22 26	2.0 / 2.0			M. Dense	Gray	SAA (0.0-2.0)	SM	Moist	S=0.0
10	26 34				↓	↓	Cobble at 0.8'	↓	↓	H=0.0
	14 19	1.1 / 2.0			M. Dense	Gray	SAA (0.0-0.7)	SM	Moist	S=0.0
12	26 30				↓	↓	Sand(F), little Silt (0.7-1.1)	SP	Wet	H=0.0
		/		EOB						
		/								

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: SB-405

TINUS Form 0018

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB406
START DATE: 06/01/10
COMPLETION: DATE: 06/01/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	9		GI-SB406-0006 1255	Topsoil	Loose	Brown	Sand(F), Some Silt, roots(0.0-0.3)	SM	Dry	S = 0.0
	9	1.4 /	GI-SB406-1218	FILL						
2	12	2.0	1300		M. Dense	Gray	Sand(F) Some Silt, Little gravel (0.3-1.4)	↓	↓	H = 0.0
	14									
	15		GI-SB406-2430 1305	TILL	↓	Gray	SAA (0.0-1.7)	SM	Dry	S = 0.0
	24	1.7 /								
4	30	2.0	GI-SB406-4248 1310 (Dup03)		Dense	↓	↓	↓	↓	H = 0.0
	31									
	27				—	—	No recovery - Rushed Rock	—	—	—
	30	0.0 /								
6	34	2.0			—	—	↓ Augured to 8'	—		—
	39									
	43				Dense	Gray/Brown	Sand (F-m), Some Silt & Gravel 0.0-1.0	SM	Damp	S = 0.0
	49	1.0 /								
8	50/3"	1.25			V. Dense	↓	↓		↓	H = 0.0
	37				Dense	Gray/Brown	SAA (0.0-1.0)		Damp	S = 0.0
	42	1.5 /								
10	70/5"	1.5			V. Dense	↓	Sand (F-m) & Gravel, T. Silt (1.0-1.5)	SP	Dry - very stiff	H = 0.0
	48					Gray/Brown/Black	Sand (F-m), Some gravel, T. Silt (0.0-0.4)	↓	wet at 0.2	S = 0.0
	60/3"	0.75 /								
13		0.75			↓	↓	Sand (F), Some Silt, T. gravel (0.4-0.75)	SM	Fe staining	H = 0.0
	25				Dense	Gray/Brown	SAA (0.0-0.5) cobble 0.5-0.6 & 0.6-0.8		moist	S = 0.0
	48	1.3 /								
15	60/4"	1.3			V. Dense	Gray/Black	Sand (F) Some Silt, T. gravel			H = 0.0
	13				Dense	Gray/Black	SAA (0.0-0.9)	↓	moist	S = 0.0
	27	1.2 /								
17	64/4"	1.3			V. Dense	Brown/Gray	Sand (F-m), T. Silt (0.9-1.2)	SP	wet	H = 0.0

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB406
START DATE: 06/01/10
COMPLETION: DATE: 06/01/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
18	18 29 30 32	1.7 / 2.0		TILL	M. Dense	Gray/Black	Sand(F), some silt & gravel (0.0-0.8)	SM	moist, wet at Sand Seam	S=0.0
20					Dense		Sand(F-M) (0.8-0.9) Sand(F) & Silt, little gravel (0.9-1.7)			H=0.0
	59 67/3"	0.6 / 0.75			V. Dense		Sand(F) & Silt, some gravel (0.0-0.6)	SM	wet	S=0.0
22				EOB						H=0.0

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: GI-SB406

TtNUS Form 0018

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB407
START DATE: 06/01/10
COMPLETION: DATE: 06/01/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	10		GI-SB407-0006	FILL	M. Dense	Brown	Sand(F) & Silt, roots, organic - Topsoil (0.0-0.3)	SP	Dry	S=0.0
	14	1.6 /	0810							
2	26		0813	TILL	↓	Gray	Sand(F), Some Silt & Gravel, Few bricks (0.3-1.6)	SM	↓	H=0.0
	28	2.0	GI-SB407-1218							
	10		GI-SB407-2430		M. Dense	Gray/	SAA - With Some interbedded Silt	SM	Dry	S=0.0
	13	1.7 /	0820 (MS/MSD)							
4	37		GI-SB407-4248		Dense	↓ Brown	(0.0-1.7)	↓	↓	H=0.0
	60/5"	20	0825							
	35				Dense	Gray/Brn	~~0.0-2.0~~ SAA (0.0-2.0) - Cobble at	SM	Dry	S=0.0
	47	2.0 /								
6	43				V. Dense		1.6-1.8	↓	↓	H=0.0
	68	2.0								
	68/3"	0.25 /					SAA 0.0-0.25	SM	Dry	S=0.0
8		0.25			↓	↓	Augured to 8'	↓	↓	H=0.0
	14				M. Dense	Gray/Brown	SAA (0.0-1.4), Cobble at 0.5 & 1.3	SM	Dry	S=0.0
	30	1.4 /								
10	60/6"				V. Dense	↓	↓	↓	↓	H=0.0
	10	1.5								
	14				M. Dense	Gray/Brown	SAA (0.0-0.6)	SM	wet at 0.3	S=0.0
	27	1.0 /								
12	32				↓	↓	Sand(F-M) & Silt (0.6-0.8) Sand(F) Some Silt & gravel (0.8-1.0)	↓		H=0.0
	13				M. Dense	Gray/Brown	Sand(F-M), & gravel, Little Silt (0.0-1.2)	GP	wet	S=0.0
	34	1.2 /								
14	70/7"				V. Dense	↓	↓	↓	↓	H=0.0
	14	1.5								
	54				Dense	Gray/Brown	SAA (0.0-1.7) - Cobble at 0.4-0.6	GP	wet	S=0.0
	64	1.7 /								
16	54	2.0			V. Dense	↓	↓	↓	↓	H=0.0

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: GI-SB407

TINUS Form 0018

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB407
START DATE: 06/01/10
COMPLETION: DATE: 06/01/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	S1									
	S4	1.0		TILL	V. Dense	Grey/ Brown	SAA (0.0-1.0) - Some Fe Staining	GP	wet	S=0.0
18	S7	/			↓	↓	(0.4-0.8) - Interbedded Silt (0.8-1.0)	↓	↓	H=0.0
	S8	2.0								
		/		EOB						
		/								
		/								
		/								
		/								
		/								
		/								
		/								
		/								
		/								
		/								

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB408
START DATE: 06/01/10
COMPLETION: DATE: 06/01/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	5 9	1.6 / 2.0	GI-SB408-0006 1005 → 1008 → GI-SB408-1218	FILL	Loose	Brown/Lt Brown	Sand(F-m), T-Silt, little gravel (0.0-0.7)	SP	Dry	S=0.0
2	5 7				↓	Gray	Sand(F), Some Silt & gravel (0.7-1.6)	SM	↓	H=0.0
	5 9	1.4 / 2.0	GI-SB408-2430 1020		Loose	Gray	SAA - (0.0-1.4)	SM	~~Dry~~ BG Moist	S=0.0
4	8 8		GI-SB408-4248 1023		↓	↓	↓	↓	↓	H=0.0
	13 27	1.6 / 2.0		TILL	M.Dense	Gray	Weathrd rock, cobbles, Some Sand(F) (0.0-0.8)	GP	Moist	S=0.0
6	9 12				↓	Gray Brown	Sand(F-~~m~~ BG), Some Silt & Gravel (0.8-1.6)	SM	↓	H=0.0
	15 27	1.6 / 2.0			M.Dense	Gray/ Brown	SAA (0.0-1.6)	↓	Moist	S=0.0
8	44 60				V.Dense	↓	~~Some~~ interbdd Silt @ (0.4-0.6)	SM	↓	H=0.0
	17 44	1.2 / 1.3			M.Dense	Gray/ Brown	SAA (0.0-1.2)	SM	Moist-	S=0.0
10	70/4"				V.Dense	↓	↓	↓	wet @ 0.9	H=0.0
	7 60/6"	0.8 / 1.0			Loose	Gray/ Brown	SAA (0.0-0.8) - Weathrd Shale in tip (Rock)	SM	Moist	S=0.0
BG 12 11					↓	↓	↓	↓	↓	H=0.0
	17 35	1.5 / 2.0			M.Dense	Gray/Brown	Sand(F-m), little Silt, Some gravel (0.0-1.5)	GP	wet	S=0.0
13	44 61				V.Dense	↓	Sand layer (F-m) @ 0.4-0.6		↓	H=0.0
	17 27	1.3 / 2.0			M.Dense	Gray/ Brown	SAA (0.0-1.3)		Wet	S=0.0
15	38 39				Dense	↓	↓	↓	↓	H=0.0

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB408
START DATE: 06/01/10
COMPLETION: DATE: 06/01/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	60/3"	0.25 / 0.25		TILL	V. Dense	Grey/ Brown	SAA - (0.0-0.3) - rock in tip -	GP	wet	S=0.0
17					↓	↓	↓	↓		H=0.0
	15 29 37	1.5 / 1.8			M. Dense		SAA - (0.0-1.5) - Interbedded Silt	GP	wet	S=0.0
19	60/4"				Dense		layers (1.3-1.5) Cobble at (0.2-0.4)	SM		H=0.0
		/		EOB						
		/								
		/								
		/								
		/								
		/								
		/								

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: GI-SB-408

TtNUS Form 0018

BORING LOG FOR:	Newport Naval Station - Gould Island Site 17				BORING NO.:	SB409			
PROJECT NO.:	112G00949				START DATE:	5/28/10			
LOGGED BY:	M. Horton		TRANSCRIBED BY:		COMPLETION: DATE:				
DRILLED BY (Company/Driller):	Geosearch / J. Jalutkewicz				MON. WELL NO.:	NA			
GRD. SURFACE ELEVATION:			ELEVATION FROM:		CHECKED BY:				

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	17	1.8 / 2	GI-SD409-0000 :1245 GI-SD409-1218 1250	Fill	M. Dense	Brown Grey	(0-0.5') Sand (F-M), Gravel, Organics, Silt (0.5-1) Sand (F-M) Gravel, T-Silt	GP	DRY	S = 0.0
2	19 21 27				↓	Grey	Sandy Silt (F), Gravel up to 1"	SM		H = 0.0
	80-7" Spoon Refusal	0.8 / 7"	GF-SD409-2430 1300		V. Dense		SAA	SM	Moist	S = 0.0
4					↓		↓	↓		H = 0.0
	22	1.7 / 2	GI-SD409-4865 1305 DUP02	natural	Dense	Grey	Sandy Silt (F-M), Gravel up to 1"	SM	Moist	S = 0.0
6	47 51 50-2" Spoon Ref.				V. Dense		↓	↓		H = 0.0
8	9 21	1.5 / 2	NA		M. Dense	Grey	Sandy Silt (F-M), Gravel up to 0.5"	SM	Moist - Augered from 6-7' to get past refusal zone	S = 0.0
8	24 26				↓		SAA - Phyllite cobble at (1.0)	↓		H = 0.0
10	24 16	1.7 / 2	NA		M. Dense		SAA - (6-1.3)	SM	Moist	S = 0.0
10	22 36				↓	Grey	Silty Sand (F-M), Gravel up to 0.5"	SM		H = 0.0
12	60-5" Spoon Refusal		NA		V. Dense		↓	↓	- Auger 11.5-13'	S = 0.0
12					↓			↓		H = 0.0
14	22 25	1.5 / 2	NA		M. Dense		SAA (0-1.1)	SM	Moist	S = 0.0
14	27 30				↓		Sandy Silt (F-M), Gravel up to 0.5"	↓		H = 0.0
16	17 27	/			M. Dense		SAA	SM		S = 0.0
17	30 33				Dense		↓ EOP Boring, Natural Material	↓		H = 0.0

TYPE OF DRILLING RIG:	CME-750X ATV Drill Rig		Tetra Tech NUS, Inc.
METHOD OF ADVANCING BORING:	4.25" Hollow Stem Auger		
METHOD OF SOIL SAMPLING:	Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop		
METHOD OF ROCK CORING:	N/A		
GROUNDWATER LEVELS:			
OTHER OBSERVATIONS:		BORING NO.: SB-409	PAGE: 1 OF 1

TtNUS Form 0018

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: M. Horton
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: SB410
START DATE: 5/28/10
COMPLETION: DATE:
MON. WELL NO.: N.A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	12 27	1.3 / 2	GI-SB410-0012 1000	Fill	M. Dense	Light Brown	Sandy Silt (F-M), Gravel upto 0.5"	SM	DRY	S: 0.0
2	30 50				Dense	Grey	Silty Sand (F-M), Gravel upto 0.5", Concrete	↓		H: 0.0
	20 22	1.4 / 2	NA		M. Dense	GREY	Silty Sand (F-M), Concrete, Gravel	SM	Moist	S: 0.0
4	8 8				Loose	Dark Grey	Sandy Silt (F), Gravel, Slight Mottling	↓		H: 0.0
	48 58	1.25 / 2			V. Dense	Brown	Silty Sand (F), Gravel - Concrete frag	SM	DRY	S: 0.0
6	12 10		GI-SB410-6072 1020		M. Dense		↓	↓		H: 0.0
	15 17	0.7 / 2	NA		M. Dense	Dark Grey	Concrete at top of spoon, Sand (F-M) T-	SP	WET	S: 0.0
8	17 28				↓		Silt, Gravel	↓		H: 0.0
	10 5	0.7 / 2	NA		Loose	Dk. Gry	Silty Sand (F-M), Gravel upto 1"	SM	WET	S: 0.0
10	6 7				↓		↓	↓		H: 0.0
	4 4	0.4 / 2	NA		Loose	Dk. Gry	Silty Sand (F-M), Gravel over 2"	SM	WET	S: 0.0
12	5 5				↓	Dk Gry		↓		H: 0.0
	3 4 5 4	1.7 / 2	NA	NATURAL	Loose	↓	Fine grained Sand - Tr Silt Sand (F) T - Silt	SP	WET	S: 0.0
14	4 4 4 4				↓	↓	Silty Sand (F-M), Gravel up to 1"	SM		H: 0.0
	25 52	1.9 / 2	NA		M. Dense	Dk. Gry.	SAA	SM	wet	S: 0.0
16	54 47				V. Dense		↓	↓		H: 0.0

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:

TtNUS Form 0018

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: M. Hoffon
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: 410
START DATE: 5/28/10
COMPLETION: DATE: 5/28/10
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	60-4" SPOON REFUSAL	0.3/0.3	NA		V. Dense	Dk. Gry.	(SAA)	SM	WET	S=0.0
18					↓		↓	↓		H=0.0
	22 40	1.3/2	NA		Dense		SAA (0-0.6)	SM	WET	S=0.0
20	44 50				↓	Dk. Gry	Silty Sand (F-M), Gravel - some iron staining	↓		H=0.0
	12 40	0.8/1.3			M. Dense		SAA	SM	WET	S=0.0
22	50 Refusal 2"				V. Dense		↓	↓		H=0.0
		/					END BORING - WELL INTO NATURAL MATERIAL; SPOON REFUSAL			
		/								
		/								
		/								
		/								

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.:

TtNUS Form 0018

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: M. Horton
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: SB411
START DATE: 5/28/10
COMPLETION: DATE:
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	10 12	1.7/2	GI-SB411-0012 0810	Fill	M. Dense	Brown	Sand (F-M) & Gravel, T-Silt	GP	DRY	S: 0.0
2	18 19				↓	Grey Dark	Sand (F), some Phyllite fragments	↓		H: 0.0
	10 12	1.6/2	NA		M. Dense	Brown/Grey	Sand (F-M), Gravel T up to 0.5"	GP	DRY	S: 0.0
4	11 12				↓	Grey/Black	Sand (F), some Gravel, Cobble at 3.5'	↓		H: 0.0
	22 10	1.3/2	GI-SB411-3648 0825		M. Dense	Grey/Dk G	Concrete → Sand (F-M) Gravel	GP	DRY	S: 0.0
6	10 9				↓		↓	↓		H: 1.6
	3 4	1.1/2	NA		Loose	Dark Grey	SAA (6-8) w/ some iron staining	GP	WET	S: 0.0
8	4 4				↓	Dark Grey	Silty Sand (F-C), Gravel	SM		H: 0.1
	9 8	0.5/2	NA		Loose		~~SAA~~	SM	WET	S: 0.0
10	8 6				↓		↓	↓		H: 0.1
	2 6	1.0/2	NA	NATURAL	Loose	Grey/Brown	~~Sand (F-C)~~, Silty Sand (F-C), gravel (1")	SM	WET	S: 0.0
12	4 4				↓		↓	↓		H: 0.0
	7 10	1.6/2	NA		Loose	Brown	Sand (F-C), T-Gravel	SP	WET	S: 0.0
14	10 12				M. Dense		Silty Sand (F-C), T-Gravel	SM		H: 0.1
	5 11	1.4/2	NA		Loose	Dark Grey	SAA (0-0.8)	SM	WET	S: 0.0
16	12 12				M. Dense		Silty Sand (F-M), T-Gravel	↓		H: 0.1

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

TtNUS Form 0018

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: M. Horton
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: 411
START DATE: 5-28-10
COMPLETION: DATE:
MON. WELL NO.:
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	12	2/2	NA		M. Dense	Dk. Grey	Silty Sand (F-C), Gravel	SM	WET	S = 0.0
18	12 14 18				↓	Dk Grey	Silty Sand (F-M), Gravel	↓		H = 0.0
	17 22	1.6/2	NA		M. Dense	Dk Grey	SAA	SM	WET	S = 0.0
20	24 28				↓		↓	↓		H = 0.0
	12 19	13/2	NA		M. Dense		SAA	SM	WET	S = 0.0
22	24 30				↓		↓	↓		H = 0.0
		/					END BORING - NATURAL MATERIAL			
							NO NEED TO GO DEEPER			
		/								
		/								
		/								
		/								

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

BORING NO.:

Tetra Tech NUS, Inc.

TtNUS Form 0018

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB412
START DATE: 05/27/10
COMPLETION: DATE: 05/27/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	13/13	1.4/2.0	1240 GI-SB412-0012 (MS/MSD)	Topsoil	M. Dense	Lt Brown	Silt & Sand(F), Topsoil, roots (0.0-0.3)	SP	Dry	S=0.0
2	8/9			FILL	↓	Brown	Sand(F-M), Some gravel (0.3-1.4) - Brick	GP	↓	H=0.1
	12/9	0.8/2.0			M. Dense	Gray	Sand(F-M), Some Silt & Gravel (0.0-0.8)	SM	Moist	S=0.0
4	6/6				Loose	↓	Crushed rock at 0.5	↓	↓	H=0.0
	12/4	1.0/2.0			Loose	Brown	Rock/Brick - Sand(F) (0.0-0.3)	SP	Dry	S=0.0
6	5/5				↓	Gray	Sand(F-M), Some Silt & Gravel (0.3-1.0)	SM	Moist	H=0.0
	4/7	1.0/2.0	1255 GI-SB412-7246		Loose	Dk. Gray	Sand(F-M), Some Silt, T. Gravel (0.0-0.8)	↓	Wet at 7'	S=0.0
8	27/12				M. Dense	Gray	Broken/pulverized rock (0.8-1.0)	SM	Dry	H=0.0
	7/7	0.4/2.0			Loose	Dk. Gray	Sand(F-M), Some Silt & Gravel (0.0-0.4)	SM	Wet	S=0.0
10	8/9				↓	↓	Rock Fragments -	↓	↓	H=0.0
	2/2	0.4/2.0			V. Loose	Dk. Gray	SAA (0.0-0.4)	SM	Saturated	S=0.0
12	12/24				M. Dense	↓	↓	↓	↓	H=0.0
	12/14	1.6/2.0	1310 GI-SB412-144-156		M. Dense	Dk. Gray	SAA (0.0-1.6)	SM	Wet	S=0.0
14	19/12				↓	↓	↓	↓	↓	H=0.0
	27/34	1.0/2.0		TILL	Dense	Dk. Gray/ Brown	Sand(F-M), Some gravel T. Silt (0.0-0.7)	GP	Wet	S=0.0
16	44/57				V. Dense	↓	Sand(F) & Silt, T. gravel (0.7-1.0)	SM	↓	H=0.1

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: SB-412

TtNUS Form 0018

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB412
START DATE: 5/27/10
COMPLETION: DATE: 5/27/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	38 40	0.6 / 2.0			Dense	Dk. Gray/ Brown	Sand(F)+Silt, little gravel (0.0-0.6)	SM	wet	S=0.0
18	40 47				↓	↓	Rock Fragments at (0.3)	↓	↓	H=0.0
	27 34	1.8 / 2.0		TILL	Dense	Dk. Gray Brown	~~SAA~~ Sand(F-M), Some Silt+Gravel (0-1.3)	SM	wet	S=0.0
20	37 37				↓	↓	Sand(F)+Silt, little gravel (1.3-1.8)	↓	↓	H=0.0
	12 27	1.5 / 2.0		Sand	M. Dense	Dk. Gray	Sand(F-M), T-Silt (0.0-0.5)	SP	wet	S=0.0
22	44 58			TILL	V. Dense		Sand(F)+Silt, little gravel (0.5-1.5)	SM	moist	H=0.0
	26 58-3"	~~4" 35~~ ~~85~~ / ~~4"~~ BK ~~2.0~~ 0.75'			V. Dense		SAA (0.0-0.5')	SM	moist	S=0.0
~~24~~ 25				Cobble	↓	↓	↓	↓	↓	H=0.0
23	24 44	18 / 22"			Dense	Dk. Gray	SAA	SM	moist	S=0.0
~~26~~ 25	47 64/4"				V. Dense	↓	Quartz Gravel @ 20"	↓	↓	H=0.0
		/		EOB						
		/								
		/								

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: GI-SB413
START DATE: 05/27/10
COMPLETION: DATE: 05/27/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	8	1.2 / 2.0	GI-SB413-0012 1020 (DUP01)	FILL	M. Dense	Brown	(0-0.4) - Sand (F-m) & Gravel, T-Silt	SP	Dry	S= 0.0
2	14 16 22				↓	Dk Gray/Black	(0.4-1.2) - Silt & Sand (F), Some gravel	SM		H = 0.0
	17	1.2 / 2.0			M. Dense	↓	(0.0-0.5) SAA, (0.5-0.7) - Gravel	SM	Dry	S=0.0
4	27 4 6				Loose	Dark Gray	(0.7-1.2) - Sand (F) & Silt	↓		H=0.0
	21	1.8 / 2.0			M. Dense	↓	(0.0-1.8) - Sand (F-M), Some Silt & gravel	SM	Moist	S = 0.0
6	6 4 7				Loose	↓	↓	↓		H = 0.0
	9	1.2 / 2.0	1040 7296 GI-SB413-8496 36		Loose	Dark Gray	(0.0-1.2) - SAA	SM	Moist	S = 0.0
8	8 6 6				↓	↓	↓	↓	Wet at 7'	H = 0.0
	4	0.5 / 2.0			Loose	Dark Gray	(0.0 - 0.5) - SAA	SM	wet	S = 0.0
10	6 1 1				V. Loose	↓	↓	↓		H = 0.0
	4	0.5 / 2.0			V. Loose	Dark Gray	(0.0-0.5) - SAA	SM	wet	S = 0.0
12	2 2 2				↓	↓	↓	↓		H = 0.0
	6	1.4 / 2.0			Loose	Dk. Gray	Sand (m.c), & Gravel (0.0-0.9)	GP	wet	S = 0.0
14	12 14 17			Natural (FILL)	M. Dense	↓	Sand (F) & Silt (0.9-1.4) - T-Gravel	SM	Moist	H=0.0
	24	1.6 / 2.0			M. Dense	Gray/Brown	(0.0-1.6) Sand (F-M), Some Gravel, T-Silt	GP	wet	S = 0.0
16	32 38 49				Dense	↓	↓	↓		H = 0.0

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

BORING NO.: SB-413

TINUS Form 0018

S= PID Screening reading
H= PID headspace reading

BORING LOG FOR: Newport Naval Station - Gould Island Site 17
PROJECT NO.: 112G00949
LOGGED BY: B. Geringer
DRILLED BY (Company/Driller): Geosearch / J. Jalutkewicz
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:
BORING NO.: GI-SB413
START DATE: 5/27/10
COMPLETION: DATE: 5/27/10
MON. WELL NO.: N/A
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG.	SAMPLING TIME & SAMPLE NO. (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD.	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition; odors; geological classification; rock weathering; etc.)	FIELD SCREENING DATA *METHOD* = [FID, (PPM)]
	68	0.6			V. Dense	Brown/ Gray	SAA (0.0-0.6)	SM	Moist	S=0.0
18	80	1.0	Spoon refusal		↓	↓	↓	↓		H=0.0
	28	1.6		FILL	M. Dense	Brown/ Gray	SAA (0.0-1.6)	SM	Moist	S=0.0
20	41	2.0			V. Dense	↓	↓	↓		H=0.1
	68	1.7			M. Dense	Brown/ Gray	SAA (0.0-1.4)	SM	~~moist~~ wet	S=0.0
22	67	2.0			↓	Gray	(1.4-1.7) - Silt & Sand (F)	↓		H=0.0
	6			EOB						
	19									
	24									
	22									

TYPE OF DRILLING RIG: CME-750X ATV Drill Rig
METHOD OF ADVANCING BORING: 4.25" Hollow Stem Auger
METHOD OF SOIL SAMPLING: Continuous in 2' intervals with 2" OD split barrel (24"); 140 lb hammer (automatic), fixed 30" drop
METHOD OF ROCK CORING: N/A
GROUNDWATER LEVELS:
OTHER OBSERVATIONS:

Tetra Tech NUS, Inc.

B-2 SOIL SAMPLE LOG SHEETS

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB401-0006
Sample Location: SB-401
Sampled By: B. Geringer
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/02/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0800	0-6"	Brown	Sand(F) & Silt-Topsoil-(0.0-0.4') Sand(F-m), T-Silt (0.4'-0.5') Moist
Method: Grab / Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

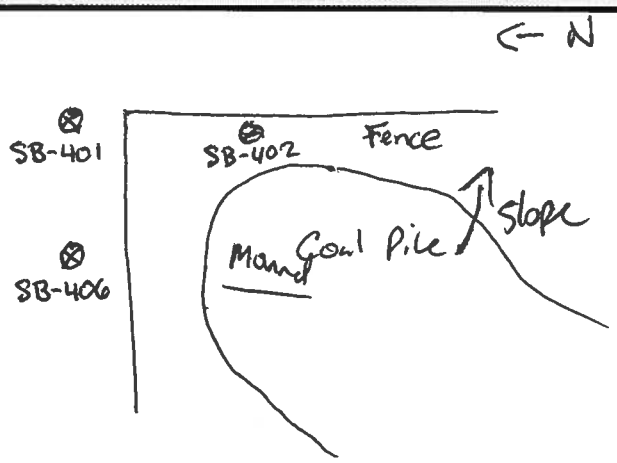
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 - 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES (NO)	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB401-1218
Sample Location: SB-401
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/02/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0803	12-18"	Gray	Sand(F), some Silt & Gravel - moist
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1-4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB401-0006 Sample log

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB401-2430
Sample Location: SB-401
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/02/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0808	24-30"	Gray	Sand(F), Some Silt & Gravel - moist
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 - 4oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB401-0006 Sample log.

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Bri Yi

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB401-4248
Sample Location: SB-401
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/03/10 Time: 0810 Method: Grab/Split Spoon Monitor Reading (ppm): 0.0	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	42-48"	Gray	Sand(F) ± Silt, Some gravel - moist

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1-4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB401-0006 Sample log

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB402-0006
Sample Location: SB-402
Sampled By: B. Geringer
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/02/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1217	0-6"	Brown/Lt. Brown	Sand(F), Silt, little gravel (Topsoil)
Method: Grab / Split Spoon			Sand(F-M) & Gravel, T-Silt
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

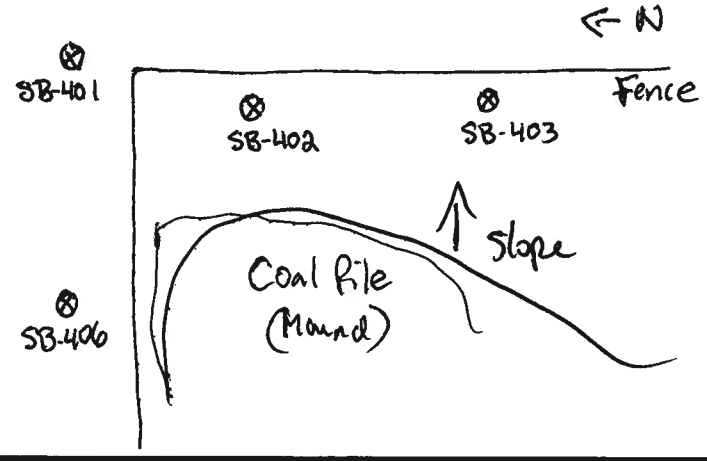
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1-4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

Very loose

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): B. Geringer

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB402-1218
Sample Location: SB-402
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/02/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1220	12-18"	Lt. Brown	Sand (F-m) ; Gravel, T-Silt, moist
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 - 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to SB-402-0006 Sample Collection Form

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Bri Geringer

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB402-2430
Sample Location: SB-402
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/02/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1235	24-30	Lt. Brown	Sand(F-M) & Gravel, T-Silt, wet
Method: Grab/Split Spoon			
Monitor Reading (ppm): 30			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 - 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES (NO)	

OBSERVATIONS / NOTES:

Petroleum odor

MAP:

Refer to GI-SB402-0006 for Map.
↑
Sample Collection Form

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Bri Geringer

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SB402-4248
Sample Location: SB-402
Sampled By: B. Geringer
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/02/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: ~~0~~ 1240	42-48"	Gray	Sand(F), Some Silt & Gravel - Moist
Method: Grab/Split Spoon			
Monitor Reading (ppm): 30			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 4oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

Petroleum odor

MAP:

Refer to GI-SB402-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

B. Geringer

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB403-0006
Sample Location: SB-403
Sampled By: B. Geringer
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/02/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1350	0-6"	Brown	Sand(F), Some Silt, roots (Topsoil)
Method: Grab/Split Spoon		Gray/Black	Sand(F), Some Silt, little gravel
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

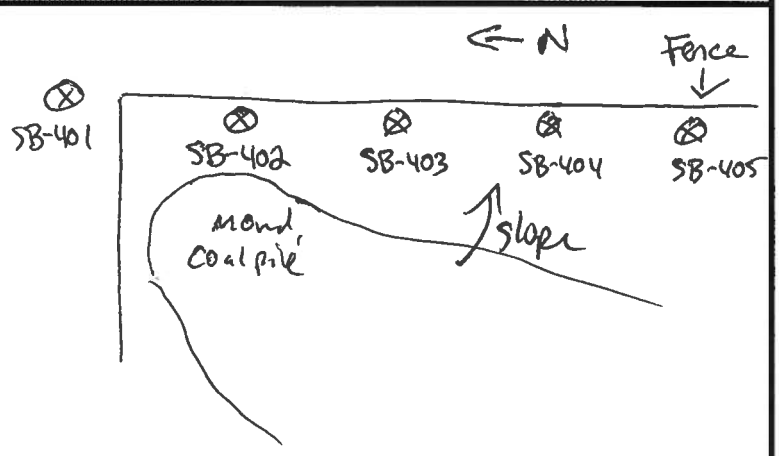
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 - 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

Coal Fragments in Sample

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Bri Gri

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB403-1218
Sample Location: SB-403
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/02/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1355	12-18"	Gray/Black	Sand(F), Some Silt, little gravel - moist
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1-4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES (NO)	

OBSERVATIONS / NOTES:

Coal Fragments in Sample

MAP:

Refer to SB-403-0006 Sample Collection Form

Circle if Applicable:

MS/MSD

Duplicate ID No.: GI-SB-DUP04-060210

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB403-2430
Sample Location: SB-403
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/02/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1405	24-30"	Gray/Black	Sand(F), Some Silt, little gravel - Moist
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1-4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to SB-403-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Bri Gri

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB403-4248
Sample Location: SB-403
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/02/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1408	42-48"	Gray/Black	Sand(F), Some Silt & Gravel - moist
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1-4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to SB-403-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Brian Geringer

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB404-0006
Sample Location: SB-404
Sampled By: B. Geringer
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/03/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0825	0-6"	Brown	Sand(F), Some Silt, roots - Topsoil
Method: Grab/Split Spoon		Gray	Sand(F), Some Silt, little gravel - Dry
Monitor Reading (ppm): 1.7			

COMPOSITE SAMPLE DATA:

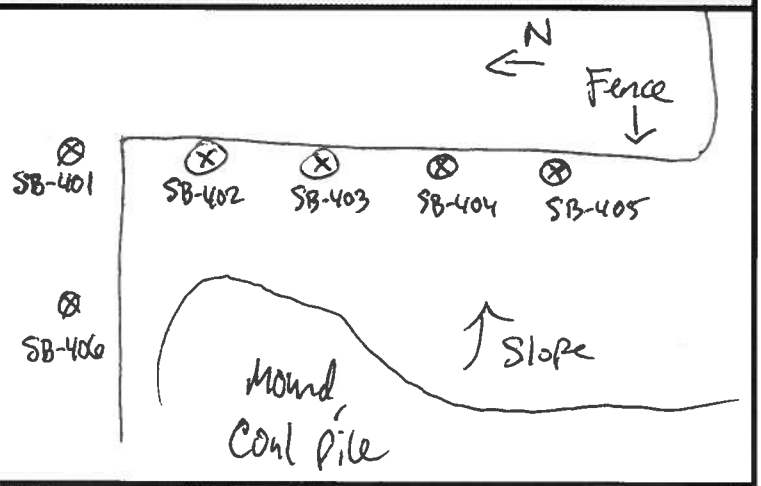
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB404-1218
Sample Location: SB-404
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/03/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0830	12-18"	Gray	Sand(F), Some Silt, little gravel - Dry
Method: Grab/Split Spoon			
Monitor Reading (ppm): 1.7			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 4oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB404-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD

Duplicate ID No.: GI-SB-DUP05-060310

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SB404-2430
Sample Location: SB-404
Sampled By: B. Geringer
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[X] High Concentration

GRAB SAMPLE DATA:

Date: 06/03/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0837	24-30"	Gray	Sand(f-m), some gravel, T-Silt, wet
Method: Grab/Split Spoon			
Monitor Reading (ppm): 135			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1-4oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

Petroleum odor, brick/coal fragments.

MAP:

Refer to GI-SB404-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

B. Geringer

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB404-4248
Sample Location: SB-404
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[X] High Concentration

GRAB SAMPLE DATA:

Date: 06/03/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0840	42-48"	Gray	Sand(F-m), some gravel, t. Silt - wet
Method: Grab/ Split Spoon			
Monitor Reading (ppm): 135			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1-4oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

Petroleum odor, brick/coal fragments present.

MAP:

Refer to GI-SB404-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Bri Gri

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB405-0006
Sample Location: SB-405
Sampled By: B. Geringer
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/03/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0940	0-6"	Brown/ Gray	Sand(F), Some Silt, roots - Dry - Topsoil
Method: Grab/Split Spoon			Sand(F-M), little Silt, Coal Frag. Damp
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

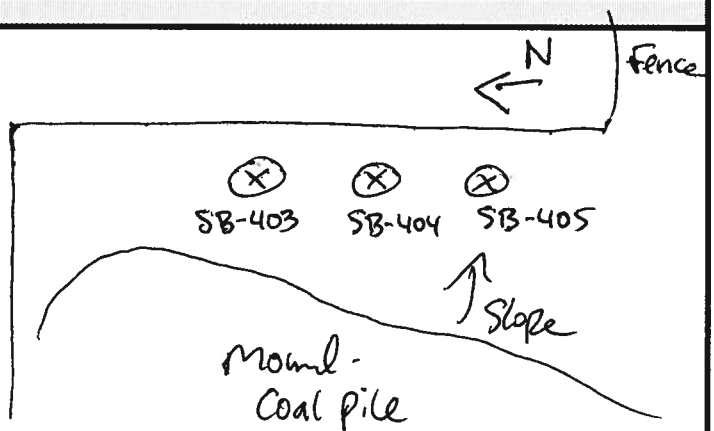
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	3-4oz. Jars
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	collected
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES (NO)	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

(MS/MSD)

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB405-0006 BG 1218
Sample Location: SB-405
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/03/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0945	12-18"	Gray	Sand(F-m), little Silt, Coal Frag. - damp
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB405-0006, Sample Collection Form.

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Bri Geringer

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SB405-2430
Sample Location: SB-405
Sampled By: B. Geringer
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/03/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0955	24-30"	Gray	Sand(F), Some Silt, little gravel - wet
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB405-0006 Sample log.

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

B. Geringer

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB405-4248
Sample Location: SB-405
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/03/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1000	42-48"	Gray	Sand(F), Some Silt, little gravel - Wet
Method: Grab / Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 4oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB405-0006 Sample log.

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB406-0006
Sample Location: SB-406
Sampled By: B. Geringer
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/01/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1255	0-6"	Brown	Sand(F), Some Silt, roots, topsoil
Method: Grab/Split Spoon		Gray	Sand(F), some silt, little gravel - Dry
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

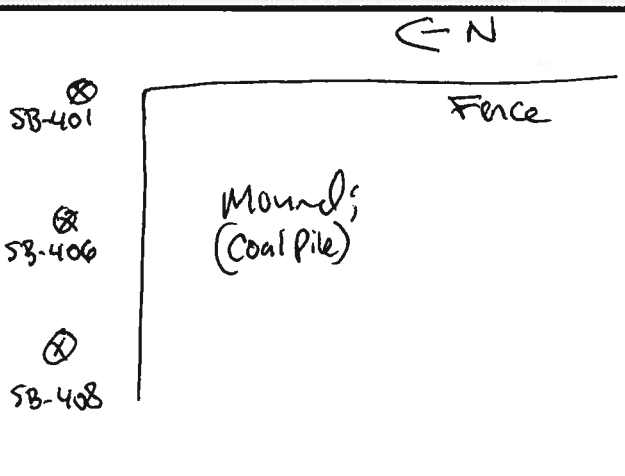
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES (NO)	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): B. Geringer

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB406-1218
Sample Location: SB-406
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/01/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1300	12-18"	Gray	Sand(F), some Silt, little gravel - Dry
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB406-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Bri Geri

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB406-2430
Sample Location: SB-406
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/01/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1305	24-30"	Gray	Sand(F), Some Silt, Little gravel - Dry
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB406-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB406-4248
Sample Location: SB-406
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/01/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1310	42-48"	Gray	Sand(F), Some Silt, little gravel - dry
Method: Grab / Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB406-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD

Duplicate ID No.: GI-SB-DUP03-060110

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB407-0006
Sample Location: SB-407
Sampled By: B. Geringer
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/01/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0810	0-6"	Brown	Sand(F) & Silt, roots - Topsoil Dry
Method: Grab/Split Spoon		Gray	Sand(F), some silt & Gravel, few bricks
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

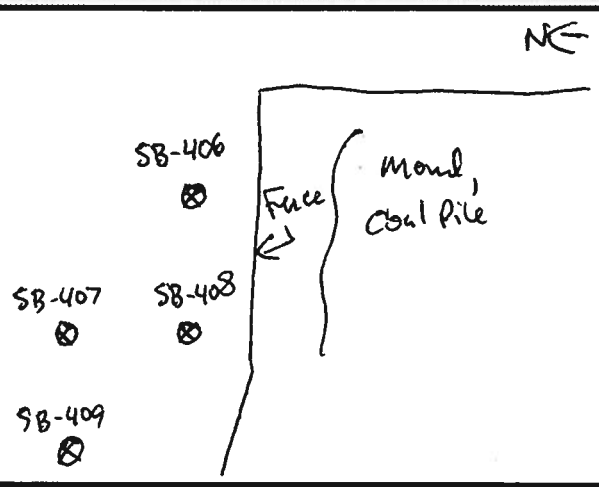
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 - 4 oz Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES (NO)	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB407-1218
Sample Location: SB-407
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/01/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0813	12-18"	Gray	Sand(F), Some Silt & Gravel, Few bricks - Dry
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 - 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB407-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Bri Geringer

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SB407-2430
Sample Location: SB-407
Sampled By: B. Geringer
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/07/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0820	24-30"	Gray/Brown	Sand(F), Some Silt & Gravel - dry interbedded silt layers
Method: Grab/ Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs x 3	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB407-0006 Sample Collection Form.

Circle if Applicable:

(MS/MSD)

Duplicate ID No.:

Signature(s):

Bri Geringer

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB407-4248
Sample Location: SB-407
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/01/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0825	42-48'	Gray/Brown	Sand (F), some Silt & Gravel; interbeded Silt layers -dry
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 4oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB407-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB408-0006
Sample Location: SB-408
Sampled By: B. Geringer
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/01/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1005	0-6"	Brown / Lt. Brown	Sand(F-m), T-Silt, little gravel - Dry
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

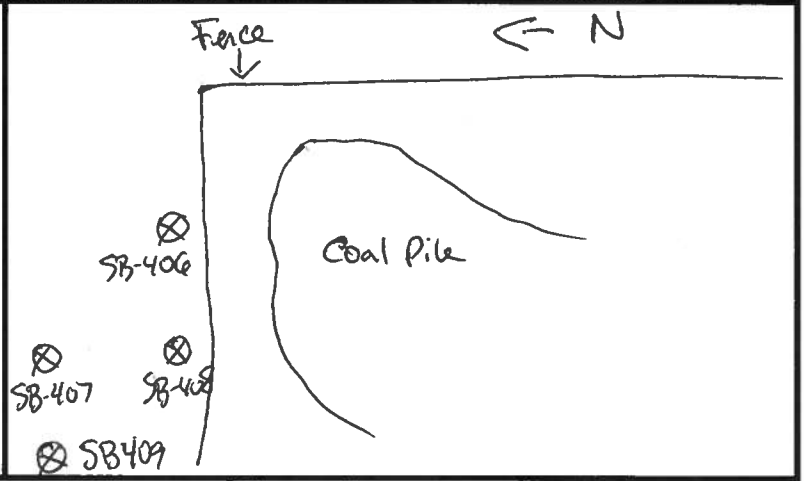
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 4oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB408-1218
Sample Location: SB-408
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/01/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1208	12-18"	Gray	Sand(F), Some Silt & Gravel - Dry
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1-4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB408-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Bri Gri

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB408-2430
Sample Location: SB-408
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/01/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1020	24-30"	Gray	Sand(F), some Silt & gravel ~~dry~~ BG moist
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1-4oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB408-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): B. Geringer

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB408-4248
Sample Location: SB-408
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 06/01/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1023	42-48"	Gray	Sand(F), some silt & gravel - moist
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 - 4oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB408-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB409-0006
Sample Location: SB-409
Sampled By: ~~B. Geringer~~ M. Horton
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 05/28/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1245	0-6"	Brown	Sand (F-m), Gravel, organics, Silt, Dry
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

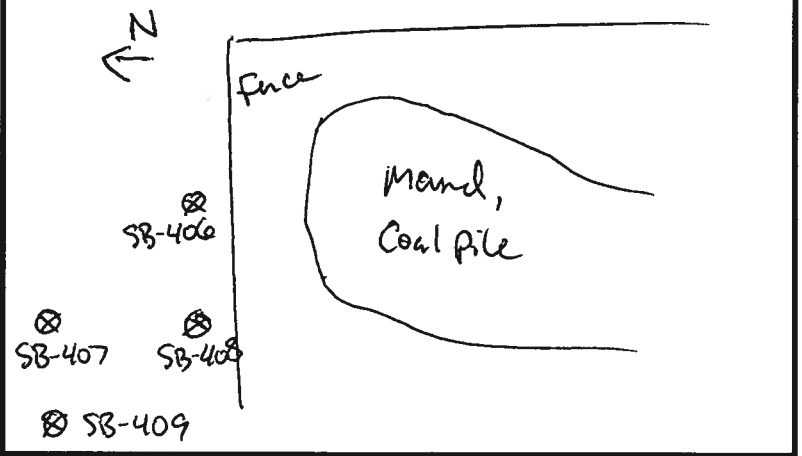
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 - 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SB409-1218
Sample Location: SB-409
Sampled By: ~~B. Goringer~~ M. Horton
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 05/28/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1250	12-18"	Gray	Sand (F-m) Gravel, T-Silt Sandy (F) Silt. - Dry
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) NO	1-4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB409-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SB409-2430
Sample Location: SB-409
Sampled By: ~~B. Geringer~~ M. Horton
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 05/28/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1300	24-30"	Gray	Sandy Silt(F), Gravel - Moist
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	(YES) NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) NO	1 - 4 oz. Jar
PAHs	4° C	1 - 4oz wide mouth jar	(YES) NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB409-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SB409-4854
Sample Location: SB-409
Sampled By: ~~B. Geringer~~ M. Horton
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 05/28/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1305	48-544	Gray	Sandy Silt(F-m), gravel - moist
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs X 2	(YES) / NO	
DRO	4° C	1 - 4oz wide mouth jar	(YES) / NO	2- 4 oz. Jars
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB409-0006 Sample Collection Form.

Circle if Applicable:

MS/MSD

Duplicate ID No.: GI-SB-DUP02-052810

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB410-0012
Sample Location: SB-410
Sampled By: ~~B. Goringer~~ M. Horton
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 05/28/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1000	0-12"	Lt. Brown / Gray	Sandy Silt (F-m), Gravel - Dry Silty Sand (F-m), Gravel
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

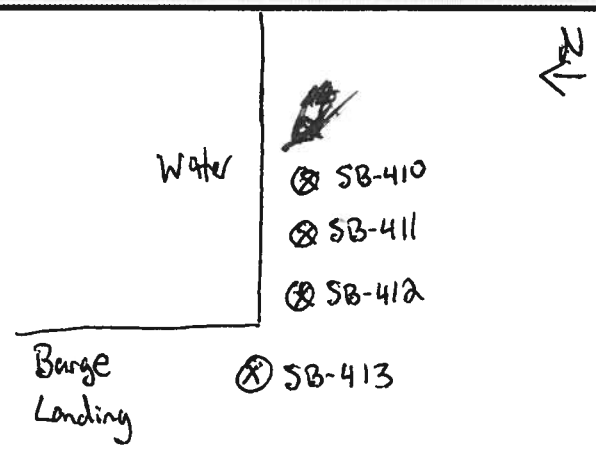
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	YES / (NO)	
DRO	4° C	1 - 4oz wide mouth jar	YES / (NO)	
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 - 4 oz. Jar
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

Concrete pieces

MAP:



Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SB410-6072
Sample Location: SB-410
Sampled By: ~~B. Geringer~~ M. Horton
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 05/28/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1020	60-72"	Brown / Dk. Gray	Silty Sand(F), Gravel - Concrete Frag. - Dry
Method: Grab/Split Spoon			Sand (F-m), T. Silt, Gravel - wet
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	YES (NO)	
DRO	4° C	1 - 4oz wide mouth jar	YES (NO)	
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	1-4 oz. Jar
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB410-0012 Sample Collection Form.

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB411-00012
Sample Location: SB-411
Sampled By: ~~B. Goringer~~ M. Horton
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 05/28/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0810	0-12"	Brown	Sand(F-M) & Gravel, T-Silt - Dry
Method: Grab/ Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

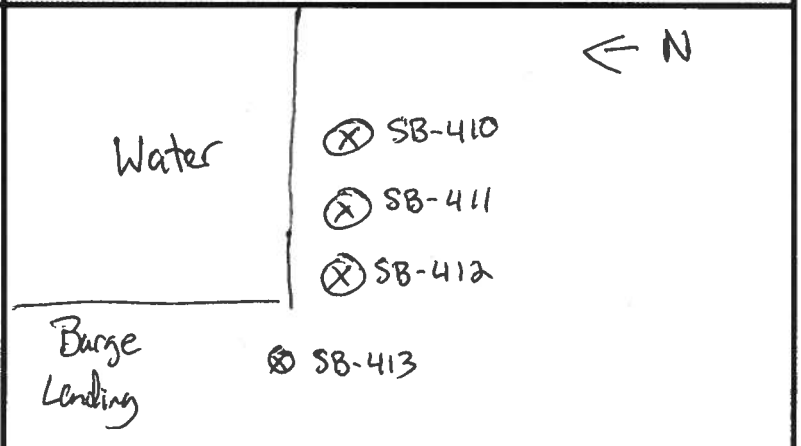
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	YES / NO	
DRO	4° C	1 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 4oz wide mouth jar	YES / NO	1 - 4 oz. Jar
TAL Metals	4° C	1 - 4oz wide mouth jar	YES / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB411-3648
Sample Location: SB-411
Sampled By: ~~B. Geringer~~ M. Horton
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 05/28/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0825	36-48"	Dk. Gray / Gray	Sand (F-m), gravel, Concrete - Dry
Method: Grab / Split Spoon			
Monitor Reading (ppm): 1.6			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	YES / NO	
DRO	4° C	1 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 4oz wide mouth jar	YES / NO	1 - 4oz. Jar
TAL Metals	4° C	1 - 4oz wide mouth jar	YES / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

Sample collected above water table.

MAP:

Refer to GI-SB411-0012 Sample Collection Form.

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB412-0012
Sample Location: SB-412
Sampled By: B. Geringer
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 05/27/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1240	0-12"	LT. Brown	Silt & Sand(F), roots (Topsoil) Dry
Method: Grab/Split Spoon			Sand(F-M), some Gravel, brick Frag
Monitor Reading (ppm): 0.1			

COMPOSITE SAMPLE DATA:

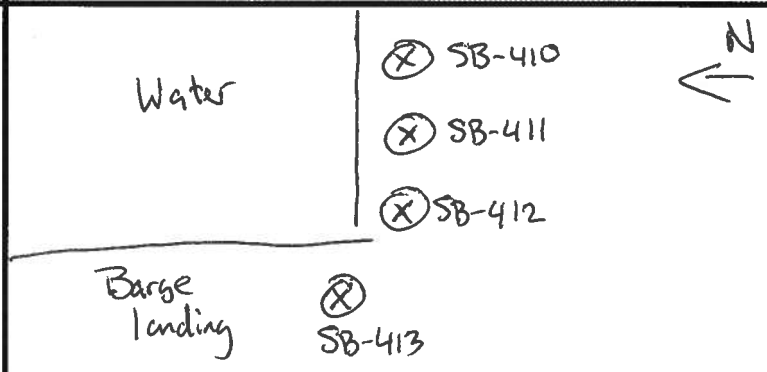
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	YES / (NO)	
DRO	4° C	1 - 4oz wide mouth jar	YES / (NO)	
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

(MS/MSD)

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB412-7296
Sample Location: SB-412
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 05/27/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1255	72-96"	Dk. Gray / Gray	Sand(F-m), Some Silt & Gravel Moist / wet
Method: Grab / Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	YES / NO	
DRO	4° C	1 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	1 4 oz. Jar
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

Wet @ 7' bgs

MAP:

Refer to GI-SB412-0012 Sample Collection Form.

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Bri Gri

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB412-144156
Sample Location: SB-412
Sampled By: B. Geringer
C.O.C. No.:

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 05/27/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1310	144-156"	Dk. Gray	Sand(F-m), some Silt, Gravel - Wet
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	YES / NO	
DRO	4° C	1 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 4oz wide mouth jar	YES / NO	1 - 4 oz. Jar
TAL Metals	4° C	1 - 4oz wide mouth jar	YES / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB412-0012 Sample Collection Form.

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SB413-0012
Sample Location: SB-413
Sampled By: B. Geringer
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 05/27/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1020	0-12"	Brown	Sand(F-m) & Gravel, T-Silt - Dry
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

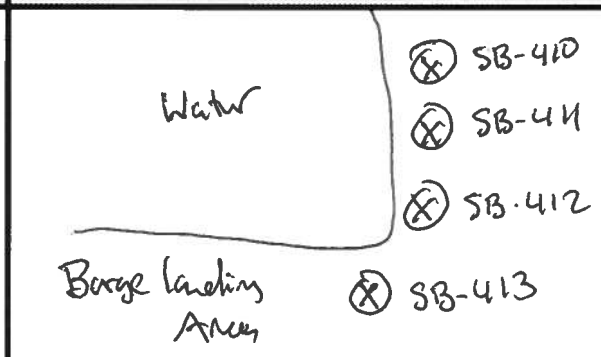
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	YES (NO)	
DRO	4° C	1 - 4oz wide mouth jar	YES (NO)	
PAHs	4° C	1 - 4oz wide mouth jar	(YES) / NO	2 - 4 oz. Jars
TAL Metals	4° C	1 - 4oz wide mouth jar	(YES) / NO	
PCBs	4° C	1 - 4oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID No.: GI-SB-DUP01-052710

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[X] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SB413-7296
Sample Location: SB-413
Sampled By: B. Geringer
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 05/27/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1040	72-96"	Dk. Gray	Sand F-M, Some Silt & gravel moist/wet
Method: Grab/Split Spoon			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
GRO	4° C / 5 ml MeOH	2 - 40 ml VOAs	YES / NO	
DRO	4° C	1 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 4oz wide mouth jar	YES / NO	1-4oz. Jar
TAL Metals	4° C	1 - 4oz wide mouth jar	YES / NO	
PCBs	4° C	1 - 4oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

MAP:

Refer to GI-SB413-0012 Sample Collection Form.

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

B-3 SEDIMENT SAMPLE LOG SHEETS, 2009

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GT-SD401-0006
Sample Location: SD401
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0900	0-6": R	Black Grey	-Silty fine to medium grained sand with many shells & shell fragments, rounded rocks up to 1.5"
Method: Vibracore	0-16": S		
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

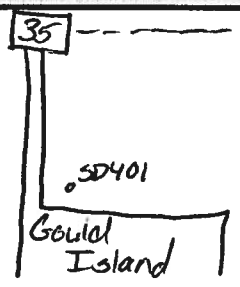
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

- Core went down ~~4.5~~ 4' but only had 1.5' of recovery
2' water depth
- 4 attempts to collect more sediment recovered 6" at most in other 3 cores
P = 48" $\frac{48}{18} = 2.67$ Sample Depth = Recovered Depth x 2.67
R = 18"

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Michael Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD401-0612
Sample Location: SD401
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0900	6-12" : R	Black Grey	Fine to medium grained silty sand with few large shell fragments and rounded rocks up to 1"
Method: Vibracore	16-32 : S		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

~~Core went into sediment~~
see GI-SD401-0006 →

MAP:

Circle if Applicable:

MS/MSD: N/A
Duplicate ID No.: N/A

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD401-1218
Sample Location: SD401
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0900	12-18 : R	Black Grey	Fine to coarse grained silty sand with round rocks up to 2.5"
Method: Vibracore	32-48 : S		
Monitor Reading (ppm): N.A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	~~YES~~ / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	~~YES~~ / NO	
PAHs	4° C	1 - 8oz wide mouth jar	~~YES~~ / NO	

OBSERVATIONS / NOTES:

See GI-SD401-0006 →

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

MD A Hor

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD402-0006
Sample Location: SD402
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1145	0-6: R	Black	Fine to medium grained silty sand with many shell fragments
Method:	0-24: S		
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

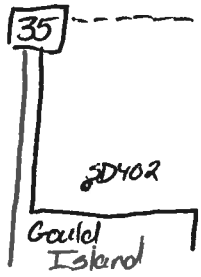
OBSERVATIONS / NOTES:

- Core advanced 4' but only 1' of recovery, drillers say it feels like they are hitting "voids"
- 21' depth

P = 48" $\frac{48}{12} = 4$
R = 12"

Sample Depth = Recovered Depth x 4

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
	DUP06

Signature(s):

Michael Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD402-0612
Sample Location: SD402
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1145	6-12" : R	Black	Fine to medium grained sandy silt with many shell fragments
Method: Vibracore	24-48 : S		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See GI-SD402-0006 log sheet →

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD403-0006
Sample Location: SD403
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1245	0-6	Black	Fine to coarse grained silty sand with some stones and shell fragments up to 1.5"
Method: Vibracore			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

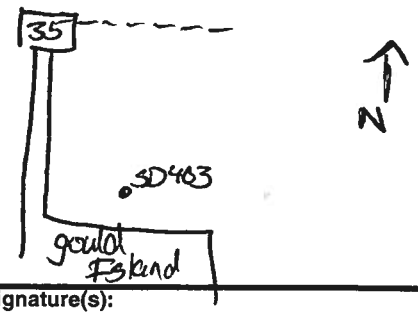
OBSERVATIONS / NOTES:

4 trys could only get 6" of recovery, core was advanced 4' just very poor recovery

P = 48" $\frac{48}{6} = 8$
R = 6"

Sample Depth = Sample Recovery Depth x 8

MAP:



Circle if Applicable:

MS/MSD N/A

Duplicate ID No.: N/A

Signature(s):

Matthew Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD404-0006
Sample Location: ~~SD413~~ SD404
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1350	0-6" - R	Black	Sandy silt w/ fine to medium grained sand and many large shell fragments
Method: Vibracore	0-8.5" - S		
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) NO	

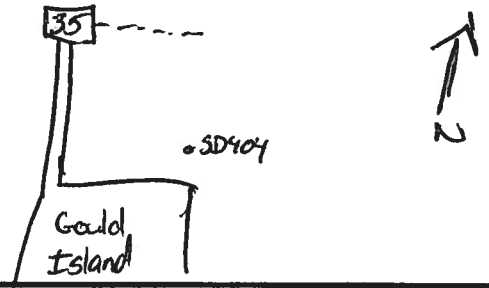
OBSERVATIONS / NOTES:

- Core advanced 4' into sediment but only 34" of Recovery

P = ~~34'~~ 48" $\frac{48}{34} = 1.41$"
R = 34"

Sample depth = Recovered Depth × 1.41

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Michael Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD404-0612
Sample Location: ~~SD413~~ SD404
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09 Time: 1350 Method: Vibracore Monitor Reading (ppm): NA	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	6-12 - R 8.5-16.9-S	Black	Sandy Silt with fine to medium grained sand and many large shell fragments

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

see GI-SD404-0006 log sheet ——→

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Michael Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD404-~~0006~~ 1824
Sample Location: SD404
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1350	18-24 : R	Black	Sandy Silt with fine to medium grained sand and many large shell fragments
Method: Vibracore	25.4-33.9 : S		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

See GI-SD404-0006 Log Sheet →

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Mark Abbott

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD404-2834
Sample Location: SD404
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1350	28-34":R	Black	Sandy silt with fine to medium grained sand and many large shell fragments
Method: Vibracore	39.5-48":S		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

See GI-SD404-0006 log sheet →

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Michael J. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD405-0006
Sample Location: SD405
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0935	~~0-6":R~~ 0-16:5	Black grey	-fine to medium grained silty sand with many small shell fragments and few rounded stones up to 1"
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	~~YES~~ / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	~~YES~~ / NO	
PAHs	4° C	1 - 8oz wide mouth jar	~~YES~~ / NO	

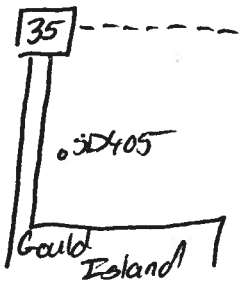
OBSERVATIONS / NOTES:

-Core penetrated ~~4.5'~~ only had 1.5' of recovery
- 4 attempts to collect more sediment 1.5' was greatest recovery

P: 48" $\frac{48}{18} = 2.67$
R = 18"

Sample Depth = Recovered Depth X 2.67

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	DUP05

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD405-0612
Sample Location: SD405
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0935	6-12 : R	Grey Black	well graded fine sand with some silt - to 6 inch was same as SD401-0006
Method:	16-32 : S		
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

See GI-SD405-0006 →

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD405-1218
Sample Location: SD405
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0935	12-18 : R	Black grey	Fine to medium grained silty sand - silt some stones (rounded) up to 1"
Method: VibraCore	32-48 : S		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	~~YES~~ / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	~~YES~~ / NO	
PAHs	4° C	1 - 8oz wide mouth jar	~~YES~~ / NO	

OBSERVATIONS / NOTES:

- See GI-SD405-0006 log sheet →

MAP:

→

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD406-0006
Sample Location: SD406
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1445	0-6 : R	Black	Sandy Silt with fine grained sand and shell fragments
Method: Vibracore	0-24 : S		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

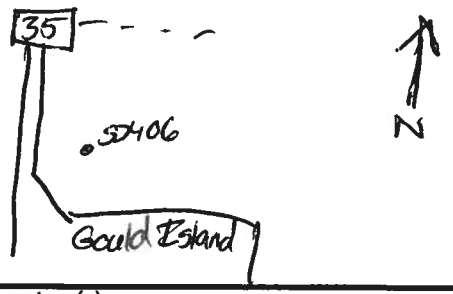
OBSERVATIONS / NOTES:

- Core was advanced 4' into sediment but only one foot of sediment was recovered

P = 48" $\frac{48}{12} = 4$
R = 12"

Sample Depth = Recovered Depth x 4

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD406-0612
Sample Location: SD406
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1445	6-12" : 8	Black Grey	Fine grained sand w/ some large rounded rocks up to 2"
Method: Vibracore	24-48" : S		
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

See GI-SD406-0006 log sheet →

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD407-0006
Sample Location: SD407
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1515	0-6 : R	Black Grey	Fine silty sand ~~& sandy silt with fine~~ MH 10/9/07
Method: Vibracore	0-24 : S		~~Sand and some shell fragments~~
Monitor Reading (ppm): NA			with some rounded rocks up to 1.5"

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

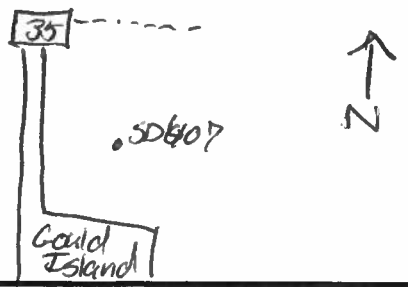
Core was advanced 4' into the sediment but only recovered 1' of sediment

P = 48 $\frac{48}{12} = 4$

R = 12

Sample Depth = Recovered Depth x 4

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD407-0612
Sample Location: SD407
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1515	6-12 : R	Black Grey	Silty sand & Sandy silt with fine grained sand and some shell fragments
Method: Vibrocore	24-48 : S		
Monitor Reading (ppm): N.A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

- See GI-SD407-0006 log sheet →

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD408-0006
Sample Location: SD-408
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1000	R: 0-6in. S: 0-15.2	dark brown	silty sand (fine grained sand and shell fragments the size of fine grained sand) trace shells up to an inch
Method: vibracore			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

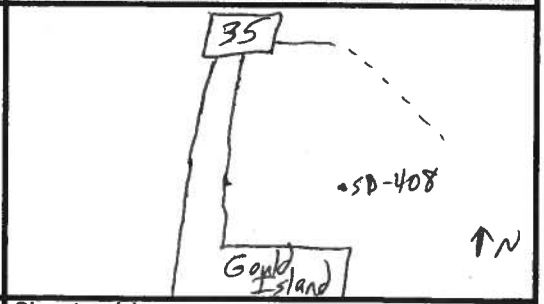
OBSERVATIONS / NOTES:

Sampled down to 4ft but only got 19in of recovery after two attempts (recovered same amount in both attempts)

P = 48"
R = 19"
$\frac{48}{19} = 2.53$

Sample depth = recovered depth x 2.53

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD408-0612
Sample Location: SD 408
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1000	R: 6-12in.	dark brown	silty sand (fine to medium), little coarse sand, little subangular fine gravel
Method: vibracore	S = 15.2-30.4cm		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

see log sheet for 0-6in. →

MAP:

Circle if Applicable:

MS/MSD —

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD408-1218
Sample Location: SD408
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1000	R: 12-18in	dark brown	silty sand (medium to coarse), little rounded fine gravel, trace subrounded coarse gravel, little shells and shell fragments
Method: vibracore	S = 30.4-45.5in		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See logsheet for 0-6in →

MAP:

Circle if Applicable:

MS/MSD —

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD409-0006
Sample Location: SD-409
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1045	0-6 in.	brown	silty sand (fine grained sand and shell fragments)
Method: vibracore			
Monitor Reading (ppm): ~			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

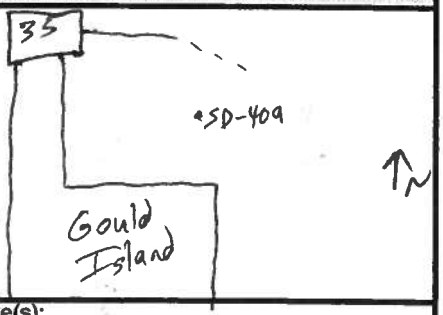
Recovered 48 in.

Penetration = 48"

Recovery = 48"

Sample depth = Recovered Depth

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD409-0612
Sample Location: SD409
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1045	6-12in.	brown	silty sand (fine to medium grained)
Method: Vibracore			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

see logsheet for 0-6in. →

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD409-1824
Sample Location: SD409
Sampled By: CA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1095	18-24 in.	dark brown	silty sand (fine to medium)
Method: vibracore			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

see logsheet for 0-6in →

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	

Signature(s):

Tori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD409-4248
Sample Location: SD 409
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09 Time: 1045 Method: vibracore Monitor Reading (ppm):	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	42-48 in.	dark brown	sandy silt (fine to medium) trace coarse grained sand, little fine gravel

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See logsheet for 0-6in. →

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD410-0006
Sample Location: SD410
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1115	R: 0-6 in.	dark brown	sandy silt (fine grained sand and shell fragments), little organic matter
Method: vibracore	S: 0-9 in.		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

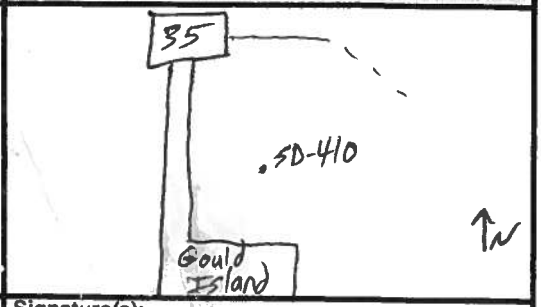
Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

Core went down 4 ft. but only recovered 32 in. of sediment.

Penetration = 48"
Recovery = 32"
$\frac{48}{32} = 1.5$
sample depth = Recovered depth × 1.5

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD410-0612
Sample Location: SD410
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1115	R: 6-12 in. S: 9-18 in	dark brown	sandy silt (fine grained)
Method: vibracore			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See logsheet for 0-6 in.

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Jori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD40-1824
Sample Location: SD40
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1115	R: 18-24 in.	dark brown	sandy silt (fine grained)
Method: vibracore	S: 27-36 in.		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See logsheet for 0-6 in.

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD410-2632
Sample Location: SD410
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1115	R: 26-32 in.	dark brown	sandy silt (fine grained)
Method: Vibracore	S: 39-48 in		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See logsheet for 0-6 in.

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD411-0006
Sample Location: SD411
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silty sand (fine to medium), some small shell fragments (fine to medium sand), little fine gravel, organic materia
Time: 1215	0-6 in	dark brown	
Method: vibracore			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA: 0-10.3 in

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

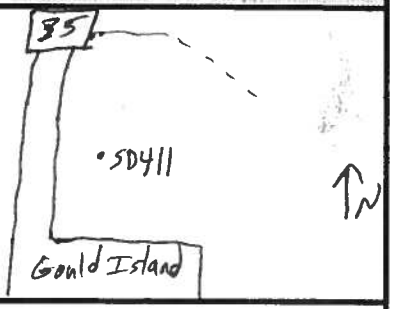
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

Sampled down to 4ft. but only recovered 28in. of sediment
Penetration = 48"
Recovery = 28"
$\frac{48}{28} = 1.7$
Sample depth = recovered depth × 1.7

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD411-0612
Sample Location: SD411
Sampled By: CA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1215	F: 6-12 in.	dark brown	sandy silt (fine to medium), shell fragments, little coarse gravel
Method: vibracore	S: 10.3-20.6 in.		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

see logsheet for 0-6in.

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD411-1218
Sample Location: SD411
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1215	R: 12-18 in.	dark brown	silty sand (fine to medium)
Method: vibracore	S: 20.6-30.9 in		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

see log sheet for 0-6 in.

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD411-1824
Sample Location: SD 411
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1215	R: 18-24 in.	dark brown	sandy silt (fine), trace fine gravel
Method: vibracore	S: 30.9-41.1 in.		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See Logsheet for 0-6in.

MAP:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD412-0006
Sample Location: SD412
Sampled By: MHorton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1040	0-6 : ØR	Black	Fine to medium grained silty sand with many shell fragments
Method: Vibrocore	0-12 : S		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

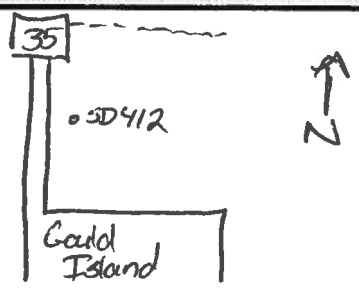
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	~~YES~~ / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	~~YES~~ / NO	
PAHs	4° C	1 - 8oz wide mouth jar	~~YES~~ / NO	

OBSERVATIONS / NOTES:

-Core was advanced 4' but only had 2' of recovery
-4 attempts to collect entire core 2' was the greatest recovery
21' water depth
P = 48" $\frac{48}{24} = 2$
R = 24" Sample Depth = Recovered Depth x 2

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID No.: N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD412-0612
Sample Location: SD412
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1040	6-12 : R	Black	Fine to medium grained sand with many shell fragments
Method: Vibrocore	12-24 : S		
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

see GI-SD412-0006 log sheet →

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD412-1218
Sample Location: SD412
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1040	12-18 : R	Black Grey	Fine to medium grained silty sand with many shell fragments
Method: Vibracore	24-36 : S		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

See GI-SD412-0006 log sheet

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD412-1824
Sample Location: SD412
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/9/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1640	18-24": R	Black	Fine to medium grained silty sand with many shell fragments
Method: Vibracore	36-48: S		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

See GI-SD412-0006 log sheet →
- sheen on water in pan
- chunks of wood in sample

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD413-0006
Sample Location: SD413
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/6/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1010	0-6": R	Black	Silt with little fine grained sand and many large shell fragments, very few angular rocks up to 1" (probably concrete)
Method: Vibracore	0-24:S		
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

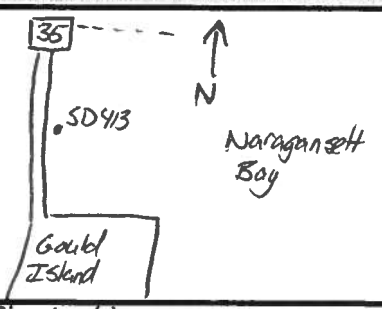
- only 1' recovery in core tube - penetrated 48"

P = 48"
R = 12"

$\frac{48}{12} = 4$

Sample Depth = Recovered Depth x 4

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD413-0612
Sample Location: SD413
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/6/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1010	~~0~~ 6-12" : R	Black	Silt with little fine sand and large shell fragments
Method: Vibracore	24-48 : S		
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

only 1' recovery in core tube

MAP:

See GI-SD413-0006 log sheet

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD414-0006
Sample Location: SD414
Sampled By: L. Anderson
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1130	R: 0-6 in.	~~blackish~~ dark grey	sandy silt (fine grained sand)
Method: vibracore	S: 0-11.1 in.	~~brown~~ 10/12/09	
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

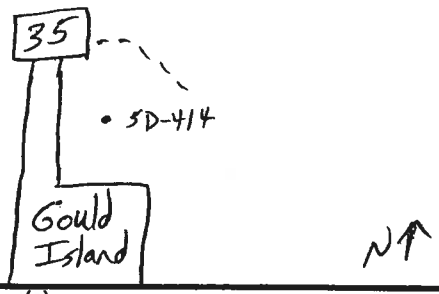
Core advanced 4 ft. into sediment but only 26 in. recovery

Penetration = 48" $\frac{48}{26} = 1.8$

Recovery = 26"

Sample depth = recovered depth × 1.8

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	GI-SD-DUP 07-101209

Signature(s): Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD414-0612
Sample Location: SD414
Sampled By: L. Anderson
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1130	P: 6-12 in. S: 11.1-22.2 in.	dark gray	sandy silt (fine grained)
Method: vibra core			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See logsheet for GI-SD414-0006

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD414-1218
Sample Location: SD414
Sampled By: L. Anderson
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1130	R: 12-18 in.	dark	sandy silt (fine grained), some
Method: vibracore	S: R2.2-33.2 in.	gray	subangular fine gravel
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings				
(Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See logsheet for GI-SD414-0006

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD414-1824
Sample Location: SD414
Sampled By: L. Anderson
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1130	P: 18-24 in	dark grey	sandy silt (fine grained), some medium to coarse grained sand, little subrounded fine gravel
Method: vibra core	S: 33.2-44.3 in		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See logsheet for GI-SD414-0006

MAP:

Circle if Applicable:

MS/MSD —

Duplicate ID No.: GI-SD-DUP08-101209

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD415-0006
Sample Location: SD415
Sampled By: L. Anderson
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09 Time: 1415 Method: vibracore Monitor Reading (ppm): NA	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0-6	dark grayish brown	silty sand (medium to coarse) and shell fragments (coarse sand sized)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

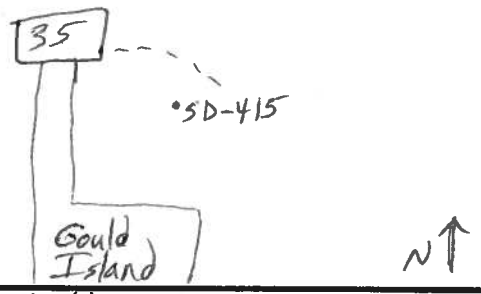
OBSERVATIONS / NOTES:

Recovered 48 in.

Penetration = 48"
Recovery = 48"

Sample depth = recovered depth

MAP:



Circle if Applicable:

MS/MSD (YES)

Duplicate ID No.:

(double volume)

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD415-0612
Sample Location: SD415
Sampled By: L. Anderson
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09 Time: 1415 Method: vibracore Monitor Reading (ppm): NA	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	6-12	dark brown	silty sand (medium to coarse), some shell fragments (coarse sand size)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See sample log sheet GI-SD415-0006

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD415-1824
Sample Location: SD415
Sampled By: L. Anderson
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1415	18-24	brown	silty sand (medium to coarse) and fine gravel and shell fragments, trace coarse gravel (angular)
Method: vibracore			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See sample log sheet GI-SD415-0006

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.: ~~DUP09~~ 1a 10/12/09

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD415-4248
Sample Location: SD415
Sampled By: L. Anderson
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1415	42-48	dark brown	silty sand (medium to coarse) little fine gravel (subangular to rounded) LA 10/12/09
Method: vibracore			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

See sample log sheet GI-SD415-0006

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.: GI-SD-DUP09-101209

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD416-0006
Sample Location: SD416
Sampled By: L. Anderson
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09	Depth Interval	Color	Description (Sand, Silty, Clay, Moisture, etc.)
Time: 1330	R: 0-6 in S: 0-18 in.	greyish brown	silty sand (fine to medium), some fine gravel and shell fragments, little organic material
Method: Vibracore			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

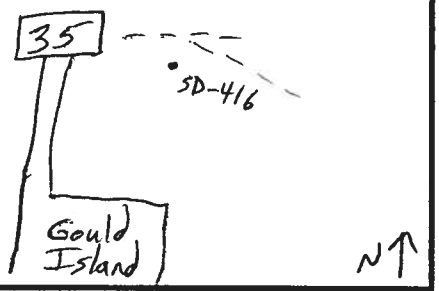
Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

Poor core recovery on first attempt (only 10 in.) even though core advanced to 4'. Attempted a second core which advanced 4 ft. but only had 16 in. recovery, metalic sheen observed on sediment

Penetration = 48"
Recovery = ~~32~~ 16"
$\frac{48}{16} = 3$
Sample depth = recovered depth × 3

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
Yes	

Signature(s): Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD416-0612
Sample Location: SD416
Sampled By: L. Anderson
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1330	R: 6-12 in.	dark grey	silty sand (fine to medium), some shell fragments
Method: vibracore	S: 18-36 in.		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

See sample log sheet GI-SD416-0006

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD416-1218
Sample Location: SD416
Sampled By: L. Anderson
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1330	R: 12-~~18~~ 16 in.	dark grey	silty sand (medium to coarse grained) and shell fragments and fine angular grave
Method: vibracore	S: 36-~~44~~ in 48		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See sample log sheet GI-SD416-0006

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD417-0006
Sample Location: SD417
Sampled By: L. Andersen
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1100	R: 0-6 in.	dark brown	~~silty sand~~ (fine to medium) sandy silt
Method: vibracore	S: 0-15.2 in.		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

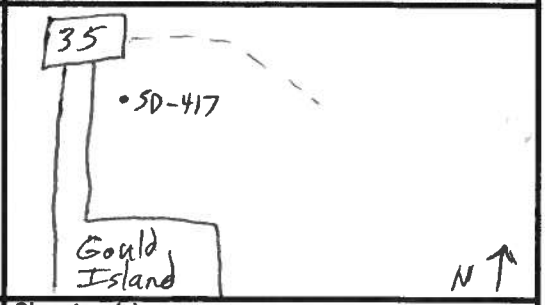
OBSERVATIONS / NOTES:

Core advanced 4 ft. into sediment but only 19 in. of recovery

Penetration = 48" $\frac{48}{19} = 2.5$
Recovery = 19"

sample depth = recovered depth × 2.5

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

 10/12/09

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD417-~~0006~~ 0612
Sample Location: SD417
Sampled By: E. Anderson
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09	Depth Interval	Color	Description (Sand, Silty, Clay, Moisture, etc.)
Time: 1100	F: 6-12 in.	dark grayish brown	silty sand (fine to medium), trace fine gravel
Method: vibra core	S: 15.2-30.3 in.		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

See GI-SD417-0006 log sheet →

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD417-1218
Sample Location: SD417
Sampled By: L. Anderson
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/12/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1100	R: 12-18 in.	grayish brown	silty sand (fine to medium), some fine gravel, trace coarse gravel (subangu
Method: vibracore	S: 30.3-45.5 in.		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

See log sheet GI-SD417-0006

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD418-0006
Sample Location: SD418
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1315	R: 0-6 in.	dark brown	sandy silt (fine grained)
Method: vibracore	S: 0-22.2 in.		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

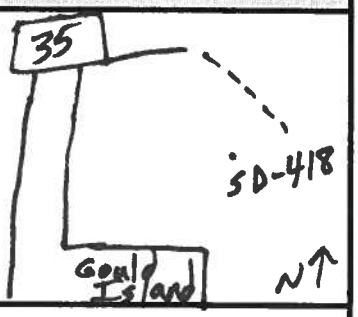
Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

Cored down to 4 ft. but only 13 in. of suspended sediment recovered. Lots of fines in core tube, let fines settle before sampling.

Penetration = 48" $\frac{48}{13} = 3.7$
Recovery = 13"
Sample depth = recovered depth × 3.7

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD418-0612
Sample Location: SD418
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1315	f: 6-12in.	dark brown	sandy silt (fine to medium), trace fine gravel, trace coarse gravel, trace shell fragments (medium grained sand size)
Method: vibracore	si: 22.2-44.3in.		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

see log sheet for 0-6in.

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD419-0006
Sample Location: SD419
Sampled By: CA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1540	P: 0-6 in. S: 0-9 in.	dark brown	silty sand (fine to medium) with shell fragments
Method: vibracore			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

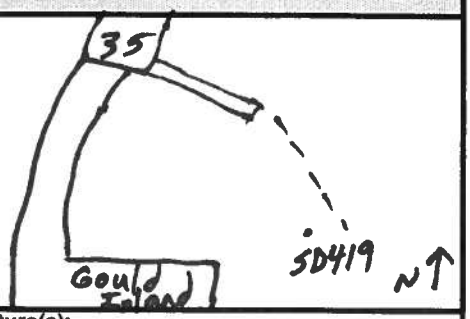
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

Cored down to 4ft. but only got 32 in. of recovery
Penetration = 48"
Recovery = 32"
$\frac{48}{32} = 1.5$
Sample depth = recovered depth × 1.5

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD419-0612
Sample Location: SD419
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1540	R: 6-12in.	dark brown	silty sand (fine to medium) and shell fragments
Method: vibracore	S: 9-18in.		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

see logsheet for 0-6in.

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD49-1824
Sample Location: SD49
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1540	R: 18-24 in. S: 27-36 in	dark brown	silty sand (medium to coarse), trace fine gravel, little shell fragments, trace organic matter
Method: vibracore			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

see logsheet for 0-6in.

MAP:

Circle if Applicable:

MS/MSD —

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD419-2632
Sample Location: SD419
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1540	R: 26-32 in.	dark brown	subrounded fine gravel, some silty sand (medium to coarse), trace subangular coarse gravel
Method: vibracore	S: 39-48 in.		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

see logsheet for 0-6 in.

MAP:

Circle if Applicable:

MS/MSD —

Duplicate ID No.:

Signature(s):

Lori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD420-0006
Sample Location: SD420
Sampled By: CA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 510	R: 0-6in.	dark brown	silty sand (fine to medium), little shell fragments
Method: vibracore	S: 0-19.2in.		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

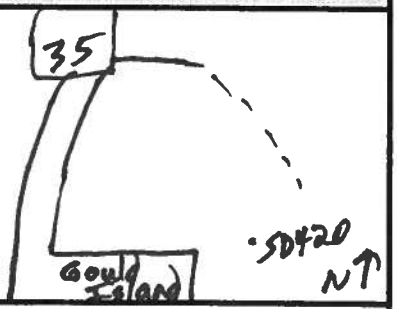
Cored down to 4ft. but only got 15in. of recovery

Penetration = 48" $\frac{48}{15} = 3.2$

Recovery = ~~3~~ 15"

sample depth = recovered depth x 3.2

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID No.: GI-SDDUP10-101309

Signature(s):

Tori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD420-0612
Sample Location: SD420
Sampled By: LA
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/13/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1510	R: 6-12 in.	dark brown	silty sand (fine to medium), trace fine gravel (subangular)
Method: Vibracore	S: 19.2-38.4 in.		
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

see logsheet for 0-6in.

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tori Anderson

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD421-0006
Sample Location: SD421
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/5/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1040	0-6"	Grey Brown	Silty, fine to medium grained sand with shell fragments and rocks up to 4" in size
Method: Vibracore			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

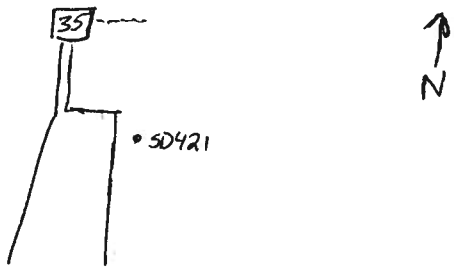
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

Water Depth 12'

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Mike Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD421-0006
Sample Location: SD421
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: ~~1115~~ 1105	0-6	No sample collected →	
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

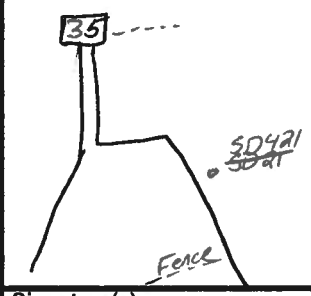
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / ~~NO~~	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / ~~NO~~	
PAHs	4° C	1 - 8oz wide mouth jar	YES / ~~NO~~	
REDEM Split	4°C	Ziplock Bag	NO	

OBSERVATIONS / NOTES:

- 15,8
- Hard Bottom
- 2 grabs no sediment
- Moved 15' away from shore grabbed again, collected only rocks up to 2"

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Mark Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD422-0006
Sample Location: SD422
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1115	0-6	Brown	- Medium to fine grained sand with rocks up to 2" and shell fragments
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

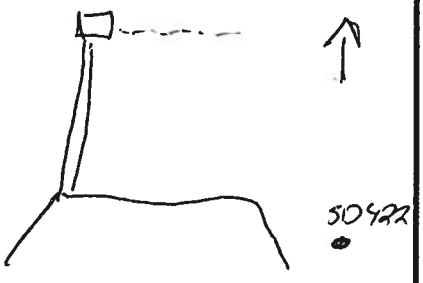
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	
REDEM SPLIT	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

- 17.8' deep

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD423-0006
Sample Location: SD423
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/5/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1100	0-6"	Grey	Silty Fine to medium-grained sand w/ shell fragments and rounded rocks up to 4"
Method: Vibracore			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

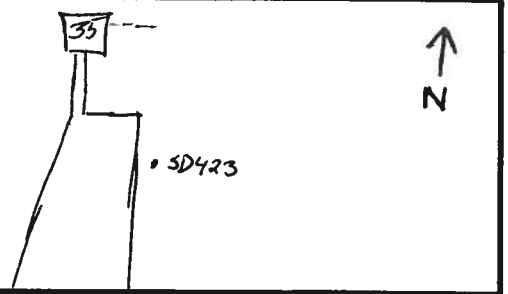
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	DUP 04

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD423-0006
Sample Location: SD423
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1127	0-6	NO sample collected	
Method: Grab Sampler			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

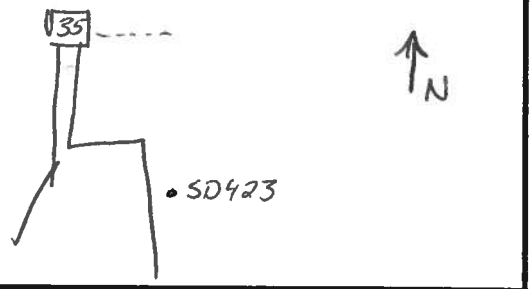
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / (NO)	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / (NO)	
PAHs	4° C	1 - 8oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

6.4' deep
- 4 trys with paper. No sediment recovery - only muscle stalks

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD424-0006
Sample Location: SD424
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/5/05 Time: 1145 Method: Vibra Core Monitor Reading (ppm):	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0-6	Grey	Silty fine to medium grained sand with rounded rocks up to 4", shell fragments

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

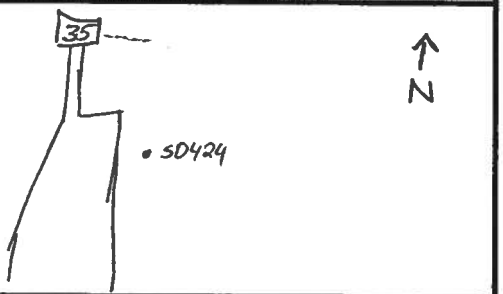
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

Water Depth 6'

MAP:



Circle if Applicable:

MS/MSD N/A

Duplicate ID No.: N/A

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD424-0006
Sample Location: SD424
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1135	0-6"	NO SAMPLE COLLECTED	
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

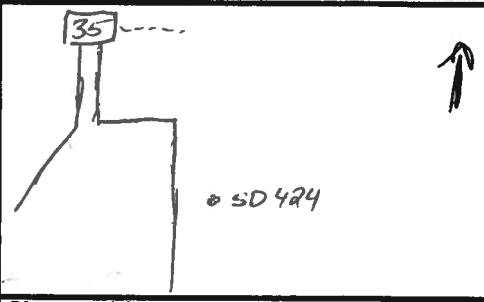
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / (NO)	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / (NO)	
PAHs	4° C	1 - 8oz wide mouth jar	YES / (NO)	

OBSERVATIONS / NOTES:

7.5' deep
- 4 grabs, NO sediment recovery

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD425-0006
Sample Location: SD425
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1140	0-6"	Brown	Fine to coarse grained sand with large rocks up to 5", and shell fragments
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

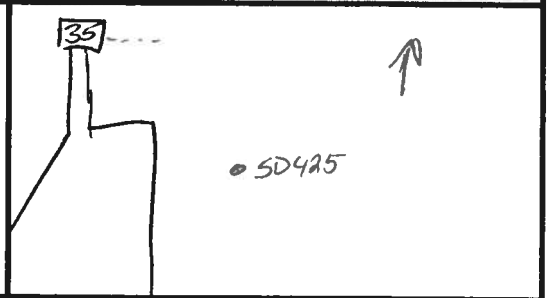
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
REDEM Split	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

~11.4' depth to sediment

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD426-0006
Sample Location: SD426
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/5/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1210	0-6"	Grey	Fine to coarse grained silty sand with rounded rocks up to 2"
Method: Vibracore			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

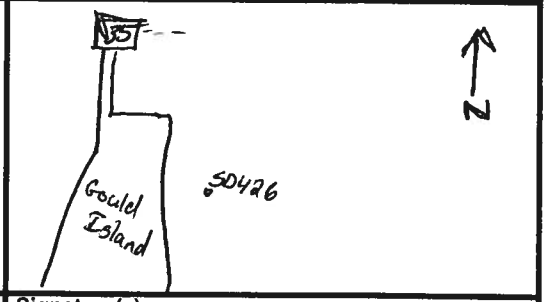
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

Water Depth 7'

MAP:



Circle if Applicable:

(MS/MSD)

Duplicate ID No.: N/A

Signature(s):

Mike Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD426-0006
Sample Location: SD426
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1155	0-6"	NO SAMPLE COLLECTED	
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

8.6' depth
Hard Bottom - No sample collected
- No material retrieved in ponar

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Mike Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD427-0006
Sample Location: SD427
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1200	0-6'	Brown	fine to coarse grained sand, with some rock up to 1", and shell fragments
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

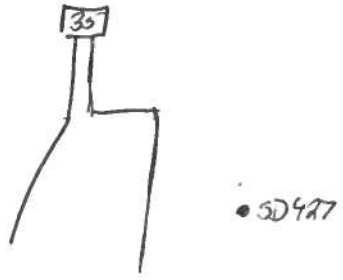
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
RIDEM Split	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

19.1' Depth to sediment

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD428-0006
Sample Location: SD428
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1221	0-6"	Brown	Fine to medium grained sand w. some small rocks & shell fragments
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

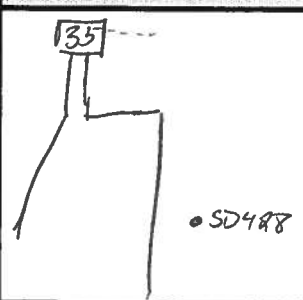
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	Yes
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	
RIDEM Split	4°C	Ziplock Bag	NO	

OBSERVATIONS / NOTES:

- 4.5'
- Vegetation caught in ponar
- 9 grabs yielded only ~4oz of sed
- No split collected for RIDEM Not enough material
- Sediment that was recovered was sent to the Lab for metals analysis

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD429-0006
Sample Location: SD429 SD429
Sampled By: M. Hinton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1231	0-6"	Brown	Brown, Fine to medium grained sand well graded, some small rocks
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

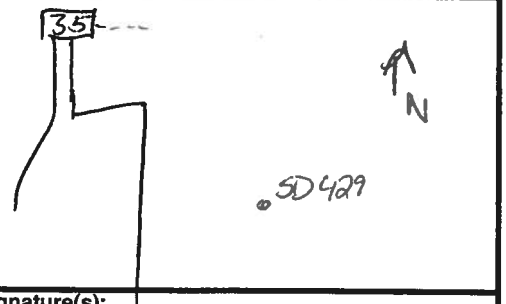
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
RIDEM Split	4°C	Ziplock Bag	~~Yes~~ NO	

OBSERVATIONS / NOTES:

14.0' Depth to Sediment
- No split collected for RIDEM, Not enough material split

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Mike Hinton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD430-0006
Sample Location: SD430
Sampled By: M. Nanna
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/06	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1243	0-6"	Brown	Fine to medium grained sand with some small rocks and shell fragments
Method: GRAB Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

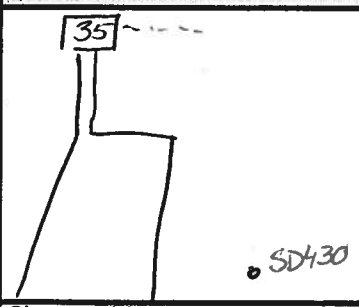
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	
RIDEM Split	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

-

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD431-0006
Sample Location: SD431
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/5/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1225	0-6"	Grey	Fine to coarse grained silty sand with some rounded rock up to 2" and shell fragments
Method: Vibracore			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

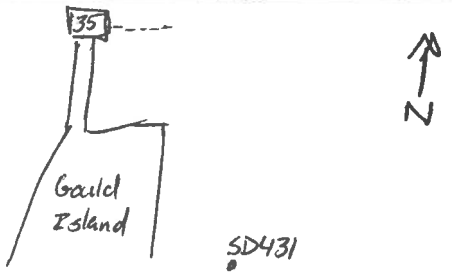
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

7' Water Depth

MAP:



Circle if Applicable:

MS/MSD: N/A
Duplicate ID No.: N/A

Signature(s):

M. Horton

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SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD431-0006
Sample Location: ~~SD3~~ SD431
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1301	0-6"	NO SAMPLE COLLECTED	
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

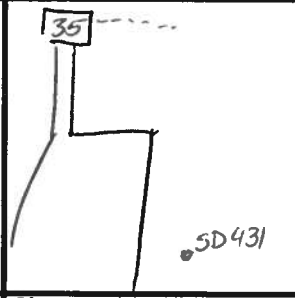
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

8.2'
-No recovery

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD432-0006
Sample Location: SD432
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1306	0-6"	Brown	Fine to medium grained silty sand with some small rock and shell fragments
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

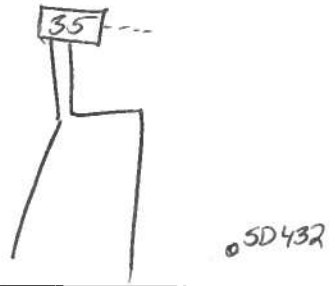
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
RIDEM Split	4°C	Ziplock	Yes	

OBSERVATIONS / NOTES:

16.6' Depth to sediment

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD433-0006
Sample Location: SD433
Sampled By:
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1320	0-6"	Brown	Fine to medium grained sandstone sand with small rocks and shell fragments
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

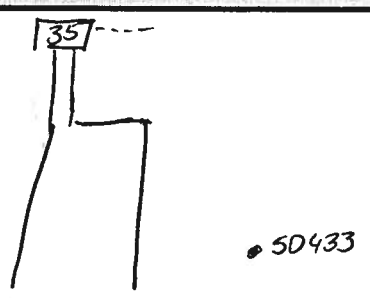
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	
RIDEM Split	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD434-0006
Sample Location: SD434
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1334	0-6"	Brown	Fine to medium grained silty sand with rocks up to 1" and shell fragments
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

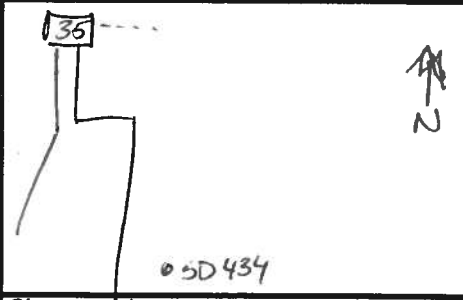
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

12.2' depth to sediment

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD435-0006
Sample Location: SD435
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1346	0-6"	Brown	Fine to medium grained silty sand with some small rocks and shell fragments
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

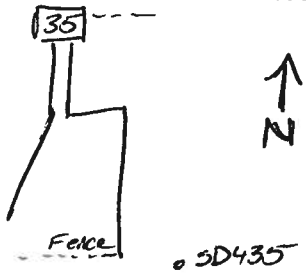
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	
RIDEM Split	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD436-0006
Sample Location: SD436
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1405	0-6"	Brown	Fine grained silty sand with few small rock and shell fragments
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

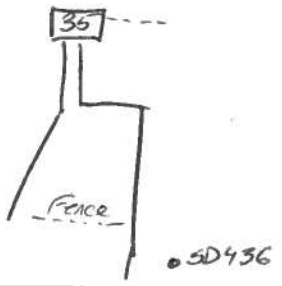
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	
RIDEM Split	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

7.4' - depth to sediment

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD437-0006
Sample Location: SD437
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1424	0-6	Brown	Fine to medium grained sand with some small well-rounded rocks and shell fragments
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

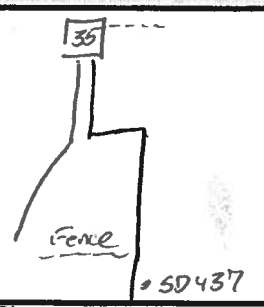
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	
RIDEM	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

4.0'

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD438-0006
Sample Location: SD438
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/21/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1430	0-6"	NO SAMPLE COLLECTED	
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

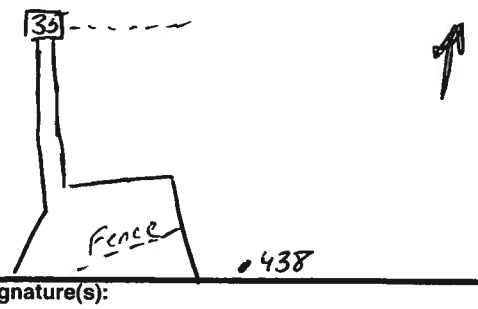
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

- No sample collected, hard bottom
- four grabs attempted, no recovery

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD439-0006
Sample Location: SD439
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/5/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1305	0-6	Black Grey	Fine to medium grained silty sand with organics, & shell fragments
Method: Vibracore			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

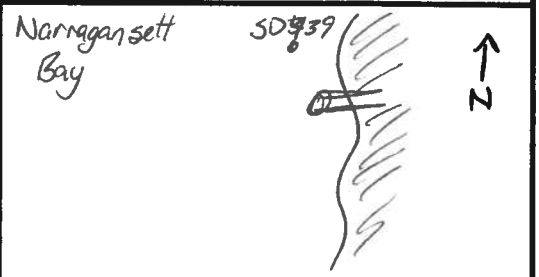
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

Water Depth ~ 3'

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Michael Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD439-0006
Sample Location: SD439
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/22/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1121	0-6"	NO SAMPLE COLLECTED	
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

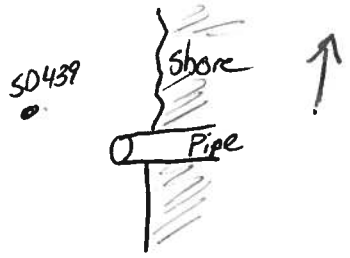
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

4' water depth
- No sample collected hard bottom, 7 grabs with ponar

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD440-0006
Sample Location: SD440
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/5/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1335	0-6"	Grey	Fine to coarse grained silty sand, well graded, with some shell fragments
Method: Vibracore			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

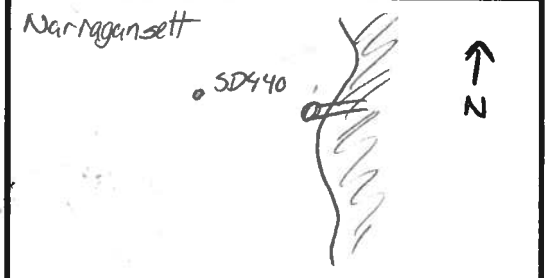
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

8' water ~~Depth~~

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Mil J. Hort

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD440-0006
Sample Location: SD440
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/22/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1125	0-6"	NO sample Collected	
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

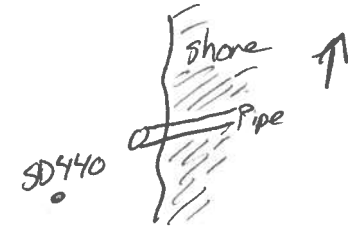
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

- No sample collected, no recovery, hard bottom
- 5 grabs
12.5' water depth

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Mike Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-~~SD444~~SD441-0006
Sample Location: SD441
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/5/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1350	0-6'	Grey Brown	Fine to coarse grained silty sand with many small shell fragments
Method: Vibracore			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

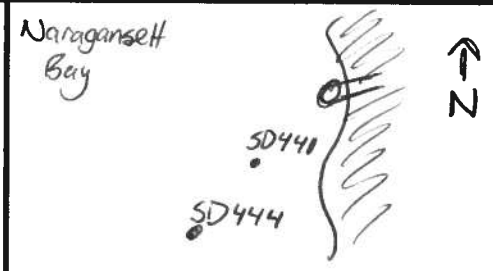
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

Water Depth 6'

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD441-0006
Sample Location: SD441
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/22/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1131	0-6	NO SAMPLE COLLECTED	
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES (NO)	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES (NO)	
PAHs	4° C	1 - 8oz wide mouth jar	YES (NO)	

OBSERVATIONS / NOTES:

- 8.1' water depth
- No sample collected, hard bottom, No recovery

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD442-0006
Sample Location: SD442
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/5/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1415	0-6"	Black	Fine to medium grained silty sand with organics, round rocks and shell fragments up to 1"
Method: Vibracore			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

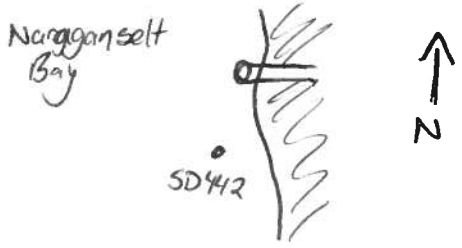
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

2' water depth

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Michael Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD442-0006
Sample Location: SD442
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/22/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1142	0-6"	NO SAMPLE COLLECTED	
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

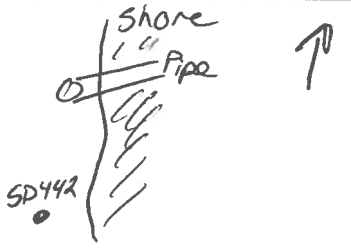
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

5.4' water depth
- No sample collected, eelgrass was too thick and sediment could not be reached after 7 grabs

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

M. Horton

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD443-0006
Sample Location: SD443
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/22/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1150	0-6"	Grey Brown	Silty, Fine to medium grained sand with shell fragments
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

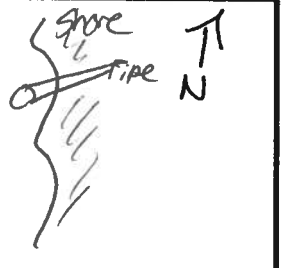
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
RIDEM Split	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

10.3 water depth

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

MH Hort

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD444-0006
Sample Location: SD444
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/22/09	Depth Interval	Color	Description (Sand, Silty, Clay, Moisture, etc.)
Time: 1205	0-6"	Grey Brown	Silty Fine to medium grained sand with many shell fragments & shells
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

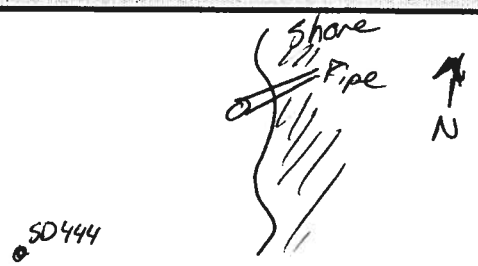
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
RIDEM Split	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

14.1' Water depth

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	~~DUP~~ DUP02

Signature(s):

Mark Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GE-SD445-0006
Sample Location: SD445
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/22/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1220	0-6"	Grey Brown	Silty Fine to medium grained ~~shell fra.~~ sand with lots of shell fragments & shells
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

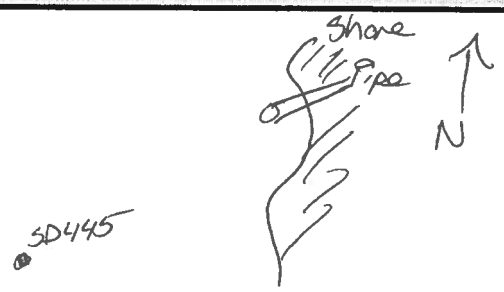
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
RIDEM Split	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

23.6' water depth

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD446-0006
Sample Location: SD446
Sampled By:
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/22/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0940	0-6"	Grey Brown	sandy silt with fine to coarse grained sand, rocks 1-5", few shell fragments
Method: Grab Shovel			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

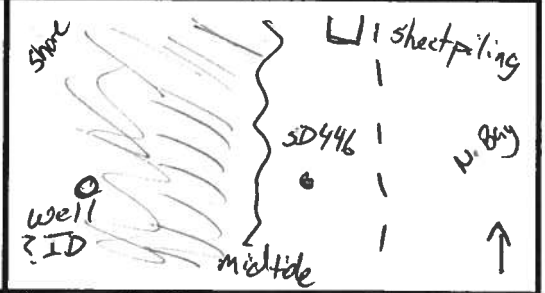
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	3 1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	6 2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	3 1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

Triple volume collected for Lab QC
- NO RIDEM split collected, not enough volume

MAP:



Circle if Applicable:

(MS/MSD)

Duplicate ID No.: Not

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD447-0006
Sample Location: SD447
Sampled By: M Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/22/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1000	0-6	Brown/Grey	Sandy silt with fine to coarse grained sand, rocks up to 5", few shell fragments
Method: Grab Shovel			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

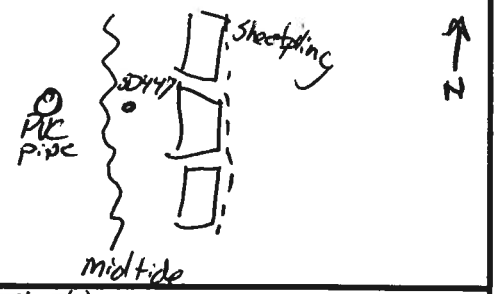
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 ~~3~~ ~~1~~ - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 ~~6~~ ~~2~~ - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 ~~3~~ ~~1~~ - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

6" of water
- NO RIDEM split collected - not enough material

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	DUP01

Signature(s):

M Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD448-0006
Sample Location: SD448
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/2a/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1015	0-6"	NO SAMPLE COLLECTED	
Method: Grab Shovel			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	

OBSERVATIONS / NOTES:

NO sample collected - could not access area with boat and onshore area was well above high tide mark with large stones present on surface that could not be moved by hand

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Michael J. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD449-0006
Sample Location: SD449
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/22/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: ~~1220~~ 1020	0-6"	Grey	-Sandy silt with fine to coarse grained sand and rocks up to 6"
Method: Grab Shovel			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

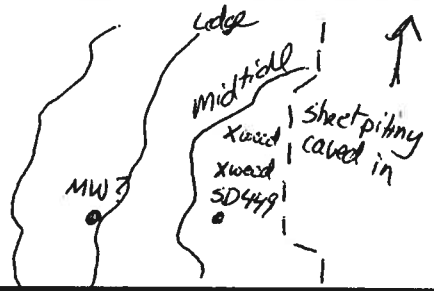
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

6" water depth
- sheen on water during sediment collection
- sheen on sediment
- strong petroleum odor
- NO RIDEM split collected - did not want ziplock bag with this sediment in cooler

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD450-0006
Sample Location: SD450
Sampled By:
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/22/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1050	0-6	Grey	Sandy Silt, fine to coarse grained with rocks from 1-5"
Method: Grab Shovel			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

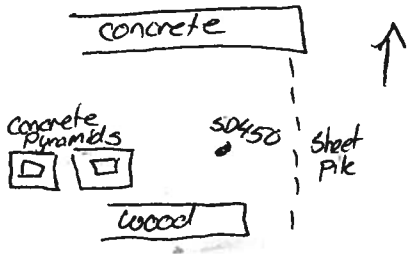
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	

OBSERVATIONS / NOTES:

- No RIDEM split collected not enough material
- 6" water depth

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-JPC01-0006
Sample Location: JPC01
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/23/09 Time: 0903 Method: Grab Ponar Monitor Reading (ppm): N/A	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0-6''	Brown Grey	Fine grained sand, little silt, few shells and shell fragments

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

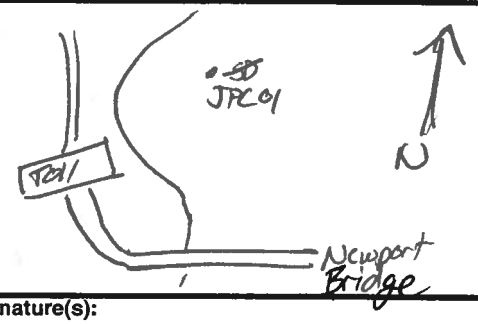
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	
REDEM SPLIT	4°C	Ziplock Bag	~~YES~~ NO	

OBSERVATIONS / NOTES:

23.5' water depth

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	DUP03

Signature(s):

Mark A Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-JPC02-0006
Sample Location: JPC02
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/23/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0925	0-6"	Brown Grey	Fine grained silty sand w/ lots of shell fragments
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

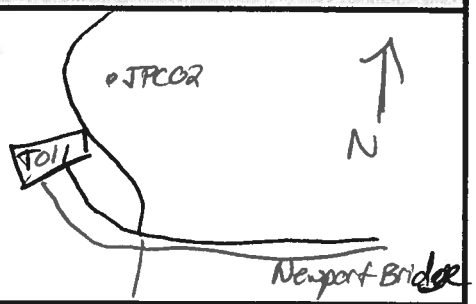
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	
REDEM Split	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

16.7 water depth
sediment surface blanketed with shells

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-JPC03-0006
Sample Location: JPC03
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/23/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0947	0-6"	Brown Grey	fine grained sand with little silt, few shells and shell fragments, well graded
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

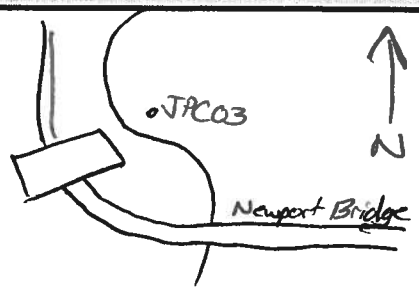
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
RIDEM Split	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

10.1' water depth

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-JCC04-0006
Sample Location: JCC04
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/23/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1010	0-6"	Brown Grey	Fine to medium grained sand with little silt, few shells, well graded
Method: Grab Ponar			
Monitor Reading (ppm): N/A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

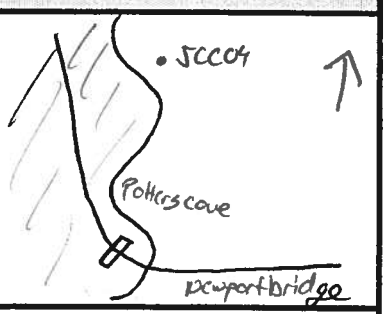
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	
RIDEM Split	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

19.1 water depth

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-JCC01-0006
Sample Location: JCC01
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/23/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1026	0-6"	Brown Grey	Fine grained silty sand with Rew shell fragments, well graded
Method: Grab Ponar			
Monitor Reading (ppm): N.A			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

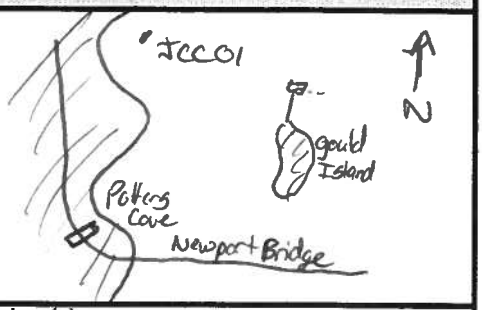
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	(YES) / NO	
PAHs	4° C	1 - 8oz wide mouth jar	(YES) / NO	
FIELD DEM SPLIT	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

25.4' water depth

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-ICCC2-0006
Sample Location: JCC02
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 9/23/09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1050	0-6"	Brown Grey	Fine grained silty sand with few shell fragments, well graded
Method: Grab Ponar			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

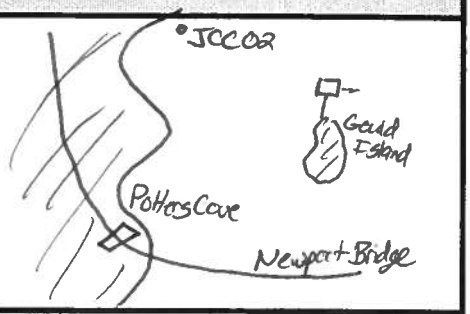
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCBs	4° C	1 - 8oz wide mouth jar	YES / NO	
TAL Metals	4° C	2 - 4oz wide mouth jar	YES / NO	
PAHs	4° C	1 - 8oz wide mouth jar	YES / NO	
RIDEM Split	4°C	Ziplock Bag	Yes	

OBSERVATIONS / NOTES:

29.4' Water Depth

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N/A	N/A

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: Gould Island Phase II RI
Project Number: 112G00949
Sample Location:
QA Sample Type:

Sample ID Number: GI-SD-RB04-1009
Sampled By: LA
C.O.C. Number:

[ ] Trip Blank
[ ] Source Water Blank (Field Blank)
[X] Rinsate Blank
[ ] Other Blank

SAMPLING DATA:

Date: 10/14/09 to 10/16/09
Time: 1100
Method: Direct Pour

WATER SOURCE:

[X] Laboratory Prepared
[X] Purchased
[ ] Other
[ ] Tap
[ ] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Reagent Grade Water (DIUF)
Supplier: Thermo Scientific
Manufacturer: NERL
Order Number: 40906089 3867
Lot Number: 0505119
Expiration Date: 5/2010

RINSATE INFORMATION (If Applicable):

Media Type: ~~Groundwater~~ Sediment
Equipment Used: stainless steel bowl and trowel
Equipment Type:
[ ] Dedicated
[X] Reusable
[ ] Disposable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	3 X 40 mL vials	YES / (NO)
SVOC		2 x 1 liter amber glass jars	YES / (NO)
PAH		2 x 1 liter amber glass jars	(YES) / NO
Pesticides		2 x 1 liter amber glass jars	YES / (NO)
PCBs		1 X 1 liter amber glass jars	(YES) / NO
Metals (filtered/(unfiltered))	HNO3	1 X 500 mL poly bottle	(YES) / NO
Salintiy		1 x 250 mL poly bottle	YES / (NO)

OBSERVATIONS / NOTES:

Signature(s):
Lori Anderson

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: Gould Island Phase II RI
Project Number: 112G00949
Sample Location:
QA Sample Type:

Sample ID Number: GI-SD-FB05-1009
Sampled By: LA
C.O.C. Number:

[ ] Trip Blank
[ ] Source Water Blank (Field Blank)
[X] Rinsate Blank
[ ] Other Blank

SAMPLING DATA:

Date: 10/14/09
Time: 1120
Method: Direct Pour

WATER SOURCE:

[ ] Laboratory Prepared
[X] Purchased
[ ] Other
[ ] Tap
[ ] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Reagent Grade Water (DIUF)
Supplier: Thermo Scientific
Manufacturer: NERL
Order Number: 40906080386?
Lot Number: 050519
Expiration Date: 5/2010

RINSATE INFORMATION (If Applicable):

Media Type: ~~Groundwater~~ Sediment
Equipment Used: stainless steel bowl and trowel
Equipment Type:
[ ] Dedicated
[X] Reusable
[ ] Disposable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCL	3 X 40 mL vials	YES / (NO)
SVOC		2 x 1 liter amber glass jars	YES / (NO)
PAH		2 x 1 liter amber glass jars	(YES) / NO
Pesticides		2 x 1 liter amber glass jars	YES / (NO)
PCBs		2 x 1 liter amber glass jars	(YES) / NO
Metals (filtered/unfiltered)	HNO3	2 x 500 mL poly bottle	(YES) / NO
Salintiy		1 x 250 mL poly bottle	YES / (NO)

OBSERVATIONS / NOTES:

Signature(s): Lori Anderson

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Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD304-0006
Sample Location: SD304
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0950	0-6	Brown	Fine to medium grained sand with trace silt and some gravel up to 1"
Method: Core			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

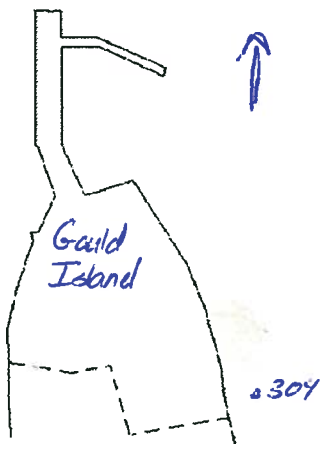
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / (NO)	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / (NO)	

OBSERVATIONS / NOTES:

located at fenceline 30' off shore near buoy

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD311-0006
Sample Location: SD311
Sampled By: MHorton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/16	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0913	0-6"	Brown Grey	Fine to coarse grained sand w/ trace silt. some gravel up to 1"
Method: Core			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

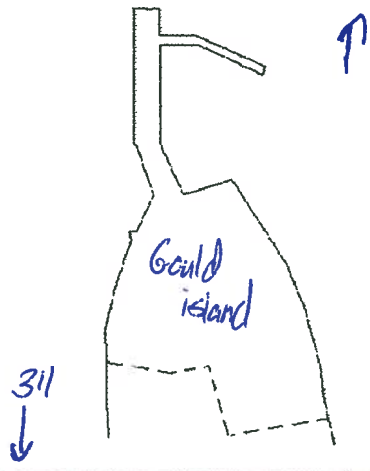
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES (NO)	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / (NO)	

OBSERVATIONS / NOTES:

Located in front of abandoned brick building with small smoke stack about mid coast west side

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD429-0006
Sample Location: 429
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/4/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0835	0-6"	Brown	medium to coarse grained sand w/ some shell fragments
Method: Ponar	14' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

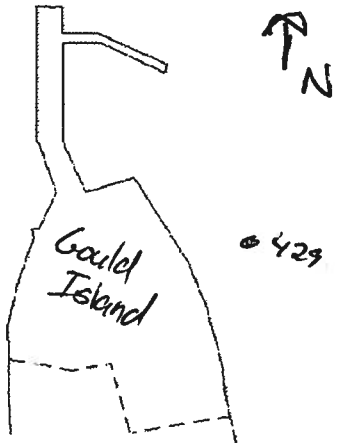
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / (NO)	

OBSERVATIONS / NOTES:

- located 60-70' East of SD309 did not have coordinated make up sample from the hull

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD438-0006
Sample Location: SD438
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1030	0-6	Brown Grey	Medium to coarse grained sand w/ trace silt and shell fragments
Method: Core			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

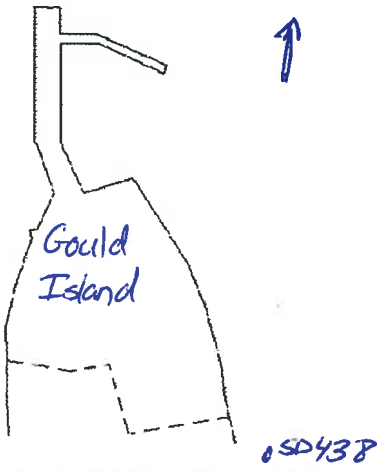
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / (NO)	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / (NO)	

OBSERVATIONS / NOTES:

- 75-100' south of the fence about 40' offshore
- Lab QC collected here

MAP:



Circle If Applicable:

(MS/MSD)

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD501-0006
Sample Location: 406
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1025	0-6"	Dark Grey	silt w/ trace fine to medium grained sand, many shell frags. and debris (moist)
Method: Ponar	24.2' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

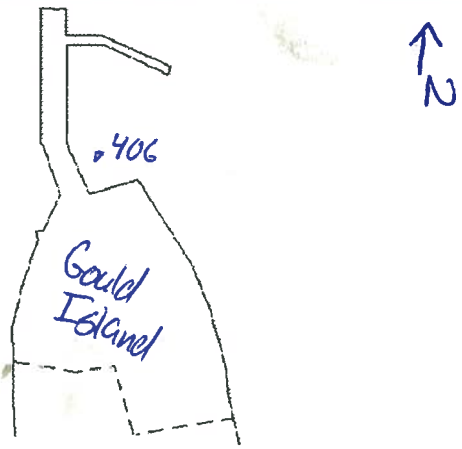
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- location was moved 15' west because sediment was not recovered at original location

MAP:



Circle If Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s): Mark Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD502-0006
Sample Location: 402
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/3/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0910	0-6"	Brown	- Fine to coarse grained sand w/ trace silt, many shell fragments
Method: Ponar	17.2 WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- Mussels & Hermit Crabs observed at this location
- Sheen observed on water that was in the sample bowl

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD503-0006
Sample Location: 419
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1045	0-6"	Brown	Sandy silt w/ fine to medium grained sand, many shell fragments few small stones up to 1"
Method: Ponar	28' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

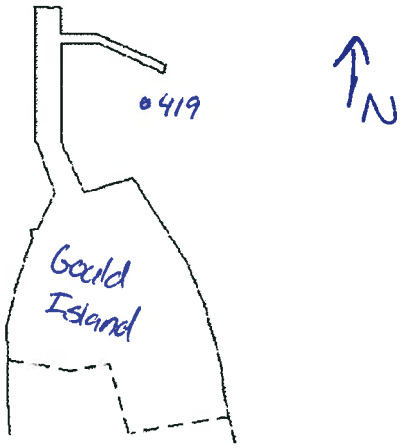
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD504-0006
Sample Location: 413
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0825	0-6"	Dark Grey	Silt with some fine to medium grained sand, rocks up to 4", some shell fragments some organics and very saturated
Method: Ponar	27' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

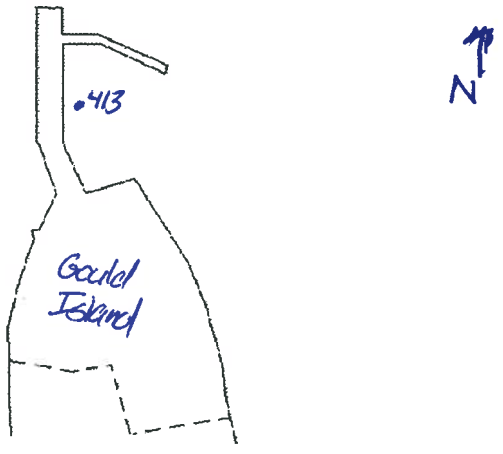
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) NO	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD505-0006
Sample Location: 404
Sampled By: M. Horan
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/4/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0805	0-6"	Brown/Grey	Silt with some fine grained sand and many shell fragments
Method: Poner	23' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

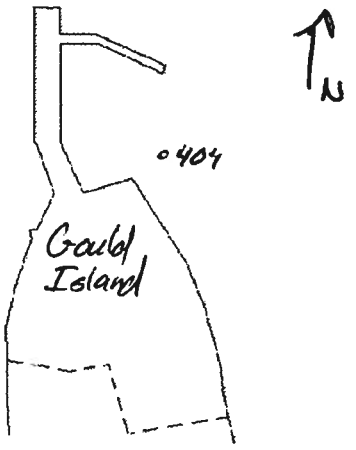
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- original location yielded only shell frags, no sediment so location was moved about 20' East to find sediment
- second attempt

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.:
Sample Location: 404
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1110	0-6"	N.A	-Shell fragments, hermit crabs, small green crab, rocks up to 3" little to no silt or sand
Method: Ponar	24' WD		
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

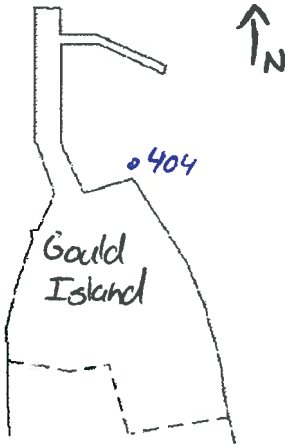
Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / NO	

OBSERVATIONS / NOTES:

- No sample collected - nothing to sample but shells & rocks

- Original attempt, see other sample log sheet for sample details GI-SD505-0006

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD506-0006
Sample Location: 408
Sampled By: MH
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/4/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0750	0-6"	Grey / Dark Grey	Silt with some fine grained sand - trace organics - some shellfish & shell frags.
Method: Ponar	23.9' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

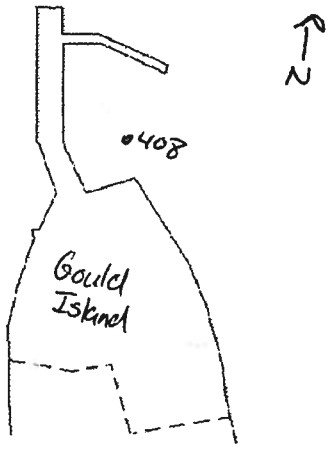
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) NO	

OBSERVATIONS / NOTES:

- Hermit crabs observed in sample

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD507-0006
Sample Location: 410
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0840	0-6"	Dark Grey	silt w/some fine to medium grained sand organics, rocks up to 2", shell fragments very saturated
Method: Ponar Dredge			
Monitor Reading (ppm): NA	26' WD		

COMPOSITE SAMPLE DATA:

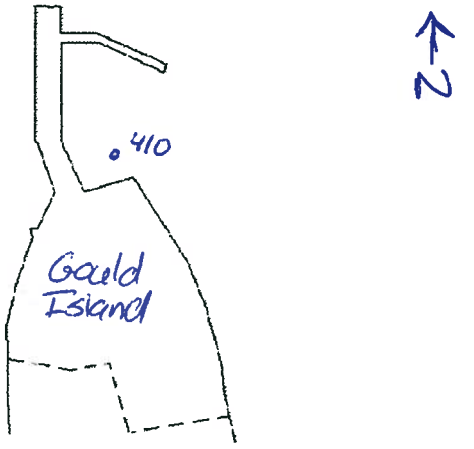
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD508-0006
Sample Location: 508
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/3/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0940	0-6"	Brown	-Fine to medium grained sand with trace silt and many shell frags
Method: Ponar	13.7' WD		
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

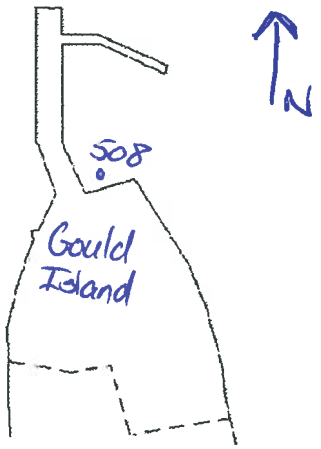
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / NO	

OBSERVATIONS / NOTES:

- Mussels & Hermit crabs observed at this location
- Sheen observed on water in sample bowl
- This location was 509 on orginal list but 509 was already used for SD411 so it was changed to 508

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	GI-SD-DUP02-050310

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-~~SD509~~ SD509-0006
Sample Location: 411
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0955	0-6"	Dark grey	Silt with some fine to medium grained sand, some rocks up to 1.5" and some shell fragments
Method: Ponar	25.5' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

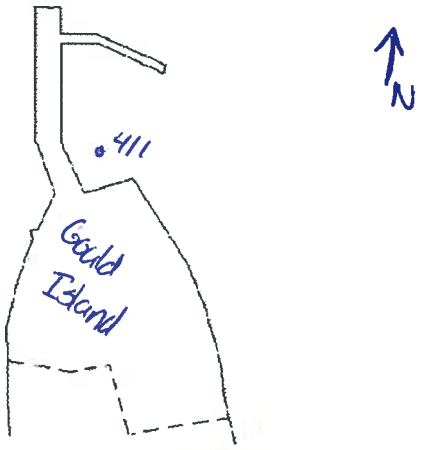
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- Hermit crabs observed in this location

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: ~~DUP01~~ GI-SD-DUP01-043010

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD510-0606
Sample Location: 310D
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1135	0-6"	Brown	Fine to medium grained sand with few large stones up to 4" - many small shell fragments
Method: Ponar	9.5' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

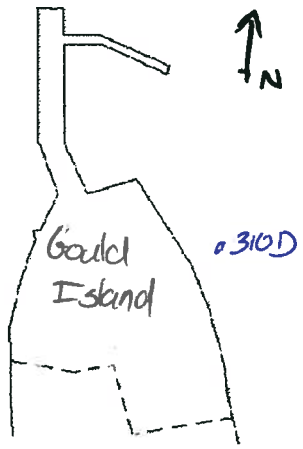
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- Moved 10' east from 310 center location

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD511-0006
Sample Location: 304F
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1415	0-6"	Grey Brown	-Fine grained silty sand w/ organics (eel grass) - many small shell fragments
Method: Ponar	8' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

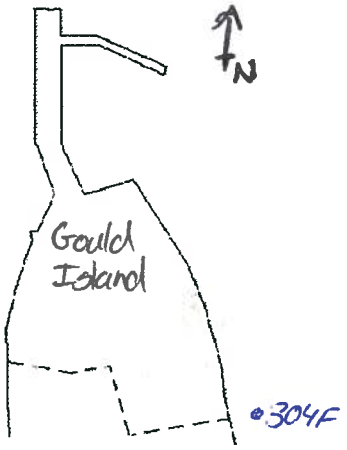
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- Two scoops were to obtain ~~core~~ needed volume
- located about 40' east of GPS coordinated because location was onshore beneath large rocks

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD572-0606
Sample Location: 309F
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10 Time: 1100 Method: Diver Monitor Reading (ppm): NA	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0-6"	Brown Grey	Fine to medium grained sand w/ trace silt and some shell hash

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

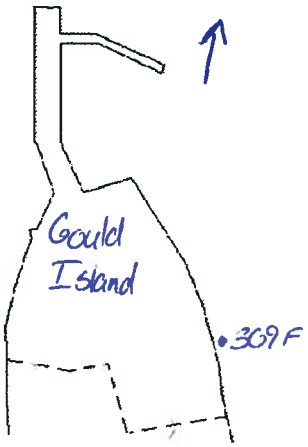
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- Sample collected against concrete blocks about 5' off shore, about 15-20' south of Northend of large stony Beach
- Collected in 5' radius
- Divers observed rusty outfall pipe in area

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.:
Sample Location: 309F
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1200	0-6"		
Method: Ponar			
Monitor Reading (ppm):	8' WD		

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / NO	

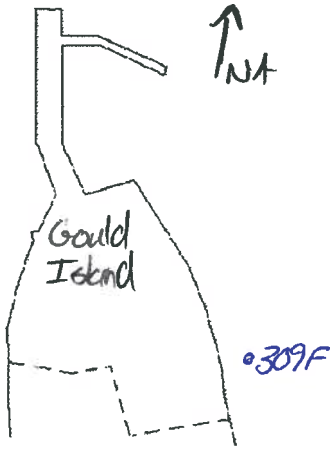
OBSERVATIONS / NOTES:

No sample collected - 4 attempts w/ ponar - no recovery - a couple large stones; some red seaweed and eelgrass

- sample ~~cette~~ attempted as close to shore as possible to get near outfall about 30' ~~from~~ East of Coordinates

-Sediment sample collected on 5/13/10 see GI-SD512-0006 sample log sheet

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD513-0006
Sample Location: 309A
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: ~~HH~~ 1110	0-6	Brown	Fine to medium grained sand with trace silt and lots of shell fragments
Method: Diver			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

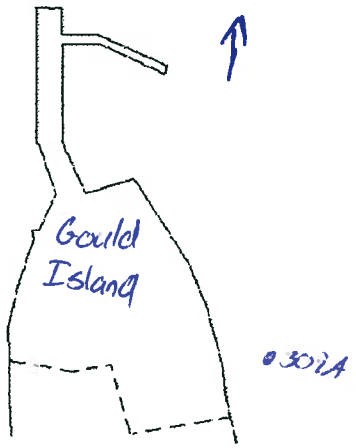
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- station located 50' off shore perpendicular to 309F
- collected in 1 patch of sand

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.:
Sample Location: 309A
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1210	0-6"		
Method: Ponar	10' WD		
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

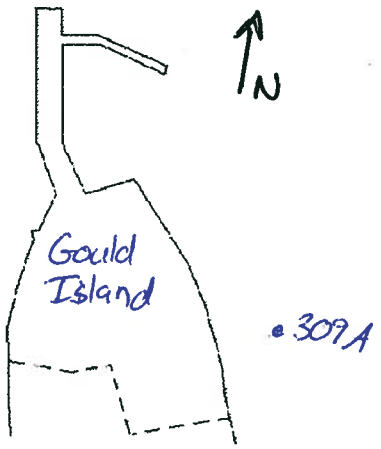
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / (NO)	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / (NO)	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / (NO)	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / (NO)	

OBSERVATIONS / NOTES:

- No sample collected - no recovery
- recovered some red seaweed and little eelgrass, some big stones up to 6"
- Sediment sample collected on 5/13/10 see GI-SD513-0006 log sheet for details

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD514-0006
Sample Location: 432
Sampled By: MH
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1320	0-6"	Dark grey	-Silt w/ trace fine sand some rocks up to 2" and many shells and shell fragments
Method: Ponar	16.4' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

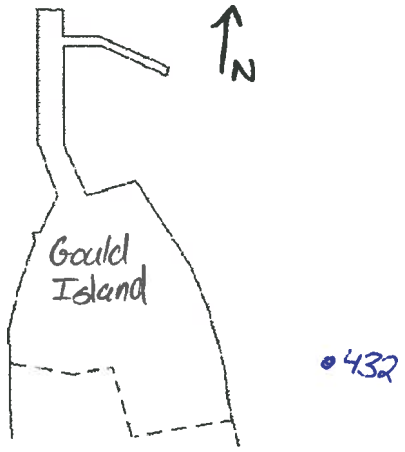
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

Lab QC collected at this location

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
Lab QC	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD515-0006
Sample Location: 434
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1345	0-6"	Brown Grey	Silt with trace fine sand, mostly shells & shell fragments
Method: Ponar	13' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

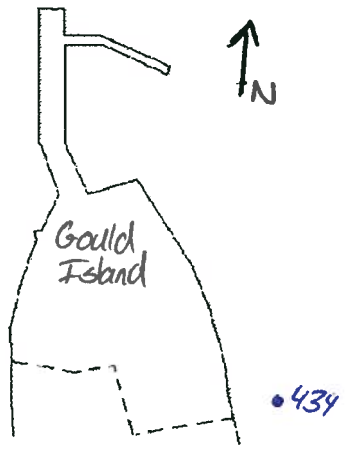
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD517-0006
Sample Location: 437
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1200	0-6	Brown	Fine to coarse grained sand w/ trace silt and some shell hash
Method: Diver			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) NO	

OBSERVATIONS / NOTES:

- location 70' south of range line about 20' offshore - water depth 4.5'
- 8' circle diameter

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	GI-SD DUP03-051310

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.:
Sample Location: 437
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1015			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES (NO)	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES (NO)	
Grain Size	4° C	1 - 8oz wide mouth jar	YES (NO)	
Toxicity	4° C	1 - 1 Gal. Bucket	YES (NO)	

OBSERVATIONS / NOTES:

- No sample collected. refusal after 4 attempts w/ ponar
- sample collected on 5/13/10 see GI-SD517-0006 for details

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD578-0006
Sample Location: 447
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/3/10 Time: 0830 Method: Hand dig Monitor Reading (ppm): NA	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0-6"	Grey	- Fine to coarse grained sand w/ trace silt & stones up to 3"

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

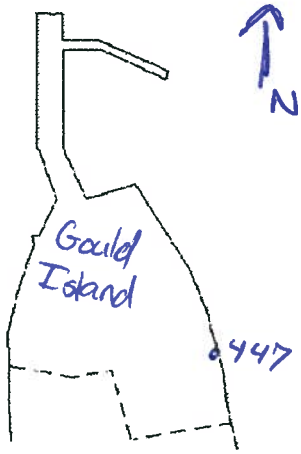
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- location on shore, had to move large rocks to find sediment

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD519-0006
Sample Location: 519
Sampled By: M. Hoag
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/4/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0855	0-6"	Brown/Grey	-Fine to medium grained sand w/ trace silt and many small shell frags.
Method: Ponar	14' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

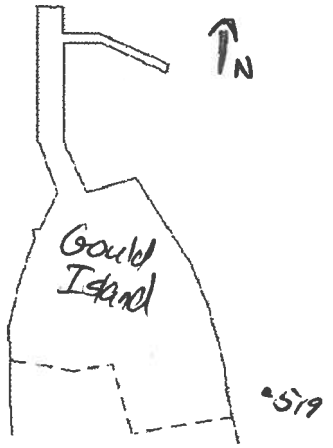
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) NO	

OBSERVATIONS / NOTES:

- 3 scoops to obtain full volume
- 50' East of 304 F

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s): M. Hoag

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD520-0006
Sample Location: SD 308E
Sampled By: MH
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1315	0-6	Brown	Fine to coarse grained sand w/ trace silt and some shell fragments
Method: Diver			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

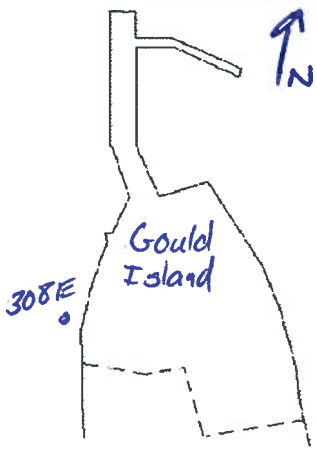
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) NO	

OBSERVATIONS / NOTES:

- Sample collected 30-40' offshore in same location as 308F
- Water Depth 6'

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.:
Sample Location: 308E
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

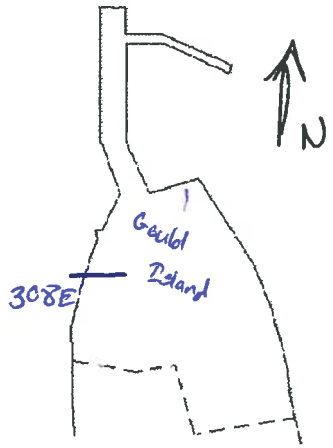
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES (NO)	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES (NO)	
Grain Size	4° C	1 - 8oz wide mouth jar	YES (NO)	
Toxicity	4° C	1 - 1 Gal. Bucket	YES (NO)	

OBSERVATIONS / NOTES:

- No sample collected - Refusal, no recovery after 4 attempts w/ponar
- Sediment sample collected on 5/13/10 see GI-SD520-0006 sample log sheet for Details

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD521-0006
Sample Location: 308F
Sampled By: M Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1305	0-6	Brown	Fine to coarse grained sand w/ trace silt and some shell hash
Method: Diver			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

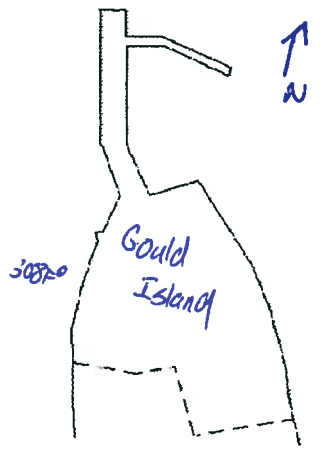
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) NO	

OBSERVATIONS / NOTES:

- Sample collected 15' off shore at small 8" pipe outfall
- Water Depth 5'

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.:
Sample Location: 308F
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / NO	

OBSERVATIONS / NOTES:

- No sample, No recovery after 4 attempts w/ Ponar
- Sediment sample collected on 5/13/10 see GI-SD521-0006 sample log sheet for details

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD522-0006
Sample Location: SD313D
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1335	0-6	Brown	Fine to coarse grained sand w/ trace silt some shell fragments
Method: Diver			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

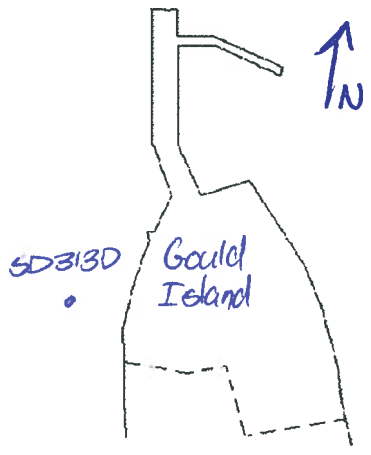
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- Sample collected 25-30' off shore from 14" outfall pipe
- Water Depth 5'

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.:
Sample Location: 313D
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

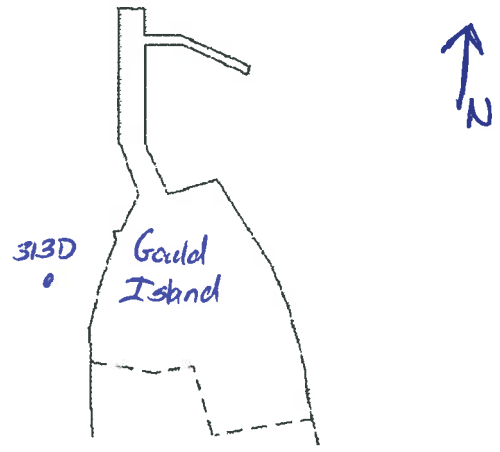
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / NO	

OBSERVATIONS / NOTES:

No sample collected - refusal after 4 attempts w/ ponar
- Sediment sample collected on 5/13/10 see GI-SD522-0006 for details

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD523-0006
Sample Location: SD313F
Sampled By: M.Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1345	0-6	Brown	Fine to coarse grained sand and some small gravel
Method: Diver			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

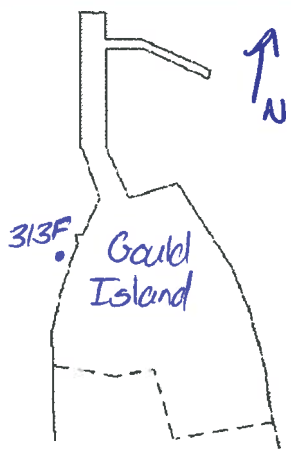
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / NO	

OBSERVATIONS / NOTES:

- Sample collected 10' offshore from 14" outfall pipe
- water depth 1.5'

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
N.A	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.:
Sample Location: 3|3F
Sampled By:
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/3/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

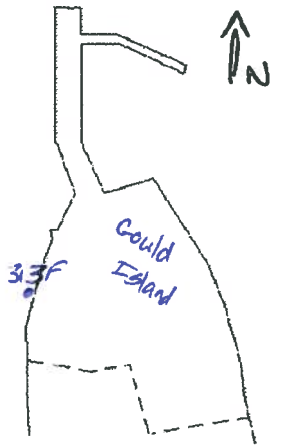
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / NO	

OBSERVATIONS / NOTES:

No sample collected - refusal after 4 attempts w/ Ponar
- Attempted to collect sample about 20' west of original location because of water level
- Sediment sample collected on 5/13/10 see GI-SD523-0006 sample log sheet for details

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD524-0006
Sample Location: JPC 01
Sampled By: M. Horten
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/3/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1115	0-6"	Grey Brown	Fine grained silty sand with few shell fragments
Method: Ponar	25.3 WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

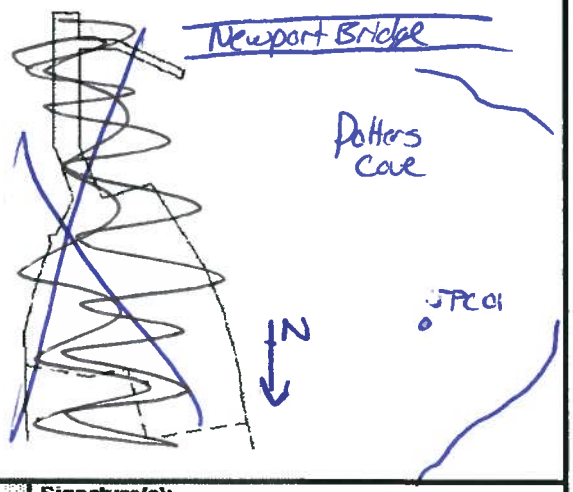
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- sample collected in potters cove near the West end of the Newport Bridge in Jamestown RI

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: GI-SD-525-0606
Sample Location: SPC 02
Sampled By: M. Hartley
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/3/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1135	0-6"	Grey	- Silt w/ some fine grained sand some shell frags
Method: Ponar	18.1'		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings				
(Range in ppm):				

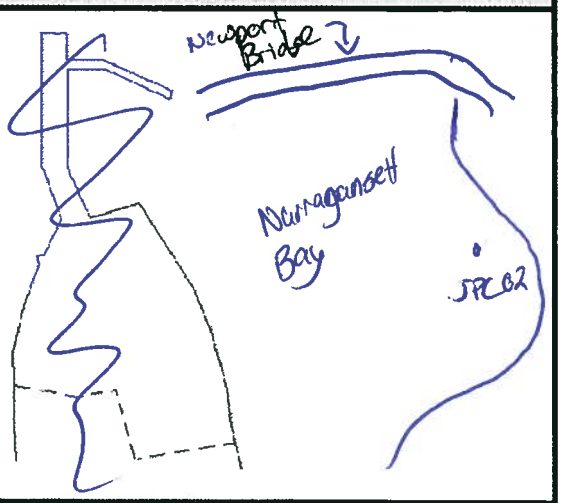
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / NO	

OBSERVATIONS / NOTES:

- Many shellfish observed in sample

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD526-0006
Sample Location: JCC 04
Sampled By: MH
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/3/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1205	0-6"	Grey	Fine grained sand with some silt and shell fragments
Method: Ponar	20' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

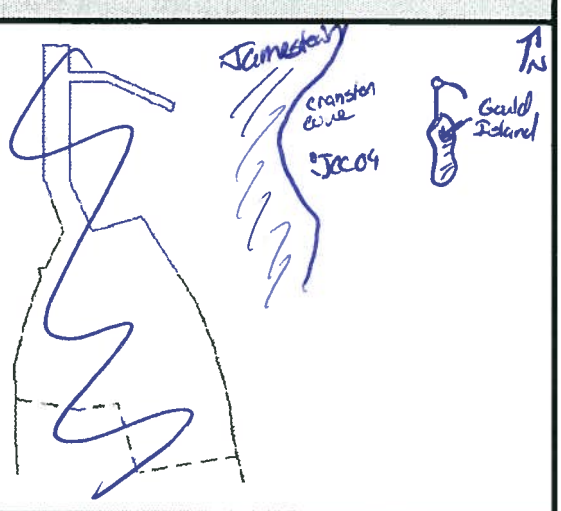
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- Cranston cove - due West from Gould Island

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD527-0006
Sample Location: 414
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0810	0-6"	Grey/Brown	Silt with some fine to medium grained sand and rocks up to 4" - trace shell fragments - very saturated
Method: Ponar Grab	26' water Depth		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD528-0006
Sample Location: ~~SD4~~ SD306B
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1145	0-6"	Brown/Grey	Fine to Medium grained sand w/ some silt
Method: Diver			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

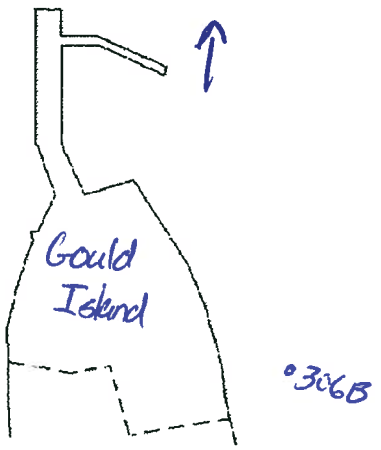
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- Station located 60' to East of SD306F
- One patch eelgrass
1015 WD

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s): M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.:
Sample Location: 306B
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1315	0-6"		
Method: Ponar	8' WD		
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

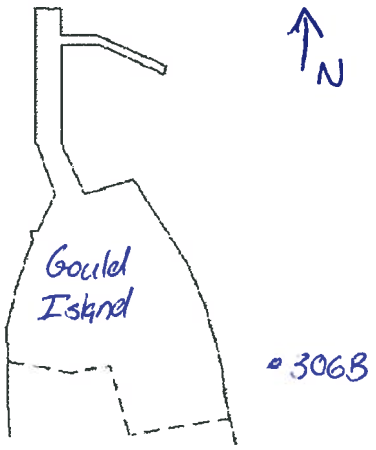
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / NO	

OBSERVATIONS / NOTES:

- No sample No recovery 4 attempts
- sample collected on 5/13/10 see GI-SD528-0006 for details

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD529-0006
Sample Location: 314
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/4/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0910	0-6"	Grey	Fine to medium grained silty sand with some organics and many small shell frags
Method: Poner	9.9' WD		
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

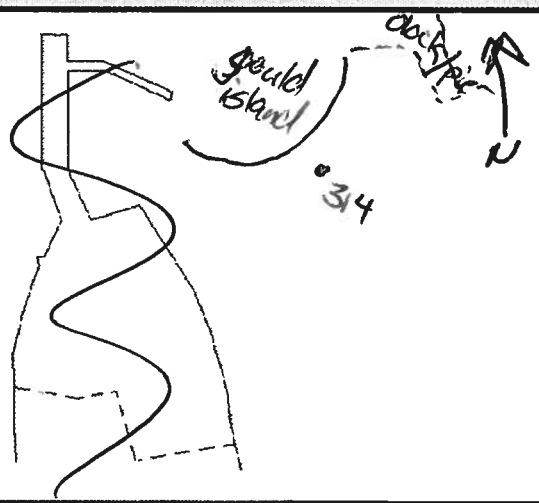
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) / NO	

OBSERVATIONS / NOTES:

- Collected on south end of Gould Island
- Spider Crab observed at this location

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD530-0006
Sample Location: 317
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1240	0-6	Brown Black	-Fine to coarse grained silty sand with some silt and shell hash
Method: Diver			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) NO	

OBSERVATIONS / NOTES:

- Water Depth 8.5'
- location in front of area where sheet piling & concrete have caved in towards island
- collected 15' off shore

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.:
Sample Location: 317
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1120	0-6"		large rocks up to 6"
Method: Ponar	8'		
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / NO	

OBSERVATIONS / NOTES:

- No sample collected - no recovery in ponar accept red seaweed (fine and fluffy) tried moving east about 15' still no recovery
- sample collected on 5/13/10 see GI-SD530-0006 for details

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): M. Horton

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-50531-0006 ~~36~~
Sample Location: 306F
Sampled By: M. Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/13/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: ~~1127~~ 1135	0-6	Brown Grey	Fine to Medium Grained silty sand
Method: Diver			
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

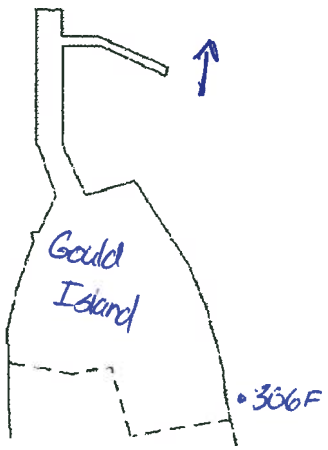
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / NO	

OBSERVATIONS / NOTES:

- ~~Located at end of outfall pipe 10' north of intact concrete on sheet piling about 10' off shore~~
- located 30-40' offshore at end of underwater discharge pipe that comes off shore about 30' N of intact concrete on sheetpiling
  10' water Depth
- Two patches of seal 3' apart
  eel grass

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.:
Sample Location: 306F
Sampled By: M. Horton
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1305	0-6		
Method: Ponar	7' WD		
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

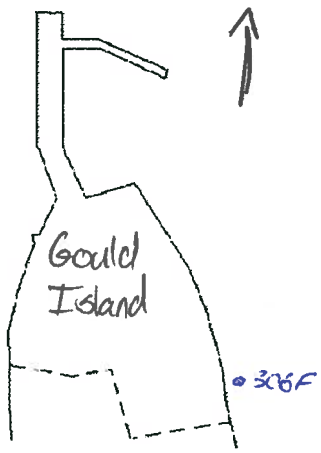
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / NO	

OBSERVATIONS / NOTES:

No sample - NO Recovery 4a Hempts
- only recovered red fluffy seaweed
- attempted about 30' East of GPS coordinates because coordinates were on land and there were large stones
- sample collected on 5/13/10 see GI-50531-0006 for Details

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

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Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD532-0006
Sample Location: 401
Sampled By: M Horton
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 5/3/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0850	0-6"	Brown	Fine to medium grained sand w/ trace silt and many shell frags
Method: Ponar	13.2' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

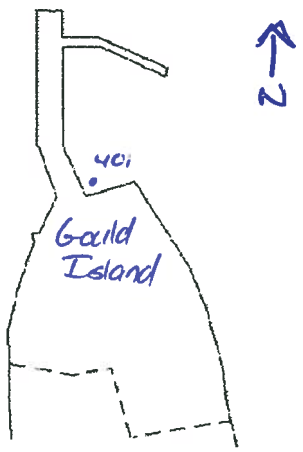
SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	(YES) NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	(YES) NO	
Grain Size	4° C	1 - 8oz wide mouth jar	(YES) NO	
Toxicity	4° C	1 - 1 Gal. Bucket	(YES) NO	

OBSERVATIONS / NOTES:

- hermit crabs & mussels observed at this location
- Sheen observed ~~in~~ on water in the sample bowl

MAP:



Circle If Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Gould Island, Phase II RI, Jamestown RI
Project No.: 112G00949.0330

Sample ID No.: GI-SD566-0006
Sample Location: 435
Sampled By: MH
C.O.C. No.:

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 4/30/10	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1400	0-6"	Brown Grey	Silty fine grained sand with many tiny shell fragments, little organics and few stones up to 1"
Method: Ponar	12' WD		
Monitor Reading (ppm): NA			

COMPOSITE SAMPLE DATA:

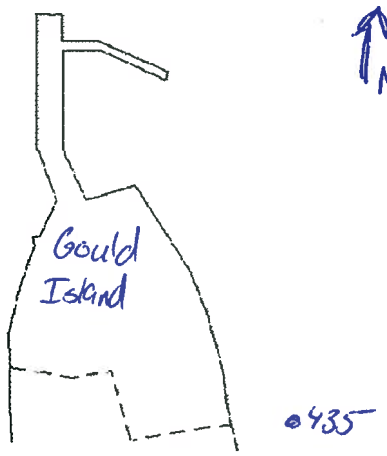
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	Other
PCB homologes, 8270 PAH	4° C	1 - 4oz wide mouth jar	YES / NO	
Metals, TOC, % Solid	4° C	1 - 4oz wide mouth jar	YES / NO	
Grain Size	4° C	1 - 8oz wide mouth jar	YES / NO	
Toxicity	4° C	1 - 1 Gal. Bucket	YES / NO	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s):

B-5 BIOTA SAMPLE LOG SHEETS

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 402
Sample ID: GI-ET502-0510
Sampler(s): M. Horton

Project Number: 112G00949
Date: 5/26/10 Time: 1110
Weather: 75° Sun, light breeze out of South
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Mussels
Method: Diver Grab

Total # of specimens: 25

	Length mm	Girth mm	Weight
1	51	18	
2	57	19	
3	68	23	
4	60	23	
5	61	22	
6	56	18	
7	55	20	
8	63	25	
9	54	21	
10	64	23	

Total:

Remarks on Condition:

Length	Girth	Length	Girth
61	21	56	20
63	22	50	17
61	22	53	17
57	20	46	18
65	25	75	27
59	21	57	20
20 ↔ 51			
55	18		
49	19		

SAMPLE DESCRIPTION

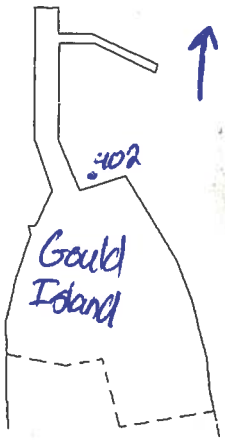
~~Circle If Applicable:~~
Lab QC DUP NA

Type: Whole
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	Whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Size: g /oz

MAP:



Observations / Notes:

starfish - lots of shellhash
- Lab QC

Signatures:

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Project Number: 112G00949
Sample Location: 413
Date: 5/26/10
Time: 1000
Sample ID: GI-ET564-0510
Weather: SUN 75° light breeze out of south
Sampler(s): M. Horton
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Clams
Method: Diver Grab
Total # of specimens: ~~85~~ 89

	Length mm	Girth mm	Weight
1	36	19	
2	~~44~~	24	
3	41	24	
4	43	23	
5	38	21	
6	40	23	
7	36	18	
8	39	19	
9	39	21	
10	32	16	

Total:

Remarks on Condition:

Length	Girth	Length	Girth
~~44~~	23	30	15
35	18	33	16
42	25	30	15
35	18		
33	17		
33	15		
30	15		
29	14		
33	19		

SAMPLE DESCRIPTION

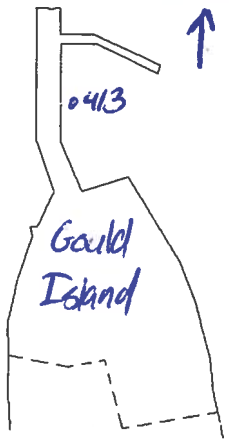
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Type: ~~Whole~~
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



Observations / Notes:

Water Depth 32'
- bottom slopes up as they moved east
- saw starfish
- lobsters, hermit crabs, some dead crabs
- Debris including Tires & Booms

Signatures:

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 404
Sample ID: GI-ET505-0510
Sampler(s): M. Horton

Project Number: 112G00949
Date: 5/26/10
Time: ~~0805~~ 0900
Weather: Sun 75° Light breeze out of South
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: mussels
Method: Diver Grab

Total # of specimens: 15 17(DUP)

	Length	Girth	Weight
1	55	23	
2	53	22	
3	57	22	
4	72	30	
5	62	20	
6	65	22	
7	63	23	
8	43	15	
9	65	23	
10	64	22	

Total:

Remarks on Condition:

Length	Girth
51	18
51	19
54	20
52	19
59	23

SAMPLE DESCRIPTION

Circle If Applicable: GI-ET-DUP01-052610
Lab QC DUP DUP01 (see back of page for length)

Type: Whole
Preparation: Rinse and Package
Describe body "part" ~~sampled~~ if circled above:

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Size: g /oz

MAP:

Observations / Notes:

- 25' radius South to West
- lots of shellhash
- very muddy no dams - clumps of mussels attached to rocks
- Barnicles covering most animals
- water Depth 22.5

Signatures:

MH

DUPOI

Length	Girth (mm)
50	18
50	20
57	20
58	22
61	21
56	21
60	21
45	14
64	25
41	13
55	19
55	20
54	19
53	17
47	16

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 410
Sample ID: GI-ET507-0610
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/4/10 Time: 1120
Weather: 75° sun
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Spider Crabs
Method: Trap

Total # of specimens: 12

	Length mm	Girth	Weight
1	60		
2	59		
3	46		
4	57		
5	46		
6	44		
7	46		
8	57		
9	58		
10	50		
	48 45	Total:	

Remarks on Condition:
length measurement was carapice - No legs

SAMPLE DESCRIPTION

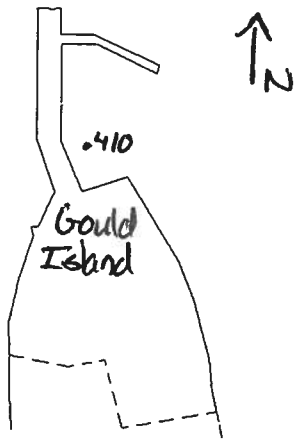
~~Circle If~~ Applicable:
(Lab QC) DUP NA

Type: ~~Whole~~
Preparation: (Rinse and Package)
Describe body "part" sampled if circled above:

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	Whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Size: g /oz

MAP:



Observations / Notes:

Dropped trap on 6/2 at 1250
- squid for bait
- pot #10

Collect pot on 6/4 at 1120
- collect Lab QC at this station
- Many spider crabs in trap, only collected 12 for sample

Signatures:

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Project Number: 112G00949
Sample Location: 411
Date: 6/4/10
Time: 1130
Sample ID: GI-ET509-0610
Weather: 75° Sun
Sampler(s): M. Horton
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Spider Crabs
Method:
Total # of specimens: 6 (Dup 6)

	Length mm	Girth	Weight
1	50		
2	57		
3	53		
4	50		
5	47		
6	52		
7			
8			
9			
10			

Total:

Remarks on Condition:
DUP01 Length
46
48
54
55
57
54
- measurement was length of carapace

SAMPLE DESCRIPTION

Circle If Applicable:
Lab QC DUP GI-ET-DUP01-060410

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C		oz Glass jar
Metals	4° C		
% Lipids	4° C		

Type: Whole
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Size: g /oz

MAP:

Observations / Notes:

Dropped crab trap on 6/2 at 1240
- squid for bait
- pot # 11

Collect pot 6/4 at 1130
- many spider crabs - only 12 collected (6 for sample, 6 for DUP)

Signatures:

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 432
Sample ID: GI-ETS14-0610
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/4/10 Time: 1035
Weather: Sun 75°
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Spider Crabs
Method: Trap

Total # of specimens: 4

	Length mm	Girth	Weight
1	44		
2	43		
3	48		
4	49		
5			
6			
7			
8			
9			
10			

Total:

Remarks on Condition:
- length measurement was carapice - NB legs

SAMPLE DESCRIPTION

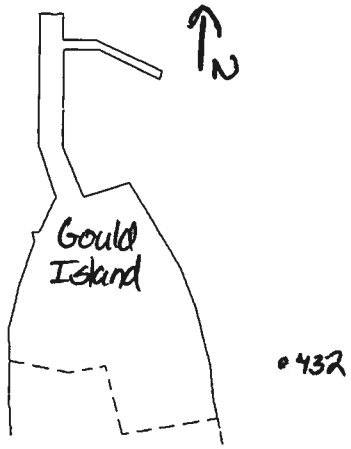
Circle If Applicable:
Lab QC DUP N/A

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Type: Whole
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



Observations / Notes:

Drop crab pot on 6/2 at 1220
- use squid for bait
- pot #7

Collect Pot 6/4 at 1034
4 - spider crabs
1 - rock crab (Not sampled)

- also had 3 skate fish in trap upon retrieval

Signatures:

MJ Hort

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 434
Sample ID: GI-ET575-0610
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/4/10 Time: 1045
Weather: 75° Sun
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Spider Crabs
Method: Trap

Total # of specimens: 5

	Length mm	Girth	Weight
1	46		
2	45		
3	34		
4	48		
5	37		
6			
7			
8			
9			
10			

Total:

Remarks on Condition:
length measurement was carapace - No legs

SAMPLE DESCRIPTION

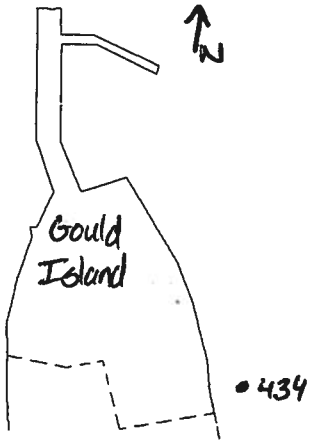
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Type: (Whole)
Preparation: (Rinse and Package)
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



Observations / Notes:

Dropped crab trap on 6/4 at 1255
- squid for bait
- pot #8

Collect pot 6/4 at 1045
5 - spider crabs
2 - rock crabs (Not sampled)

- also had 2 skate fish in trap upon retrieval

Signatures:

MH-ET

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Project Number: 112G00949
Sample Location: 437
Date: 5/27/10
Time: 1045
Sample ID: GI-ET517-6510
Weather: Cloudy 60° Wind out of the N 10-15 mph
Sampler(s): M. Horton
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Mussels
Method: Diver Grab
Total # of specimens:

	Length mm	Girth mm	Weight
1	55	22	
2	59	22	
3	53	19	
4	49	20	
5	48	17	
6	48	18	
7	48	16	
8	54	23	
9	57	22	
10	54	21	

Total:

Remarks on Condition:

Length	Girth	Length	Girth
49	19	51	20
57	20	48	18
57	23	50	26
62	28	49	20
58	20	48	17
53	22	48	18
56	19		
51	20		
50	18		

SAMPLE DESCRIPTION

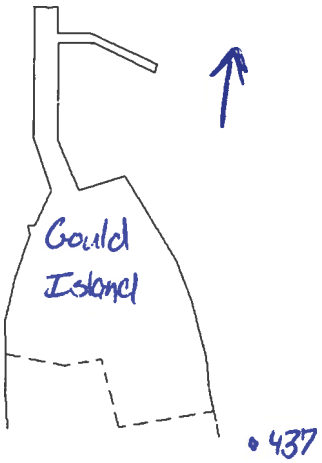
Circle If Applicable:
Lab QC DUP NA

Type: ~~Whole~~
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Size: g /oz

MAP:



Observations / Notes:

Start Dive 1030 Water Depth 11'
End Dive 1048
- collected from within eelgrass bed

Signatures:

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 447
Sample ID: GI-ET518-0510
Sampler(s): M. Horton

Project Number: 112G00949
Date: 5/27/10 Time: 0930
Weather:
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Mussels
Method: Diver Grab

Total # of specimens: 31 / 31

	Length mm	Girth mm	Weight
1	58	20	
2	51	21	
3	53	19	
4	51	21	
5	51	18	
6	52	19	
7	54	22	
8	54	21	
9	58	20	
10	58	20	

Total:

Remarks on Condition:

Length	Girth	Length	Girth
58	20	41	15
49	18	44	17
51	20	45	18
48	18	44	16
50	18	45	17
51	18	54	19
56	20	43	16
44	15	44	16
53	18	41	15
		40	15

SAMPLE DESCRIPTION

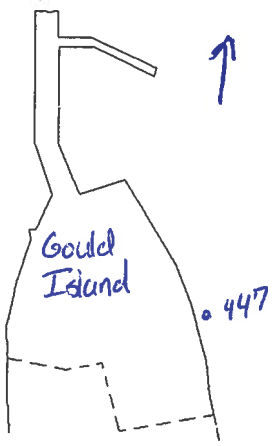
Circle If Applicable:
Lab QC DUP DUP 02 (see back side for ~~weights~~ lengths)

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	Whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Type: (Whole)
Preparation: (Rinse and Package)
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



Observations / Notes:

Start Dive - 1025
- Saw eelgrass, many hermit crabs
- located about 5-10' East of sheetpiling

Signatures:

Length	Girth
~~70~~	~~55~~
~~55~~	20
66	23
59	22
~~55~~	20
58	19
60	23
~~55~~	21
56	23
52	17
49	17
57	19
52	22
54	20
48	17
61	26
48	~~48~~ 19
41	16
59	20
54	21
50	20
50	18
43	16
~~45~~	16
44	17
44	15.
44	16
40	14
~~45~~	~~15~~
39	15

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 308E
Sample ID: GI-ET520-0610
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/2/10 Time: 1045
Weather: 75° Sunny - No wind
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: clams
Method: Diver Grab

Total # of specimens: 11

	Length mm	Girth mm	Weight
1	85	46	
2	83	45	
3	53	28	
4	73	34	
5	70	35	
6	48	25	
7	47	26	
8	89	46	
9	73	38	
10	75	38	
	76	39	Total:

Remarks on Condition:

SAMPLE DESCRIPTION

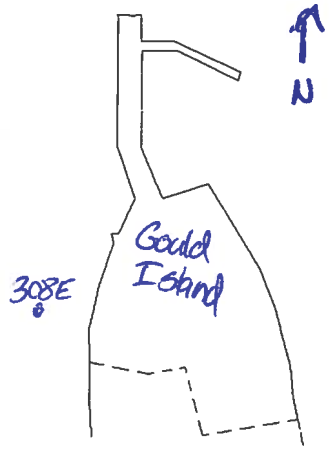
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	Whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Type: Whole
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



Observations / Notes:

Signatures:

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 313F
Sample ID: GI-ET523-0610
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/4/10 Time: 1015
Weather: Sun 75°
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Green Crabs
Method: Trap

Total # of specimens: 4

	Length mm	Girth	Weight
1	57		
2	46		
3	44		
4	40		
5			
6			
7			
8			
9			
10			

Total:

Remarks on Condition:
- length measurement was carapace - NO legs

SAMPLE DESCRIPTION

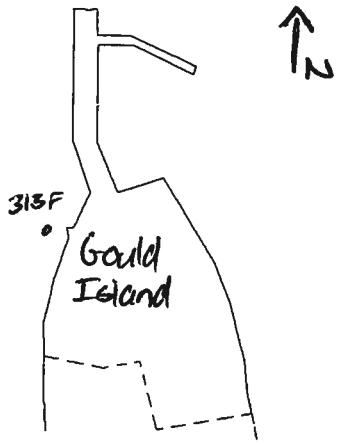
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	Whole	oz Glass jar
Metals	4° C		↓
% Lipids	4° C		

Type: Whole
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



Observations / Notes:

Drop Crab Trap on 6/2 at 1210
- use squid for bait
Collect trap on 6/4 at 1010

Signatures:

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: JPC01
Sample ID: GI-ET584-0410 & GI-ET524-0610 A
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/2/10
Time: 0910
Weather: 70° Sun
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Clams
Method: Diver collection

Total # of specimens: 13

	Length mm	Girth mm	Weight
1	50	25	
2	43	25	
3	88	42	
4	40	20	
5	51	25	
6	43	26	
7	79	45	
8	42	21	
9	40	21	
10	55	27	

Total:

Remarks on Condition:

Length	Girth
49	27
38	22
35	20

SAMPLE DESCRIPTION

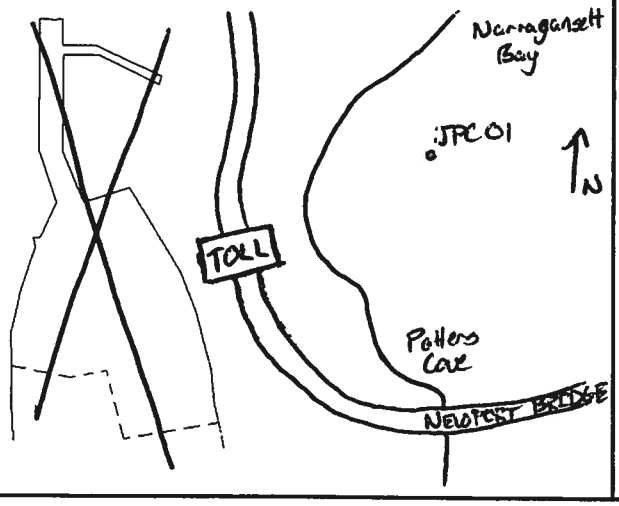
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	Whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Type: Whole
Preparation: Rinse and Package
Describe body "part" ~~sampled~~ if circled above:

Size: g /oz

MAP:



Observations / Notes:

Signatures:

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: JPC01
Sample ID: GI-ET524-~~0601~~0610-A
Sampler(s): M. Horton

Project Number: 112G00949
Date: ~~6/2/10~~ 6/4/10
Time: 1240
Weather: 75° Sun
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Spider Crabs
Method: Trap

Total # of specimens: 3

	Length mm	Girth	Weight
1	57		
2	55		
3	54		
4			
5			
6			
7			
8			
9			
10			

Total:

Remarks on Condition: length measurement was carapice - No legs

SAMPLE DESCRIPTION

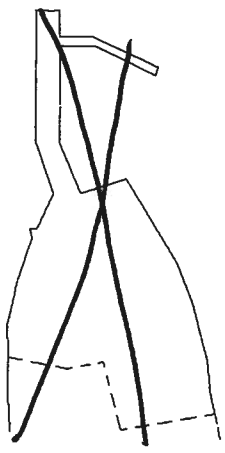
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Type: ~~Whole~~
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



See log sheet for GI-ET524-0610

Observations / Notes:

Dropped crab trap on 6/2 at 0900
- baited with squid
- pot #1

collected trap on 6/4 at 1240
- 3 spider crabs in trap, collect all for sample

Signatures:

MH 6/4

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: JPC 02
Sample ID: GI-ET525-0610
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/2/10
Time: 0940
Weather: 70° SUN
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Clams
Method: Diver Grab

Total # of specimens: _____

	Length	Girth	Weight
1	71	38	
2	75	37	
3	60	32	
4	78	40	
5	78	39	
6	70	37	
7	84	43	
8	80	44	
9	94	42	
10			

Total: _____

Remarks on Condition: _____

SAMPLE DESCRIPTION

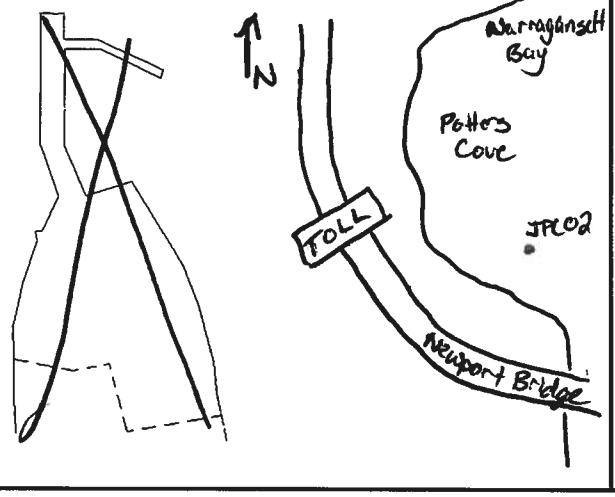
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	Whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C	↓	↓

Type: ~~Whole~~
Preparation: Rinse and Package
Describe body "part" ~~sampled if circled above~~:

Size: _____ g /oz

MAP:



Observations / Notes:

Signatures:

MH Hort

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: JPC02
Sample ID: GI-ET525-0610-A
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/4/10 Time: 1245
Weather: 75° Sun
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Green Crabs
Method: Trap

Total # of specimens: 4

	Length MM	Girth	Weight
1	38		
2	40		
3	40		
4	41		
5			
6			
7			
8			
9			
10			

Total:

Remarks on Condition:
length measure was carapice - No legs

SAMPLE DESCRIPTION

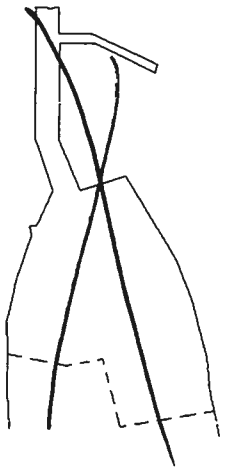
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Type: (Whole)
Preparation: (Rinse and Package)
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



- see logsheet for GI-ET525-0610

Observations / Notes:

Dropped Crab Trap on 6/2 at 0930
- squid for bait
- crab pot #2

Collect crab trap 6/4 at 1245
- 4 spider crabs (No sample)
- 4 green crabs (Sample)
- 2 rock crabs (No sample)

Signatures:

Mel Hort

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: JCC 04
Sample ID: GI-ET526-0610
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/2/10 Time: 1010
Weather: 70° Sun
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Clams
Method: Diver Grab

Total # of specimens: 18

	Length mm	Girth mm	Weight
1	45	29	
2	43	28	
3	44	24	
4	41	24	
5	46	23	
6	40	~~27~~ 22	
7	50	~~26~~ 22	
8	45	~~14~~ 26	
9	33	16	
10	34	20	

Total:

Remarks on Condition:

Length	Girth
41	24
44	25
47	28
47	28
44	26
39	22
106	55
102	54

SAMPLE DESCRIPTION

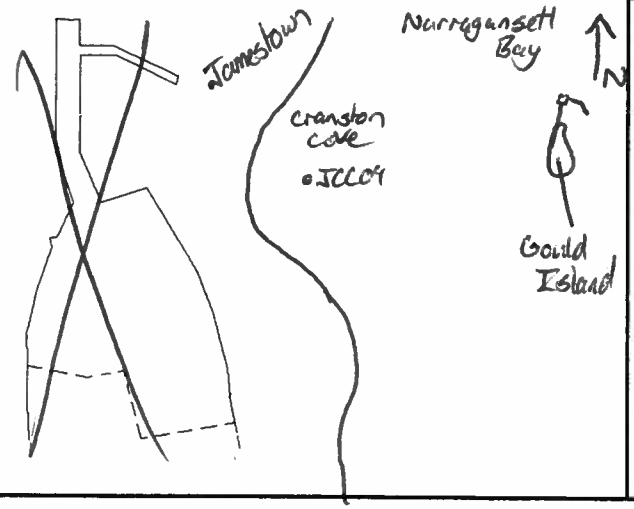
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	Whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Type: ~~Whole~~
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



Observations / Notes:

Signatures:

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: JCC64
Sample ID: GI-ET526-0610-A
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/4/10 Time: 1255
Weather: 75° Sun
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Spider Crabs
Method: Trap

Total # of specimens: 4

	Length mm	Girth	Weight
1	52		
2	54		
3	54		
4	51		
5			
6			
7			
8			
9			
10			

Total:

Remarks on Condition:
Length measurement was carapice, no legs

SAMPLE DESCRIPTION

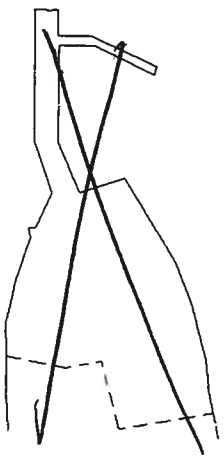
Circle If Applicable:
Lab QC DUP N/A

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Type: Whole
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



see logsheet for GI-ET526-0610

Observations / Notes:

- Dropped crab trap on 6/2 at 1000
  - squid for bait
- Collect trap on 6/4 at 1255
  - 4 spider crabs

Signatures:

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Project Number: 112G00949
Sample Location: 4/4
Date: 6/4/10
Time: 1110
Sample ID: GI-SD527-0610
Weather: 75° Sun
Sampler(s): M. Horton
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Spider Crabs
Total # of specimens: 7
Method: Trap

	Length mm	Girth	Weight
1	52		
2	43		
3	47		
4	45		
5	39		
6	51		
7	49		
8			
9			
10			

Total:

Remarks on Condition:
Length measurement was carapice - NO legs

SAMPLE DESCRIPTION

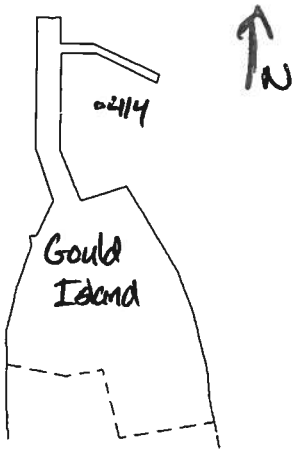
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Type: ~~Whole~~
Preparation: Rinse and Package
Describe body "part" sampled ~~if circled above~~:

Size: g /oz

MAP:



Observations / Notes:

Dropped Crab Trap on 6/2 at 1300
- squid for bait
- pot #16

Collect pot 6/4 at 1110
- many spider crabs in trap - only collected 7 animals for sample

Signatures:

MH 2 MH

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 314
Sample ID: GI-ER529-0610
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/3/10
Time: 1120
Weather: 70° Sun
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Clams
Method: Diver Grab
Total # of specimens: 10

	Length	Girth	Weight
1	70	36	
2	23	35	
3	31	41	
4	56	29	
5	55	27	
6	79	41	
7	29	38	
8	34	42	
9	34	41	
10	28	43	

Total:

Remarks on Condition:

SAMPLE DESCRIPTION

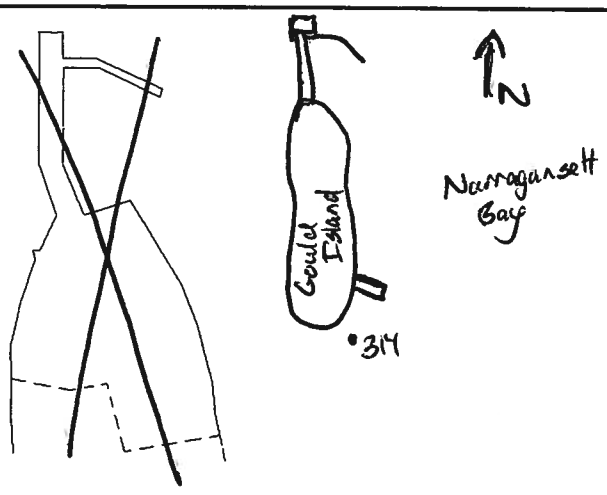
Circle If Applicable:
Lab QC DUP NA

Type: Whole
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C		oz Glass jar
Metals	4° C		↓
% Lipids	4° C		↓

Size: g /oz

MAP:



Observations / Notes:

- Collected within 5' of station marker

Signatures:

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 317
Sample ID: GI-ET530-0516
Sampler(s): M. Horton

Project Number: 112G00949
Date: 5/26/10 Time: 1210
Weather: Sun 75° light breeze out of south
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Mussels
Method: Diver Grab

Total # of specimens: 18

	Length mm	Girth mm	~~Weight~~
1	50	19	
2	51	21	
3	59	24	
4	45	18	
5	53	30	
6	65	24	
7	51	20	
8	45	15	
9	44	16	
10	59	20	

Total:

Remarks on Condition:

~~Length~~	~~Girth~~
48	17
42	15
48	17
41	15
42	15
48	17
14	42
15	47

SAMPLE DESCRIPTION

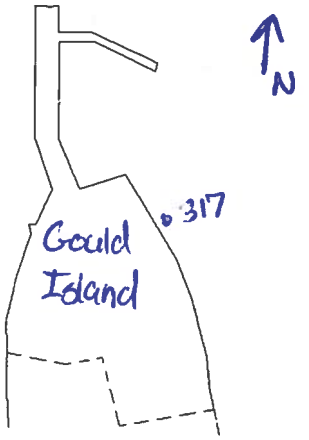
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Type: ~~Whole~~
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



Observations / Notes:

Half buried in sediment - not just growing on rocks in open
- all collected along sheetpile

Signatures:

MH

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Project Number: 112G00949
Sample Location: 435
Date: 5/27/10
Time: 1015-A 1020-B
Sample ID: GI-ET566-0516-A & B
Weather:
Sampler(s): M. Horton
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: clams
Method: Diver Grab
Total # of specimens: A-11 B-3

A

	Length	Girth	Weight
1	71	35	
2	69	37	
3	76	39	
4	78	38	
5	46	29	
6	48	27	
7	46	26	
8	43	24	
9	43	25	
10	44	28	
	43	26	Total:

B

Remarks on Condition:

~~Length Girth~~

Length	Girth
106	52
98	45
109	51

SAMPLE DESCRIPTION

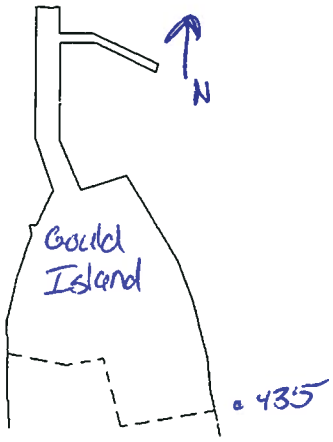
Circle If Applicable:
Lab QC DUP NA

Type: Whole
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C	Whole	oz Glass jar
Metals	4° C	↓	↓
% Lipids	4° C		

Size: g /oz

MAP:



Observations / Notes:

Start Dive 1006
End Dive 1012
- Also observed razor clams, turkey wings

- sent two samples from this location
small & medium animals - A
Large animals - B

Signatures:

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 419
Sample ID:
Sampler(s): M. Horton

Project Number: 112G00949
Date: 5/27/10 Time: 0845
Weather: cloudy 60° wind out of North 10-15 mph
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name: Clams
Method:

Total # of specimens: 6

	Length	Girth	Weight
1	40	23	
2	46	28	
3	43	25	
4	38	23	
5	44	24	
6	15	29	
7			
8			
9			
10			

Total:

Remarks on Condition:

SAMPLE DESCRIPTION

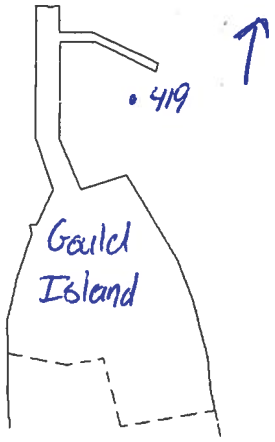
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C		oz Glass jar
Metals	4° C		↓
% Lipids	4° C		

Type: Whole
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



Observations / Notes:

Water Depth 28'
- ~~Bare Bottom~~
- Serenthas (tube worm) - lobster
- lots of debris

NO SAMPLE COLLECTED - too few animals

Signatures:

MH

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 419
Sample ID: ~~GI-ET503-0610~~
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/4/10 Time: 1100
Weather: 75° Sun
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name:
Method:

Total # of specimens:

	Length	Girth	Weight
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Total:

Remarks on Condition:
1.

SAMPLE DESCRIPTION

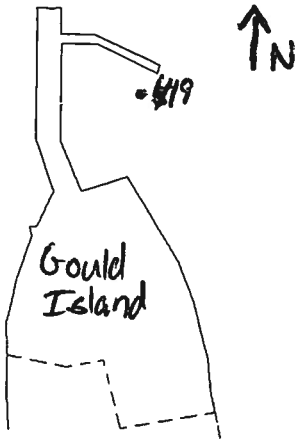
Circle If Applicable:
Lab QC DUP

Type: Whole
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C		oz Glass jar
Metals	4° C		↓
% Lipids	4° C		↓

Size: g /oz

MAP:



Observations / Notes:

Dropped crab trap on 6/2 at 1245
- squid for bait
- pot # 9

collected pot on 6/4 at 1100
- one rock crab in trap w/ no claws and only 5 legs
- No sample collected

Signatures:

MH 2 Hot

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 313D
Sample ID: GI-ET322-0610
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/4/10
Time:
Weather:
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name:
Method:
Total # of specimens:

	Length	Girth	Weight
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Total:

Remarks on Condition:

SAMPLE DESCRIPTION

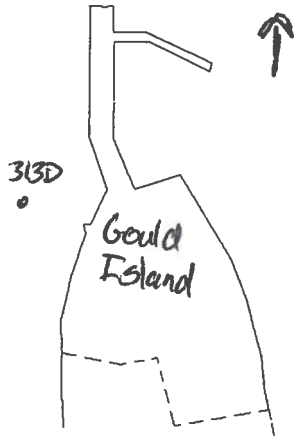
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C		oz Glass jar
Metals	4° C		↓
% Lipids	4° C		

Type: Whole
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



Observations / Notes:

Drop Crab trap 6/2 at 1200
collect trap 6/4 at 1000
- No crabs in trap - bait gone everything else intact
- NO SAMPLE

Signatures:

MH

BIOLOGICAL TISSUE SAMPLING DATA SHEET

Tetra Tech NUS, Inc.

Project: Gould Island, CTO 458
Sample Location: 308F
Sample ID: GI-ET521-0610
Sampler(s): M. Horton

Project Number: 112G00949
Date: 6/4/10
Time:
Weather:
Subcontractors: TG&B

SPECIMEN COLLECTION DATA

Species Common Name:
Method:

Total # of specimens:

	Length	Girth	Weight
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Total:

Remarks on Condition:

SAMPLE DESCRIPTION

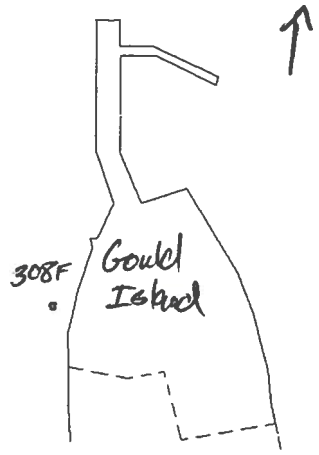
Circle If Applicable:
Lab QC DUP NA

Analysis	Preservative	Preparation	Container
PCB Homologues	4° C		oz Glass jar
Metals	4° C		↓
% Lipids	4° C		

Type: Whole
Preparation: Rinse and Package
Describe body "part" sampled if circled above:

Size: g /oz

MAP:



Observations / Notes:

Crab pot dropped at 6/4 1100
Crab pot collected on 6/4 at 1020
- No animals - bait gone
No sample

Signatures:

B-6 VANE SHEAR TEST RECORDS

Tetra Tech NUS Inc.

VANE SHEAR STRENGTH RESULTS

PROJECT NAME: Gould Island
PROJECT NUMBER: 112G02303 FI.SW
PERSONNEL: J. Galler, M. Horton

WEATHER: Hazy 80° Calm
EQUIPMENT: RocTest Telemac Hand Shear Vane
DATE: 7/7/10

LOCATION ID	TIME	DEPTH INTERVAL	VANE SIZE USED	INSTRUMENT READING	NOTES: (weather, recovery, etc.)
401	0855	0-2"	Large	2.4	10.2' WD, 2.2' Rec
		4-5.5"	Large	9.8	-Silty on top, more coarse and compact the deeper core was advanced
416	0915	0-2"	Large	1.0	7" Recovery, 25' WD, 3' penetration
		5-7"	Large	1.8	
417	0930	0-2"	Large	0.8	35' WD, 3.5" Rec
					-Silt w/ trace fine sand
414	1005	1-3"	Large	5.6	24' WD, 5' pene., 1.7' Rec
					-top inch was shell trash
					-after top 4" medium to coarse grained silty sand - no readings
418	1030	0-2"	Large	0.8	24.2' WD, 5' pene., 1' rec
		2-4"	↓	1.2	Top was silt w/ shell hash and trace
		4-6"	↓	3.6	sand, after 6" too much shell and
					sand for readings
404		0-2"	Large	2.2	23.8' WD, 3.5' pene, 1.2' rec
		2-4"		4.6	Sandy Silt w/ fine grained sand
		4-6"		4.8	
		6-8"		3.8	Clay
		8-10"		6.8	
		10-12"	↓	7.6	Silty Clay
410	1115	0-2"	Large	2.8	24.5' WD, 2' Pene., 5" Rec
		2-4"	↓	6.8	Silty Clay, shell on top 1"
412	1135	Too Much Shell, No Readings			16.7' WD
01	1155	0-2"	Large	1.8	NO shells
		2-4"	↓	2.8	24' WD 0.7' Rec
		4-6"	↓	3.0	
02	1235	0-2	No Readings, too much shell sand and gravel		
		4-6			1.2' Rec, ~~29.7' WD~~ 26' WD
03	1255	NO RECOVERY			29.7' WD
04	1315	0-2"	Large	1.8	32.8 WD, 1.9' Rec
		2-4"		1.8	Shells on top, shell hash in sed
		6-8"		~~2.0~~ Too Much Shell	
		14-16"		~~2.2~~ 2.0	
		16-18"		2.2	Silty Clay
		18-20"	↓	2.6	↓

Tetra Tech NUS Inc.

VANE SHEAR STRENGTH RESULTS

PROJECT NAME: Gould Island
PROJECT NUMBER: 112G02303 FI.SW
PERSONNEL: J. Galler, M. Horton

WEATHER: Hazy 85° Calm
EQUIPMENT: RocTest, Telemac Hand Shear Vane
DATE: 7/7/10

LOCATION ID	TIME	DEPTH INTERVAL	VANE SIZE USED	INSTRUMENT READING	NOTES: (weather, recovery, etc.)
05	1340	2-4"	Large	2.1	34' WD, 0.75' Rec
		4-6"	↓	2.6	- Black silt with shells & shell fragments
		6-8"	↓	2.8	
06	1355	0-2"	Large	—	20' WD - 2.6' Rec
		No Readings, too much shell hash for reading			

Tetra Tech NUS Inc.

VANE SHEAR STRENGTH RESULTS

PROJECT NAME: Gould Island
PROJECT NUMBER: 112G02303 FI.SW
PERSONNEL: J. Galler, M. Horton

WEATHER: Overcast 75° very humid
EQUIPMENT: RocTest Telemac Handshear Vane
DATE: 7/8/10

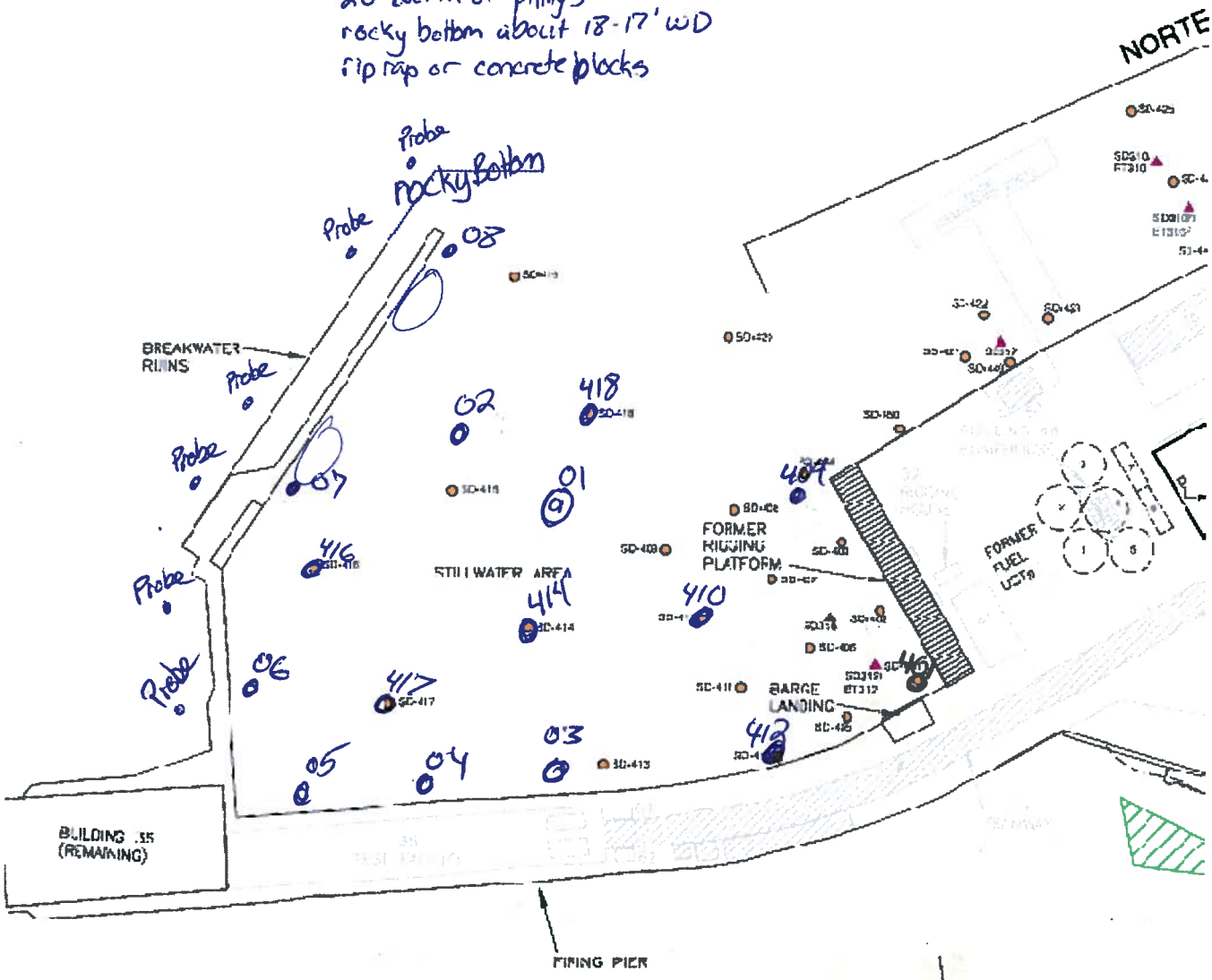
LOCATION ID	TIME	DEPTH INTERVAL	VANE SIZE USED	INSTRUMENT READING	NOTES: (weather, recovery, etc.)
07	0805				19.5' WD, 2.1' Rec
					- Shell hash and very fine black
					sediment - NO Reading
08	0820				- 19.5' WD, 2.4' Rec
					- Shell hash and very fine black
					sediment - NO Reading

LEGEND

- STRUCTURES DEMOLISHED PRIOR TO 1998
- BUILDINGS DEMOLISHED 2000, 2001. SURVEYED CORNERS AND FEATURES (FOUNDATIONS REMAIN)
- PROPERTY BOUNDARY
- WASTE DRAIN PIPES
- APPROXIMATE LOW TIDE LINE
- PLANNED DRAIN LINE
- PLANNED FLOOR DRAIN
- MANHOLE WITH IDENTIFIER
- PHASE I RI SEDIMENT SAMPLE LOCATION
- PROPOSED SEDIMENT/BIOTA SAMPLE LOCATION
- EEL GRASS BEDS - CONTIGUOUS EXTENT INTERPRETED BY EVAK (2006)

NA

Probes
20' North of pilings
rocky bottom about 18-17' WD
rip rap or concrete blocks



REFERENCE PLANS:

1. US NAVY EXISTING CONDITIONS MAP, US NAVAL TORPEDO STATION, NEWPORT, RHODE ISLAND, 8/30/97
2. DRAWS, TRENCHES, ETC., GOULD ISLAND BUILDING 32 SITE, LOUIS FEDERICI & ASSOCIATES FOR TETRA TECH, NUS INC. CTO 208, LIA/B70726, 4/25/00
3. GEOTECHNICAL SURVEY PLAN AT FORMER BUILDING 44 AND 33, US NAVAL BASE ON GOULD ISLAND, LOUIS FEDERICI & ASSOCIATES FOR BROWN & ROOT ENVIRONMENTAL, 9/8/97, DWG#B70728-03
4. LOCATION OF MONITORING WELLS AT BUILDING 32 - GOULD ISLAND, U.S. NAVAL BASE NEWPORT, RHODE ISLAND, LOUIS FEDERICI & ASSOCIATES FOR TETRA TECH, NUS INC., 05/25/00
5. U.S. NAVAL OPERATING BASE, NEWPORT, RI, TORPEDO STATION GOULD ISLAND OVERHEAD SHOP PLUMBING FLOOR PLAN, CONT. NO. 4804, DRAWING P-201, DATED MARCH 14, 1918, BY JOHN BRADBURY CHIEF CIVIL ENGINEER

NOTES:

1. PLAN NOT TO BE USED FOR DESIGN.
2. ALL LOCATIONS ARE APPROXIMATE
3. PHYSICAL FEATURES SHOWN MAY NOT REFLECT CURRENT CONDITIONS
4. THE PUMPHOUSE VAULTS AND BUILDINGS 30, 34, 38, 40, 41, AND 43 WERE DEMOLISHED IN 2001.
5. VERTICAL = LOCAL MEAN LOW WATER (NAVY DATUM MARK 6-2, GOULD ISLAND TORPEDO STATION)
6. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM, RI STATE PLANE 1927

GRAPHIC SCALE

50' 0' 50' 100'

B-7 QA SAMPLE LOG SHEETS

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: Gould Island Phase II RI
Project Number: 112G00949
Sample Location:
QA Sample Type:

Sample ID Number: GI-SB-TB01-~~0528~~/0528 10 (36)
Sampled By: B. Geringer / M. Horton
C.O.C. Number:

[x] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 05/28/10
Time: 0600
Method: N/A

WATER SOURCE:

[] Laboratory Prepared
[] Purchased N/A
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type: N/A
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
GRO	Cool 4°C & HCl	2 - 40 ml VOAs	(YES) / NO
DRO	Cool 4°C	2 - 1 liter Ambers	YES / (NO)
PAHs	Cool 4°C	2 - 1 liter Ambers	YES / (NO)
PCBs	Cool 4°C	2 - 1 liter Ambers	YES / (NO)
TAL METALs	Cool 4°C & HNO_3	1 - 500 ml poly	YES / (NO)

OBSERVATIONS / NOTES:

Submitted 1 VOA aqueous, preserved with HCL.

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: Gould Island Phase II RI
Project Number: 112G00949
Sample Location:
QA Sample Type:

Sample ID Number: GI-SB-TB02-060110
Sampled By: B. Geringer
C.O.C. Number:

[x] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 06/01/10
Time: 1700
Method: —

WATER SOURCE:

[] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
GRO	Cool 4°C ~~& HCl~~ MeOH	2 - 40 ml VOAs	(YES) / NO
DRO	Cool 4°C	2 - 1 liter Ambers	YES / (NO)
PAHs	Cool 4°C	2 - 1 liter Ambers	YES / (NO)
PCBs	Cool 4°C	2 - 1 liter Ambers	YES / (NO)
TAL METALs	Cool 4°C & HNO_3	1 - 500 ml poly	YES / (NO)

OBSERVATIONS / NOTES:

Submitted unopened MeOH preserved VOAs for GRO analysis.

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: Gould Island Phase II RI
Project Number: 112G00949
Sample Location:
QA Sample Type:

Sample ID Number: GI-SB-TB03- 060210
Sampled By: B. Geringer
C.O.C. Number:

[x] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 06/02/10
Time: 1800
Method: —

WATER SOURCE:

[] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
GRO	Cool 4°C ~~& HCl~~	2 - 40 ml VOAs	(YES) / NO
DRO	Cool 4°C MeOH	2 - 1 liter Ambers	YES / (NO)
PAHs	Cool 4°C	2 - 1 liter Ambers	YES / (NO)
PCBs	Cool 4°C	2 - 1 liter Ambers	YES / (NO)
TAL METALs	Cool 4°C & HNO_3	1 - 500 ml poly	YES / (NO)

OBSERVATIONS / NOTES:

Submitted unopened MeOH preserved VOAs for GRO analysis.

Signature(s):

B. Geringer

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: Gould Island Phase II RI
Project Number: 112G00949
Sample Location:
QA Sample Type:

Sample ID Number: GI-SB-RB01- 060310
Sampled By: B. Geringer
C.O.C. Number:

[] Trip Blank
[] Source Water Blank
[x] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 06/03/10
Time: 1350
Method: Direct Pour

WATER SOURCE:

[] Laboratory Prepared
[x] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Reagent Grade Water
Supplier: VWR
Manufacturer: NERL
Order Number: —
Lot Number: 0319240
Expiration Date: 03/2011

RINSATE INFORMATION (If Applicable):

Media Type: Soil
Equipment Used: split spoon, aluminum pan, plastic ~~scoop~~ 3G plunger/syringe
Equipment Type:
[x] Dedicated
[] Reusable (Split spoon)

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
GRO	Cool 4°C & HCl	2 - 40 ml VOAs	(YES) / NO
DRO	Cool 4°C	2 - 1 liter Ambers	(YES) / NO
PAHs	Cool 4°C	2 - 1 liter Ambers	(YES) / NO
PCBs	Cool 4°C	2 - 1 liter Ambers	(YES) / NO
TAL METALs	Cool 4°C & HNO_3	1 - 500 ml poly	(YES) / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: Gould Island Phase II RI
Project Number: 112G00949
Sample Location:
QA Sample Type:

Sample ID Number: GI-SB-RB02-060310
Sampled By: B. Geringer
C.O.C. Number:

[] Trip Blank
[] Source Water Blank
[x] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 06/03/10
Time: 1400
Method: Direct Pour

WATER SOURCE:

[] Laboratory Prepared
[x] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Reagent Grade Water
Supplier: VWR
Manufacturer: NERL
Order Number: —
Lot Number: 0319240
Expiration Date: 03/2011

RINSATE INFORMATION (If Applicable):

Media Type: Soil
Equipment Used: split spoon, aluminum pan, plastic ~~scoop~~ BG plunger/syringe
Equipment Type:
[x] Dedicated
[] Reusable (Split Spoon)

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
GRO	Cool 4°C & HCl	2 - 40 ml VOAs	(YES) / NO
DRO	Cool 4°C	2 - 1 liter Ambers	(YES) / NO
PAHs	Cool 4°C	2 - 1 liter Ambers	(YES) / NO
PCBs	Cool 4°C	2 - 1 liter Ambers	YES / (NO)
TAL METALs	Cool 4°C & HNO_3	1 - 500 ml poly	(YES) / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: Gould Island Phase II RI
Project Number: 112G00949
Sample Location:
QA Sample Type:

Sample ID Number: GI-SB-RB03-060310
Sampled By: B. Geringer
C.O.C. Number:

[] Trip Blank
[] Source Water Blank
[x] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 06/03/10
Time: 1410
Method: Direct Pour

WATER SOURCE:

[] Laboratory Prepared
[x] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Reagent Grade Water
Supplier: VWR
Manufacturer: NERL
Order Number: —
Lot Number: 0319240
Expiration Date: 03/2011

RINSATE INFORMATION (If Applicable):

Media Type: Soil
Equipment Used: split spoon, aluminum pan, plastic ~~scoop~~ BG plunger/syringe
Equipment Type:
[x] Dedicated
[X] Reusable (Split Spoon)

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
GRO	Cool 4°C & HCl	2 - 40 ml VOAs	(YES) / NO
DRO	Cool 4°C	2 - 1 liter Ambers	(YES) / NO
PAHs	Cool 4°C	2 - 1 liter Ambers	(YES) / NO
PCBs	Cool 4°C	2 - 1 liter Ambers	YES / (NO)
TAL METALs	Cool 4°C & HNO_3	1 - 500 ml poly	(YES) / NO

OBSERVATIONS / NOTES:

Signature(s):

Brian Yoder

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: Gould Island Phase II RI
Project Number: 112G00949
Sample Location:
QA Sample Type:

Sample ID Number: GI-SB-FB01- 060310
Sampled By: B. Geringer
C.O.C. Number:

[] Trip Blank
[x] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 06/03/10
Time: 1420
Method: Direct Pour

WATER SOURCE:

[] Laboratory Prepared
[x] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Reagent Grade Water
Supplier: VWR
Manufacturer: NERL
Order Number: —
Lot Number: 0319240
Expiration Date: 03/2011

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
GRO	Cool 4°C & HCl	2 - 40 ml VOAs	(YES) / NO
DRO	Cool 4°C	2 - 1 liter Ambers	(YES) / NO
PAHs	Cool 4°C	2 - 1 liter Ambers	(YES) / NO
PCBs	Cool 4°C	2 - 1 liter Ambers	(YES) / NO
TAL METALs	Cool 4°C & HNO_3	1 - 500 ml poly	(YES) / NO

OBSERVATIONS / NOTES:

Signature(s):

Bri Hyn

B-8 SAMPLE CHAINS OF CUSTODY

Columbia Analytical Services™ CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR #

CAS Contact

www.caslab.com One Mustard St., Suite 250 • Rochester, NY 14609-0859(585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE 1 OF 1

Project Name: GOULD ISLAND CTO458	Project Number: 112600949
Project Manager: STEVE PARKER	Report CC: TetraTech NUS
Company/Address: 55 Jonspin Rd, Wilmington MA 01887	
Phone #: (978) 474-8434	FAX#: (978) 474-8499
Sampler's Signature:	Sampler's Printed Name: Michael Horton

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	PCB Homologs, Metals & LP 625	REMARKS/ ALTERNATE DESCRIPTION
GI-ET502-0510		5/26/10	1110	Biota	1							1		Lab QC
GI-ET504-0510			1000		1							1		
GI-ET530-0510			1210		1							1		
GI-ET505-0510			0900		1							1		
GI-ET-DUP01-052610			0000		1							1		ET505
GI-ET517-0510		5/27/10	1045		1							1		
GI-ET566-0510-A			1015		1							1		
GI-ET566-0510-B			1020		1							1		
GI-ET518-0510			0930		1							1		
GI-ET-DUP02-052710			0000		1							1		ET518

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
_____ STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature: FedEx	Signature	Signature	Signature	Signature
Printed Name: Michael Horton	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: TetraTech NUS	Firm	Firm	Firm	Firm	Firm
Date/Time: 5/27/10 1500	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

Columbia Analytical Services™ Rochester NY
19408 Park Row, Ste 320 • Houston, TX 77084 • (713) 266-1599 • FAX (713) 266-0130

DATE 6/2/10 PAGE 1 OF 1

PROJECT NAME Gould Island CTO 458
PROJECT # 112G00949
COMPANY/ADDRESS TetraTech NUS
55 Jonspin Rd
Wilmington MA 01887 PHONE (978) 474-8400
REPORT TO: Steve Parker

ANALYSIS REQUEST

SAMPLE I.D.	DATE	TIME	SAMPLE MATRIX	NUMBER OF CONTAINERS	8290	1613B	1613 TCDD only	1668 WHO	1668 Full List	PCB Homolog, Metals, % Lipids	REMARKS
GI-ET525-0610	6/2/10	0940	Tissue	2					X		
GI-ET529-0610		1120		2					X		
GI-ET526-0610		1010		2					X		
GI-ET520-0610		1045		2					X		
GI-ET524-0610		0910		1					X		

RELINQUISHED BY:
Signature
Michael Horton
Printed Name
TetraTech NUS
Firm
6/2/10 1600
Date/Time

RECEIVED BY:
Fed Ex
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS (in working days)
RUSH .....5 Days
RUSH .....10 Days
STD.....15 DAYS

DELIVERABLES
___ I. Analytical Report
___ II. Analytical Report + QC
___ IV. Data Validation Report (includes All Raw Data)

INVOICE INFORMATION:
P.O.# _____
Bill To _____

SAMPLE RECEIPT:
Opened by: _____
Inspected by: _____
Date: _____
Time: _____

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

SAMPLER'S SIGNATURE

DISTRIBUTION: WHITE - return to originator; YELLOW - retained by originator

coc11-09

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

Columbia Analytical Services™ 19408 Park Row, Ste 320 • Houston, TX 77084 • (713) 266-1599 • FAX (713) 266-0130

DATE _____ PAGE _____ OF _____

PROJECT NAME Gould Island CTO458
PROJECT # 112G00949
COMPANY/ADDRESS Tetra tech NUS
55 Jonspin Rd
Wilmington MA 01887 PHONE (978) 474-8400
REPORT TO: Stacie Parker

ANALYSIS REQUEST

SAMPLE I.D.	DATE	TIME	SAMPLE MATRIX	NUMBER OF CONTAINERS	8290	1613B	1613 TCDD only	1668 WHO	1668 Full List	PCB Homo	Metals	% Lipids	REMARKS
GI-ET523-0610	6/4/10	1015	Tissue	1						X	X	X	
GI-ET525-0610		~~0940~~ 1045		1						X	X	X	
GI-ET515-0610		1045		1						X	X	X	
GI-ET514-0610		1035		1						X	X	X	
GI-ET527-0610		1110		1						X	X	X	
GI-ET507-0610		1120		1						X	X	X	Lab QC
GI-ET509-0610		1130		1						X	X	X	
GI-ET526-0610		~~1015~~ 1255		1						X	X	X	
GI-ET524-0610		1240		1						X	X	X	
GI-ET-DUP01-060410	↓	—	↓	1						X	X	X	509

RELINQUISHED BY:
Signature
Michael Horton
Printed Name
TetraTech NUS
Firm
6/4/10 1600
Date/Time

RECEIVED BY:
FedEx
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS (in working days)
RUSH .....5 Days
RUSH .....10 Days
STD.....15 DAYS

DELIVERABLES
___ I. Analytical Report
___ II. Analytical Report + QC
___ IV. Data Validation Report (includes All Raw Data)

INVOICE INFORMATION:
P.O.# _____
Bill To _____

SAMPLE RECEIPT:
Opened by: _____
Inspected by: _____
Date: _____
Time: _____

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

SAMPLER'S SIGNATURE

DISTRIBUTION: WHITE - return to originator; YELLOW - retained by originator

coc11-09

MITKEM LABORATORIES

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CHAIN OF CUSTODY RECORD

Page 1 of 3

Special Handling:
TAT- Indicate Date Needed: _____
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: TENUS

Project Mgr.: Steve Parker

Invoice To: _____

P.O. No.: _____ RQN: _____

Project No.: CTO458 112600949

Site Name: Gould Island

Location: Portsmouth State: RI

Sampler(s): Michael Horton

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9=_____ 10=_____ 11=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Containers: Analyses: 4oz Metals (Hg)	4oz Metals	8oz PAHs	8oz PCBs	List preservative code below:	Notes:
	GI-SD437-0006	9/21/09	1424	G	SD		4			1	1	1	1		
	GI-SD446-0006	9/22/09	0940	G			12			3	3	3	3		Lab QC
	GI-SD447-0006	9/22/09	1000	G			4			1	1	1	1		DUP01
	GI-SD449-0006	9/22/09	1020	G			4			1	1	1	1		Strong Petroleum Odor
	GI-SD450-0006	9/22/09	1050	G			4			1	1	1	1		
	GI-SD443-0006	9/22/09	1150	G			4			1	1	1	1		
	GI-SD444-0006	9/22/09	1205	G			4			1	1	1	1		DUP02
	GI-SD445-0006	9/22/09	1220	G			4			1	1	1	1		
	GI-SD-DUP01-0909	9/22/09	—	G			4			1	1	1	1		
	GI-SD-DUP02-0909	9/22/09	—	G	↓		4			1	1	1	1		

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____

State specific reporting standards: _____

☐ E-mail to _____

EDD Format _____

Relinquished by:	Received by:	Date:	Time:
Michael Horton		9/23/09	1620
		1620	

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C _____

MITKEM LABORATORIES

A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 2 of 3

Special Handling:
TAT- Indicate Date Needed: _____
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: TENUS

Project Mgr.: Steve Parker

Invoice To: _____

P.O. No.: _____ RQN: _____

Project No.: CTO458 112G00949

Site Name: Gould Island

Location: Portsmouth RI State: RI

Sampler(s): Michael Horton

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9=_____ 10=_____ 11=_____

List preservative code below:

Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: Metals(Hg) 4oz	Metals 4oz	PCB 8oz	PAH 8oz					
	GI-SD422-0006	9/21/09	1115	G	SD		4			1	1	1	1					
	GI-SD425-0006	9/21/09	1140	G			4			1	1	1	1					
	~~GI~~ MH GI-SD427-0006	9/21/09	1200	G			4			1	1	1	1					
	GI-SD430-0006	9/21/09	1238	G			4			1	1	1	1					
	GI-SD428-0006	9/21/09	1221	G			4			—	1	—	—					Only 4oz collected, analyze for Hg if enough material is left
	GI-SD432-0006	9/21/09	1306	G			4			1	1	1	1					
	GI-SD433-0006	9/21/09	1320	G			4			1	1	1	1					
	GI-SD434-0006	9/21/09	1334	G			4			1	1	1	1					
	GI-SD435-0006	9/21/09	1346	G			4			1	1	1	1					
	GI-SD436-0006	9/21/09	1405	G	↓		4			1	1	1	1					

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____

State specific reporting standards:
_____

☐ E-mail to _____

EDD Format _____

Relinquished by:	Received by:	Date:	Time:
Michael Horton		9/23/09	1620

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C _____

MITKEM LABORATORIES
A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 3 of 3

Special Handling:
TAT- Indicate Date Needed: _____
· All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
· Samples disposed of after 60 days unless otherwise instructed.

Report To: TT NUS
Project Mgr.: Steve Parker

Invoice To: _____
P.O. No.: _____ RQN: _____

Project No.: CTO 458 Gould Island
Site Name: Gould Island
Location: Portsmouth RI State: RI
Sampler(s): Michael Horton

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9=_____ 10=_____ 11=_____

List preservative code below: 4

Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: Metals 500ml Poly	PAHs 1L Amber	PCBs 1L Amber	Metals(Hg) 4oz	Metals 4oz	PAHs 8oz	PCBs 8oz	
	GI-SD-RB01-0909	9/22/09	1500	QC water →			4		1	1	2	2					
	GI-SD-FB01-0909	9/22/09	1530	QC	water		4		1	1	2	2					
	GI-JPC01-0006	9/23/09	0903	G	SD								1	1	1	1	DUP03
	GI-JPC02-0006	9/23/09	0925	G									1	1	1	1	
	GI-JPC03-0006	9/23/09	0947	G									1	1	1	1	
	GI-JCC04-0006	9/23/09	1010	C									1	1	1	1	
	GI-JCC01-0006	9/23/09	1026	G									1	1	1	1	
	GI-JCC02-0006	9/23/09	1050	C									1	1	1	1	
	GI-SD-DUP03-0909	9/23/09	—	G	↓								1	1	1	1	

Containers:

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____

State specific reporting standards: _____

☐ E-mail to _____
EDD Format _____

Relinquished by:	Received by:	Date:	Time:
Michael Horton		9/23/09	1620

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C _____

Columbia Analytical Services™ — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR #

CAS Contact

www.caslab.com One Mustard St., Suite 250 • Rochester, NY 14609-0859(585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE _____ OF _____

Project Name: CTO 458 Gould Island	Project Number: CTO 458 112G60949
Project Manager: Steve Parker	Report CC:
Company/Address: TE NUS 55 Jonspin Rd Wilmington MA 01887	
Phone #: (978) 474-8400	FAX#: (978) 474-8499
Sampler's Signature: Michael J Horton	Sampler's Printed Name: Michael J Horton

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Grain Size							REMARKS/ ALTERNATE DESCRIPTION
GI-JPC01-0006		9/23	0903	SD									1							DUP03
GI-JPC02-0006		9/23	0925										1							
GI-JPC03-0006		9/23	0947										1							
GI-JCC04-0006		9/23	1010										1							
GI-JCC01-0006		9/23	1026										1							
GI-JCC02-0006		9/23	1050										1							
GI-SD-DUP03-0909		9/23	—										1							

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
_____ STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Michael J Horton	Fed Ex				
Printed Name: Michael J Horton					
Firm: TE NUS					
Date/Time: 9/23/09 1400					

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

MITKEM LABORATORIES

A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 2

Special Handling:
TAT- Indicate Date Needed: _____
· All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
· Samples disposed of after 60 days unless otherwise instructed.

Report To: TetraTech NUS
Steve Parker

Project Mgr.: Steve Parker

Invoice To: _____

P.O. No.: _____ RQN: _____

Project No.: 112G00949 CT0458
Site Name: Gould Island Site 17
Location: Jamestown State: RI
Sampler(s): Michael Horton

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9=_____ 10=_____ 11=_____

List preservative code below:

Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= Sediment X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: Metals PAH PCB 8oz
	GI-SD421-0006	10/5/09	1040	G	X1		1			1
	GI-SD423-0006	10/5/09	1100	↓	↓		1			1
	GI-SD424-0006	10/5/09	1145				1			1
	GI-SD426-0006	10/5/09	1210				1			3
	GI-SD431-0006	10/5/09	1225				1			1
	GI-SD439-0006	10/5/09	1305				1			1
	GI-SD440-0006	10/5/09	1335				1			1
	GI-SD441-0006	10/5/09	1350				1			1
	GI-SD442-0006	10/5/09	1415				1			1
	GI-SD-DUP04-1009	10/5/09	—	↓	↓		1			1

Notes:
QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____
State specific reporting standards:
_____
DUP04
Lab QC

☐ E-mail to _____
EDD Format _____

Relinquished by:	Received by:	Date:	Time:
		10/6/09	1455

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C _____

MITKEM LABORATORIES

A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 2 of 2

Special Handling:
TAT- Indicate Date Needed: _____
· All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
· Samples disposed of after 60 days unless otherwise instructed.

Report To: TENNIS
Steve Parker

Project Mgr.: Steve Parker

Invoice To: _____

P.O. No.: _____ RQN: _____

Project No.: 112G00949 CTO458
Site Name: Gould Island Site 17
Location: Jamestown State: RI
Sampler(s): Michael Horton

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9=_____ 10=_____ 11=_____

List preservative code below: 4

Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: 1L Amber PAH	1L Amber PCB	500mL Poly Metals	1 8oz Amber Metals PAH PCB
	GI-SD-RB02-1009	10/5/09	1700	QC	QC		4		1	2	2	1	
	GI-SD413-0006	10/6/09	1010	G	SD		1						1
	GI-SD413-0612	10/6/09	1010	G	SD		1						1

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____

State specific reporting standards: _____

☐ E-mail to _____
EDD Format _____

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C _____

Relinquished by:	Received by:	Date:	Time:
		10/6/09	1455

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MITKEM LABORATORIES

A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 3

Special Handling:
TAT- Indicate Date Needed: _____
· All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
· Samples disposed of after 60 days unless otherwise instructed.

Report To: TENK
55 Jonspin Rd
Wilmington MA 01887

Project Mgr.: Steve Parker

Invoice To: _____

P.O. No.: _____ RQN: _____

Project No.: 112G00949 CTO458
Site Name: Gould Island Site 17
Location: Jamestown RI State: RI
Sampler(s): Michael Horton

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9=_____ 10=_____ 11=_____

List preservative code below: 4

Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= Sediment SD X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: PAH 1L Amber	PCB 1L Amber	Metals 500ml Poly	PCBs, PAH, metals 8oz Amber					
	~~GI-SD-R~~																	
	GI-SD-R803-1009	10/9/09	0700	QC	water		4		1	2	2	1						
	GI-SD401-0006	10/9/09	0900	G	SD		1						1					
	GI-SD401-0612	10/9/09	0900				1						1					
	GI-SD401-1218	10/9/09	0900				1						1					
	GI-SD405-0006	10/9/09	0935				1						1					DUP05
	GI-SD405-0612	10/9/09	0935				1						1					
	GI-SD405-1218	10/9/09	0935				1						1					
	GI-SD-DUP05-1009	10/9/09	—				1						1					
	GI-SD412-0006	10/9/09	1040				3						3					Lab QC

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____

State specific reporting standards: _____

☐ E-mail to _____
EDD Format _____

Relinquished by:	Received by:	Date:	Time:
		10/13/09	1540

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C _____

MITKEM LABORATORIES

A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 2 of 3

Special Handling:
TAT- Indicate Date Needed: _____
· All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
· Samples disposed of after 60 days unless otherwise instructed.

Report To: TENUS
55 Jonspin Rd
Wilmington MA 01887

Project Mgr.: Stacie Parker

Invoice To: _____

P.O. No.: _____ RQN: _____

Project No.: 112G0949 CTO458
Site Name: Site 17 Gould Island
Location: Jamestown RI State: RI
Sampler(s): Michael Horton

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9=_____ 10=_____ 11=_____

List preservative code below:

Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= Sediment SD X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: Metals PAH PCB 8oz Amber	QA/QC Reporting Level
	GI-SD412-0612	10/9/09	1040	G	SD		1			1	
	GI-SD412-1218	10/9/09	1040				1			1	
	GI-SD412-1824	10/9/09	1040				1			1	
	GI-SD402-0006	10/9/09	1145				1			1	DUP06
	GI-SD402-0612	10/9/09	1145				1			1	
	GI-SD-DUP06-1009	10/9/09	—				1			1	
	GI-SD403-0006	10/9/09	1245				1			1	
	GI-SD404-0006	10/9/09	1350				1			1	
	GI-SD404-0612	10/9/09	1350				1			1	
	GI-SD404-1824	10/9/09	1350	↓	↓		1			1	

☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____

State specific reporting standards: _____

☐ E-mail to _____
EDD Format _____

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C _____

Relinquished by:	Received by:	Date:	Time:
		10/13/09	1540

MITKEM LABORATORIES

A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page _____ of _____

Special Handling:

TAT- Indicate Date Needed: _____

- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: TETRA TECH
55 Jonspin Rd
Wilmington MA 01887

Project Mgr.: Steve Parker

Invoice To: _____

P.O. No.: _____ RQN: _____

Project No.: 112G00949 CTO458

Site Name: Site 17 Gould Island

Location: Jamestown 4 State: RI

Sampler(s): Michael Horton

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9=_____ 10=_____ 11=_____

List preservative code below:

Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= sediment SD X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: PCB, PAH, Metals 8oz amber
	GI-SD404-2834	10/9/09	1350	G	SD		1			1
	GI-SD406-0006	10/9/09	1445				1			1
	GI-SD406-0612	10/9/09	1445				1			1
	GI-SD407-0006	10/9/09	1515				1			1
	GI-SD407-0612	10/9/09	1515				1			1

QA/QC Reporting Level

☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____

State specific reporting standards: _____

☐ E-mail to _____

EDD Format _____

Relinquished by:	Received by:	Date:	Time:
	Jonathan Emerson	10/13/09	1540

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C _____

MITKEM LABORATORIES

A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 5

Special Handling:
TAT- Indicate Date Needed: _____
· All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
· Samples disposed of after 60 days unless otherwise instructed.

Report To: Tetra Tech NUS
Steve Parker

Project Mgr.: Steve Parker

Invoice To: _____

P.O. No.: _____ RQN: _____

Project No.: 112G00949 CTO458
Site Name: Gould Island Site 17
Location: Jamestown State: RI
Sampler(s): Lori Anderson

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9=_____ 10=_____ 11=_____

List preservative code below:

Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= sediment X2= quality control X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: Metals PAH PCB 8oz	QA/QC Reporting Level
	GI-SD417-0006	10/12/09	1100	G	X1		1			1	
	GI-SD415-0006	10/12/09	1415				2			2	Lab QC
	GI-SD414-0006	10/12/09	1130				1			1	DUP07
	GI-SD414-0612	10/12/09	1130				1			1	
	GI-SD414-1218	10/12/09	1130				1			1	
	GI-SD414-1824	10/12/09	1130				1			1	DUP08
	GI-SD415-0612	10/12/09	1415				1			1	
	GI-SD415-1824	10/12/09	1415				1			1	
	GI-SD415-4248	10/12/09	1415				1			1	DUP09
	GI-SD416-0006	10/12/09	1330				3			3	Lab QC

☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____

State specific reporting standards: _____

☐ E-mail to _____
EDD Format _____

Relinquished by:	Received by:	Date:	Time:
Lori Anderson	Jennifer Emerson	10/14/09	5:16pm

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C _____

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CHAIN OF CUSTODY RECORD

Page 2 of 5

Special Handling:
TAT- Indicate Date Needed: _____
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: T+NUS
Steve Parker

Project Mgr.: Steve Parker

Invoice To: _____

P.O. No.: _____ RQN: _____

Project No.: 112600949 CTO 458
Site Name: Gould Island Site 17
Location: Jamestown State: RI
Sampler(s): Lori Anderson

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9=_____ 10=_____ 11=_____

List preservative code below:

Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= sediment X2= quality control X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: metals PCBs PAHs 8oz	QA/QC Reporting Level
SDA 10/14/09	GI-SD416-0612	10/12/09	1330	G	X1		1			1	
	GI-SD416-1218	10/12/09	1330				1			1	
	GI-SD417-0612	10/12/09	1100				1			1	
	GI-SD417-1218	10/12/09	1100				1			1	
	GI-SD-DUP08-101209	10/12/09	—				1			1	SD414-1824
	GI-SD-DUP09-101209	10/12/09	—				1			1	SD415-4248
	GI-SD-DUP07-101209	10/12/09	—				1			1	SD414-0006
	GI-SD-DUP10-101309	10/13/09	—				1			1	SD420-0006
	GI-SD408-0006	10/13/09	1000				1			1	
	GI-SD408-0612	10/13/09	1000				1			1	

☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____

State specific reporting standards: _____

☐ E-mail to _____
EDD Format _____

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C _____

Relinquished by:	Received by:	Date:	Time:
Lori Anderson	Jennifer Cuevas	10/14/09	5:16 pm

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MITKEM LABORATORIES

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CHAIN OF CUSTODY RECORD

Page 3 of 5

Special Handling:
TAT- Indicate Date Needed: _____
· All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
· Samples disposed of after 60 days unless otherwise instructed.

Report To: TtNUS
Steve Parker

Invoice To:

Project No.: 112600949 CTO 458
Site Name: Gould Island Site 17
Location: Jamestown State: RI
Sampler(s): Lori Anderson

Project Mgr.: Steve Parker

P.O. No.: _____ RQN: _____

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9=_____ 10=_____ 11=_____

List preservative code below:

Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=sediment X2=quality control X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: metals PAHs PCBs 8082
	GI-SD408-1218	10/13/09	1000	G	X1		1			1
	GI-SD409-0006	10/13/09	1045	↓	↓		1			1
	GI-SD409-0612	10/13/09	1045				1			1
	GI-SD409-1824	10/13/09	1045				1			1
	GI-SD409-4248	10/13/09	1045				1			1
	GI-SD410-0006	10/13/09	1115				1	-		1
	GI-SD410-0612	10/13/09	1115				1			1
	GI-SD410-1824	10/13/09	1115				1			1
	GI-SD410-2632	10/13/09	1115				1			1
	GI-SD411-0006	10/13/09	1215	↓	↓		1			1

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____

State specific reporting standards:
_____

☐ E-mail to _____
EDD Format _____

Relinquished by:	Received by:	Date:	Time:
Lori Anderson	Jennifer Emerson	10/14/09	5:16pm

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C _____

MITKEM LABORATORIES
A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 4 of 5

Special Handling:
TAT- Indicate Date Needed: _____
· All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
· Samples disposed of after 60 days unless otherwise instructed.

Report To: TtNUS
Steve Parker

Project Mgr.: Steve Parker

Invoice To: _____

P.O. No.: _____ RQN: _____

Project No.: 112600949 CTO 458
Site Name: Gould Island Site 17
Location: Jamestown State: RI
Sampler(s): Lori Anderson

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9=_____ 10=_____ 11=_____

List preservative code below:

Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= sediment X2= quality control X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: Metals PAHs PCBs 8082
	GI-SD411-0612	10/13/09	1215	G	X1		1			1
	GI-SD411-1218	10/13/09	1215				1			1
	GI-SD411-1824	10/13/09	1215				1			1
	GI-SD418-0006	10/13/09	1315				1			1
	GI-SD418-0612	10/13/09	1315				1			1
	GI-SD419-0006	10/13/09	1540				1			1
	GI-SD419-0612	10/13/09	1540				1			1
	GI-SD419-1824	10/13/09	1540				1			1
	GI-SD419-2632	10/13/09	1540				1			1
	GI-SD420-0006	10/13/09	1510				1			1

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____

State specific reporting standards:
_____

DUP10

☐ E-mail to _____
EDD Format _____

Relinquished by:	Received by:	Date:	Time:
Lori Anderson	Jennifer Emerson	10/14/09	9:40 am

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C _____

MITKEM LABORATORIES

A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 5 of 5

Special Handling:

TAT- Indicate Date Needed: _____

- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: TtNUS
Steve Parker

Project Mgr.: Steve Parker

Invoice To: _____

P.O. No.: _____ RQN: _____

Project No.: 112G00949 CTO 458

Site Name: Gould Island Site 17

Location: Jamestown State: RI

Sampler(s): Lori Anderson

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9=_____ 10=_____ 11=_____

List preservative code below: 4

Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= sediment X2= quality control X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: amber 8oz metals PAHs PCBs	1L Amber PAH/PCB	500mL Poly metals	QA/QC Reporting Level
	GI-SD420-0612	10/13/09	1510	G	X1		1			1			
	GI-SD-RB04-1009	10/14/09	1100	QC	X2		3		1		3	1	
	GI-SD-RB05-1009	10/14/09	1120	QC	X2		3		1		3	1	

☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other _____

State specific reporting standards: _____

☐ E-mail to _____

EDD Format _____

Relinquished by:	Received by:	Date:	Time:
Lori Anderson	Linda Emerson	10/14/09	5:16pm

Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C _____

Columbia Analytical Services

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR #

CAS Contact

www.caslab.com

One Mustard St., Suite 250 • Rochester, NY 14609-0859(585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE 1 OF 2

Project Name: Gould Island	Project Number: 112G00949
Project Manager: Steve Parker	Report CC:
Company/Address: TetraTech NUS, 55 Jonspin Rd, Wilmington MA	
Phone #: (978) 474-8434	FAX#: (978) 474-8499
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

NUMBER OF CONTAINERS

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Grain Size 8oz	PCB Homologues PAH 4oz	Metals TOC % Solid 4oz					REMARKS/ ALTERNATE DESCRIPTION
GI-SD509-0006		4/30/16	0955	SED								1	1	1					
GI-SD511-0006			1415									1	1	1					
GI-SD527-0006			0810									1	1	1					
GI-SD566-0006			1400									1	1	1					
GI-SD514-0006			1320									3	3	3					Lab QC
GI-SD515-0006			1345									1	1	1					
GI-SD503-0006			1045									1	1	1					
GI-SD510-0006			1135									1	1	1					
GI-SD501-0006			1025									1	1	1					
GI-SD507-0006		↓	0840	↓								1	1	1					

Preservative Key
0. NONE
1. HCl
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

Metals

Homologs analysis - Extract and hold until ELAP is complete

See QAPP ☐

TURNAROUND REQUIREMENTS

_____ **RUSH** (SURCHARGES APPLY)

____ 24 hr ____ 48 hr ____ 5 day

_____ **STANDARD**

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

____ I. Results Only

____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

____ V. Specialized Forms / Custom Report

- Edata ____ Yes ____ No

INVOICE INFORMATION

PO#

BILL TO:

SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Fed Ex				
Printed Name: Michael Horton					
Firm: TtNUS					
Date/Time: 5/3/16 1700					

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

Columbia Analytical Services™ — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR #

CAS Contact

www.caslab.com

One Mustard St., Suite 250 • Rochester, NY 14609-0859(585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE 2 OF 2

Project Name	Project Number
Gould Island	112600949
Project Manager	**Report CC**
Company/Address	See pg 1
Phone #	**FAX#**
Sampler's Signature	**Sampler's Printed Name**

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

NUMBER OF CONTAINERS

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Grain Size 8oz	PAH Homo 4oz	Metals TOC 4oz	REMARKS/ ALTERNATE DESCRIPTION
GI-SD504-0006		4/30/10	0825	SED								1	1	1	
GI-SD-DUP01-043010			0000									1	1	1	SD509
GI-SD532-0006		5/3/10	0850	SED								1	1	1	
GI-SD518-0006			0830									1	1	1	
GI-SD526-0006			1205									1	1	1	
GI-SD525-0006			1135									1	1	1	
GI-SD524-0006			1115									1	1	1	
GI-SD502-0006			0910									1	1	1	
GI-SD508-0006			0940									1	1	1	
GI-SD-DUP02-050310			0000									1	1	1	SD508

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

Metals

See pg 1

See QAPP ☐

TURNAROUND REQUIREMENTS

_____ **RUSH** (SURCHARGES APPLY)

____ 24 hr ____ 48 hr ____ 5 day

_____ **STANDARD**

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

____ I. Results Only

____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

____ V. Specialized Forms / Custom Report

Edata ____ Yes ____ No

INVOICE INFORMATION

PO#

BILL TO:

SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Fed Ex	Signature	Signature	Signature	Signature
Printed Name Michael J Horton	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm TE NUS	Firm	Firm	Firm	Firm	Firm
Date/Time 5/3/10 1700	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

Columbia Analytical Services™ — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR #

CAS Contact

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Project Name: Gould Island	Project Number: 112G00949 CTO 458
Project Manager: Steve Parker	Report CC:
Company/Address: TetraTech NUS, 55 Jonspin Rd, Wilmington MA 01887	
Phone #: (978) 474-8434	FAX#:
Sampler's Signature: Michael J Horton	Sampler's Printed Name: Michael J Horton

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: HNO3, H2SO4

NUMBER OF CONTAINERS

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	#	GC/MS VOA's 8260 CLP	GC/MS SVOA's 8270 625 CLP	GC VOA's 8021 601/602	PESTICIDES 8081 608 CLP	PCB's 8082 608 CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Grain Size	PCB Homo. 8oz	PAH 4oz	Metals 4oz	TOC	8270 450ml	SVOC 40ml	REMARKS/ ALTERNATE DESCRIPTION
GI-SD529-0006		5/4/10	0910	SED	3								1	1	1					
GI-SD506-0006		5/4/10	0750	SED	3								1	1	1					
GI-SD429-0006		5/4/10	0835	SED	3								1	1	1					
GI-SD519-0006		5/4/10	0855	SED	3								1	1	1					
GI-SD505-0006		5/4/10	0805	SED	3								1	1	1					
GI-SD-RB01-050410		5/4/10	1225	H2O	8											1	3	2	2	
GI-SD-FB01-050410		5/4/10	1240	H2O	8											1	3	2	2	
													MTH							

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

Metals

PCB Homologues Analysis - Extract and hold until ELAP is Complete

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
_____ STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature: FedEx	Signature:	Signature:	Signature:	Signature:
Printed Name: Michael J Horton	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: TetraTech NUS	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 5/4/10 1400	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

Columbia Analytical Services™ — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR #

CAS Contact

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One Mustard St., Suite 250 • Rochester, NY 14609-0859(585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE _____ OF _____

Project Name: Gould Island CTO458	Project Number: 112600949
Project Manager: Steve Parker	Report CC:
Company/Address: TetraTech NUS, 55 Jonspin Rd, Wilmington MA 01887	
Phone #: (978) 474-8434	FAX#: (978) 474-8499
Sampler's Signature:	Sampler's Printed Name: Michael Horton

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

NUMBER OF CONTAINERS

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	GC/MS VOA's ☐8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625 ☐CLP	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608 ☐CLP	PCB's ☐8082 ☐608 ☐CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Grain Size 8oz	PCB Homologues, PAH 4oz	Metals, TOC, %Solid 4oz	REMARKS/ ALTERNATE DESCRIPTION
GI-SD438-0006		5/13/10	1030	SED								1	1		Lab QC
GI-SD311-0006			0913									1	1		
GI-SD304-0006			0950									1	1		
GI-SD531-0006			1135									1	1		
GI-SD528-0006			1145									1	1		
GI-SD530-0006			1240									1	1		
GI-SD521-0006			1305									1	1		
GI-SD512-0006			1100									1	1		
GI-SD513-0006			1110									1	1		
GI-SD517-0006			1200									1	1		

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

Metals

PCB Homologues - Extract and Hold until ELap is complete

- For GI-SD438-0006 use bottle indicated for Grain Size analysis as extra volume for Lab QC

See QAPP ☐

TURNAROUND REQUIREMENTS

_____ RUSH (SURCHARGES APPLY)

____ 24 hr ____ 48 hr ____ 5 day

_____ STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

____ I. Results Only

____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

____ V. Specialized Forms / Custom Report

Edata ____ Yes ____ No

INVOICE INFORMATION

PO#

BILL TO:

SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature: FedEx	Signature:	Signature:	Signature:	Signature:
Printed Name: Michael T Horton	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: TtNUS	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 5/14/10 1030	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

Columbia Analytical Services

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR #

CAS Contact

www.caslab.com

One Mustard St., Suite 250 • Rochester, NY 14609-0859(585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE _____ OF _____

Project Name: Gould Island	Project Number:
Project Manager:	Report CC:
Company/Address: See Pg 1.	
Phone #	FAX#
Sampler's Signature: Michael Horton	Sampler's Printed Name: M Horton

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

NUMBER OF CONTAINERS

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	GC/MS VOA's ☐8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625 ☐CLP	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608 ☐CLP	PCB's ☐8082 ☐608 ☐CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Grain Size 8oz	28 Homologues PAH 4oz	Metals, TOC, %Solid 4oz	Metals 250ml HNO3	TOC 40ml H2SO4	68D 1L Amber	SVOC 8270 1L Amber	REMARKS/ ALTERNATE DESCRIPTION
GI-SD520-0006		5/13/10	1315	SED								1	1	1					
GI-SD523-0006			1345									1	1	1					
GI-SD522-0006			1335									1	1	1					
GI-SD-DUP03-051310			0000									1	1	1					SD517
GI-SD-RB02-051310			1715	QC											1	3	2	2	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals
see pg 1

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
_____ STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: M Horton	Signature: FedEx	Signature:	Signature:	Signature:	Signature:
Printed Name: Michael Horton	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: TENUS	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 5/14/10 1030	Date/Time:	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

ESI

EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No:

CHAIN OF CUSTODY DOCUMENTATION

Client: TetraTech NUS	Contact: Steve Parker	Project Name: Gould Island CTO458	Page 1 of 1
Report to: Steve Parker	Address: 55 Jonspin Rd	Project Number: 112600949	
Invoice to:	Address: Wilmington MA	Project Manager: Steve Parker	
Voice: (978) 474-8434	Fax: (978) 474-8499	email:	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
	GI-SD509-0006	4/30/10	0955	MH	G	1 gal	P	4°C	S	N	Toxicity
	GI-SD511-0006		1415								Toxicity
	GI-SD527-0006		0810								Toxicity
	GI-SD566-0006		1400								Toxicity
	GI-SD514-0006		1320								Toxicity
	GI-SD515-0006		1345								Toxicity
	GI-SD503-0006		1045								Toxicity
	GI-SD510-0006		1135								Toxicity
	GI-SD501-0006		1025								Toxicity
	GI-SD507-0006		0840								Toxicity
	GI-SD504-0006		0825								Toxicity
	GI-SD-DUP01-043010		0000								GI-SD509-0006

Relinquished By: [signature] Date: 5/3/10 Time: 1415

Received By: [signature] Date: 5/3/10 Time: 1415

Relinquished By: Date: Time:

Received at Lab By: Date: Time:

Comments:

COC Doc No: 3753

Sample Delivery Group No: Page of

ESI

EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No:

CHAIN OF CUSTODY DOCUMENTATION

Client: TetraTech NUS	Contact: Steve Parker	Project Name: Gould Island	Page 1 of
Report to: Steve Parker	Address: 55 Jonspin Rd	Project Number: 112G00949	
Invoice to:	Address: Wilmington MA	Project Manager: Steve Parker	
Voice: (978) 474-8434	Fax: (978) 474-8499	email:	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
	GI-SD532-0006	5/3/10	0850	MH	G	1 gal	P	4°C	S	N	Toxicity
	GI-SD518-0006		0830								Toxicity
	GI-SD526-0006		1205								Toxicity
	GI-SD525-0006		1135								Toxicity
	GI-SD524-0006		1115								Toxicity
	GI-SD502-0006		0910								Toxicity
	GI-SD508-0006	↓	0940								Toxicity
	GI-SD529-0006	5/4/10	0910								Toxicity
	GI-SD506-0006		0750								Toxicity
	~~GI-SD429-0006~~		~~0835~~								~~Toxicity~~ MJH
	GI-SD519-0006		0855								Toxicity
	GI-SD505-0006	↓	~~1240~~ 0805 MJH 5/4/10	↓	↓	↓	↓	↓	↓	↓	Toxicity

Relinquished By: [signature] Date: 5/7/10 Time: 1:00PM Received By: [signature] Date: 5/8/10 Time: 1300

Relinquished By: Date: Time: Received at Lab By: Date: Time:

Comments:

COC Doc No: 3386

Sample Delivery Group No: Page of

ESI

EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No:

CHAIN OF CUSTODY DOCUMENTATION

Client: TetraTech NUS	Contact:	Project Name: Gould Island	Page 1 of 1
Report to: Steve Parker	Address: 55 Jonspin Rd	Project Number: 112GC0949 CTO458	
Invoice to:	Address: Wilmington MA 01887	Project Manager: Steve Parker	
Voice: (978) 471-8434	Fax: (978) 474-8499	email:	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
	GI-SD531-0006	5/13/10	1135	MH	G	1 gal	P	4°C	S	N	Toxicity
	GI-SD528-0006		1145								Toxicity
	GI-SD530-0006		1240								Toxicity
	GI-SD521-0006		1305								Toxicity
	GI-SD512-0006		1100								Toxicity
	GI-SD513-0006		1110								Toxicity
	GI-SD517-0006		1200								Toxicity
	GI-SD520-0006		1315								Toxicity
	GI-SD523-0006		1345								Toxicity
	GI-SD522-0006		1335								Toxicity
								MTH			

Relinquished By: MH Hot	Date: 5/14/10	Time: 1130	Received By: W Berry
Relinquished By:	Date:	Time:	Received at Lab By:

Date: 5/14/10 Time: 1130

Date: Time:

Comments:

COC Doc No: 3385

Sample Delivery Group No:

Page of

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 2

Special Handling:
- [x] Standard TAT - 7 to 10 business days
- [ ] Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Steve Parker
Tetra Tech NUS
55 Jonspin Rd
Wilmington MA
Telephone #: 978-474-8400
Project Mgr. Steve Parker

Invoice To: Same

P.O. No.: _____ RQN: _____

Project No.: 112G00949
Site Name: Gould Island - Site 17
Location: Jamestown State: RI
Sampler(s): Brian Geringer

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8=$NaHSO_4$ 9=_____ 10=_____ 11=_____

List preservative code below:

QA/QC Reporting Notes:
(check as needed)

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: TAL METALS	PAHs	PCBs	QA/QC Reporting Notes
	GI-SB413-0012	5/27/10	1020		SO		1			X	X	X	SO-DUP01
	GI-SB413-7296		1040		SO		1			X	X	X	
	GI-SB412-0012		1240		SO		3			X	X	X	LAB QC
	GI-SB412-7296		1255		SO		1			X	X	X	
	GI-SB412-144156		1310		SO		1			X	X	X	
	GI-SB-DUP01-052710	↓	—		SO		1			X	X	X	
	GI-SB411-0012	5/28/10	0810		SO		1			X	X	X	
	GI-SB411-6072		0825		SO		1			X	X	X	
	GI-SB410-0012		1000		SO		1			X	X	X	
	GI-SB410-6072	↓	1020		SO		1			X	X	X	

Relinquished by:	Received by:	Date:	Time:	Temp°C
		5/28/10	1618	

- [ ] Provide MA DEP MCP CAM Report
- [ ] Provide CT DPH RCP Report

QA/QC Reporting Level
- [ ] Standard [ ] No QC
- [ ] Other _____

State specific reporting standards: _____

- [ ] EDD Format _____
- [ ] E-mail to _____

[ ] Ambient [ ] Iced [ ] Refrigerated [ ] Fridge temp ___°C [ ] Freezer temp ___°C

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page _____ of _____

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Tetra Tech NUS
see pg 1
Telephone #:
Project Mgr.

Invoice To:
P.O. No.: RQN:

Project No.: 112G00949
Site Name: Gould Island - Site 17
Location: see pg 1 State:
Sampler(s):

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9= 10= 11=

List preservative code below:

QA/QC Reporting Notes:
(check as needed)

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id: (SHOULD BE "SB")	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: TAL Metals	PAHs	PCBs (NO PCB Analysis BG 06/04/10)	ORO	GRO	
	GI-SD409-0006	5/28/10	1245	G	SO	2	1			X	X	X	X	X	
	GI-SD409-1218		1250	G	SO	2	1			X	X	X	X	X	
	GI-SD409-2430		1300	G	SO	2	1			X	X	X	X	X	
	GI-SD409-4854		1305	G	SO	2	1			X	X	X	X	X	SD409-4854
	GI-SD-DUP02-052810		—	G	SO	2	1			X	X	X	X	X	
	GI-SD-TB01-052810		0600	G	~~SO~~	~~2~~ 1	+			~~X~~	~~X~~	~~X~~	~~X~~	X	
	BG 06/04/10						BG 06/04/10				BG	06/04/10			

Relinquished by:	Received by:	Date:	Time:	Temp°C
		5/28/10	1613	

☐ Provide MA DEP MCP CAM Report
☐ Provide CT DPH RCP Report

QA/QC Reporting Level
☐ Standard ☐ No QC
☐ Other

State specific reporting standards:

☐ EDD Format
☐ E-mail to

☐ Ambient ☐ Iced ☐ Refrigerated ☐ Fridge temp ___ °C ☐ Freezer temp ___ °C

11 Almgren Drive • Agawam, MA 01001 • 413-789-9018 • FAX 413-789-4076 • www.spectrum-analytical.com

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page _____ of _____

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- · All TATs subject to laboratory approval.
- · Min. 24-hour notification needed for rushes.
- · Samples disposed of after 60 days unless otherwise instructed.

Report To: Tetra Tech NUS
see pg 1

Telephone #:

Project Mgr.

Invoice To:

P.O. No.: RQN:

Project No.: 112G00949
Site Name: Gould Island - Site 17
Location: see pg 1 State:
Sampler(s):

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8=$NaHSO_4$ 9= 10= 11=

List preservative code below:

QA/QC Reporting Notes:
(check as needed)

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: TAL Metals	PAHs	PCBs	ORO	GRO	QA/QC Reporting Notes
	GI-SD409-0606	5/28/10	1245	G	SO	2	1			X	X	X	X	X	
	GI-SD409-1218		1250	G	SO	2	1			X	X	X	X	X	
	GI-SD409-2430		1300	G	SO	2	1			X	X	X	X	X	
	GI-SD409-4854		1305	G	SO	2	1			X	X	X	X	X	
	GI-SD-DUP02-052810		—	G	SO	2	1			X	X	X	X	X	SD409-4854
	GI-SD-TB01-052810		0600	G	SO	2	1			X	X	X	X	X	

☐ Provide MA DEP MCP CAM Report
☐ Provide CT DPH RCP Report

QA/QC Reporting Level
☐ Standard ☐ No QC
☐ Other

State specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp°C
		5/28/10	1618	

☐ EDD Format
☐ E-mail to

☐ Ambient ☐ Iced ☐ Refrigerated ☐ Fridge temp ___°C ☐ Freezer temp ___°C

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Featuring
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CHAIN OF CUSTODY RECORD

Page 1 of 2

Special Handling:
- [x] Standard TAT - 7 to 10 business days
- [ ] Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Steve Parker
55 Jonspin Rd.
Wilmington MA
Telephone #: 978-474-8400
Project Mgr. Steve Parker

Invoice To: Same
P.O. No.: _____ RQN: _____

Project No.: 112G00949
Site Name: Gould Island - Site 17
Location: Newport State: RI
Sampler(s): Brian Geringer

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9= MeOH 10= Cold/4°C 11= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: GRO	DRO	TAL Metals	PAHs
	GI-SB407-0006	06/01/10	0810	Grab	SO	2	1			X	X	X	X
	" " -1218	" "	0813		SO	2	1			X	X	X	X
	-2430		0820		SO	6	3			X	X	X	X
	-4248		0825		SO	2	1			X	X	X	X
	GI-SB408-0006		1005		SO	2	1			X	X	X	X
	" " -1218		1008		SO	2	1			X	X	X	X
	-2430		1020		SO	2	1			X	X	X	X
	-4248		1023		SO	2	1			X	X	X	X
	GI-SB406-0006		1255		SO	2	1			X	X	X	X
	-1218		1300		SO	2	1			X	X	X	X

List preservative code below: 9 | 10 | 10 | 10

QA/QC Reporting Notes: (check as needed)
- [ ] Provide MA DEP MCP CAM Report
- [ ] Provide CT DPH RCP Report

QA/QC Reporting Level
- [x] Standard
- [ ] No QC
- [ ] Other _____

State specific reporting standards: _____

LAB QC

Relinquished by:	Received by:	Date:	Time:	Temp°C
Brian Geringer	Shirley Ng	6/2/10	16:33	3°C

- [x] EDD Format _____
- [x] E-mail to Stephen.Parker@tetratech.com

- [ ] Ambient [ ] Iced [ ] Refrigerated [ ] Fridge temp ___°C [ ] Freezer temp ___°C

SPECTRUM ANALYTICAL, INC.
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HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 2 of 2

Special Handling:
- ☒ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Refer to Page 1
Telephone #:
Project Mgr.

Invoice To: Refer to Page 1
P.O. No.: RQN:

Project No.: 112G00949
Site Name: Gould Island - Site 17
Location: Newport State: RI
Sampler(s): Brian Geringer

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8=$NaHSO_4$ 9= MeOH 10= 4°C 11=

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	List preservative code below: 9	10	10	10	Analyses: GRO	DRO	TAL Metals	PAHs	QA/QC Reporting Notes:
	GI-SB406-2430	06/01/10	1305	Grab	SO	2	1							X	X	X	X	
	" " -4248	" "	1310		SO	2	1							X	X	X	X	DUP03
	GI-SB-DUP03-060110		—		SO	2	1							X	X	X	X	
	GI-SB-TB02-060110		1700	—	—	2	—							X				
	GI-SB401-0006	06/02/10	0800	Grab	SO	2	1							X	X	X	X	
	" " -1218	" "	0803		SO	2	1							X	X	X	X	
	-2430		0808		SO	2	1							X	X	X	X	
	-4248		0810		SO	2	1							X	X	X	X	
				TB														

☐ Provide MA DEP MCP CAM Report
☐ Provide CT DPH RCP Report

QA/QC Reporting Level
☒ Standard ☐ No QC
☐ Other

State specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp°C
Brian Geringer	Shirley NJ	6/2/10	16:33	3°C

☒ EDD Format
☒ E-mail to Stephen.Parker@tetratech.com

☐ Ambient ☐ Iced ☐ Refrigerated ☐ Fridge temp ___ °C ☐ Freezer temp ___ °C

SPECTRUM ANALYTICAL, INC.
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CHAIN OF CUSTODY RECORD

Page 1 of 3

Special Handling:
- ☒ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
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- Samples disposed of after 60 days unless otherwise instructed.

Report To: Steve Parker
55 Jonspin Rd.
Wilmington MA
Telephone #: 978-474-8400
Project Mgr. Steve Parker

Invoice To: Same
P.O. No.: _____ RQN: _____

Project No.: 112G00949
Site Name: Gould Island - Site 17
Location: Newport State: RI
Sampler(s): Brian Geringer

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8=$NaHSO_4$ 9= MeOH 10= 4°C 11= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= ~~Me~~ BG X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	GRO	DRO	TAL Metals	PAHs	
	GI-SB402-0006	06/02/10	1217	G	SO	2	1			X	X	X	X	
	" " -1218	" "	1220	G	SO	2	1			X	X	X	X	
	-2430		1235	G	SO	2	1			X	X	X	X	* Petroleum Odor
	-4248		1240	G	SO	2	1			X	X	X	X	↓
	GI-SB403-0006		1350	G	SO	2	1			X	X	X	X	
	" " -1218		1355	G	SO	2	1			X	X	X	X	DUP04
	-2430		1405	G	SO	2	1			X	X	X	X	
	-4248		1408	G	SO	2	1			X	X	X	X	
	GI-SB-DUP04-060210		—	G	SO	2	1			X	X	X	X	
	GI-SB-TB03-060210	↓	1800	G	—	2	1			X				

List preservative code below: 9 | 10 | 10 | 10

Analyses: GRO | DRO | TAL Metals | PAHs

QA/QC Reporting Notes: (check as needed)
- ☐ Provide MA DEP MCP CAM Report
- ☐ Provide CT DPH RCP Report

QA/QC Reporting Level
☒ Standard ☐ No QC
☐ Other _____

State specific reporting standards: _____

Relinquished by:	Received by:	Date:	Time:	Temp°C
Brian Geringer	[signature]	6/3/10	17:15	

☒ EDD Format _____
☒ E-mail to Stephen.Parker@tetratech.com

☐ Ambient ☐ Iced ☐ Refrigerated ☐ Fridge temp ___ °C ☐ Freezer temp ___ °C

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CHAIN OF CUSTODY RECORD

Page 3 of 3

Special Handling:
- [x] Standard TAT - 7 to 10 business days
- [ ] Rush TAT - Date Needed: _____
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Report To: Refer to Page 1

Telephone #:

Project Mgr.

Invoice To: Refer to Page 1

P.O. No.: RQN:

Project No.: Refer to Page 1

Site Name:

Location: State:

Sampler(s):

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9= ~~MeOH~~ SBS 10= 4oC 11=

List preservative code below:

9	10	10	4	10				

QA/QC Reporting Notes:
(check as needed)

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= Water X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	2 GRO	Analyses: DRO	PAHs	TAL Metals	PCBs
	GI-SB-RB01-060310	06/03/10	1350	G	X1	2	6		1	X	X	X	X	X
	GI-SB-RB02-060310	"	1400	G	X1	2	4		1	X	X	X	X	
	GI-SB-RB03-060310		1410	G	X1	2	4		1	X	X	X	X	
	GI-SB-FB01-060310		1420	G	X1	2	6		1	X	X	X	X	X

- [ ] Provide MA DEP MCP CAM Report
- [ ] Provide CT DPH RCP Report

QA/QC Reporting Level
- [x] Standard
- [ ] No QC
- [ ] Other _____

State specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp°C
[signature]	[signature]	6/3/10	17:15	

- [x] EDD Format _____
- [x] E-mail to Stephen.Parker@tetratech.com

- [ ] Ambient [ ] Iced [ ] Refrigerated [ ] Fridge temp ___°C [ ] Freezer temp ___°C

SPECTRUM ANALYTICAL, INC.
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CHAIN OF CUSTODY RECORD

Page 2 of 3

Special Handling:
- ☒ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Refer to page 1
Telephone #:
Project Mgr. Steve Parker

Invoice To: refer to page 1
P.O. No.: RQN:

Project No.: refer to page 1
Site Name:
Location: State:
Sampler(s): Brian Geringer

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9= MeOH 10= 4°C 11=

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	List preservative code below: 9	10	10	10	Analyses: GRO	DRO	TAL Metals	PAHs
	GI-SB404-0006	06/03/10	0825	G	SO	2	1							X	X	X	X
	" " -1218	" "	0830			2	1							X	X	X	X
	-2430		0837			2	1							X	X	X	X
	-4248		0840			2	1							X	X	X	X
	GI-SB405-0006		0940			6	3							X	X	X	X
	" " -1218		0945			2	1							X	X	X	X
	-2430		0955			2	1							X	X	X	X
	-4248		1000			2	1							X	X	X	X
	GI-SB-DUP05-060310		—			2	1							X	X	X	X

QA/QC Reporting Notes: (check as needed)
- ☐ Provide MA DEP MCP CAM Report
- ☐ Provide CT DPH RCP Report

QA/QC Reporting Level
- ☒ Standard ☐ No QC
- ☐ Other

State specific reporting standards:

Rev 05 ODOR

LAB QC

Relinquished by:	Received by:	Date:	Time:	Temp°C
Brian Geringer	C Stockman	6/3/10	17:15	

☒ EDD Format
☒ E-mail to Stephen.Parker@tetratech.com

☐ Ambient ☐ Iced ☐ Refrigerated ☐ Fridge temp ___ °C ☐ Freezer temp ___ °C

APPENDIX C

OTHER FIELD RECORDS

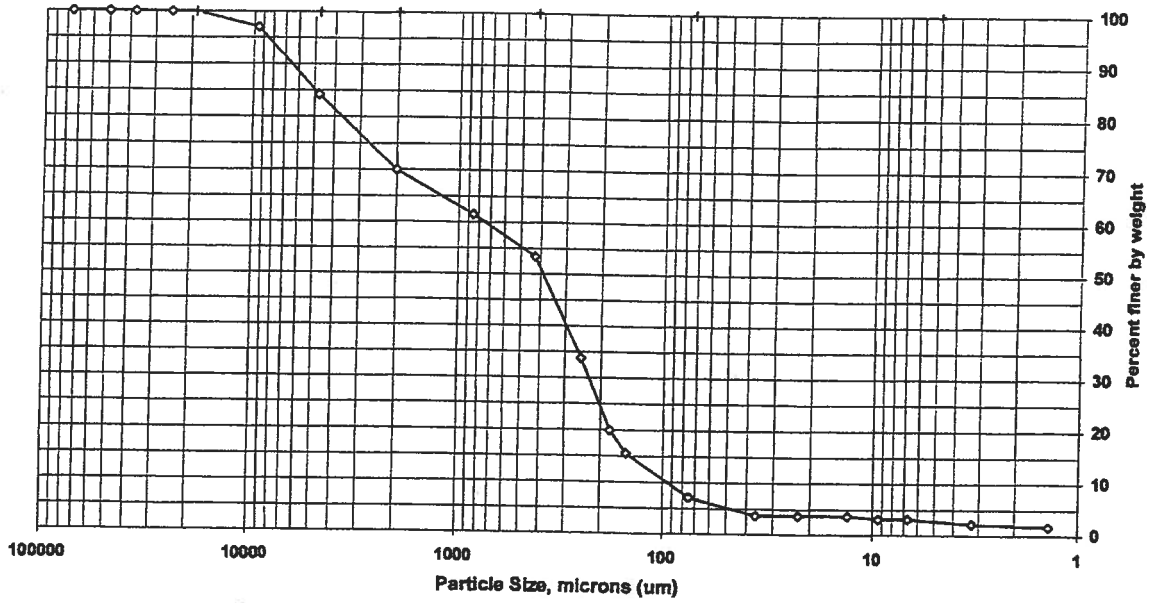
C-1 GRAIN SIZE DISTRIBUTION DATA, 2005

G32 - SD 301 - 0.5/.0

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/08/05
Sample ID:	D1035-16	ETR(s):	109567	Start Date:	09/27/05
Lab ID:	636875			End Date:	10/03/05

Percent Solids:	84.7%		Non-soil material:	plant
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	97.0	3.0
#4	4750	84.2	12.8
#10	2000	70.0	14.3
#20	850	61.5	8.5
#40	425	53.4	8.1
#60	250	33.8	19.7
#80	180	19.9	13.8
#100	150	15.5	4.4
#200	75	7.1	8.4
Hydrometer	36.2	3.7	3.5
I	22.9	3.7	0.0
I	13.2	3.7	0.0
I	9.4	3.2	0.5
I	6.7	3.2	0.0
I	3.2	2.3	1.0
V	1.4	1.7	0.5

Soil Classification	Percent of Total Sample
Gravel	15.8
Sand	77.1
Coarse Sand	14.3
Medium Sand	16.6
Fine Sand	46.3
Silt	3.9
Clay	3.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

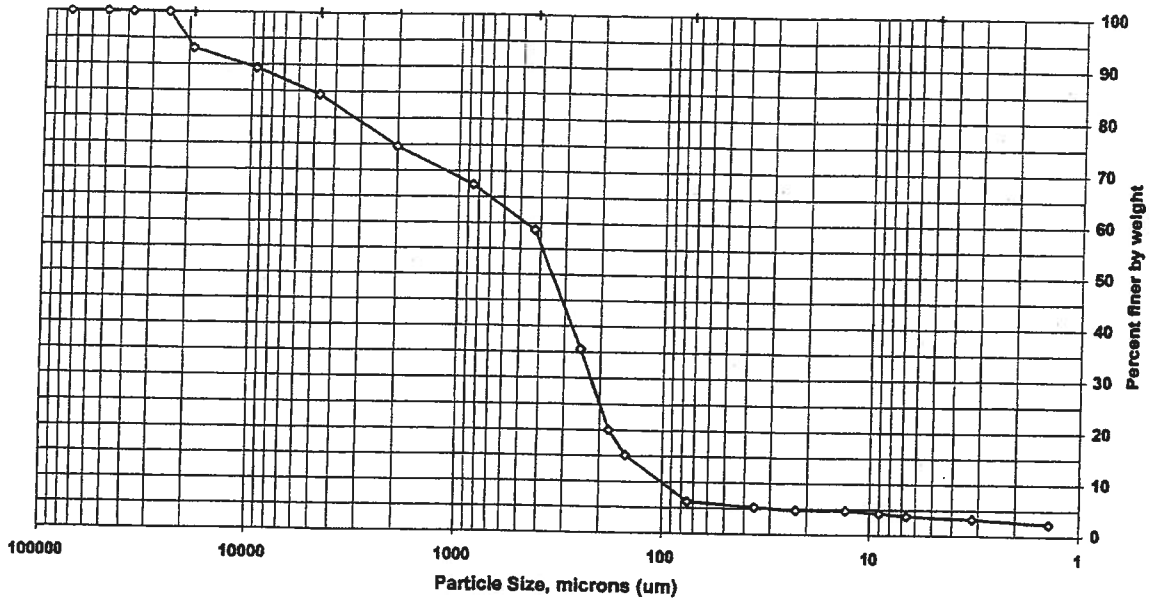
109541BPS 10/4/2005

G32-SD301-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/08/05
Sample ID:	D1035-23	ETR(s):	109567	Start Date:	09/27/05
Lab ID:	636882			End Date:	10/03/05

Percent Solids:	80.1%		Non-soil material:	shell,plant
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	25 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	93.1	6.9
3/8 inch	9500	89.3	3.8
#4	4750	84.4	5.0
#10	2000	74.6	9.7
#20	850	67.3	7.3
#40	425	58.7	8.6
#60	250	35.6	23.1
#80	180	20.0	15.6
#100	150	15.2	4.9
#200	75	6.2	9.0
Hydrometer	35.7	5.3	0.9
I	22.7	4.8	0.5
I	13.1	4.8	0.0
I	9.0	4.3	0.5
I	6.6	3.8	0.5
I	3.2	3.3	0.5
V	1.4	2.3	1.0

Soil Classification	Percent of Total Sample
Gravel	15.6
Sand	78.1
Coarse Sand	9.7
Medium Sand	15.9
Fine Sand	52.5
Silt	2.4
Clay	3.8

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

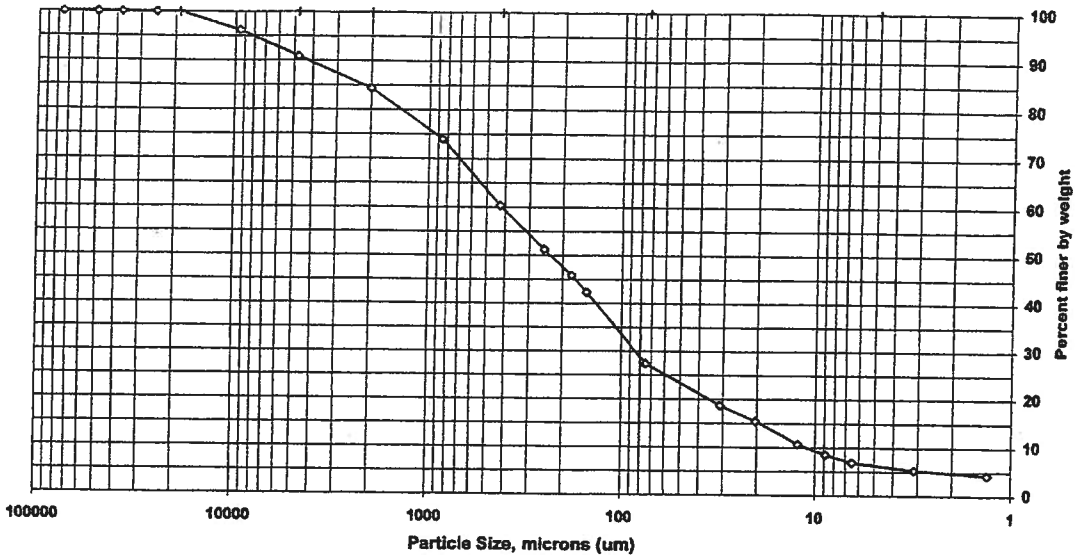
109541BPS 10/4/2005

G32-SD302A-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-02	ETR(s):	109423	Start Date:	09/21/05
Lab ID:	635866			End Date:	09/28/05

Percent Solids:	74.9%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	96.2	3.8
#4	4750	90.9	5.3
#10	2000	84.3	6.5
#20	850	74.0	10.3
#40	425	60.3	13.6
#60	250	51.2	9.1
#80	180	45.9	5.4
#100	150	42.3	3.5
#200	75	27.4	14.9
Hydrometer	31.0	18.7	8.7
I	20.3	15.5	3.2
I	12.3	10.7	4.8
I	8.9	8.5	2.1
I	6.5	6.9	1.6
I	3.1	5.3	1.6
V	1.3	4.3	1.0

Soil Classification	Percent of Total Sample
Gravel	9.1
Sand	63.5
Coarse Sand	6.5
Medium Sand	24.0
Fine Sand	33.0
Silt	20.5
Clay	6.9

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

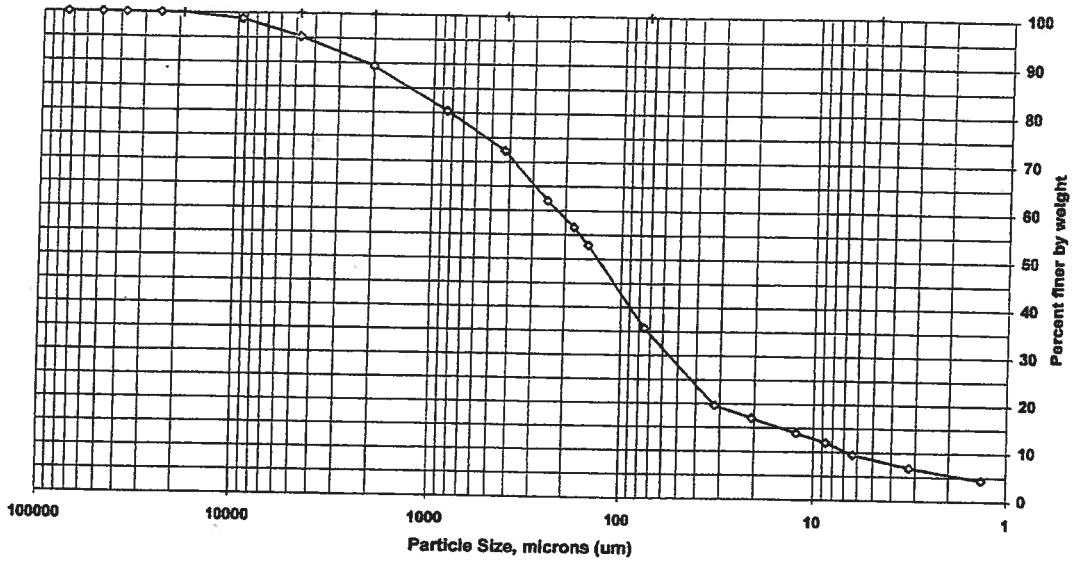
109423PS 9/29/2005

G32-5D302B-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-06	ETR(s):	109423	Start Date:	09/21/05
Lab ID:	635869			End Date:	09/28/05

Percent Solids:	77.0%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.8	1.2
#4	4750	95.2	3.6
#10	2000	89.4	5.8
#20	850	80.4	9.0
#40	425	72.3	8.1
#60	250	62.0	10.3
#80	180	56.6	5.5
#100	150	52.9	3.7
#200	75	35.6	17.2
Hydrometer	32.0	19.6	16.1
I	20.7	17.0	2.5
I	12.3	13.9	3.2
I	8.7	12.0	1.9
I	6.4	9.4	2.5
I	3.2	6.9	2.5
V	1.3	4.4	2.5

Soil Classification	Percent of Total Sample
Gravel	4.8
Sand	59.6
Coarse Sand	5.8
Medium Sand	17.1
Fine Sand	36.7
Silt	26.2
Clay	9.4

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

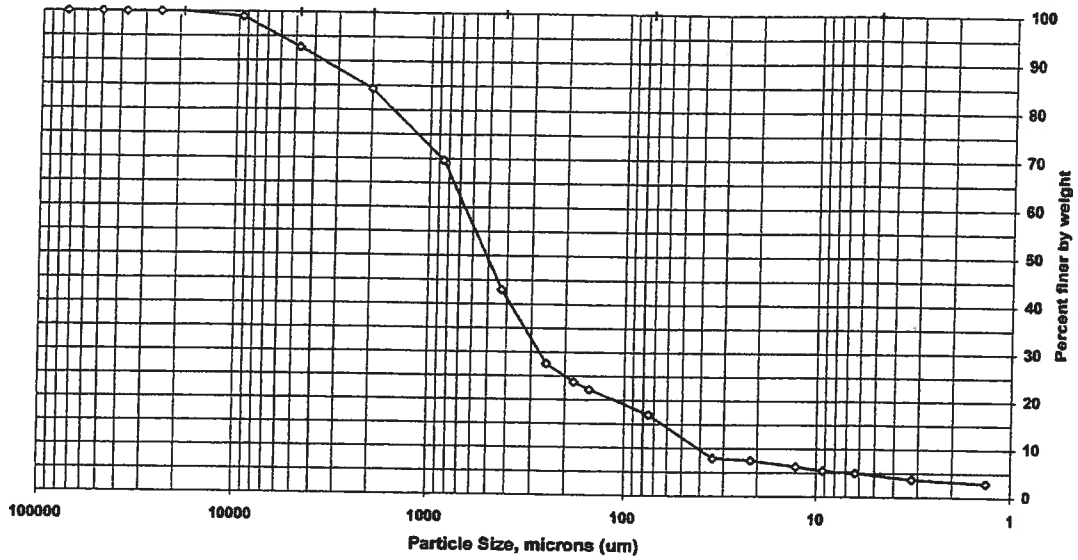
109423PS 9/29/2005

G32-SD302C-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-05	ETR(s):	109423	Start Date:	09/21/05
Lab ID:	635868			End Date:	09/28/05

Percent Solids:	82.7%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.0	1.0
#4	4750	92.7	6.2
#10	2000	84.3	8.4
#20	850	69.7	14.6
#40	425	42.9	26.8
#60	250	27.5	15.4
#80	180	23.8	3.8
#100	150	22.2	1.6
#200	75	17.0	5.2
Hydrometer	34.3	7.9	9.0
I	21.7	7.5	0.4
I	12.7	6.3	1.3
I	9.2	5.4	0.8
I	6.3	5.0	0.4
I	3.2	3.7	1.3
V	1.3	2.9	0.8

Soil Classification	Percent of Total Sample
Gravel	7.3
Sand	75.8
Coarse Sand	8.4
Medium Sand	41.4
Fine Sand	26.0
Silt	12.0
Clay	5.0

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

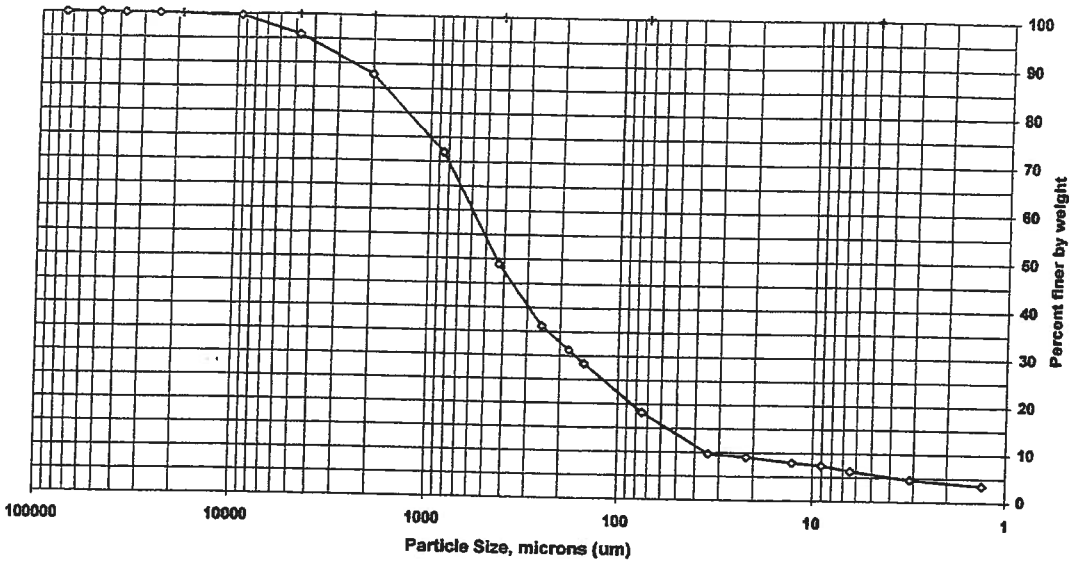
109423PS 9/29/2005

G32-SD302D-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-01	ETR(s):	109423	Start Date:	09/21/05
Lab ID:	635865			End Date:	09/28/05

Percent Solids:	76.9%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.7	0.3
#4	4750	95.8	3.9
#10	2000	87.8	8.0
#20	850	71.9	15.9
#40	425	48.9	23.0
#60	250	36.1	12.8
#80	180	31.2	4.9
#100	150	28.4	2.8
#200	75	18.2	10.1
Hydrometer	34.2	9.7	8.6
I	21.8	9.1	0.6
I	12.7	8.0	1.1
I	9.0	7.4	0.6
I	6.4	6.3	1.1
I	3.1	4.6	1.7
V	1.3	3.5	1.1

Soil Classification	Percent of Total Sample
Gravel	4.2
Sand	77.6
Coarse Sand	8.0
Medium Sand	38.9
Fine Sand	30.7
Silt	11.9
Clay	6.3

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

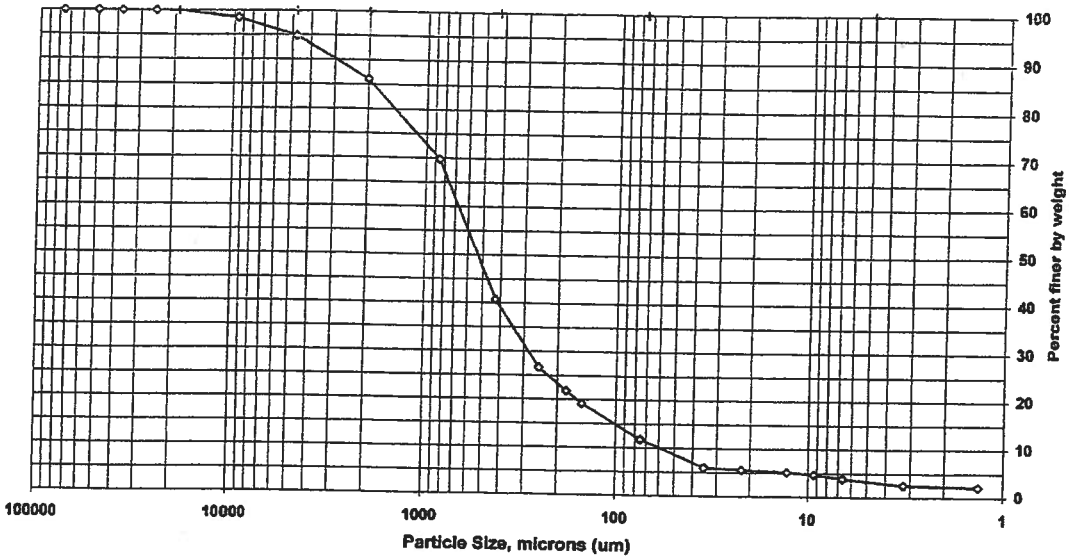
109423PS 9/29/2005

G32-SD3025-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-04	ETR(s):	109423	Start Date:	09/21/05
Lab ID:	635867			End Date:	09/28/05

Percent Solids:	82.9%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.6	1.4
#4	4750	94.8	3.7
#10	2000	86.1	8.8
#20	850	69.8	16.2
#40	425	40.7	29.1
#60	250	26.7	14.0
#80	180	21.8	4.9
#100	150	19.2	2.6
#200	75	11.8	7.4
Hydrometer	35.0	6.0	5.7
I	22.2	5.6	0.4
I	12.9	5.2	0.4
I	9.3	4.7	0.4
I	6.6	3.8	0.9
I	3.2	2.5	1.3
V	1.3	2.2	0.4

Soil Classification	Percent of Total Sample
Gravel	5.2
Sand	83.1
Coarse Sand	8.8
Medium Sand	45.4
Fine Sand	28.9
Silt	7.9
Clay	3.8

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

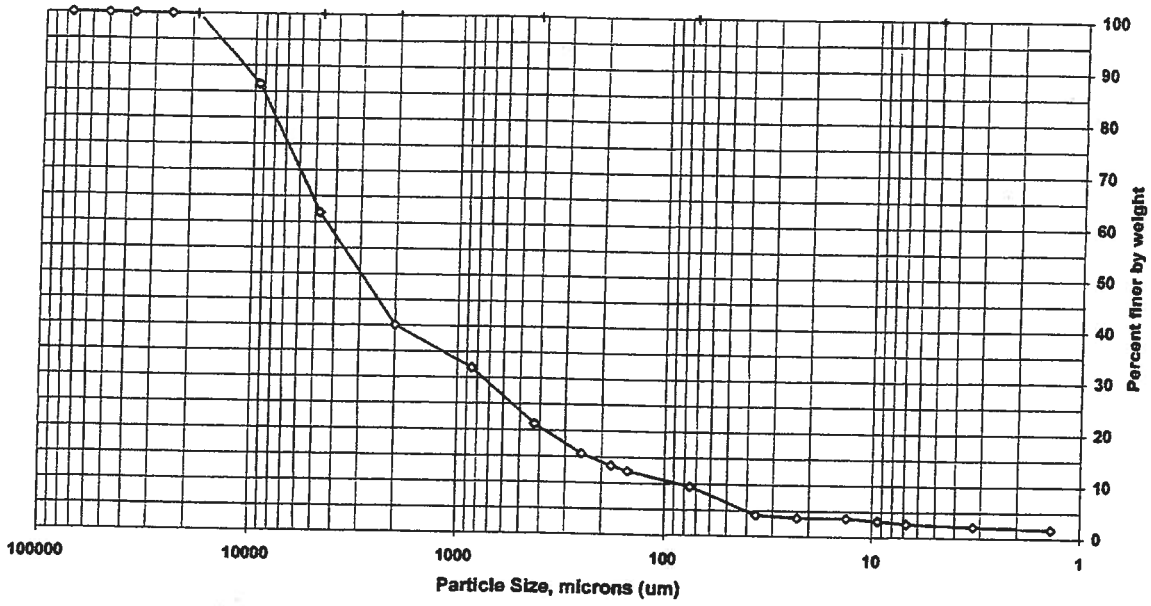
109423PS 9/29/2005

G32-SD302F-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/08/05
Sample ID:	D1035-17	ETR(s):	109567	Start Date:	09/27/05
Lab ID:	636876			End Date:	10/03/05

Percent Solids:	85.6%		Non-soil material:	shell,plant
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	86.5	13.5
#4	4750	61.8	24.6
#10	2000	40.1	21.8
#20	850	31.9	8.1
#40	425	21.2	10.7
#60	250	15.6	5.6
#80	180	13.4	2.3
#100	150	12.3	1.0
#200	75	9.5	2.9
Hydrometer	36.0	4.1	5.3
I	22.9	3.7	0.5
I	13.2	3.7	0.0
I	9.4	3.2	0.5
I	6.8	2.7	0.5
I	3.2	2.2	0.5
V	1.4	1.7	0.5

Soil Classification	Percent of Total Sample
Gravel	38.2
Sand	52.4
Coarse Sand	21.8
Medium Sand	18.8
Fine Sand	11.8
Silt	6.7
Clay	2.7

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

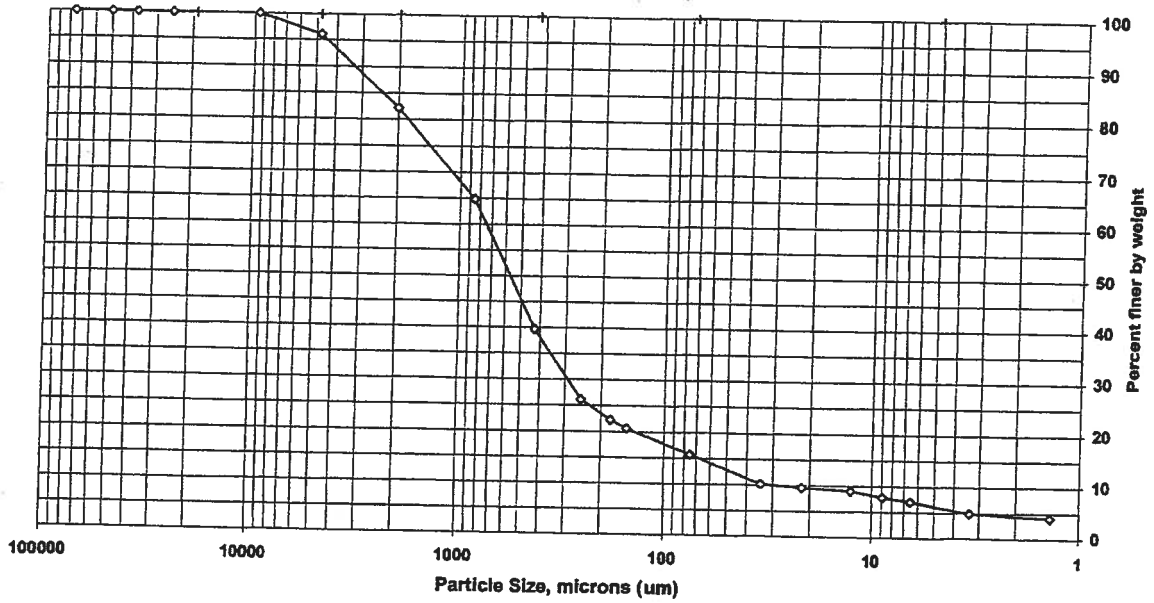
109541BPS 10/4/2005

G32-SD303-0.5/.0

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/07/05
Sample ID:	D1035-06	ETR(s):	109541	Start Date:	09/27/05
Lab ID:	636753			End Date:	10/03/05

Percent Solids:	75.1%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	96.1	3.9
#10	2000	82.2	13.9
#20	850	64.8	17.4
#40	425	39.7	25.1
#60	250	26.2	13.5
#80	180	22.3	3.9
#100	150	20.6	1.6
#200	75	15.7	4.9
Hydrometer	34.4	10.2	5.5
I	21.9	9.6	0.6
I	12.7	9.0	0.6
I	8.9	7.9	1.2
I	6.5	7.0	0.9
I	3.3	5.0	2.0
V	1.4	4.1	0.9

Soil Classification	Percent of Total Sample
Gravel	3.9
Sand	80.3
Coarse Sand	13.9
Medium Sand	42.5
Fine Sand	24.0
Silt	8.7
Clay	7.0

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

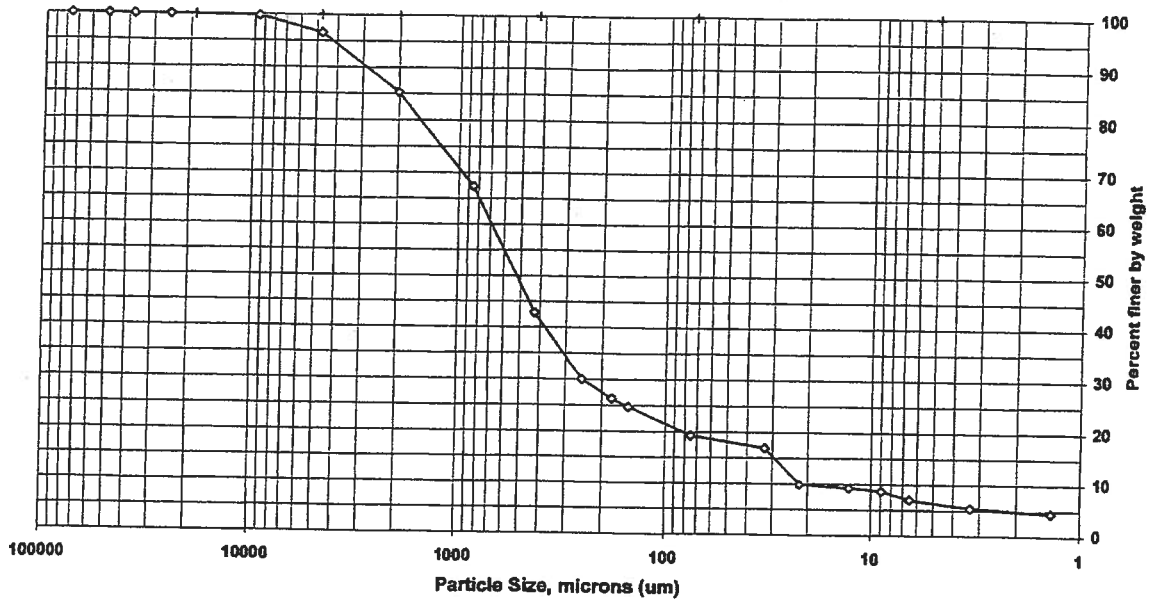
109541PS 10/5/2005

G32 - SD303 - 000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/07/05
Sample ID:	D1035-05	ETR(s):	109541	Start Date:	09/27/05
Lab ID:	636752			End Date:	10/03/05

Percent Solids:	76.5%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.8	0.2
#4	4750	96.6	3.2
#10	2000	85.3	11.3
#20	850	67.3	18.0
#40	425	42.8	24.5
#60	250	30.0	12.8
#80	180	26.4	3.7
#100	150	24.7	1.6
#200	75	19.3	5.4
Hydrometer	32.8	16.9	2.4
I	22.0	9.9	7.0
I	12.7	9.3	0.6
I	8.9	8.6	0.6
I	6.5	7.0	1.6
I	3.3	5.4	1.6
V	1.4	4.5	1.0

Soil Classification	Percent of Total Sample
Gravel	3.4
Sand	77.2
Coarse Sand	11.3
Medium Sand	42.4
Fine Sand	23.5
Silt	12.3
Clay	7.0

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

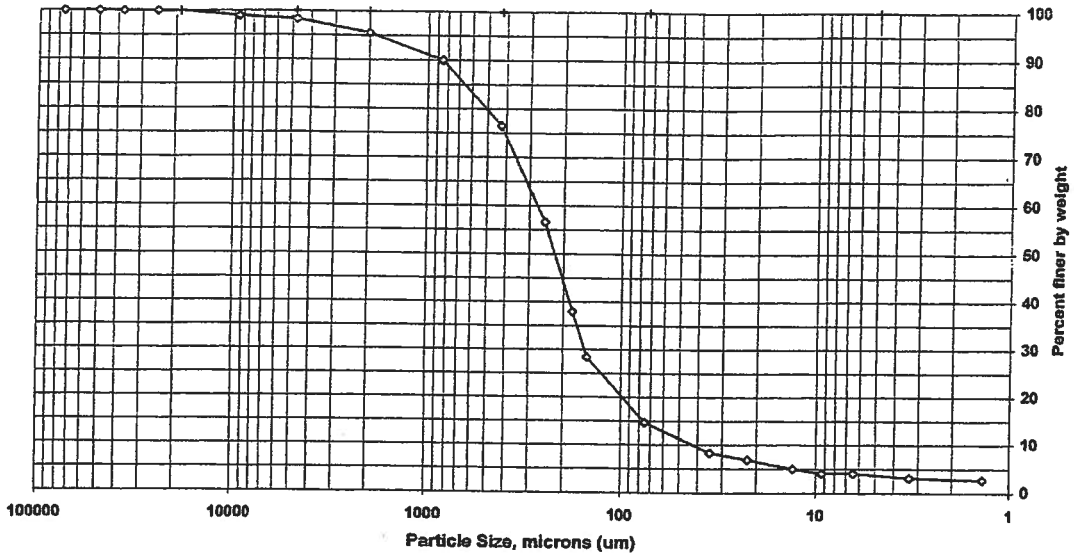
109541PS 10/5/2005

G32-SD304A-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109425	Date Received:	08/30/05
Sample ID:	D1010-05	ETR(s):	109425	Start Date:	09/23/05
Lab ID:	635887			End Date:	09/28/05

Percent Solids:	81.0%		Non-soil material:	plant,shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.9	1.1
#4	4750	98.3	0.6
#10	2000	95.6	2.7
#20	850	90.0	5.6
#40	425	76.5	13.5
#60	250	56.7	19.9
#80	180	38.0	18.7
#100	150	28.4	9.6
#200	75	14.7	13.7
Hydrometer	34.7	8.3	6.4
I	22.2	6.9	1.4
I	13.1	5.0	1.9
I	9.3	4.0	1.0
I	6.4	4.0	0.0
I	3.3	3.1	1.0
V	1.4	2.7	0.4

Soil Classification	Percent of Total Sample
Gravel	1.7
Sand	83.6
Coarse Sand	2.7
Medium Sand	19.1
Fine Sand	61.8
Silt	10.7
Clay	4.0

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

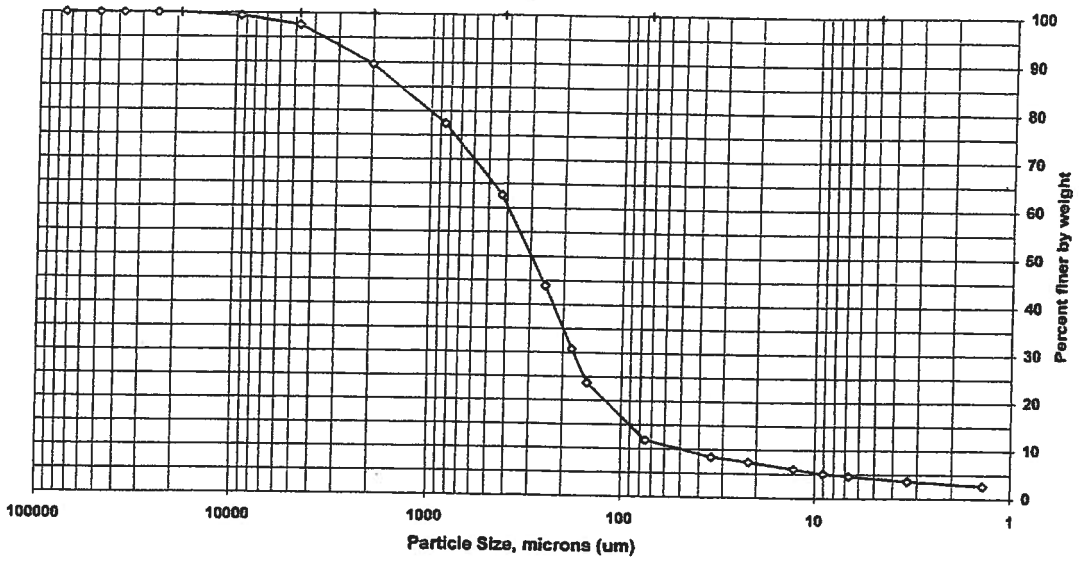
109425PS 9/29/2005

G32-SD304B-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109425	Date Received:	08/30/05
Sample ID:	D1010-06	ETR(s):	109425	Start Date:	09/23/05
Lab ID:	635888			End Date:	09/28/05

Percent Solids:	82.3%		Non-soil material:	plant,shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.4	0.6
#4	4750	97.6	1.8
#10	2000	89.6	8.0
#20	850	77.5	12.1
#40	425	62.7	14.8
#60	250	44.0	18.7
#80	180	30.7	13.2
#100	150	23.7	7.0
#200	75	11.8	11.9
Hydrometer	34.4	8.4	3.3
I	22.0	7.5	1.0
I	12.9	6.1	1.4
I	9.0	5.1	1.0
I	6.7	4.6	0.5
I	3.4	3.6	1.0
V	1.4	2.7	0.9

Soil Classification	Percent of Total Sample
Gravel	2.4
Sand	85.8
Coarse Sand	8.0
Medium Sand	26.9
Fine Sand	50.9
Silt	7.2
Clay	4.6

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

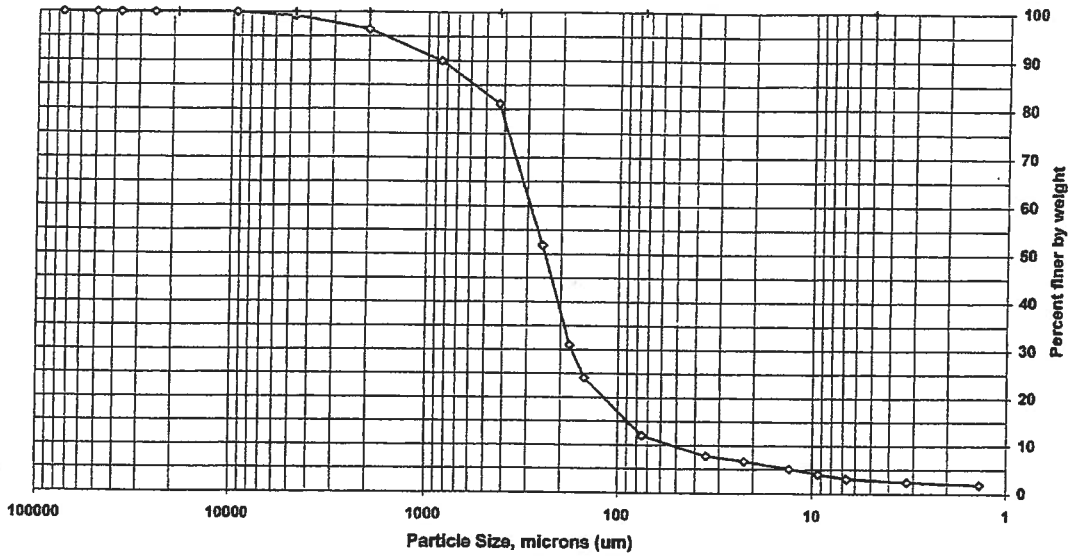
109425PS 9/29/2005

632 - SD304C - 000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109425	Date Received:	8/30/2005
Sample ID:	D1010-07	ETR(s):	109425	Start Date:	9/23/2005
Lab ID:	635889			End Date:	9/29/2005

Percent Solids:	77.7%		Non-soil material:	shell,grass
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.2	0.8
#10	2000	96.4	2.8
#20	850	90.0	6.4
#40	425	81.2	8.8
#60	250	51.8	29.4
#80	180	31.0	20.8
#100	150	24.1	6.9
#200	75	12.0	12.1
Hydrometer	35.0	7.7	4.3
I	22.3	6.7	1.1
I	13.1	5.1	1.6
I	9.3	4.0	1.1
I	6.7	3.1	1.0
I	3.2	2.5	0.6
V	1.4	1.9	0.5

Soil Classification	Percent of Total Sample
Gravel	0.8
Sand	87.2
Coarse Sand	2.8
Medium Sand	15.2
Fine Sand	69.2
Silt	8.9
Clay	3.1

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

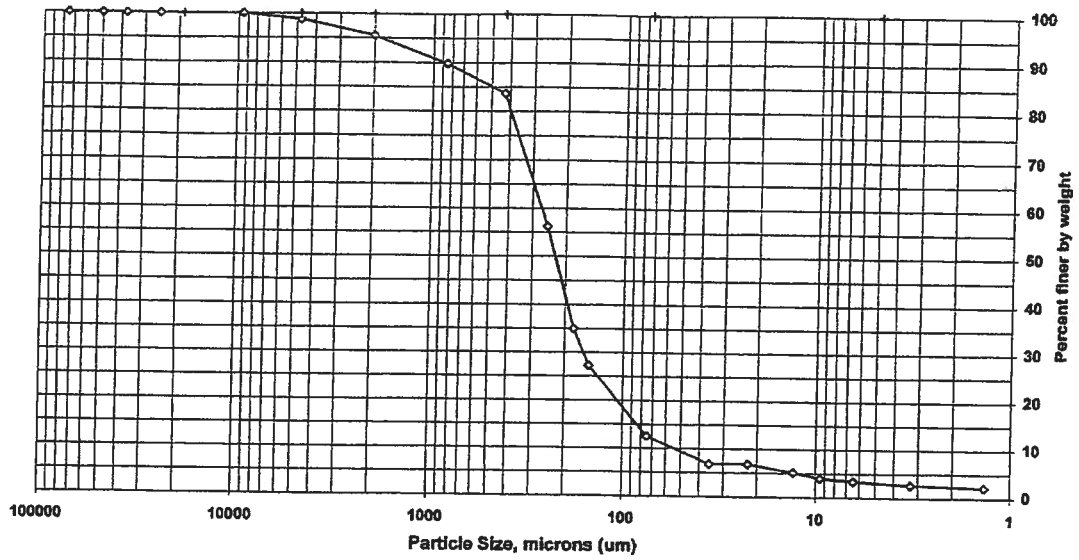
109425BPS 9/29/2005

G32-SD304D-0.5/1.0

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109425	Date Received:	8/30/2005
Sample ID:	D1010-10	ETR(s):	109425	Start Date:	9/23/2005
Lab ID:	635892			End Date:	9/29/2005

Percent Solids:	82.0%		Non-soil material:	shell,plant
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.8	1.2
#10	2000	95.5	3.2
#20	850	89.9	5.7
#40	425	83.7	6.2
#60	250	56.2	27.4
#80	180	35.0	21.2
#100	150	27.3	7.7
#200	75	12.5	14.8
Hydrometer	35.5	6.8	5.7
I	22.4	6.8	0.0
I	13.0	5.2	1.6
I	9.5	4.0	1.2
I	6.4	3.4	0.6
I	3.3	2.7	0.7
V	1.4	2.2	0.5

Soil Classification	Percent of Total Sample
Gravel	1.2
Sand	86.3
Coarse Sand	3.2
Medium Sand	11.9
Fine Sand	71.2
Silt	9.1
Clay	3.4

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

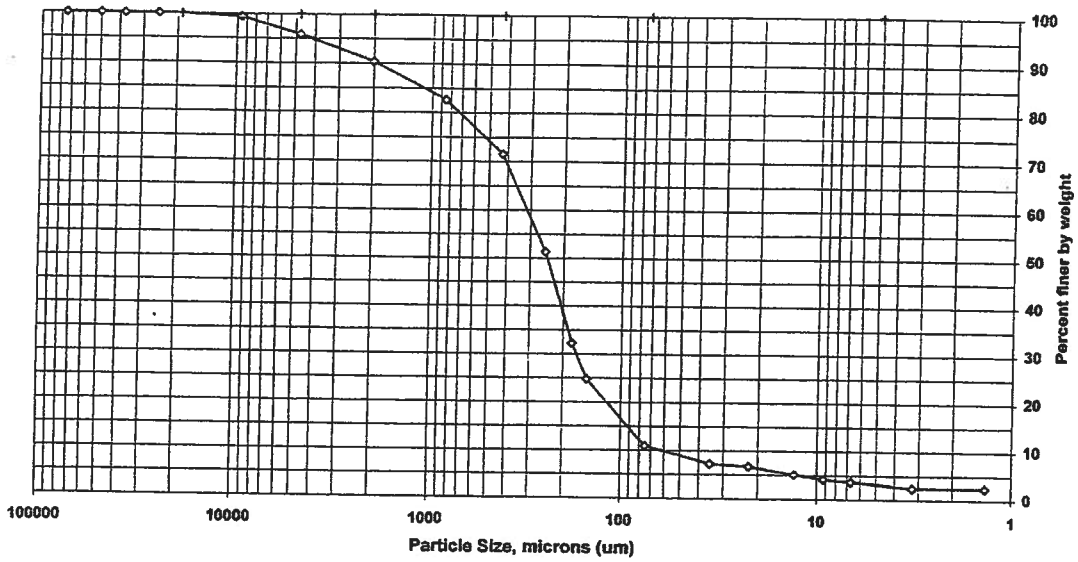
109425BPS 9/29/2005

G32-SD304D-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109425	Date Received:	8/30/2005
Sample ID:	D1010-08	ETR(s):	109425	Start Date:	9/23/2005
Lab ID:	635890			End Date:	9/29/2005

Percent Solids:	77.1%		Non-soil material:	shell,grass
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.4	0.6
#4	4750	95.9	3.6
#10	2000	90.4	5.5
#20	850	82.7	7.7
#40	425	71.5	11.1
#60	250	51.4	20.2
#80	180	32.3	19.0
#100	150	24.8	7.5
#200	75	10.9	13.9
Hydrometer	35.1	7.2	3.7
I	22.3	6.7	0.5
I	13.1	5.1	1.6
I	9.3	4.2	1.0
I	6.7	3.6	0.5
I	3.2	2.5	1.1
V	1.4	2.5	0.0

Soil Classification	Percent of Total Sample
Gravel	4.1
Sand	84.9
Coarse Sand	5.5
Medium Sand	18.8
Fine Sand	60.6
Silt	7.3
Clay	3.6

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

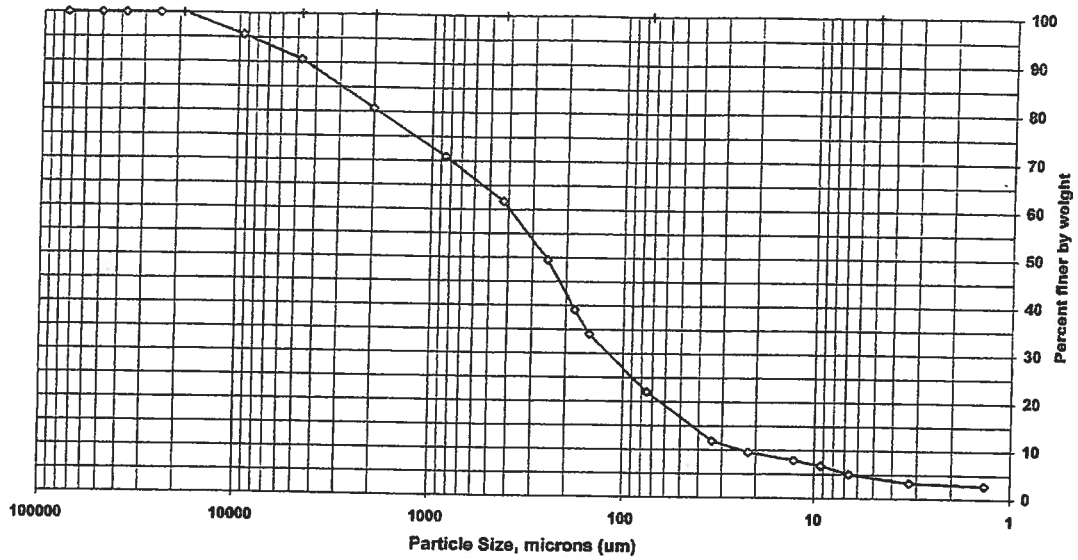
109425BPS 9/29/2005

G32-SD304E-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109425	Date Received:	8/30/2005
Sample ID:	D1010-09	ETR(s):	109425	Start Date:	9/23/2005
Lab ID:	635891			End Date:	9/29/2005

Percent Solids:	83.4%		Non-soil material:	shell,plant
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	95.6	4.4
#4	4750	90.6	5.0
#10	2000	80.7	9.9
#20	850	70.9	9.8
#40	425	61.7	9.2
#60	250	49.5	12.2
#80	180	39.1	10.4
#100	150	34.0	5.1
#200	75	22.0	12.1
Hydrometer	33.9	11.8	10.2
I	21.9	9.5	2.3
I	12.7	7.9	1.6
I	9.3	6.8	1.1
I	6.6	5.1	1.7
I	3.3	3.2	1.8
V	1.4	2.8	0.5

Soil Classification	Percent of Total Sample
Gravel	9.4
Sand	68.6
Coarse Sand	9.9
Medium Sand	19.0
Fine Sand	39.7
Silt	16.9
Clay	5.1

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

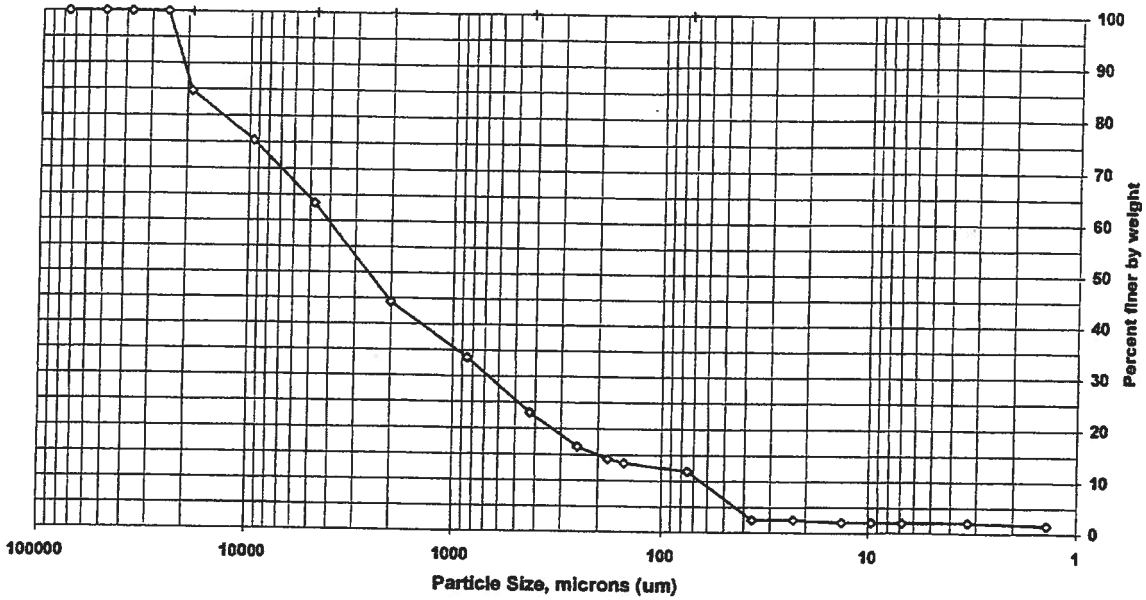
109425BPS 9/29/2005

G32-SD304F-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/08/05
Sample ID:	D1035-18	ETR(s):	109567	Start Date:	09/27/05
Lab ID:	636877			End Date:	10/03/05

Percent Solids:	91.3%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	25 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	84.8	15.2
3/8 inch	9500	75.4	9.4
#4	4750	63.4	11.9
#10	2000	44.3	19.2
#20	850	33.6	10.7
#40	425	23.0	10.6
#60	250	16.5	6.5
#80	180	14.2	2.3
#100	150	13.4	0.8
#200	75	11.9	1.5
Hydrometer	36.5	2.5	9.4
|	23.1	2.5	0.0
|	13.4	2.1	0.4
|	9.6	2.1	0.0
|	6.8	2.1	0.0
|	3.3	2.1	0.0
V	1.4	1.6	0.5

Soil Classification	Percent of Total Sample
Gravel	36.6
Sand	51.5
Coarse Sand	19.2
Medium Sand	21.3
Fine Sand	11.1
Silt	9.9
Clay	2.1

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

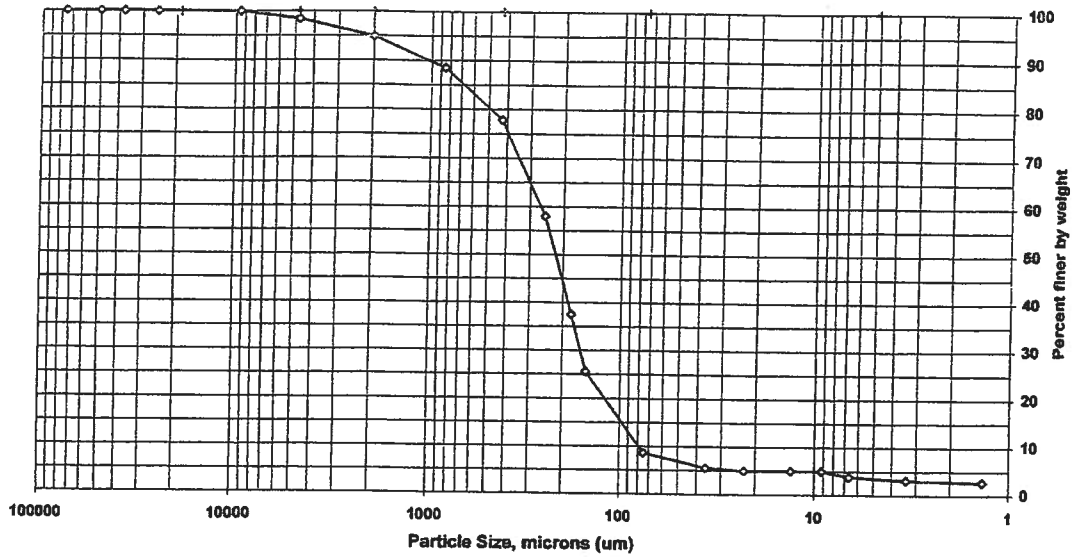
109541BPS 10/4/2005

G32-SD305A-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-19	ETR(s):	109423	Start Date:	09/23/05
Lab ID:	635881			End Date:	09/28/05

Percent Solids:	82.6%		Non-soil material:	plant,shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.4	1.6
#10	2000	95.0	3.4
#20	850	88.5	6.4
#40	425	77.8	10.7
#60	250	58.0	19.8
#80	180	37.5	20.5
#100	150	25.6	12.0
#200	75	8.7	16.9
Hydrometer	36.0	5.6	3.1
I	22.9	5.0	0.6
I	13.2	5.0	0.0
I	9.2	5.0	0.0
I	6.7	3.8	1.2
I	3.4	3.1	0.7
V	1.4	2.7	0.4

Soil Classification	Percent of Total Sample
Gravel	1.6
Sand	89.7
Coarse Sand	3.4
Medium Sand	17.2
Fine Sand	69.2
Silt	4.8
Clay	3.8

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

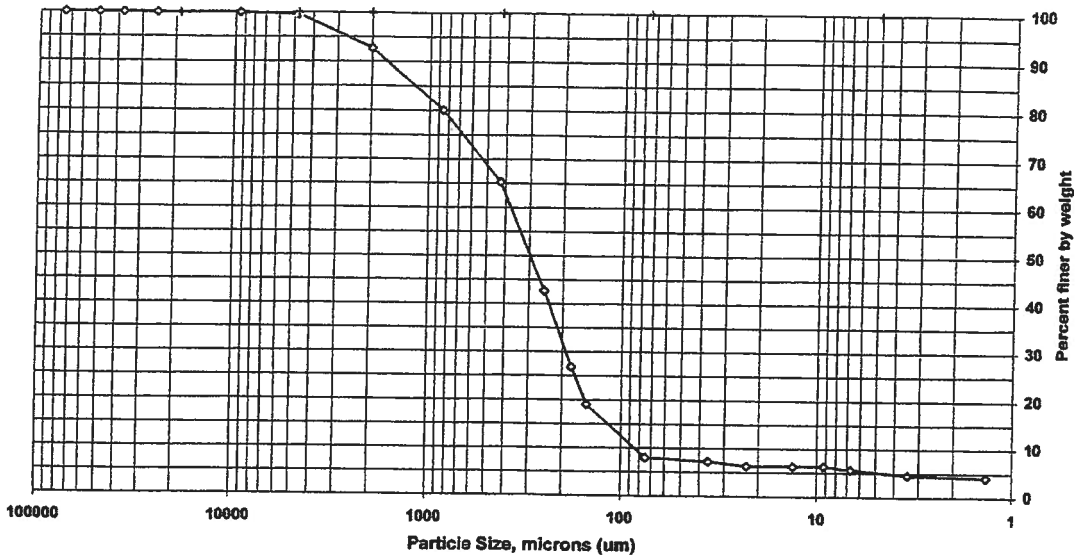
109423BPS 9/29/2005

G32-SD305B-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-20	ETR(s):	109423	Start Date:	09/23/05
Lab ID:	635882			End Date:	09/28/05

Percent Solids:	79.5%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.6	0.4
#10	2000	92.7	6.9
#20	850	80.2	12.5
#40	425	65.3	14.9
#60	250	42.7	22.6
#80	180	26.9	15.8
#100	150	19.1	7.8
#200	75	8.0	11.1
Hydrometer	36.2	7.2	0.8
I	23.0	6.4	0.8
I	13.3	6.4	0.0
I	9.2	6.4	0.0
I	6.7	5.7	0.7
I	3.4	4.5	1.1
V	1.4	4.1	0.4

Soil Classification	Percent of Total Sample
Gravel	0.4
Sand	91.6
Coarse Sand	6.9
Medium Sand	27.4
Fine Sand	57.3
Silt	2.3
Clay	5.7

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

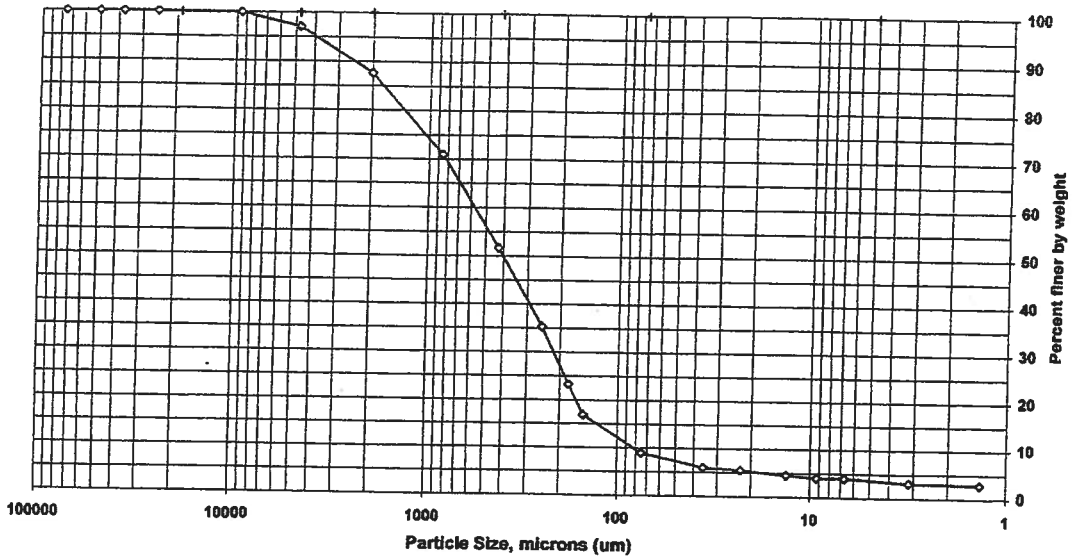
109423BPS 9/29/2005

G32-SD305C-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1010-01	ETR(s):	109423	Start Date:	09/23/05
Lab ID:	635883			End Date:	09/28/05

Percent Solids:	80.6%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	97.1	2.9
#10	2000	87.6	9.4
#20	850	71.0	16.7
#40	425	51.7	19.3
#60	250	35.3	16.4
#80	180	23.3	12.0
#100	150	16.8	6.5
#200	75	8.9	7.9
Hydrometer	35.7	6.0	2.9
I	22.7	5.5	0.5
I	13.2	4.5	1.0
I	9.2	4.1	0.5
I	6.7	4.1	0.0
I	3.2	3.2	0.9
V	1.4	2.8	0.3

Soil Classification	Percent of Total Sample
Gravel	2.9
Sand	88.2
Coarse Sand	9.4
Medium Sand	36.0
Fine Sand	42.8
Silt	4.9
Clay	4.1

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

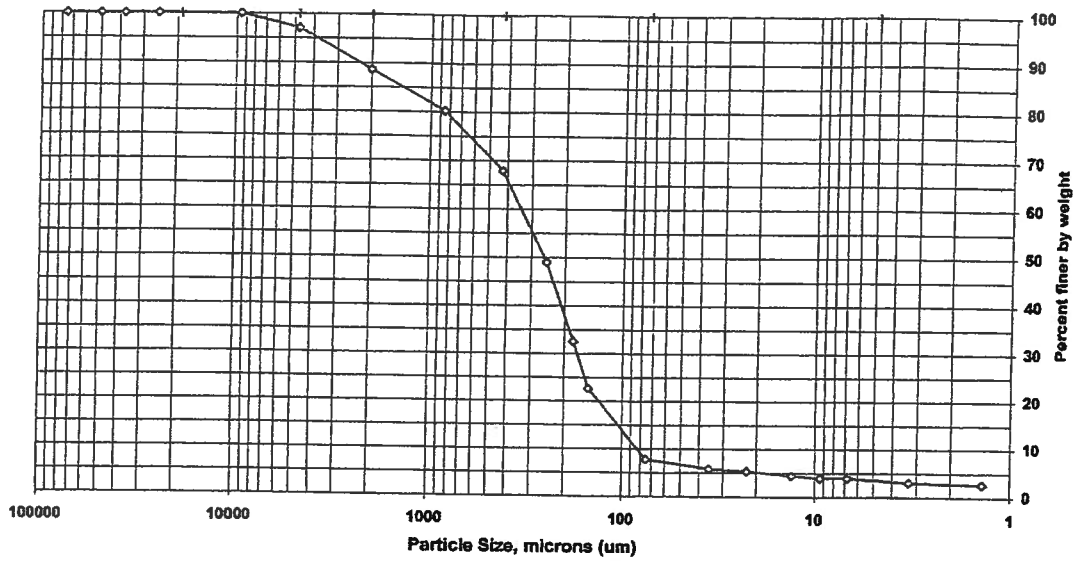
109423BPS 9/29/2005

G32-SD305D-0.5/C

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109425	Date Received:	08/30/05
Sample ID:	D1010-04	ETR(s):	109425	Start Date:	09/23/05
Lab ID:	635886			End Date:	09/28/05

Percent Solids:	83.6%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	97.1	2.9
#10	2000	88.7	8.4
#20	850	80.2	8.4
#40	425	67.9	12.3
#60	250	49.1	18.9
#80	180	32.6	16.5
#100	150	22.7	9.9
#200	75	7.8	14.9
Hydrometer	35.5	5.8	2.0
I	22.6	5.4	0.5
I	13.2	4.4	0.9
I	9.3	4.0	0.5
I	6.8	4.0	0.0
I	3.3	3.0	0.9
V	1.4	2.6	0.4

Soil Classification	Percent of Total Sample
Gravel	2.9
Sand	89.3
Coarse Sand	8.4
Medium Sand	20.7
Fine Sand	60.1
Silt	3.9
Clay	4.0

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

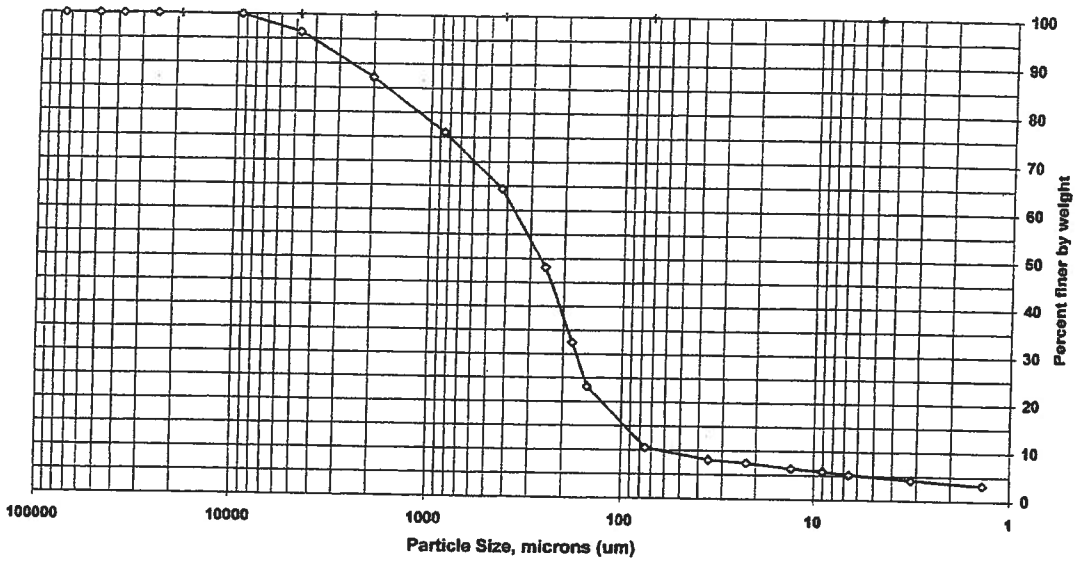
109425PS 9/29/2005

G32-SD305D-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1010-02	ETR(s):	109423	Start Date:	09/23/05
Lab ID:	635884			End Date:	09/28/05

Percent Solids:	80.3%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	96.4	3.6
#10	2000	87.2	9.1
#20	850	76.0	11.3
#40	425	64.4	11.5
#60	250	48.2	16.2
#80	180	32.5	15.7
#100	150	23.2	9.3
#200	75	10.5	12.7
Hydrometer	35.4	8.1	2.4
I	22.5	7.5	0.6
I	13.1	6.4	1.1
I	9.0	5.8	0.6
I	6.6	5.2	0.6
I	3.2	4.2	1.0
V	1.4	3.2	1.0

Soil Classification	Percent of Total Sample
Gravel	3.6
Sand	85.9
Coarse Sand	9.1
Medium Sand	22.8
Fine Sand	54.0
Silt	5.3
Clay	5.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

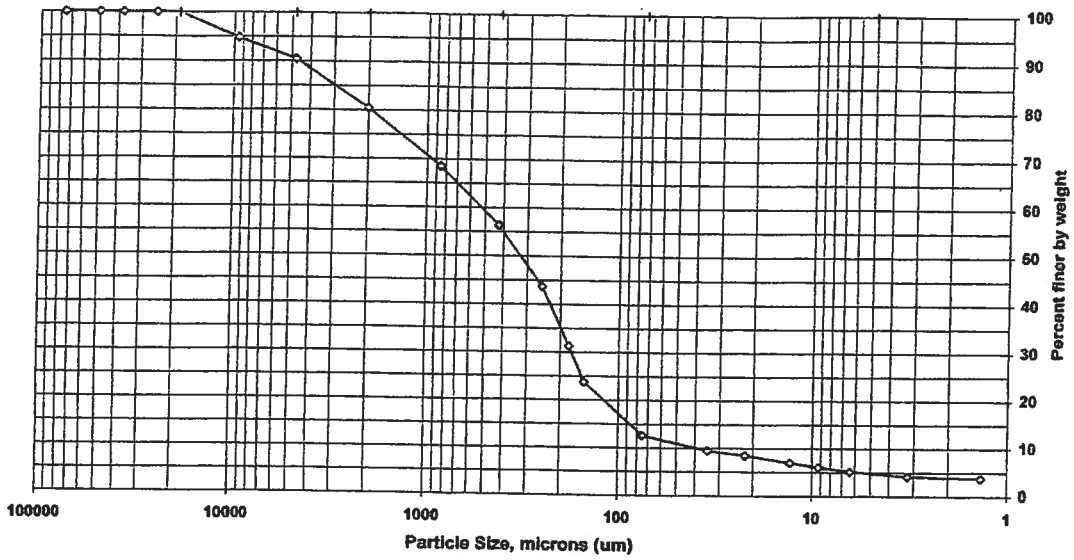
109423BPS 9/29/2005

G32-SD305E-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109425	Date Received:	08/30/05
Sample ID:	D1010-03	ETR(s):	109425	Start Date:	09/23/05
Lab ID:	635885			End Date:	09/28/05

Percent Solids:	79.6%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	94.8	5.2
#4	4750	90.4	4.4
#10	2000	80.4	10.0
#20	850	68.5	11.9
#40	425	56.4	12.1
#60	250	43.7	12.7
#80	180	31.3	12.5
#100	150	23.8	7.5
#200	75	12.6	11.2
Hydrometer	34.5	9.5	3.1
I	22.1	8.5	1.0
I	12.9	7.0	1.5
I	9.2	6.1	1.0
I	6.4	5.2	0.9
I	3.2	4.2	1.0
V	1.4	3.8	0.4

Soil Classification	Percent of Total Sample
Gravel	9.6
Sand	77.8
Coarse Sand	10.0
Medium Sand	24.1
Fine Sand	43.7
Silt	7.5
Clay	5.2

Preparation Method: **D2217**
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

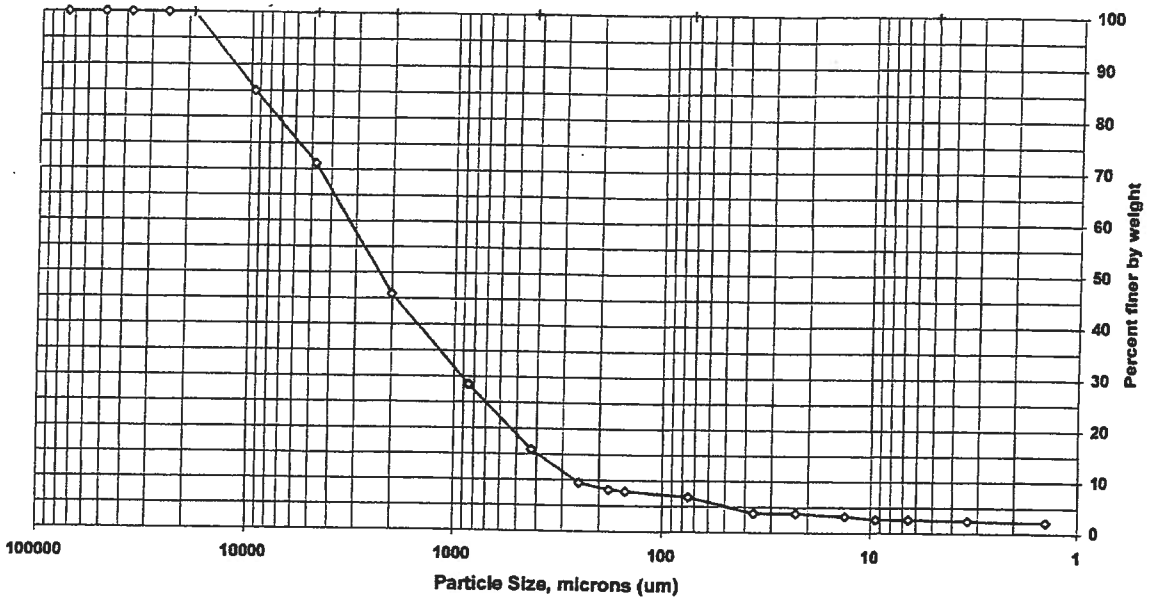
109425PS 9/29/2005

G32-SD305F-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/07/05
Sample ID:	D1035-11	ETR(s):	109541	Start Date:	09/27/05
Lab ID:	636758			End Date:	10/03/05

Percent Solids:	77.9%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	85.0	15.0
#4	4750	71.1	13.9
#10	2000	45.8	25.2
#20	850	28.5	17.3
#40	425	15.9	12.7
#60	250	9.5	6.4
#80	180	8.2	1.3
#100	150	7.9	0.4
#200	75	6.8	1.0
Hydrometer	36.3	3.8	3.0
|	22.9	3.8	0.0
|	13.3	3.3	0.5
|	9.4	2.7	0.5
|	6.5	2.7	0.0
|	3.4	2.4	0.3
V	1.4	2.2	0.3

Soil Classification	Percent of Total Sample
Gravel	28.9
Sand	64.2
Coarse Sand	25.2
Medium Sand	30.0
Fine Sand	9.0
Silt	4.1
Clay	2.7

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

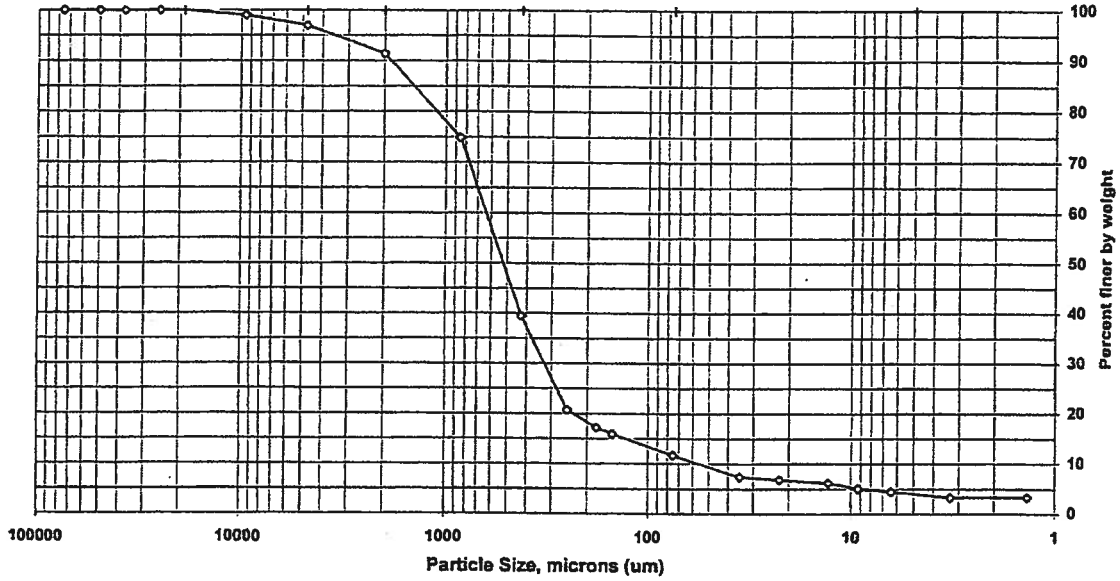
109541PS 10/5/2005

G32-SD306A-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1010-17	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636489			End Date:	9/29/2005

Percent Solids:	78.9%		Non-soil material:	shell,plant
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.0	1.0
#4	4750	97.0	2.0
#10	2000	91.4	5.6
#20	850	74.8	16.6
#40	425	39.5	35.4
#60	250	20.7	18.7
#80	180	17.1	3.6
#100	150	15.9	1.3
#200	75	11.7	4.2
Hydrometer	35.1	7.3	4.3
I	22.3	6.8	0.6
I	12.9	6.2	0.6
I	9.2	5.1	1.1
I	6.4	4.5	0.6
I	3.3	3.3	1.1
V	1.4	3.3	0.0

Soil Classification	Percent of Total Sample
Gravel	3.0
Sand	85.3
Coarse Sand	5.6
Medium Sand	51.9
Fine Sand	27.8
Silt	7.2
Clay	4.5

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

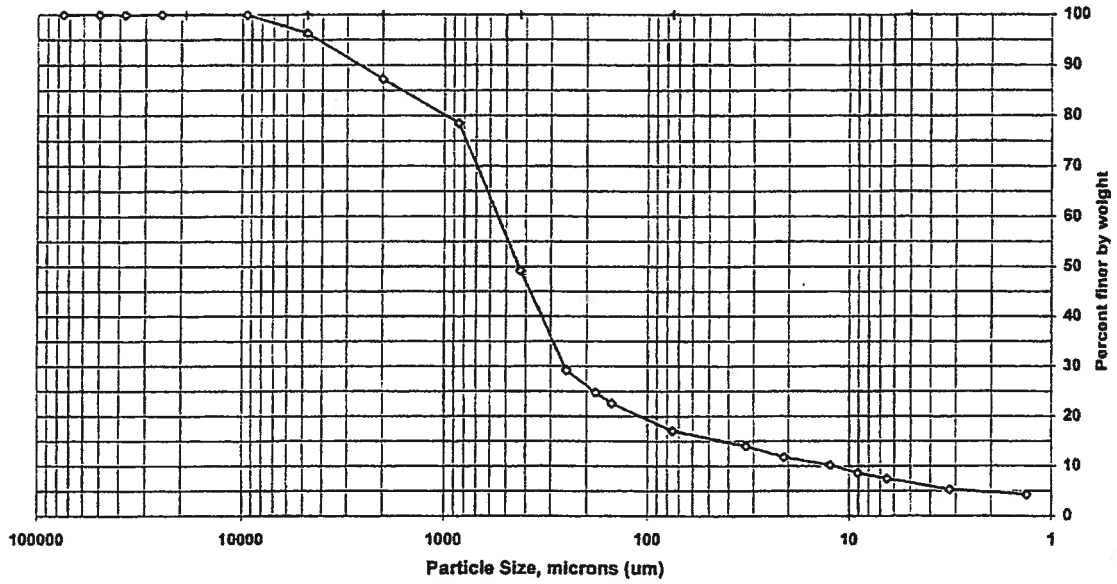
109506PS 9/30/2005

G32-SD306B-000.1

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1023-01	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636493			End Date:	9/29/2005

Percent Solids:	79.4%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	96.3	3.7
#10	2000	87.3	9.1
#20	850	78.5	8.8
#40	425	49.2	29.3
#60	250	29.2	20.0
#80	180	24.8	4.5
#100	150	22.6	2.2
#200	75	17.1	5.5
Hydrometer	32.7	14.0	3.1
I	21.1	11.8	2.2
I	12.4	10.2	1.6
I	9.0	8.6	1.6
I	6.5	7.5	1.1
I	3.2	5.3	2.2
V	1.3	4.3	1.0

Soil Classification	Percent of Total Sample
Gravel	3.7
Sand	79.3
Coarse Sand	9.1
Medium Sand	38.1
Fine Sand	32.1
Silt	9.6
Clay	7.5

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

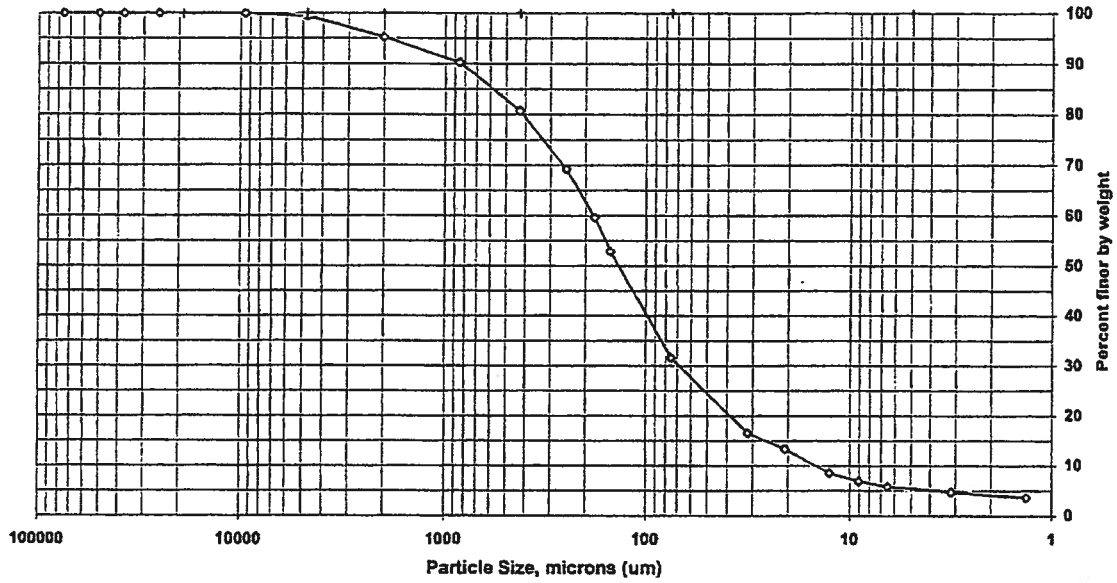
109506BPS 9/30/2005

G32-SD306C-0.5/1.0

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1010-19	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636491			End Date:	9/29/2005

Percent Solids:	83.1%		Non-soil material:	shell,plant
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.4	0.6
#10	2000	95.2	4.2
#20	850	90.2	5.0
#40	425	80.7	9.5
#60	250	69.2	11.6
#80	180	59.6	9.6
#100	150	52.8	6.8
#200	75	31.6	21.2
Hydrometer	31.8	16.6	15.1
I	20.8	13.4	3.2
I	12.6	8.5	4.8
I	9.0	6.9	1.6
I	6.5	5.8	1.1
I	3.1	4.8	1.1
V	1.3	3.7	1.1

Soil Classification	Percent of Total Sample
Gravel	0.6
Sand	67.8
Coarse Sand	4.2
Medium Sand	14.5
Fine Sand	49.1
Silt	25.8
Clay	5.8

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

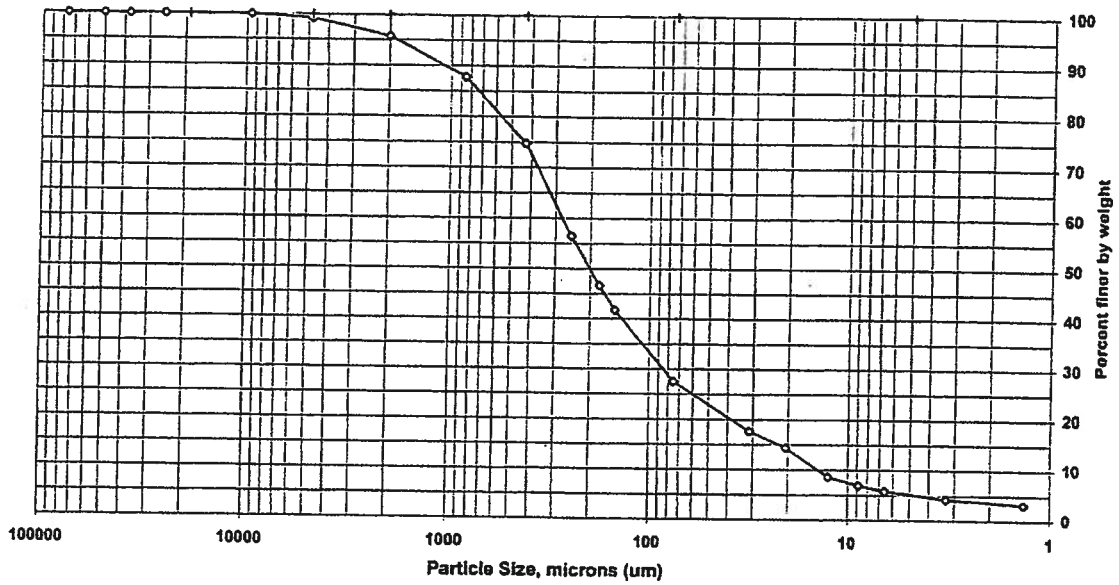
109506BPS 9/30/2005

G32 - SD306C - 000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1010-18	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636490			End Date:	9/29/2005

Percent Solids:	80.1%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.2	0.8
#10	2000	95.7	3.5
#20	850	87.8	7.9
#40	425	74.7	13.1
#60	250	56.4	18.3
#80	180	46.6	9.8
#100	150	41.8	4.9
#200	75	27.6	14.2
Hydrometer	31.2	17.6	9.9
I	20.5	14.4	3.3
I	12.5	8.5	5.8
I	8.8	6.9	1.6
I	6.6	5.8	1.1
I	3.3	4.3	1.6
V	1.4	3.3	1.0

Soil Classification	Percent of Total Sample
Gravel	0.8
Sand	71.6
Coarse Sand	3.5
Medium Sand	21.0
Fine Sand	47.2
Silt	21.7
Clay	5.8

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

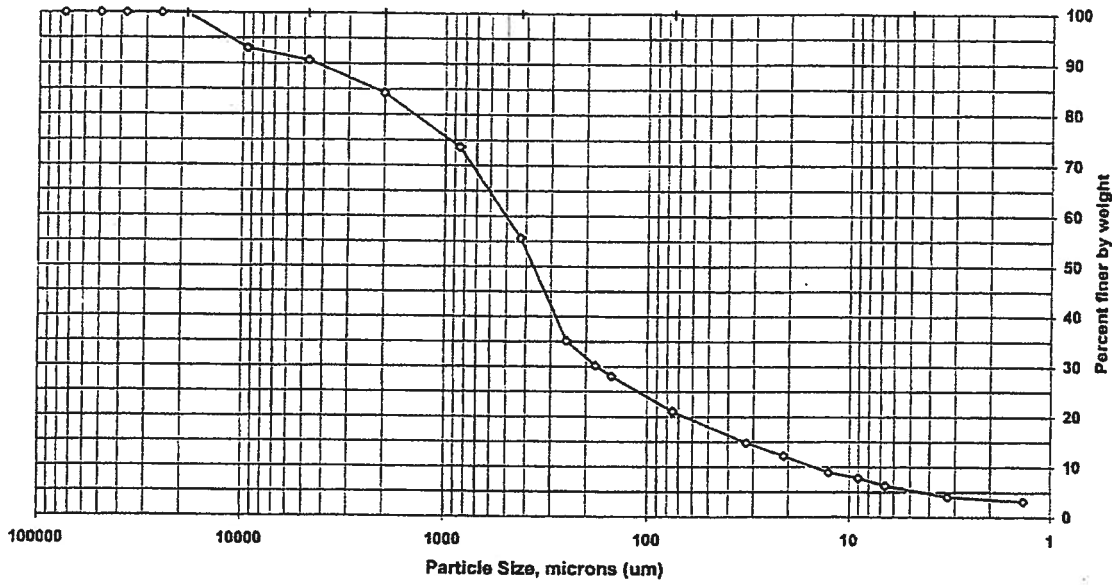
109506PS 9/30/2005

G32-SD306D-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1010-16	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636488			End Date:	9/29/2005

Percent Solids:	79.8%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	93.1	6.9
#4	4750	90.6	2.5
#10	2000	84.3	6.3
#20	850	73.7	10.6
#40	425	55.6	18.1
#60	250	35.2	20.4
#80	180	30.2	5.0
#100	150	28.1	2.1
#200	75	21.0	7.1
Hydrometer	32.5	14.8	6.2
I	21.1	12.2	2.7
I	12.6	8.9	3.3
I	9.0	7.8	1.1
I	6.6	6.2	1.6
I	3.2	4.1	2.1
V	1.4	3.2	0.9

Soil Classification	Percent of Total Sample
Gravel	9.4
Sand	69.6
Coarse Sand	6.3
Medium Sand	28.7
Fine Sand	34.6
Silt	14.8
Clay	6.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

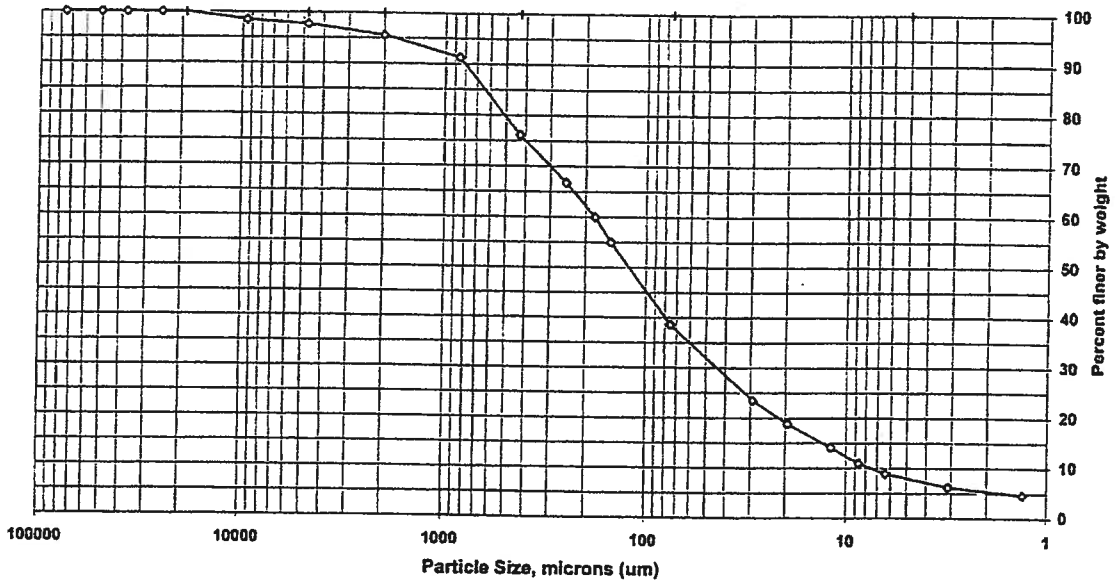
109506PS 9/30/2005

G32-SD3065-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1010-20	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636492			End Date:	9/29/2005

Percent Solids:	82.6%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.5	1.5
#4	4750	97.7	0.8
#10	2000	95.6	2.1
#20	850	91.3	4.3
#40	425	76.1	15.3
#60	250	66.7	9.4
#80	180	60.0	6.7
#100	150	55.0	5.0
#200	75	38.6	16.3
Hydrometer	29.1	23.5	15.1
I	19.5	18.8	4.7
I	11.9	14.1	4.7
I	8.7	11.0	3.1
I	6.4	8.9	2.1
I	3.1	6.2	2.7
V	1.3	4.7	1.5

Soil Classification	Percent of Total Sample
Gravel	2.3
Sand	59.1
Coarse Sand	2.1
Medium Sand	19.5
Fine Sand	37.4
Silt	29.8
Clay	8.9

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

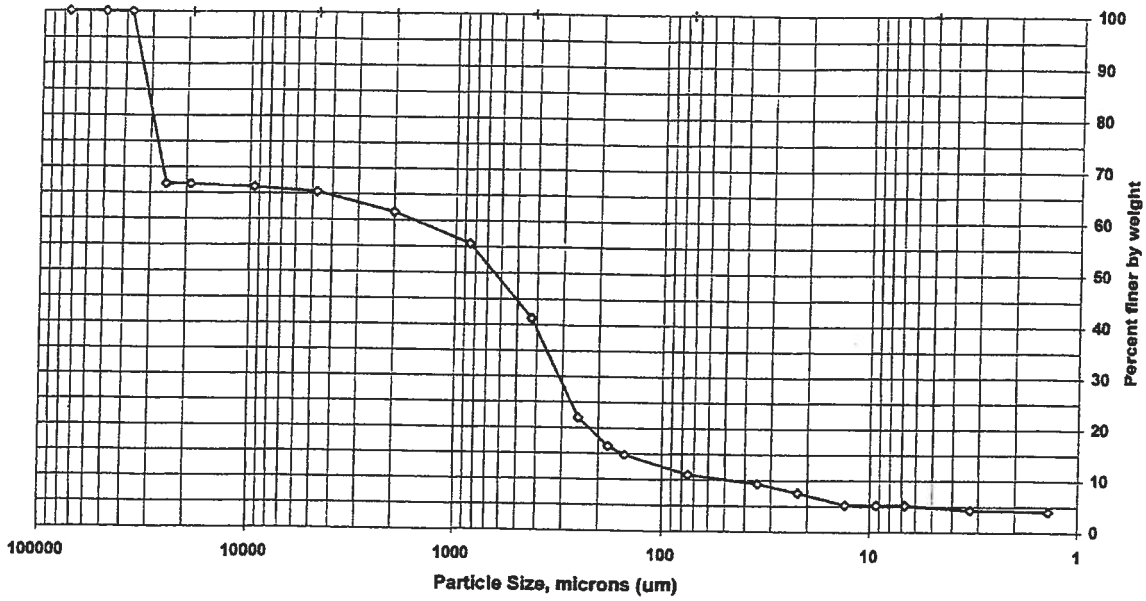
109506BPS 9/30/2005

G32-SD306F-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/07/05
Sample ID:	D1035-10	ETR(s):	109541	Start Date:	09/27/05
Lab ID:	636757			End Date:	10/03/05

Percent Solids:	68.8%		Non-soil material:	plant,shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	37.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	66.7	33.3
3/4 inch	19000	66.7	0.0
3/8 inch	9500	66.2	0.5
#4	4750	65.3	0.9
#10	2000	61.6	3.7
#20	850	55.6	5.9
#40	425	41.3	14.3
#60	250	22.0	19.3
#80	180	16.4	5.5
#100	150	14.8	1.7
#200	75	11.0	3.8
Hydrometer	34.8	9.2	1.8
|	22.3	7.5	1.7
|	13.1	5.2	2.3
|	9.3	5.2	0.0
|	6.7	5.2	0.0
|	3.3	4.3	0.9
V	1.4	4.0	0.3

Soil Classification	Percent of Total Sample
Gravel	34.7
Sand	54.3
Coarse Sand	3.7
Medium Sand	20.2
Fine Sand	30.3
Silt	5.8
Clay	5.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

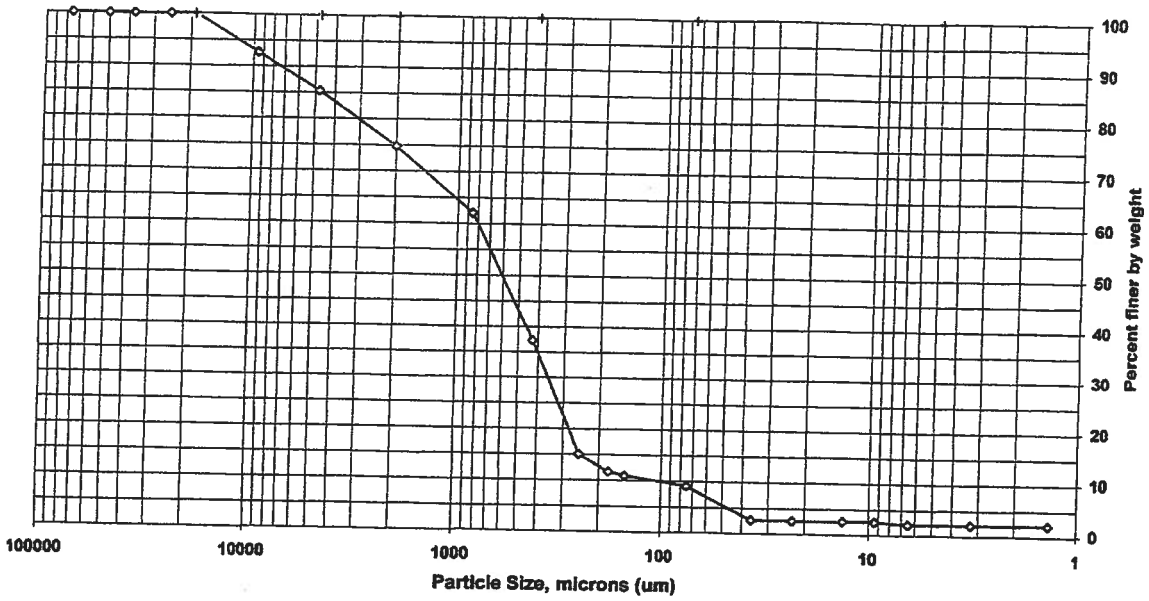
109541PS 10/5/2005

G32 - SD307 - 000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109510	Date Received:	9/2/2005
Sample ID:	D1023-21	ETR(s):	109510	Start Date:	9/23/2005
Lab ID:	636538			End Date:	9/30/2005

Percent Solids:	85.7%		Non-soil material:	shells
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subangular
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	92.7	7.3
#4	4750	85.3	7.4
#10	2000	74.8	10.6
#20	850	62.1	12.7
#40	425	37.4	24.7
#60	250	15.0	22.4
#80	180	11.7	3.3
#100	150	10.9	0.8
#200	75	9.1	1.8
Hydrometer	36.0	2.7	6.4
I	22.9	2.7	0.0
I	13.2	2.7	0.0
I	9.4	2.7	0.0
I	6.5	2.2	0.5
I	3.2	2.2	0.0
V	1.4	2.2	0.0

Soil Classification	Percent of Total Sample
Gravel	14.7
Sand	76.2
Coarse Sand	10.6
Medium Sand	37.4
Fine Sand	28.3
Silt	6.9
Clay	2.2

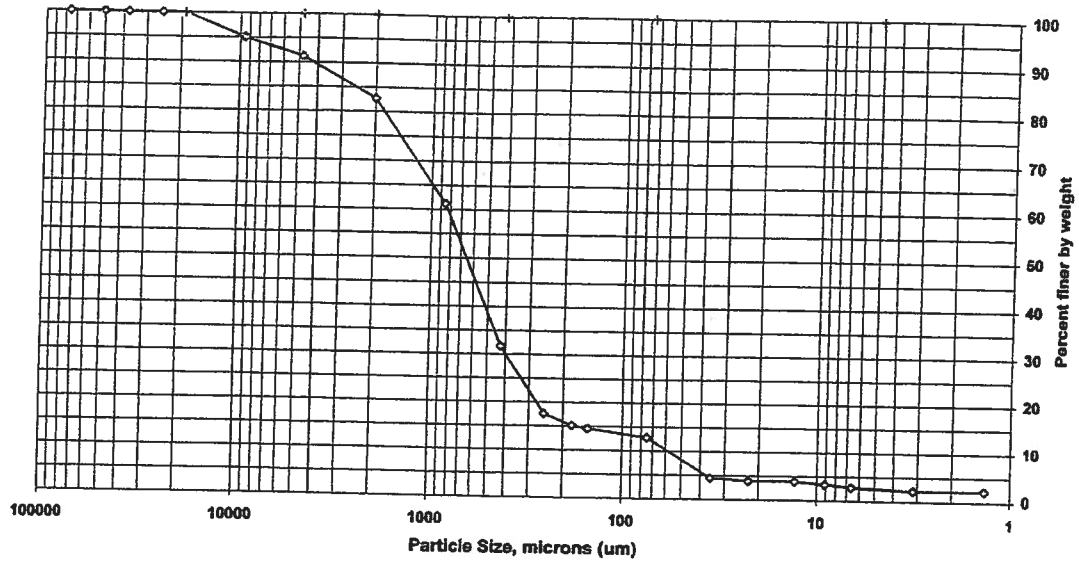
Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

632-SD308A-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-08	ETR(s):	109423	Start Date:	09/21/05
Lab ID:	635871			End Date:	09/28/05

Percent Solids:	83.1%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	95.1	4.9
#4	4750	91.2	3.9
#10	2000	82.7	8.5
#20	850	61.3	21.4
#40	425	31.7	29.5
#60	250	17.6	14.1
#80	180	15.2	2.4
#100	150	14.6	0.6
#200	75	12.8	1.7
Hydrometer	35.5	4.5	8.3
I	22.5	3.9	0.6
I	13.0	3.9	0.0
I	9.1	3.4	0.6
I	6.6	2.8	0.6
I	3.2	2.2	0.6
V	1.4	2.2	0.0

Soil Classification	Percent of Total Sample
Gravel	8.8
Sand	78.4
Coarse Sand	8.5
Medium Sand	51.0
Fine Sand	18.9
Silt	10.0
Clay	2.8

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

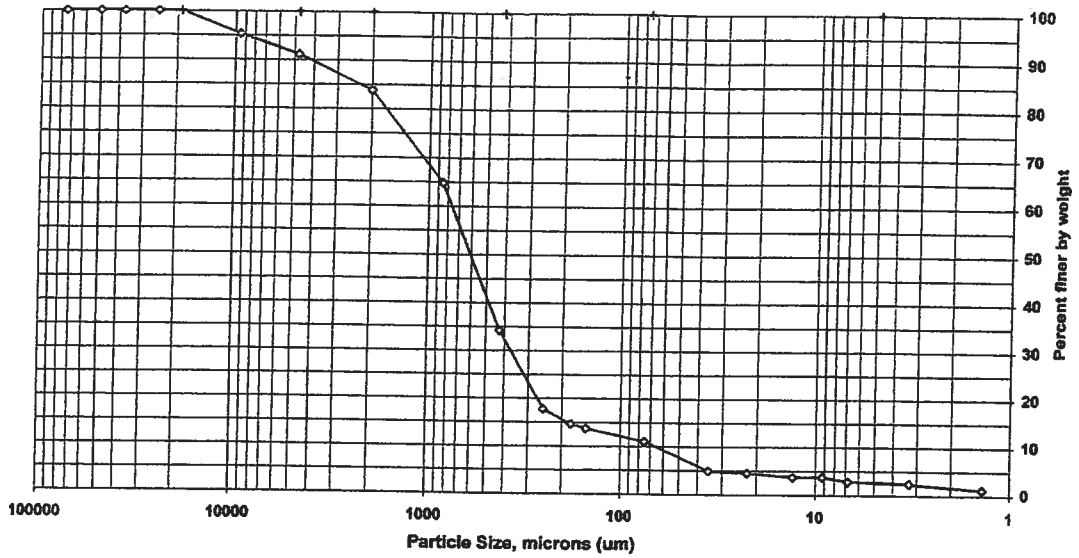
109423PS 9/29/2005

G32-SD308B-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-11	ETR(s):	109423	Start Date:	09/21/05
Lab ID:	635874			End Date:	09/28/05

Percent Solids:	82.9%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	95.4	4.6
#4	4750	91.2	4.2
#10	2000	83.9	7.3
#20	850	64.9	19.0
#40	425	34.2	30.7
#60	250	17.8	16.4
#80	180	14.6	3.1
#100	150	13.7	0.9
#200	75	11.0	2.7
Hydrometer	35.3	4.9	6.1
I	22.4	4.5	0.4
I	13.1	3.7	0.8
I	9.2	3.7	0.0
I	6.8	2.8	0.9
I	3.3	2.4	0.4
V	1.4	1.2	1.2

Soil Classification	Percent of Total Sample
Gravel	8.8
Sand	80.2
Coarse Sand	7.3
Medium Sand	49.7
Fine Sand	23.2
Silt	8.2
Clay	2.8

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

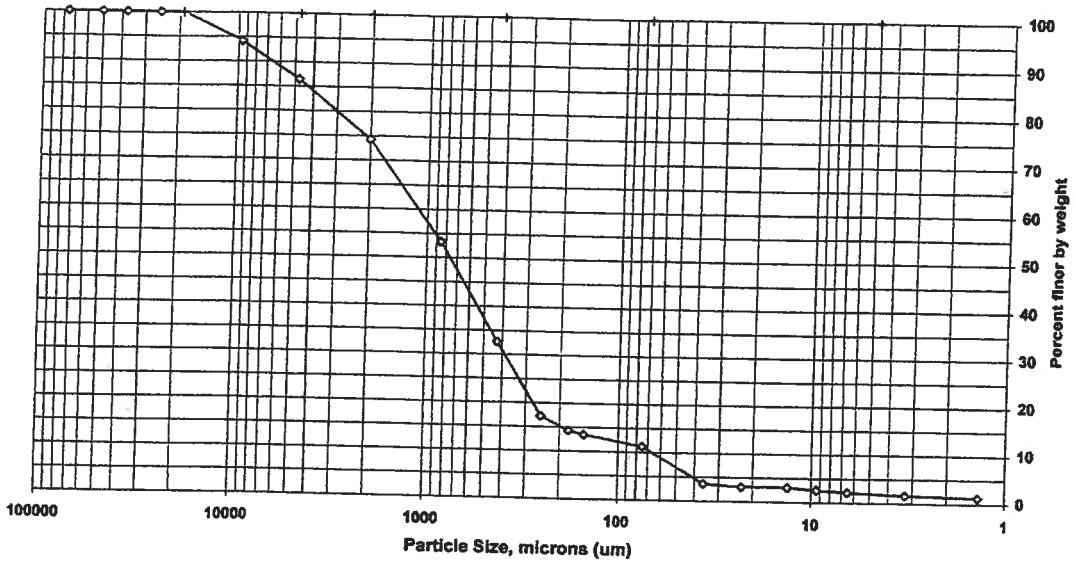
109423PS 9/29/2005

G32-SD308C-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-10	ETR(s):	109423	Start Date:	09/21/05
Lab ID:	635873			End Date:	09/28/05

Percent Solids:	83.5%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	94.2	5.8
#4	4750	86.5	7.7
#10	2000	74.3	12.2
#20	850	53.3	20.9
#40	425	32.7	20.7
#60	250	17.2	15.4
#80	180	14.3	2.9
#100	150	13.5	0.9
#200	75	11.3	2.2
Hydrometer	35.9	3.6	7.7
I	22.8	3.1	0.5
I	13.2	3.1	0.0
I	9.4	2.7	0.5
I	6.5	2.2	0.5
I	3.3	1.7	0.5
V	1.4	1.3	0.4

Soil Classification	Percent of Total Sample
Gravel	13.5
Sand	75.2
Coarse Sand	12.2
Medium Sand	41.6
Fine Sand	21.4
Silt	9.1
Clay	2.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

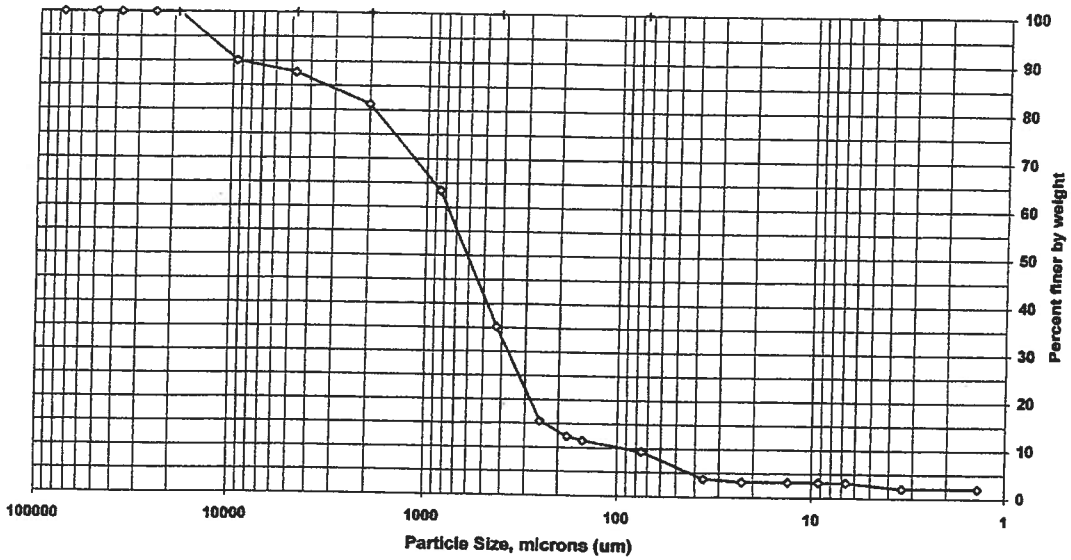
109423PS 9/29/2005

G32-SD308D-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-07	ETR(s):	109423	Start Date:	09/21/05
Lab ID:	635870			End Date:	09/28/05

Percent Solids:	82.5%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	90.1	9.9
#4	4750	87.7	2.4
#10	2000	81.2	6.5
#20	850	63.5	17.8
#40	425	35.2	28.3
#60	250	15.5	19.7
#80	180	12.4	3.1
#100	150	11.5	0.8
#200	75	9.3	2.2
Hydrometer	36.1	3.8	5.5
I	22.9	3.2	0.6
I	13.2	3.2	0.0
I	9.2	3.2	0.0
I	6.7	3.2	0.0
I	3.4	2.1	1.1
V	1.4	2.1	0.0

Soil Classification	Percent of Total Sample
Gravel	12.3
Sand	78.4
Coarse Sand	6.5
Medium Sand	46.0
Fine Sand	25.9
Silt	6.1
Clay	3.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

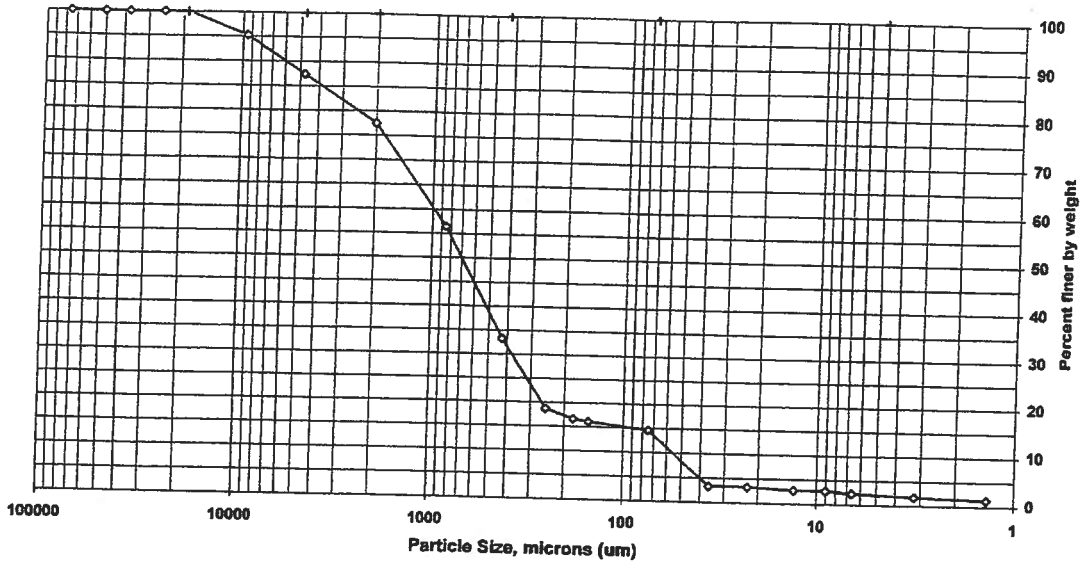
109423PS 9/29/2005

G32-SD308E-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-09	ETR(s):	109423	Start Date:	09/21/05
Lab ID:	635872			End Date:	09/28/05

Percent Solids:	87.4%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	95.3	4.7
#4	4750	87.4	7.8
#10	2000	77.5	10.0
#20	850	56.5	21.0
#40	425	33.3	23.2
#60	250	18.6	14.7
#80	180	16.6	2.0
#100	150	16.1	0.5
#200	75	14.6	1.5
Hydrometer	35.9	3.2	11.4
I	22.7	3.2	0.0
I	13.2	2.8	0.5
I	9.0	2.8	0.0
I	6.6	2.3	0.5
I	3.2	1.8	0.5
V	1.4	1.3	0.5

Soil Classification	Percent of Total Sample
Gravel	12.6
Sand	72.8
Coarse Sand	10.0
Medium Sand	44.2
Fine Sand	18.7
Silt	12.3
Clay	2.3

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

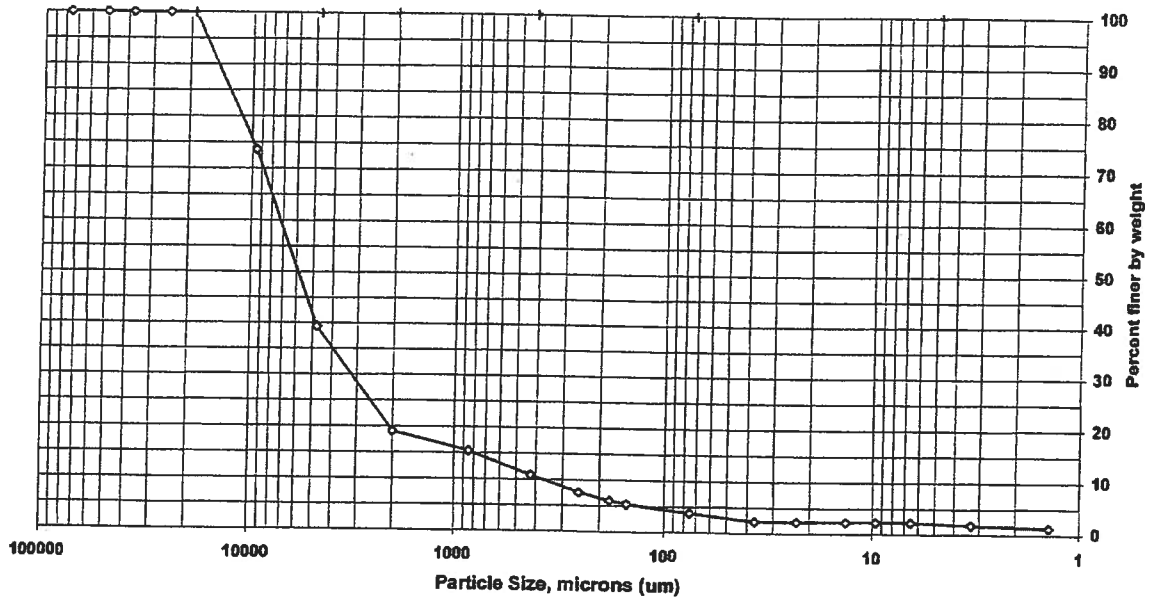
109423PS 9/29/2005

G32-SD308F-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/08/05
Sample ID:	D1035-19	ETR(s):	109567	Start Date:	09/27/05
Lab ID:	636878			End Date:	10/03/05

Percent Solids:	81.3%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	73.6	26.4
#4	4750	39.4	34.2
#10	2000	19.0	20.3
#20	850	15.4	3.6
#40	425	10.8	4.6
#60	250	7.6	3.3
#80	180	6.0	1.5
#100	150	5.4	0.6
#200	75	3.8	1.6
Hydrometer	36.7	2.3	1.5
I	23.2	2.3	0.0
I	13.4	2.3	0.0
I	9.6	2.3	0.0
I	6.5	2.3	0.0
I	3.3	1.8	0.5
V	1.4	1.3	0.5

Soil Classification	Percent of Total Sample
Gravel	60.6
Sand	35.6
Coarse Sand	20.3
Medium Sand	8.2
Fine Sand	7.0
Silt	1.5
Clay	2.3

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

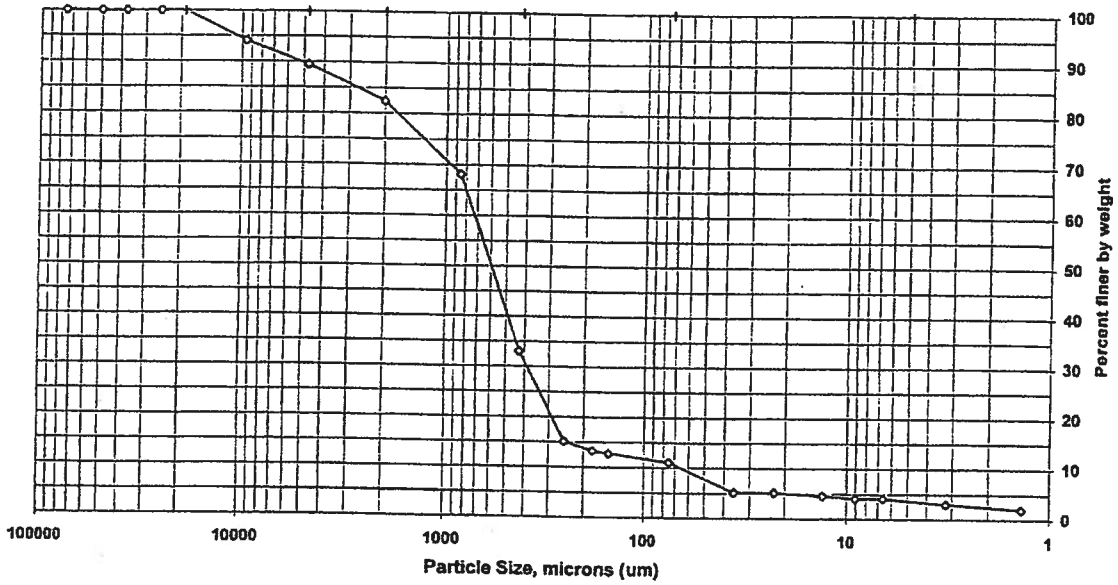
109541BPS 10/4/2005

G32-SD309A-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1010-15	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636487			End Date:	9/29/2005

Percent Solids:	79.2%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	94.1	5.9
#4	4750	89.5	4.6
#10	2000	82.4	7.0
#20	850	68.1	14.4
#40	425	33.1	35.0
#60	250	15.1	18.0
#80	180	13.2	1.9
#100	150	12.7	0.5
#200	75	11.1	1.7
Hydrometer	35.8	5.2	5.9
I	22.6	5.2	0.0
I	13.1	4.6	0.5
I	9.0	4.1	0.5
I	6.6	4.1	0.0
I	3.2	3.0	1.1
V	1.4	2.0	1.0

Soil Classification	Percent of Total Sample
Gravel	10.5
Sand	78.4
Coarse Sand	7.0
Medium Sand	49.4
Fine Sand	22.0
Silt	7.0
Clay	4.1

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

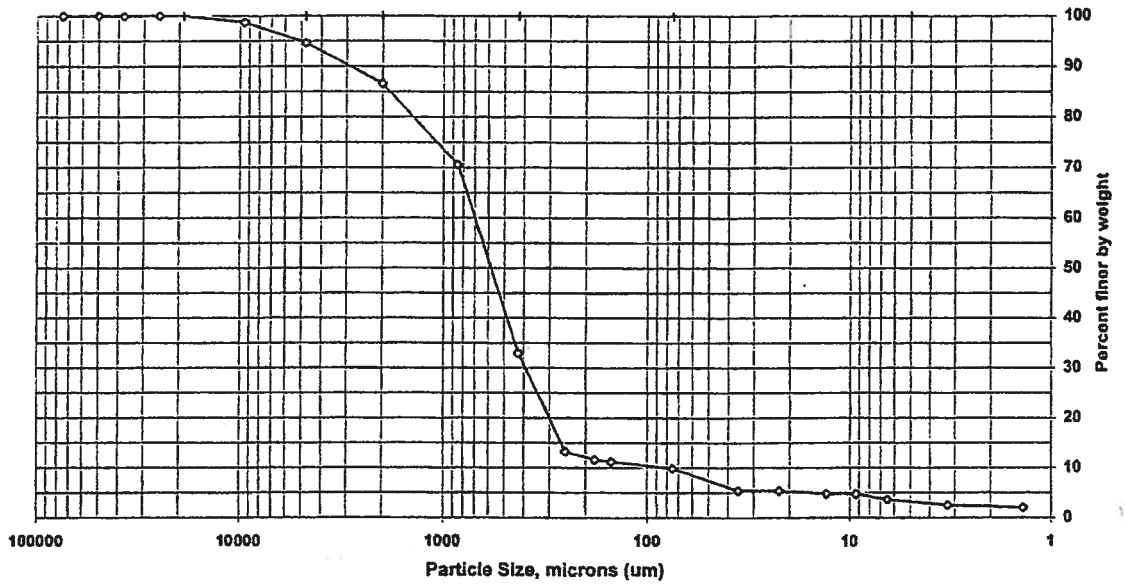
FSL024:07.29.05:0
STL Burlington

109506PS 9/30/2005

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1010-15REP	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636487DP			End Date:	9/29/2005

Percent Solids:	78.6%		Non-soil material:	shell	
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded	
Maximum Particle Size:	19 mm		Hardness (> #10):	hard	



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.7	1.3
#4	4750	94.6	4.2
#10	2000	86.6	8.0
#20	850	70.5	16.1
#40	425	33.0	37.6
#60	250	13.3	19.7
#80	180	11.6	1.6
#100	150	11.2	0.4
#200	75	9.9	1.3
Hydrometer	35.6	5.4	4.5
|	22.5	5.4	0.0
|	13.1	4.8	0.6
|	9.3	4.8	0.0
|	6.5	3.7	1.1
|	3.3	2.6	1.1
V	1.4	2.1	0.5

Soil Classification	Percent of Total Sample
Gravel	5.4
Sand	84.7
Coarse Sand	8.0
Medium Sand	53.7
Fine Sand	23.1
Silt	6.2
Clay	3.7

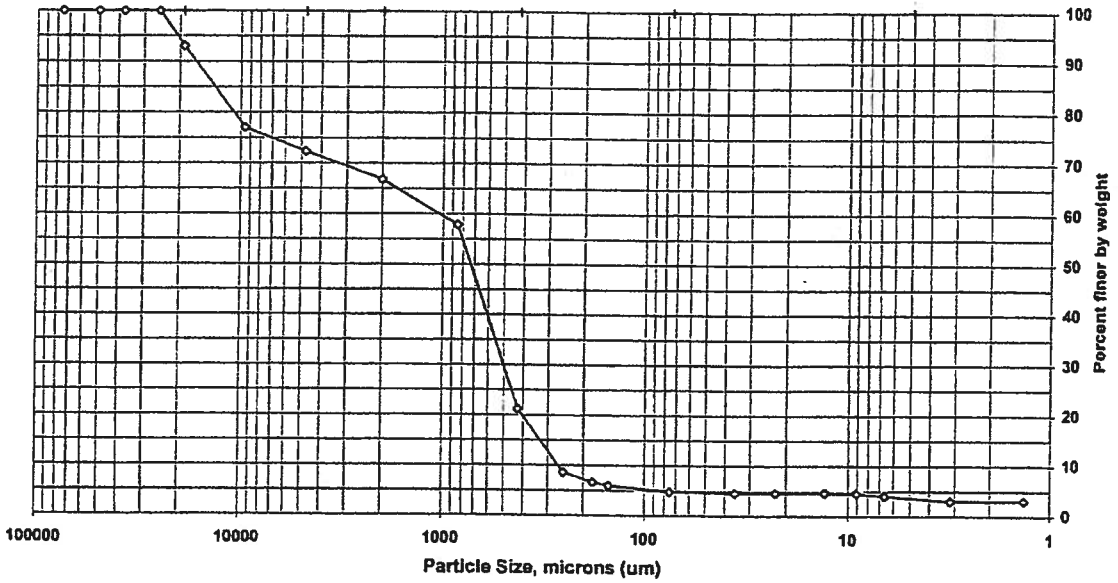
Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

G32-SD309B-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1023-05	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636497			End Date:	9/29/2005

Percent Solids:	83.8%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	25 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	93.1	6.9
3/8 inch	9500	77.0	16.1
#4	4750	72.3	4.7
#10	2000	66.8	5.5
#20	850	57.8	8.9
#40	425	21.2	36.6
#60	250	8.5	12.7
#80	180	6.6	1.9
#100	150	5.9	0.7
#200	75	4.8	1.1
Hydrometer	35.6	4.6	0.2
I	22.5	4.6	0.0
I	13.0	4.6	0.0
I	9.1	4.6	0.0
I	6.6	4.1	0.5
I	3.2	3.0	1.0
V	1.4	3.1	0.0

Soil Classification	Percent of Total Sample
Gravel	27.7
Sand	67.5
Coarse Sand	5.5
Medium Sand	45.6
Fine Sand	16.4
Silt	0.8
Clay	4.1

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

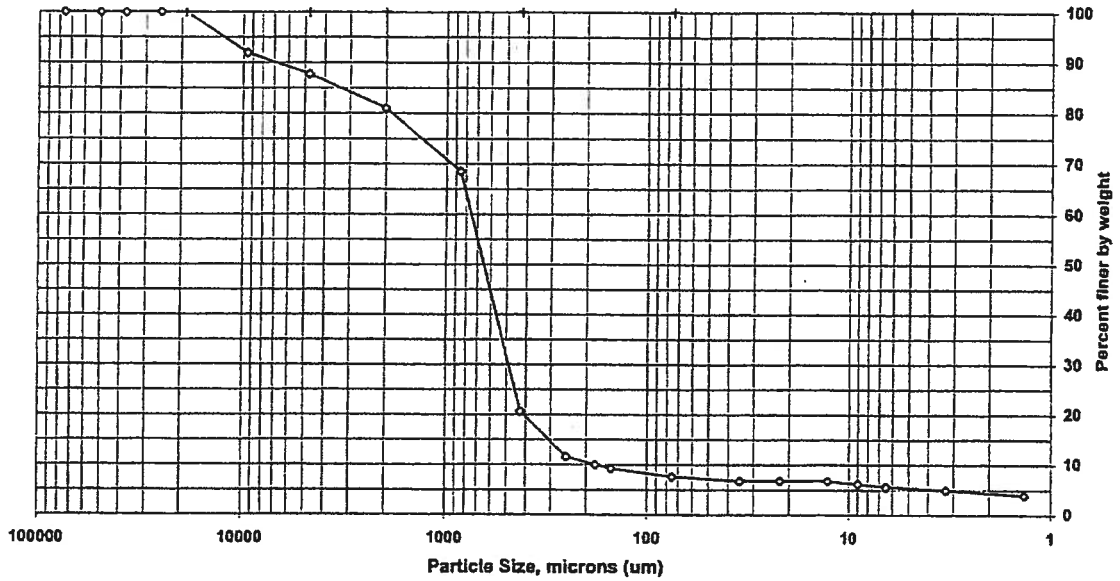
109506BPS 9/30/2005

G32-5D309C-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1023-03	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636495			End Date:	9/29/2005

Percent Solids:	77.5%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	91.9	8.1
#4	4750	87.8	4.2
#10	2000	81.0	6.7
#20	850	68.5	12.6
#40	425	20.6	47.9
#60	250	11.6	9.0
#80	180	9.9	1.7
#100	150	9.2	0.7
#200	75	7.6	1.6
Hydrometer	35.1	6.8	0.8
I	22.2	6.8	0.0
I	12.8	6.8	0.0
I	8.9	6.2	0.6
I	6.5	5.6	0.6
I	3.3	5.0	0.6
V	1.3	3.9	1.1

Soil Classification	Percent of Total Sample
Gravel	12.2
Sand	80.2
Coarse Sand	6.7
Medium Sand	60.4
Fine Sand	13.0
Silt	2.0
Clay	5.6

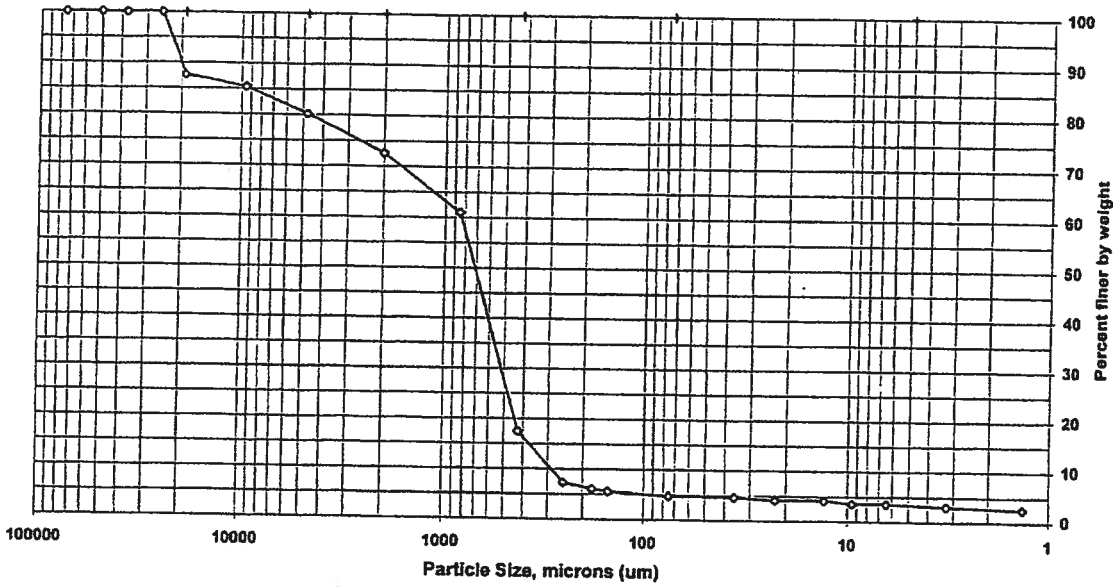
Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

G32-5D309D-0005

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1023-02	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636494			End Date:	9/29/2005

Percent Solids:	78.6%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	25 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	87.7	12.3
3/8 inch	9500	85.4	2.3
#4	4750	80.2	5.2
#10	2000	72.6	7.6
#20	850	61.0	11.6
#40	425	17.5	43.5
#60	250	7.3	10.2
#80	180	6.1	1.2
#100	150	5.6	0.5
#200	75	4.8	0.8
Hydrometer	35.8	4.6	0.2
I	22.6	4.2	0.5
I	13.0	4.2	0.0
I	9.5	3.6	0.6
I	6.4	3.6	0.0
I	3.2	3.1	0.5
V	1.4	2.6	0.5

Soil Classification	Percent of Total Sample
Gravel	19.8
Sand	75.4
Coarse Sand	7.6
Medium Sand	55.2
Fine Sand	12.7
Silt	1.2
Clay	3.6

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

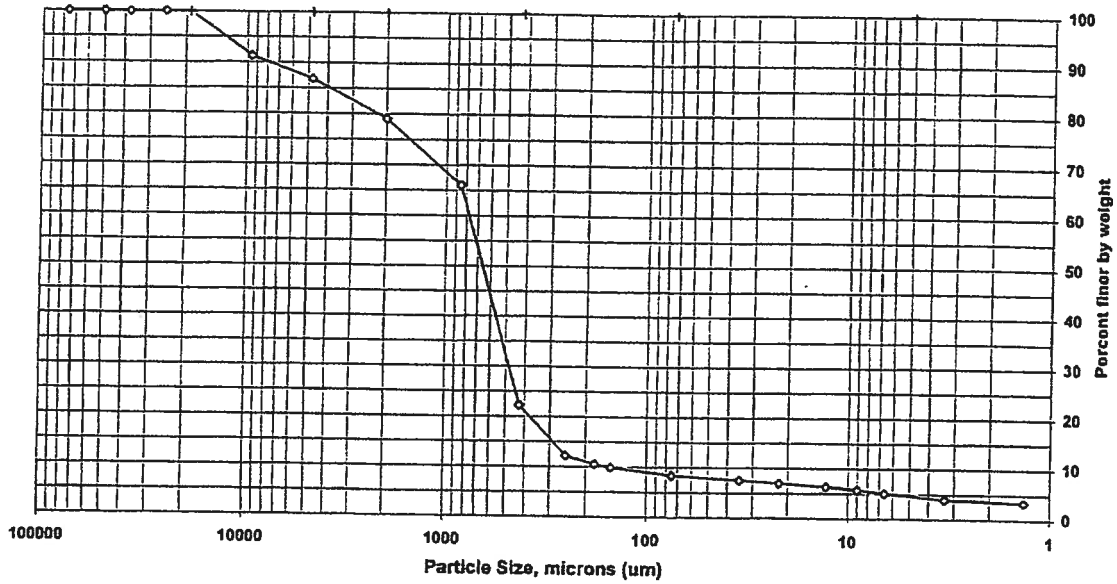
109506BPS 9/30/2005

G32-SD309E-000

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1023-04	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636496			End Date:	9/29/2005

Percent Solids:	78.7%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	91.2	8.8
#4	4750	86.8	4.4
#10	2000	79.1	7.7
#20	850	66.0	13.1
#40	425	22.2	43.8
#60	250	12.2	10.0
#80	180	10.6	1.6
#100	150	9.9	0.7
#200	75	8.4	1.5
Hydrometer	34.9	7.5	0.8
I	22.2	6.9	0.6
I	12.9	6.4	0.6
I	9.0	5.8	0.6
I	6.6	5.2	0.6
I	3.3	4.0	1.2
V	1.4	3.4	0.5

Soil Classification	Percent of Total Sample
Gravel	13.2
Sand	78.4
Coarse Sand	7.7
Medium Sand	56.9
Fine Sand	13.8
Silt	3.2
Clay	5.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

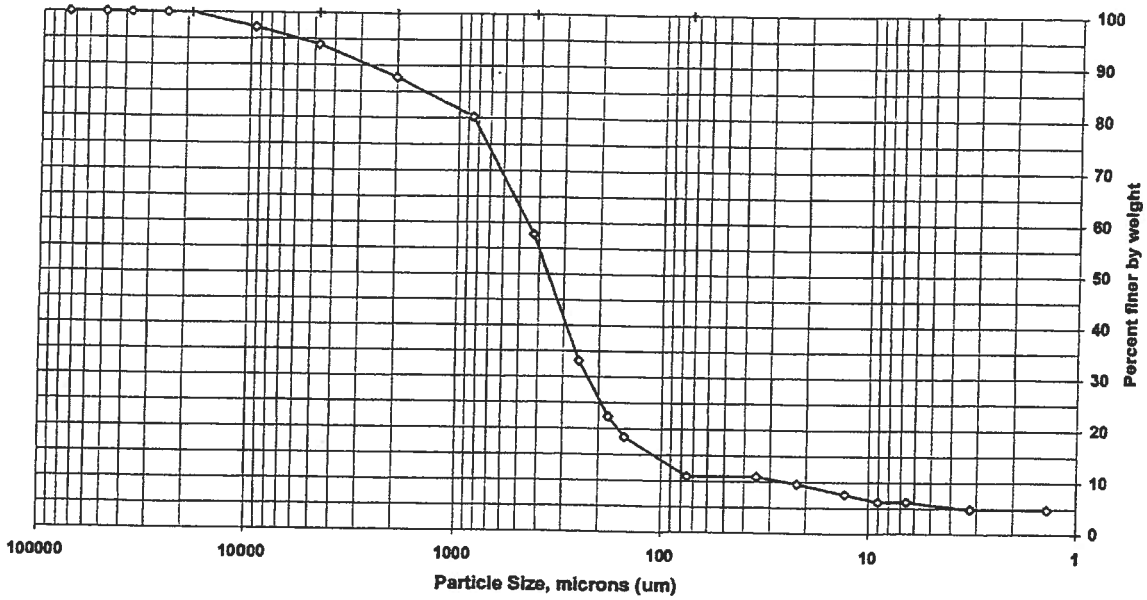
109506BPS 9/30/2005

G32-SD309F-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/07/05
Sample ID:	D1035-08	ETR(s):	109541	Start Date:	09/27/05
Lab ID:	636755			End Date:	10/03/05

Percent Solids:	68.1%		Non-soil material:	plant,shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	97.2	2.8
#4	4750	93.9	3.2
#10	2000	87.8	6.2
#20	850	80.3	7.5
#40	425	57.8	22.5
#60	250	33.2	24.6
#80	180	22.3	10.8
#100	150	18.4	3.9
#200	75	10.9	7.4
Hydrometer	34.8	11.0	0.0
I	22.2	9.6	1.4
I	13.0	7.6	2.1
I	9.0	6.2	1.4
I	6.6	6.2	0.0
I	3.2	4.8	1.4
V	1.4	4.8	0.0

Soil Classification	Percent of Total Sample
Gravel	6.1
Sand	83.0
Coarse Sand	6.2
Medium Sand	30.0
Fine Sand	46.8
Silt	4.8
Clay	6.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

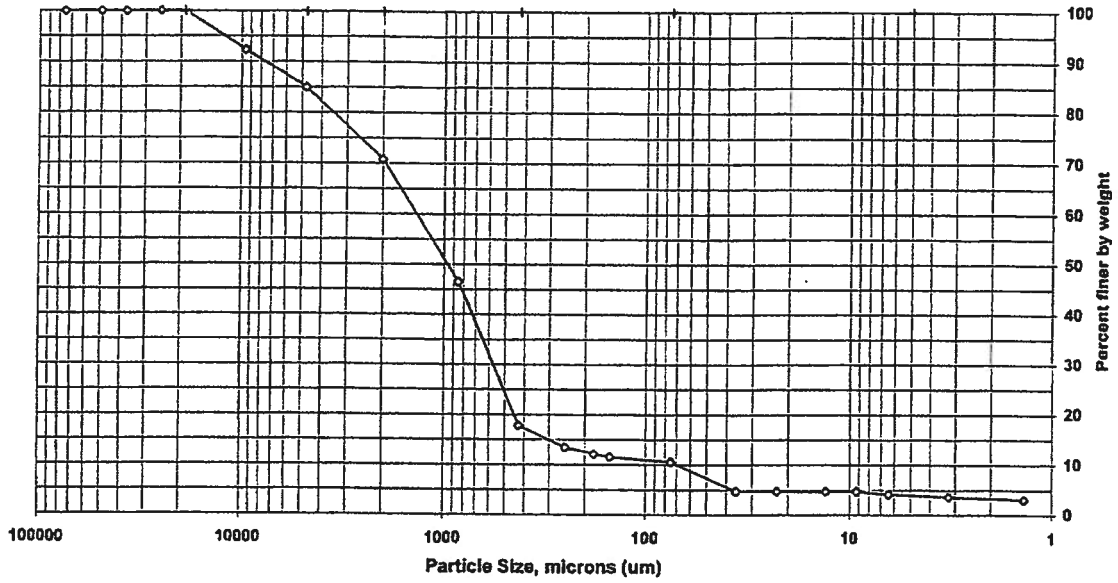
109541PS 10/5/2005

G32-SD310A-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1023-10	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636499			End Date:	9/29/2005

Percent Solids:	77.3%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	92.3	7.7
#4	4750	85.0	7.4
#10	2000	70.8	14.2
#20	850	46.5	24.3
#40	425	17.8	28.7
#60	250	13.4	4.4
#80	180	12.2	1.3
#100	150	11.6	0.6
#200	75	10.6	1.0
Hydrometer	35.8	4.7	5.9
I	22.6	4.7	0.0
I	13.1	4.7	0.0
I	9.2	4.7	0.0
I	6.4	4.2	0.5
I	3.2	3.6	0.5
V	1.4	3.1	0.5

Soil Classification	Percent of Total Sample
Gravel	15.0
Sand	74.4
Coarse Sand	14.2
Medium Sand	53.0
Fine Sand	7.2
Silt	6.4
Clay	4.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

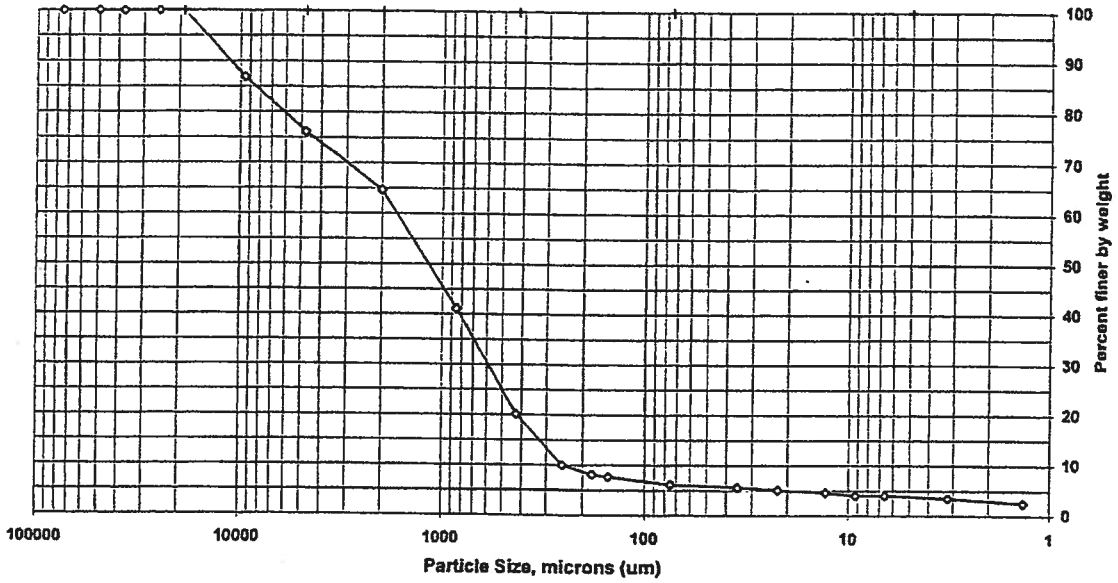
109506BPS 9/30/2005

G32 - SD 310B - 000.9

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1023-14	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636503			End Date:	9/29/2005

Percent Solids:	77.4%		Non-soil material:	shells
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subangular
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	86.9	13.1
#4	4750	76.1	10.8
#10	2000	64.6	11.5
#20	850	41.1	23.5
#40	425	20.2	21.0
#60	250	10.0	10.2
#80	180	8.1	1.9
#100	150	7.6	0.5
#200	75	6.1	1.5
Hydrometer	35.2	5.6	0.5
I	22.4	5.1	0.5
I	13.0	4.6	0.5
I	9.2	4.1	0.5
I	6.6	4.1	0.0
I	3.2	3.5	0.6
V	1.3	2.5	1.0

Soil Classification	Percent of Total Sample
Gravel	23.9
Sand	70.0
Coarse Sand	11.5
Medium Sand	44.5
Fine Sand	14.1
Silt	2.0
Clay	4.1

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

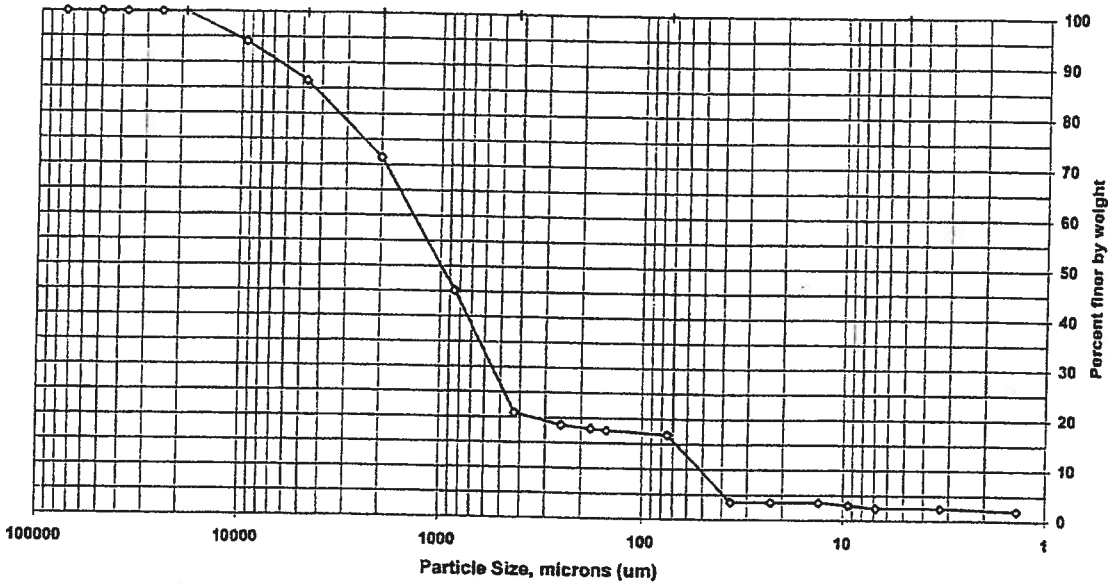
109506CPS 9/30/2005

G32-SD310C-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1023-11	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636500			End Date:	9/29/2005

Percent Solids:	79.5%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	94.1	5.9
#4	4750	86.6	7.5
#10	2000	71.4	15.2
#20	850	45.1	26.3
#40	425	20.9	24.2
#60	250	18.5	2.4
#80	180	17.8	0.7
#100	150	17.5	0.3
#200	75	16.8	0.7
Hydrometer	36.1	3.5	13.3
I	22.8	3.5	0.0
I	13.2	3.5	0.0
I	9.4	3.0	0.5
I	6.8	2.5	0.5
I	3.3	2.5	0.0
V	1.4	2.0	0.5

Soil Classification	Percent of Total Sample
Gravel	13.4
Sand	69.7
Coarse Sand	15.2
Medium Sand	50.5
Fine Sand	4.1
Silt	14.3
Clay	2.5

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

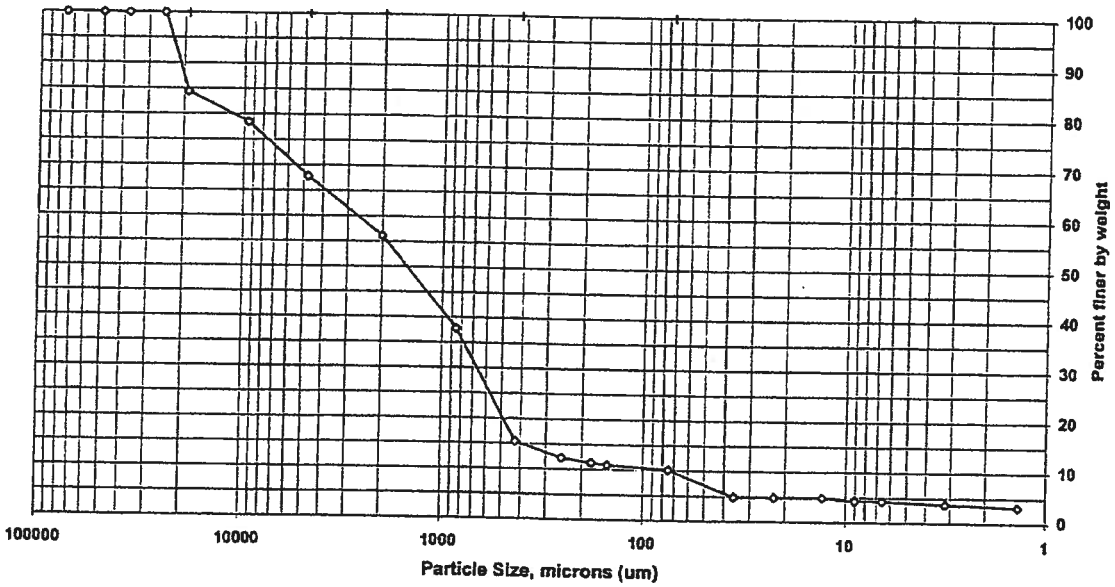
109506BPS 9/30/2005

G32.5D310D-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1023-09	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636498			End Date:	9/29/2005

Percent Solids:	78.5%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	25 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	84.4	15.6
3/8 inch	9500	78.5	5.9
#4	4750	67.8	10.7
#10	2000	56.1	11.7
#20	850	37.8	18.3
#40	425	15.4	22.4
#60	250	12.2	3.1
#80	180	11.3	0.9
#100	150	10.9	0.4
#200	75	10.1	0.8
Hydrometer	35.8	4.9	5.2
I	22.6	4.9	0.0
I	13.1	4.9	0.0
I	9.0	4.3	0.6
I	6.6	4.3	0.0
I	3.2	3.8	0.6
V	1.4	3.2	0.6

Soil Classification	Percent of Total Sample
Gravel	32.2
Sand	57.7
Coarse Sand	11.7
Medium Sand	40.7
Fine Sand	5.3
Silt	5.8
Clay	4.3

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

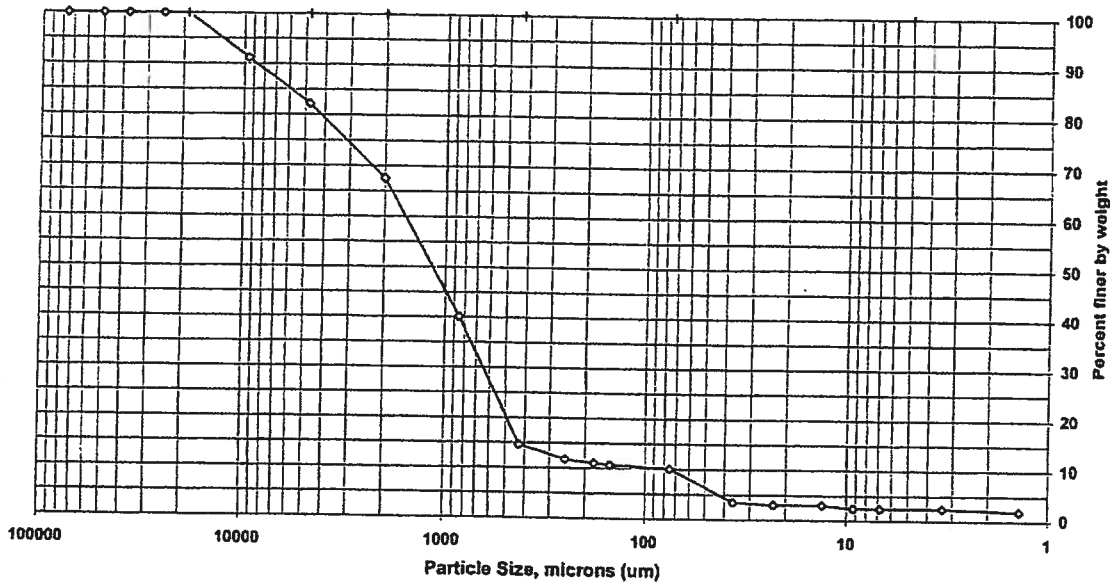
109506BPS 9/30/2005

G32-SD310E-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1023-13	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636502			End Date:	9/29/2005

Percent Solids:	75.8%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	91.2	8.8
#4	4750	82.2	9.0
#10	2000	67.5	14.7
#20	850	40.1	27.4
#40	425	14.6	25.5
#60	250	11.7	2.9
#80	180	11.0	0.7
#100	150	10.7	0.3
#200	75	10.0	0.6
Hydrometer	36.1	3.5	6.5
I	22.9	3.0	0.5
I	13.2	3.0	0.0
I	9.3	2.5	0.5
I	6.8	2.5	0.0
I	3.4	2.5	0.0
V	1.4	2.0	0.5

Soil Classification	Percent of Total Sample
Gravel	17.8
Sand	72.1
Coarse Sand	14.7
Medium Sand	52.9
Fine Sand	4.6
Silt	7.6
Clay	2.5

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

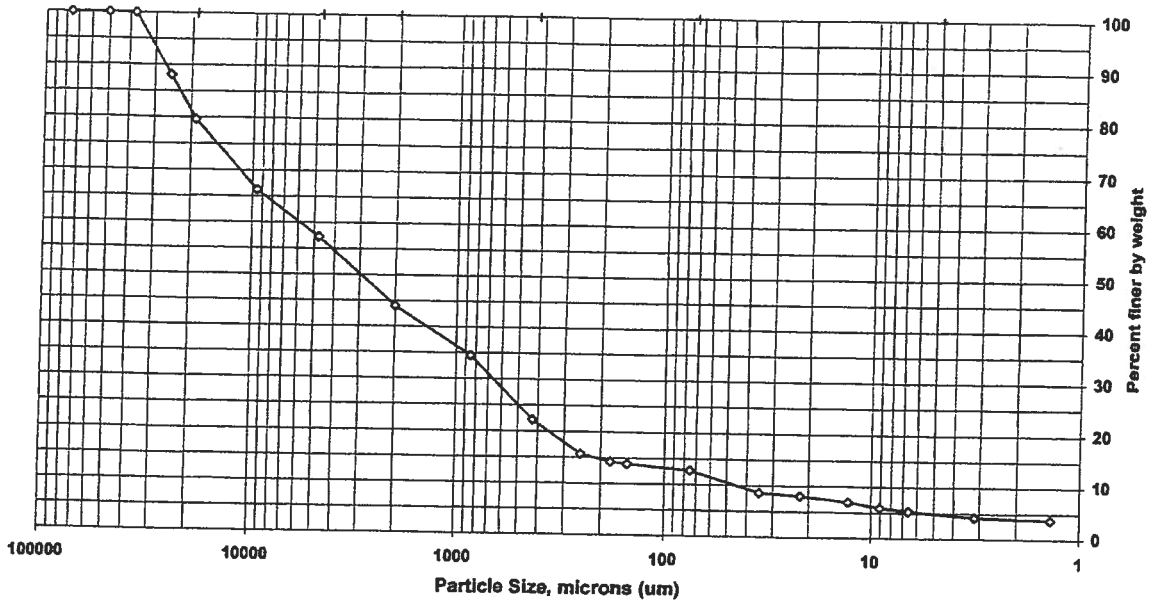
109506BPS 9/30/2005

G82-SD310F-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/07/05
Sample ID:	D1035-07	ETR(s):	109541	Start Date:	09/27/05
Lab ID:	636754			End Date:	10/03/05

Percent Solids:	77.7%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	37.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	88.1	11.9
3/4 inch	19000	79.6	8.5
3/8 inch	9500	66.2	13.4
#4	4750	57.2	9.0
#10	2000	44.0	13.2
#20	850	34.5	9.5
#40	425	22.2	12.4
#60	250	15.7	6.5
#80	180	14.3	1.4
#100	150	13.9	0.4
#200	75	12.7	1.1
Hydrometer	34.8	8.6	4.2
I	22.1	8.0	0.5
I	12.9	7.0	1.1
I	9.0	5.9	1.1
I	6.6	5.4	0.5
I	3.2	4.3	1.1
V	1.4	3.8	0.5

Soil Classification	Percent of Total Sample
Gravel	42.8
Sand	44.5
Coarse Sand	13.2
Medium Sand	21.8
Fine Sand	9.4
Silt	7.4
Clay	5.4

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

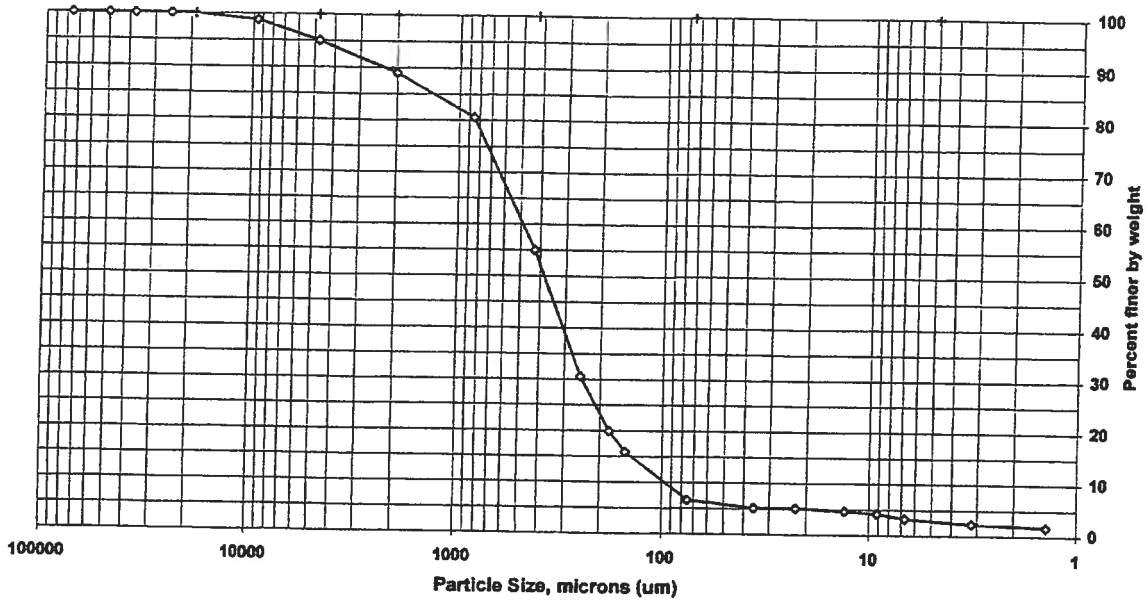
109541PS 10/5/2005

G32-SD311-0.5/.0

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/08/05
Sample ID:	D1035-22	ETR(s):	109567	Start Date:	09/27/05
Lab ID:	636881			End Date:	10/03/05

Percent Solids:	80.6%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.8	1.2
#4	4750	95.0	3.8
#10	2000	89.1	5.9
#20	850	80.6	8.5
#40	425	55.0	25.6
#60	250	30.6	24.4
#80	180	19.9	10.7
#100	150	15.9	4.1
#200	75	6.6	9.3
Hydrometer	35.7	5.2	1.4
I	22.6	5.2	0.0
I	13.1	4.7	0.5
I	9.1	4.2	0.5
I	6.7	3.2	1.0
I	3.2	2.3	1.0
V	1.4	1.8	0.5

Soil Classification	Percent of Total Sample
Gravel	5.0
Sand	88.4
Coarse Sand	5.9
Medium Sand	34.1
Fine Sand	48.4
Silt	3.3
Clay.	3.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

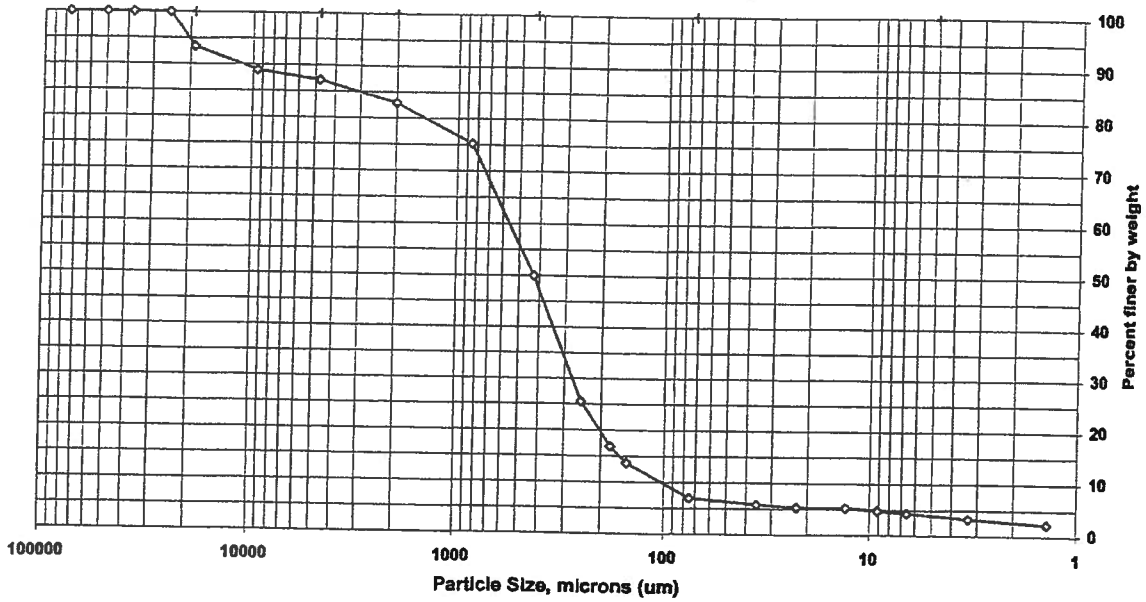
109541BPS 10/4/2005

G32-SD311-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/08/05
Sample ID:	D1035-20	ETR(s):	109567	Start Date:	09/27/05
Lab ID:	636879			End Date:	10/03/05

Percent Solids:	77.6%		Non-soil material:	shell,plant
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	25 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	93.4	6.6
3/8 inch	9500	88.9	4.5
#4	4750	87.2	1.8
#10	2000	83.0	4.2
#20	850	75.3	7.7
#40	425	49.9	25.3
#60	250	25.5	24.4
#80	180	16.8	8.7
#100	150	13.7	3.2
#200	75	7.0	6.7
Hydrometer	35.5	5.8	1.1
I	22.6	5.3	0.5
I	13.0	5.3	0.0
I	9.1	4.8	0.5
I	6.6	4.4	0.5
I	3.3	3.4	1.0
V	1.4	2.3	1.0

Soil Classification	Percent of Total Sample
Gravel	12.8
Sand	80.2
Coarse Sand	4.2
Medium Sand	33.0
Fine Sand	42.9
Silt	2.6
Clay	4.4

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

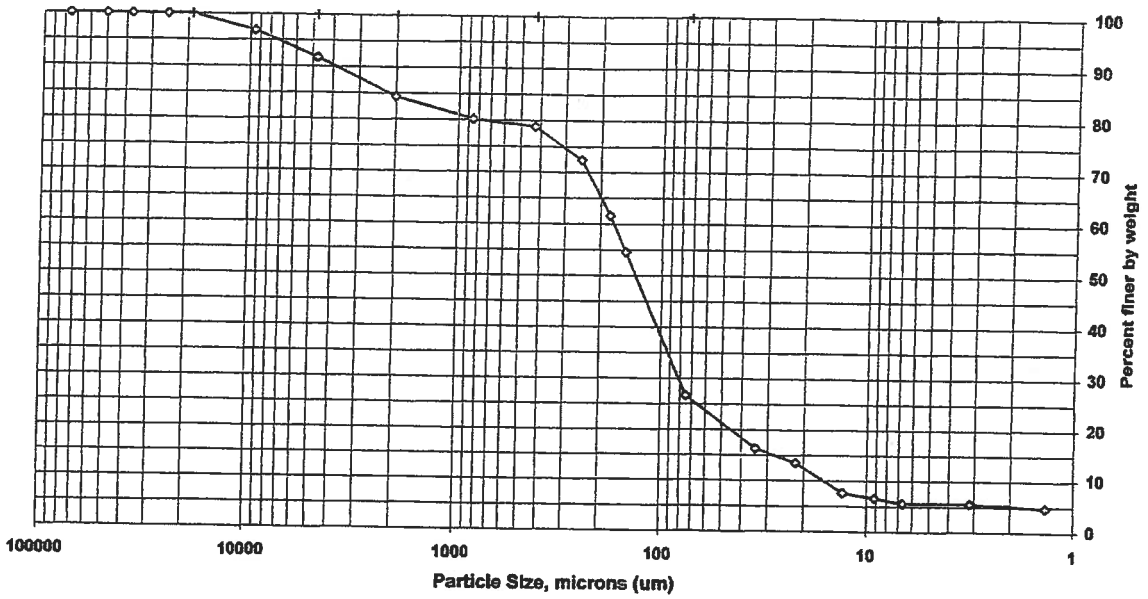
109541BPS 10/4/2005

G32 - SD 3/2 - 0.5/.0

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109510	Date Received:	9/2/2005
Sample ID:	D1023-19	ETR(s):	109510	Start Date:	9/23/2005
Lab ID:	636536			End Date:	9/30/2005

Percent Solids:	64.0%		Non-soil material:	shells
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subangular
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	96.8	3.2
#4	4750	91.7	5.1
#10	2000	84.4	7.3
#20	850	80.2	4.2
#40	425	78.9	1.3
#60	250	72.4	6.5
#80	180	61.6	10.8
#100	150	54.6	7.1
#200	75	26.7	27.8
Hydrometer	34.2	16.3	10.4
I	22.0	13.4	2.9
I	13.0	7.6	5.8
I	9.2	6.6	1.0
I	6.7	5.6	1.0
I	3.2	5.6	0.0
V	1.4	4.7	0.9

Soil Classification	Percent of Total Sample
Gravel	8.3
Sand	65.0
Coarse Sand	7.3
Medium Sand	5.5
Fine Sand	52.1
Silt	21.1
Clay	5.6

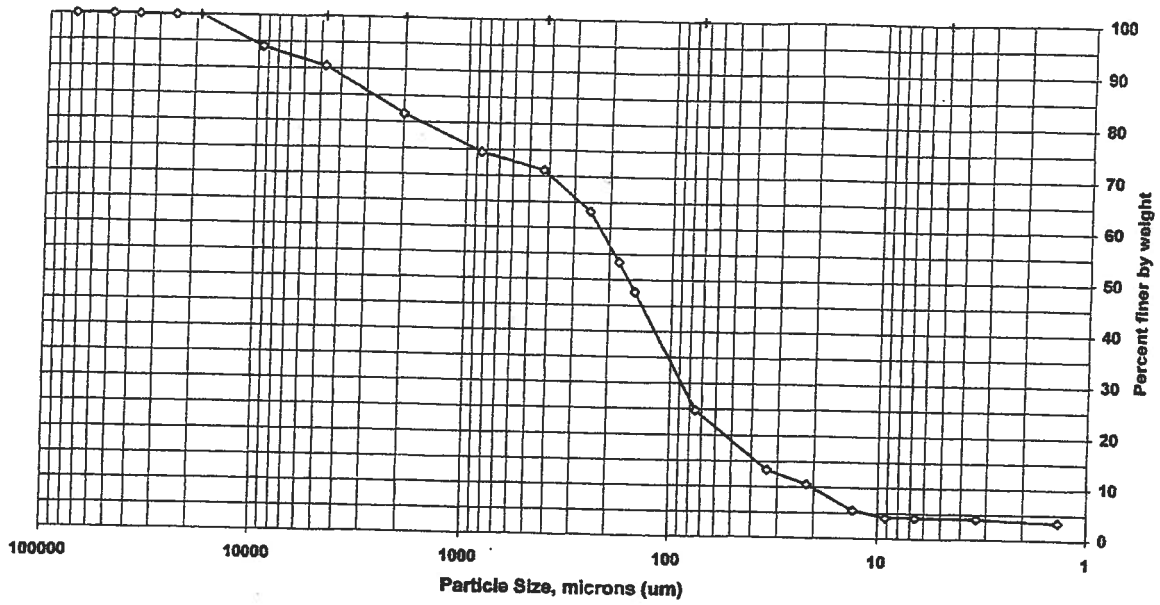
Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

G32-SD312-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109510	Date Received:	9/2/2005
Sample ID:	D1023-18	ETR(s):	109510	Start Date:	9/23/2005
Lab ID:	636535			End Date:	9/30/2005

Percent Solids:	70.6%		Non-soil material:	shells
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subangular
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	94.1	5.9
#4	4750	90.4	3.6
#10	2000	81.6	8.9
#20	850	74.4	7.1
#40	425	71.1	3.3
#60	250	63.2	7.9
#80	180	53.5	9.7
#100	150	47.7	5.8
#200	75	24.7	22.9
Hydrometer	33.7	13.3	11.4
I	21.7	10.5	2.8
I	13.0	5.6	5.0
I	9.2	4.2	1.4
I	6.6	4.2	0.0
I	3.4	4.1	0.1
V	1.4	3.5	0.6

Soil Classification	Percent of Total Sample
Gravel	9.6
Sand	65.7
Coarse Sand	8.9
Medium Sand	10.5
Fine Sand	46.4
Silt	20.6
Clay	4.2

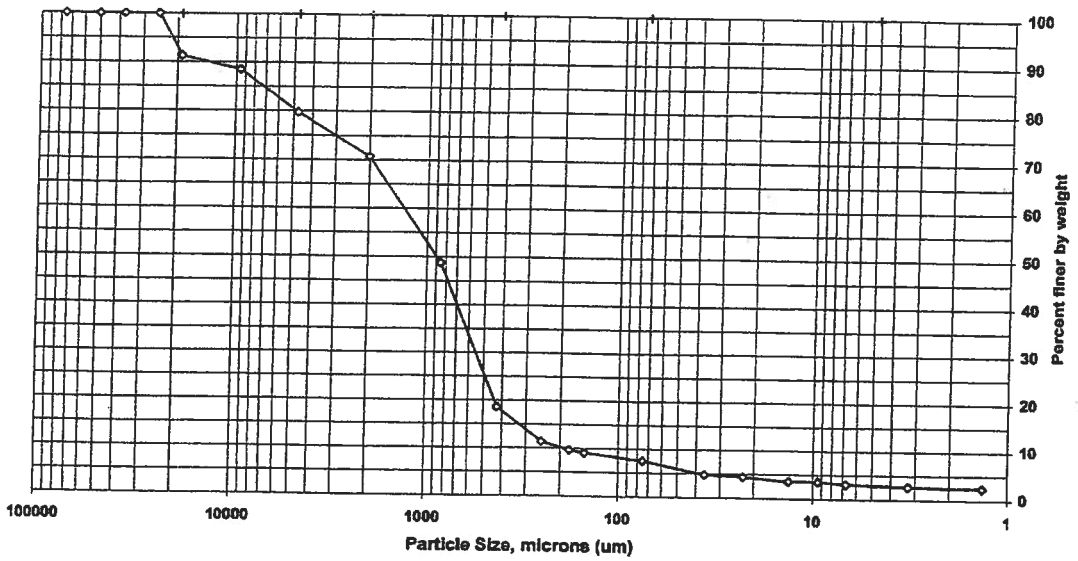
Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

G32-SD313A-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-14	ETR(s):	109423	Start Date:	09/23/05
Lab ID:	635877			End Date:	09/28/05

Percent Solids:	83.4%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	25 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	91.3	8.7
3/8 inch	9500	88.5	2.8
#4	4750	79.8	8.7
#10	2000	70.7	9.1
#20	850	48.7	21.9
#40	425	18.6	30.2
#60	250	11.4	7.2
#80	180	9.7	1.7
#100	150	9.0	0.6
#200	75	7.5	1.5
Hydrometer	35.9	4.8	2.7
I	22.8	4.4	0.4
I	13.3	3.5	0.8
I	9.4	3.5	0.0
I	6.7	3.1	0.4
I	3.2	2.7	0.4
V	1.3	2.5	0.2

Soil Classification	Percent of Total Sample
Gravel	20.2
Sand	72.3
Coarse Sand	9.1
Medium Sand	52.1
Fine Sand	11.1
Silt	4.4
Clay	3.1

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

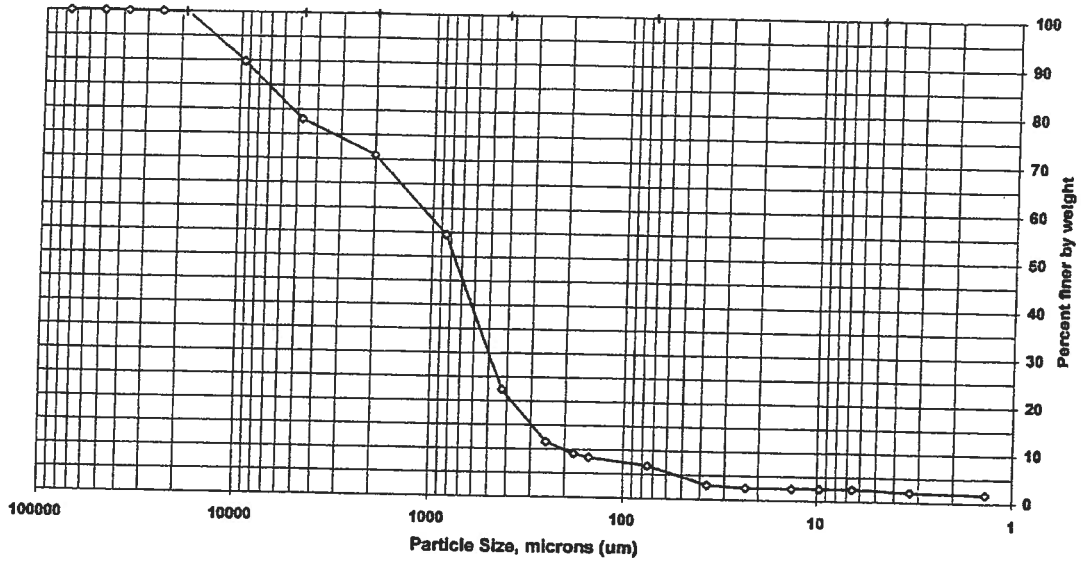
109423BPS 9/29/2005

G32-SD313B-0005

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-17	ETR(s):	109423	Start Date:	09/23/05
Lab ID:	635880			End Date:	09/28/05

Percent Solids:	84.1%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	89.8	10.2
#4	4750	78.1	11.8
#10	2000	70.8	7.3
#20	850	54.6	16.3
#40	425	22.3	32.2
#60	250	11.5	10.8
#80	180	9.1	2.4
#100	150	8.3	0.8
#200	75	6.8	1.5
Hydrometer	36.7	3.0	3.8
I	23.3	2.5	0.5
I	13.5	2.5	0.0
I	9.7	2.5	0.0
I	6.6	2.5	0.0
I	3.3	2.1	0.5
V	1.4	1.7	0.3

Soil Classification	Percent of Total Sample
Gravel	21.9
Sand	71.3
Coarse Sand	7.3
Medium Sand	48.5
Fine Sand	15.5
Silt	4.3
Clay	2.5

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

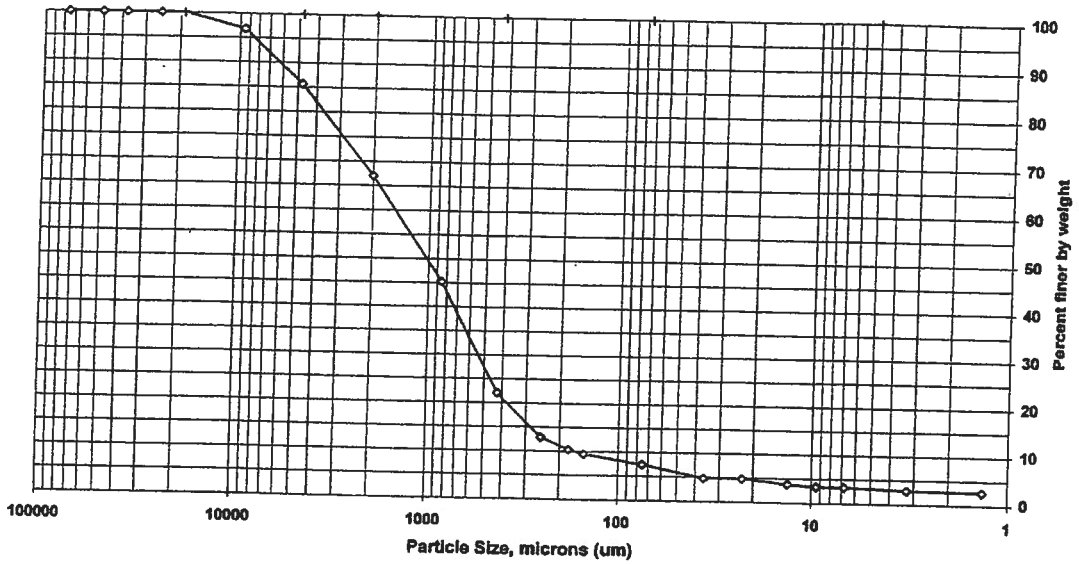
109423BPS 9/29/2005

G32-5D313C-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-15	ETR(s):	109423	Start Date:	09/23/05
Lab ID:	635878			End Date:	09/28/05

Percent Solids:	84.0%		Non-soil material:	plant,shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	96.8	3.2
#4	4750	85.7	11.1
#10	2000	67.0	18.7
#20	850	45.3	21.7
#40	425	22.1	23.2
#60	250	12.9	9.2
#80	180	10.4	2.5
#100	150	9.4	1.0
#200	75	7.4	2.0
Hydrometer	36.1	4.8	2.6
|	22.8	4.8	0.0
|	13.3	3.8	0.9
|	9.4	3.4	0.5
|	6.8	3.4	0.0
|	3.2	2.9	0.5
V	1.3	2.7	0.2

Soil Classification	Percent of Total Sample
Gravel	14.3
Sand	78.3
Coarse Sand	18.7
Medium Sand	44.9
Fine Sand	14.7
Silt	4.0
Clay	3.4

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

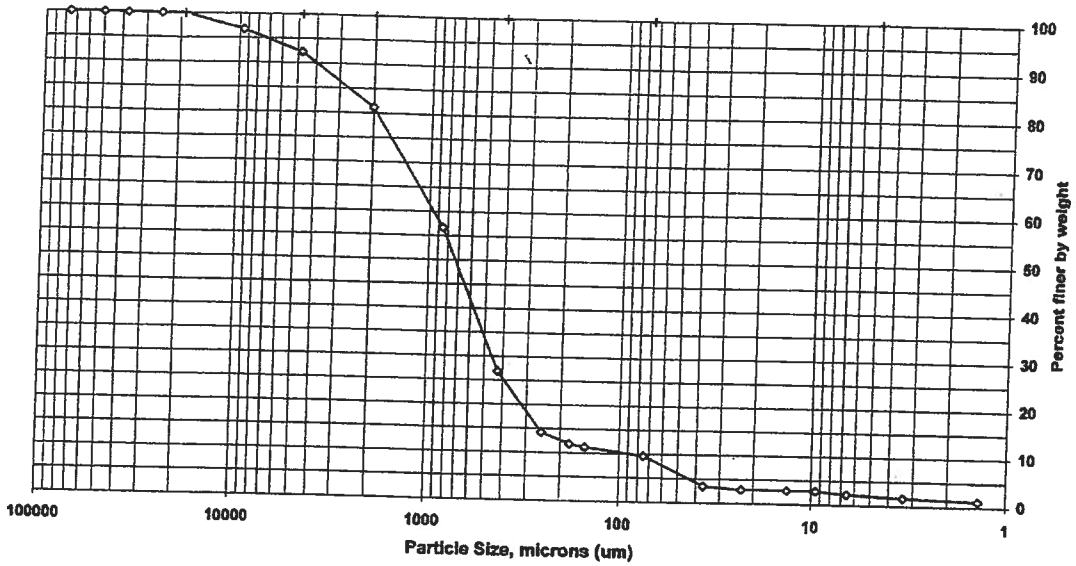
109423BPS 9/29/2005

G32-5D313D-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-12	ETR(s):	109423	Start Date:	09/21/05
Lab ID:	635875			End Date:	09/28/05

Percent Solids:	82.9%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	96.7	3.3
#4	4750	92.3	4.5
#10	2000	81.2	11.1
#20	850	56.7	24.5
#40	425	26.8	29.9
#60	250	14.2	12.6
#80	180	11.8	2.4
#100	150	11.3	0.6
#200	75	9.6	1.7
Hydrometer	36.5	3.5	6.1
I	23.2	2.9	0.6
I	13.4	2.9	0.0
I	9.5	2.9	0.0
I	6.6	2.3	0.6
I	3.4	1.7	0.6
V	1.4	1.2	0.5

Soil Classification	Percent of Total Sample
Gravel	7.7
Sand	82.7
Coarse Sand	11.1
Medium Sand	54.3
Fine Sand	17.2
Silt	7.3
Clay	2.3

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

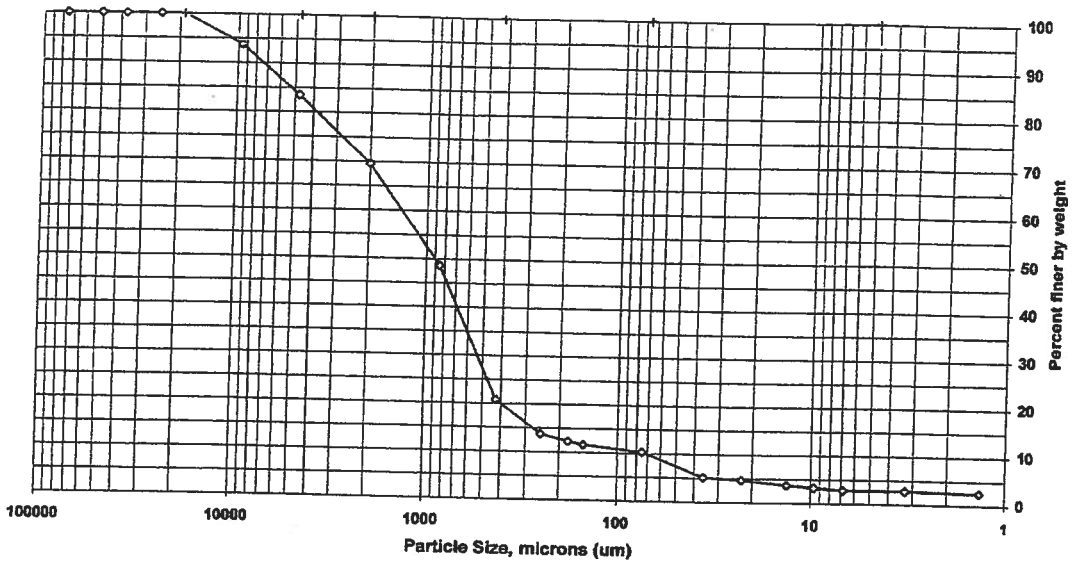
109423PS 9/29/2005

G32-SD313E-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-16	ETR(s):	109423	Start Date:	09/23/05
Lab ID:	635879			End Date:	09/28/05

Percent Solids:	83.1%		Non-soil material:	plant,shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	93.8	6.2
#4	4750	83.5	10.4
#10	2000	69.5	14.0
#20	850	48.6	20.9
#40	425	20.7	27.9
#60	250	13.8	7.0
#80	180	12.3	1.5
#100	150	11.6	0.6
#200	75	10.3	1.4
Hydrometer	35.9	5.1	5.1
I	22.8	4.7	0.5
I	13.3	3.8	0.9
I	9.6	3.3	0.5
I	6.8	2.9	0.5
I	3.3	2.9	0.0
V	1.4	2.6	0.3

Soil Classification	Percent of Total Sample
Gravel	16.5
Sand	73.2
Coarse Sand	14.0
Medium Sand	48.8
Fine Sand	10.5
Silt	7.4
Clay	2.9

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

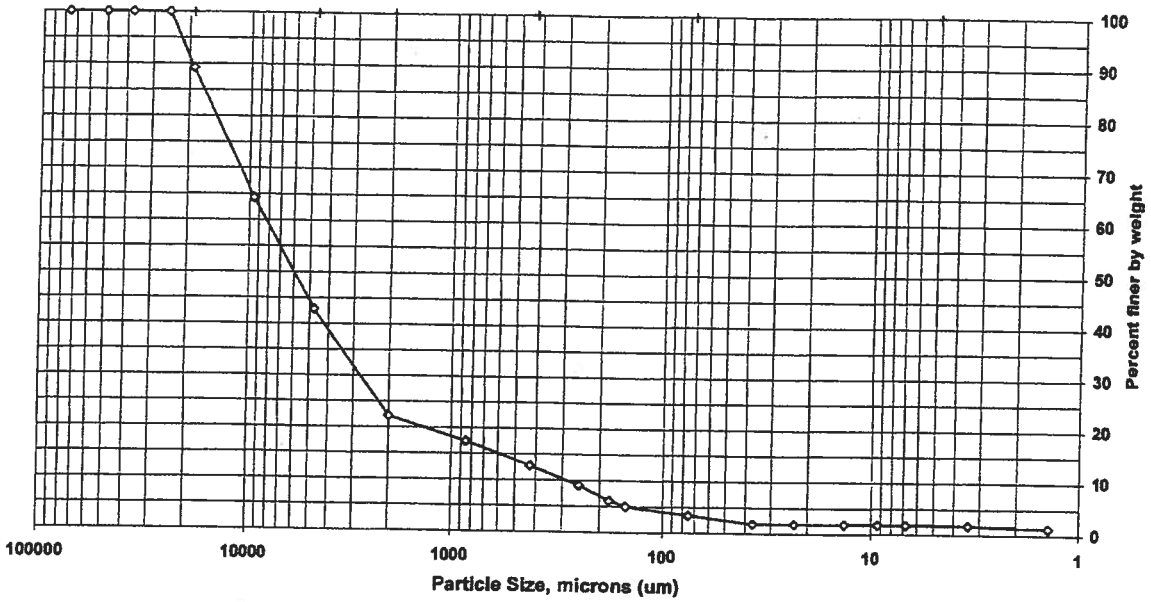
109423BPS 9/29/2005

G32-SD313F-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/08/05
Sample ID:	D1035-21	ETR(s):	109567	Start Date:	09/27/05
Lab ID:	636880			End Date:	10/03/05

Percent Solids:	86.7%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	25 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	89.2	10.8
3/8 inch	9500	64.3	25.0
#4	4750	42.9	21.4
#10	2000	22.2	20.7
#20	850	17.4	4.8
#40	425	12.7	4.6
#60	250	9.0	3.7
#80	180	6.1	3.0
#100	150	5.0	1.1
#200	75	3.4	1.6
Hydrometer	36.6	1.8	1.6
I	23.1	1.8	0.0
I	13.4	1.8	0.0
I	9.3	1.8	0.0
I	6.8	1.8	0.0
I	3.4	1.8	0.0
V	1.4	1.3	0.5

Soil Classification	Percent of Total Sample
Gravel	57.1
Sand	39.4
Coarse Sand	20.7
Medium Sand	9.5
Fine Sand	9.3
Silt	1.6
Clay	1.8

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

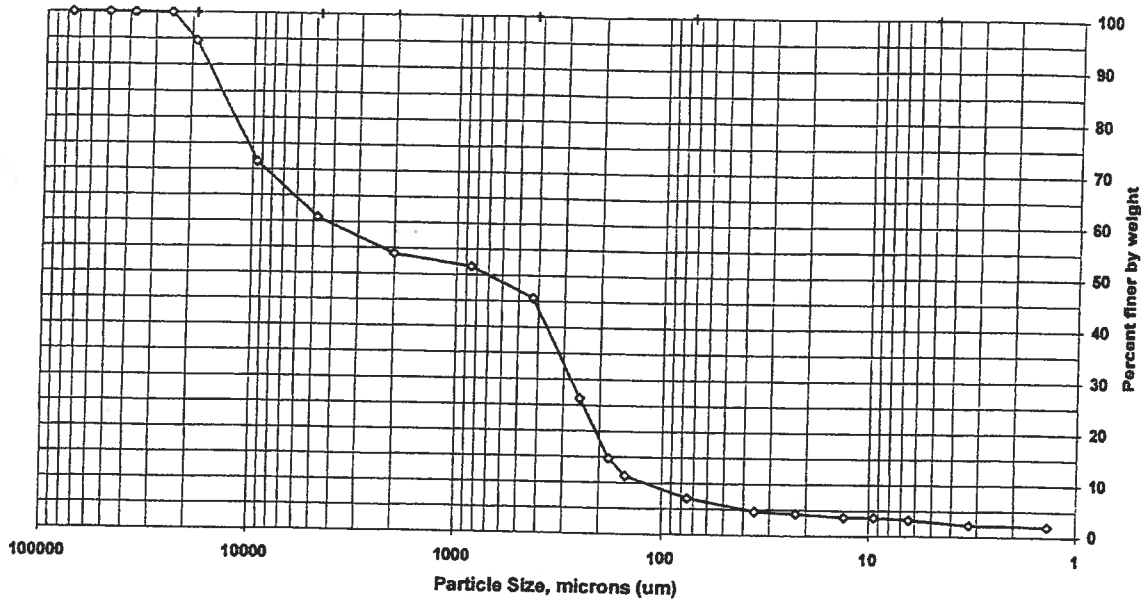
109541BPS 10/4/2005

G32-SD314-0.51.0

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/07/05
Sample ID:	D1035-04	ETR(s):	109541	Start Date:	09/27/05
Lab ID:	636751			End Date:	10/03/05

Percent Solids:	82.9%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	rounded
Maximum Particle Size:	25 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	94.6	5.4
3/8 inch	9500	71.5	23.1
#4	4750	60.8	10.6
#10	2000	53.9	6.9
#20	850	51.6	2.3
#40	425	45.6	6.0
#60	250	26.4	19.2
#80	180	14.7	11.7
#100	150	11.3	3.4
#200	75	7.1	4.3
Hydrometer	35.4	4.7	2.4
I	22.5	4.3	0.4
I	13.1	3.7	0.6
I	9.4	3.7	0.0
I	6.4	3.2	0.4
I	3.3	2.2	1.0
V	1.4	2.0	0.2

Soil Classification	Percent of Total Sample
Gravel	39.2
Sand	53.7
Coarse Sand	6.9
Medium Sand	8.3
Fine Sand	38.5
Silt	3.9
Clay	3.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

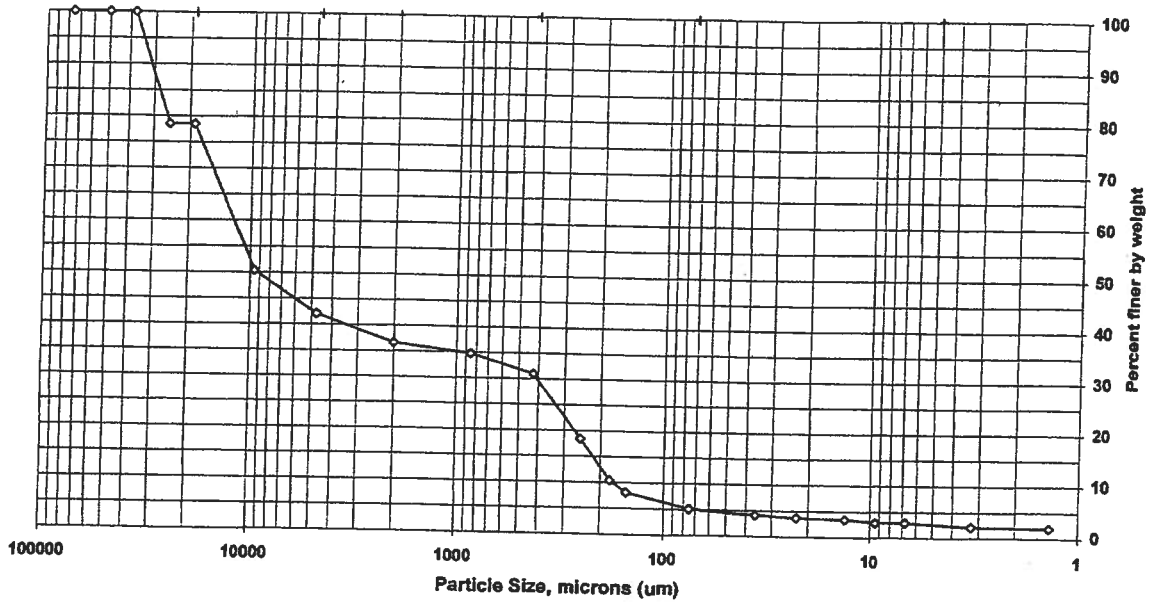
109541PS 10/5/2005

G32-SD314-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/07/05
Sample ID:	D1035-02	ETR(s):	109541	Start Date:	09/27/05
Lab ID:	636749			End Date:	10/03/05

Percent Solids:	75.0%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	rounded
Maximum Particle Size:	37.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	78.5	21.5
3/4 inch	19000	78.5	0.0
3/8 inch	9500	50.4	28.1
#4	4750	42.1	8.3
#10	2000	36.6	5.5
#20	850	34.8	1.8
#40	425	30.9	3.9
#60	250	18.4	12.6
#80	180	10.4	8.0
#100	150	8.1	2.3
#200	75	5.1	3.0
Hydrometer	35.9	4.2	0.9
I	22.8	3.7	0.5
I	13.2	3.4	0.2
I	9.4	2.9	0.5
I	6.8	2.9	0.0
I	3.3	2.2	0.7
V	1.4	2.0	0.2

Soil Classification	Percent of Total Sample
Gravel	57.9
Sand	37.0
Coarse Sand	5.5
Medium Sand	5.6
Fine Sand	25.9
Silt	2.1
Clay	2.9

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

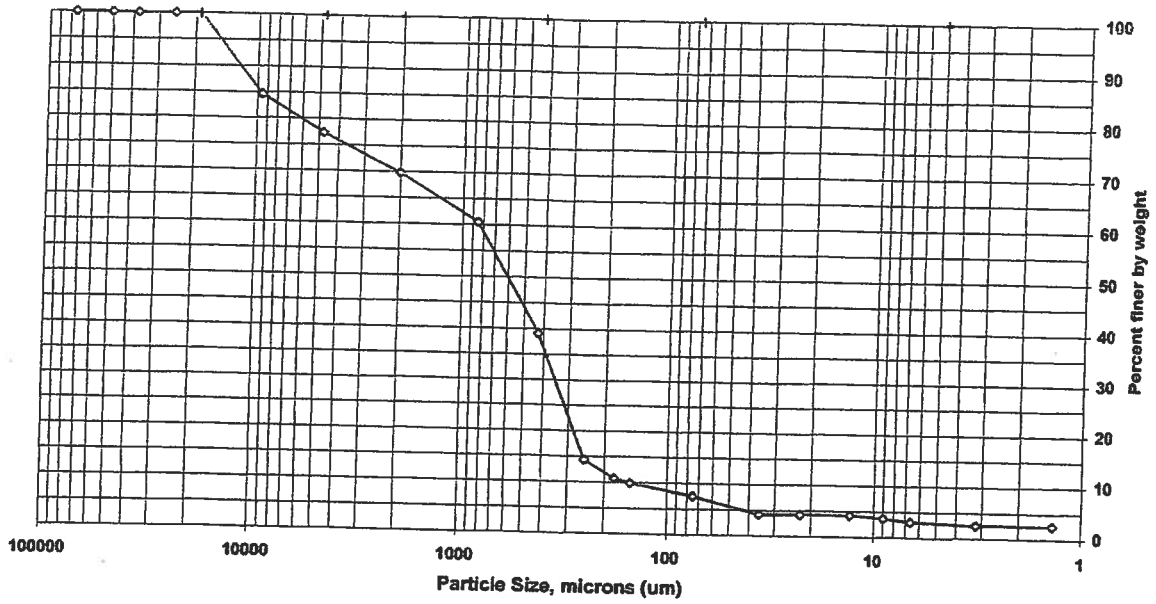
109541PS 10/5/2005

632-SD315-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109510	Date Received:	9/2/2005
Sample ID:	D1023-20	ETR(s):	109510	Start Date:	9/23/2005
Lab ID:	636537			End Date:	9/30/2005

Percent Solids:	80.8%		Non-soil material:	shells
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subangular
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	84.6	15.4
#4	4750	77.3	7.3
#10	2000	69.8	7.5
#20	850	60.5	9.3
#40	425	39.1	21.4
#60	250	14.3	24.8
#80	180	10.8	3.5
#100	150	9.9	0.9
#200	75	7.5	2.3
Hydrometer	35.7	4.2	3.3
I	22.6	4.2	0.0
I	13.0	4.2	0.0
I	9.0	3.7	0.5
I	6.6	3.1	0.6
I	3.2	2.6	0.5
V	1.4	2.6	0.0

Soil Classification	Percent of Total Sample
Gravel	22.7
Sand	69.7
Coarse Sand	7.5
Medium Sand	30.7
Fine Sand	31.6
Silt	4.4
Clay	3.1

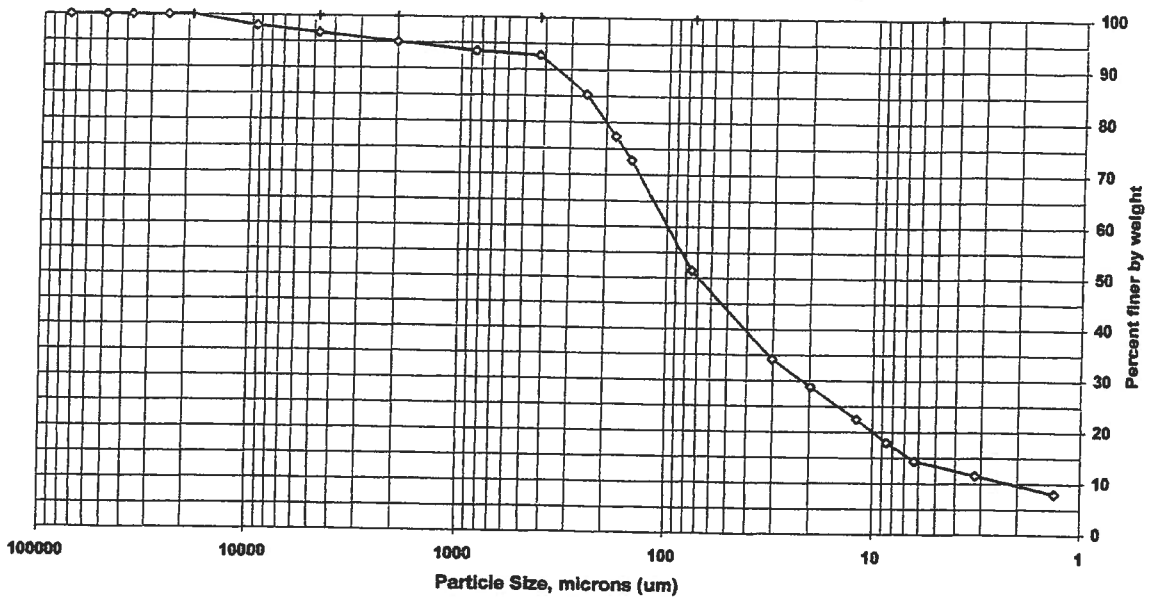
Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddie.
Dispersion Period: 1 minute

G32 - SD316 - 0.51.0

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109510	Date Received:	9/2/2005
Sample ID:	D1023-17	ETR(s):	109510	Start Date:	9/23/2005
Lab ID:	636534			End Date:	9/30/2005

Percent Solids:	68.7%		Non-soil material:	shells
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subangular
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.0	2.0
#4	4750	96.8	1.2
#10	2000	95.1	1.7
#20	850	93.5	1.6
#40	425	92.8	0.7
#60	250	85.3	7.4
#80	180	77.3	8.0
#100	150	72.8	4.5
#200	75	51.4	21.3
Hydrometer	30.3	34.2	17.2
I	19.8	28.8	5.4
I	11.9	22.5	6.3
I	8.6	17.9	4.6
I	6.3	14.3	3.6
I	3.2	11.6	2.8
V	1.3	8.0	3.5

Soil Classification	Percent of Total Sample
Gravel	3.2
Sand	45.3
Coarse Sand	1.7
Medium Sand	2.3
Fine Sand	41.3
Silt	37.1
Clay	14.3

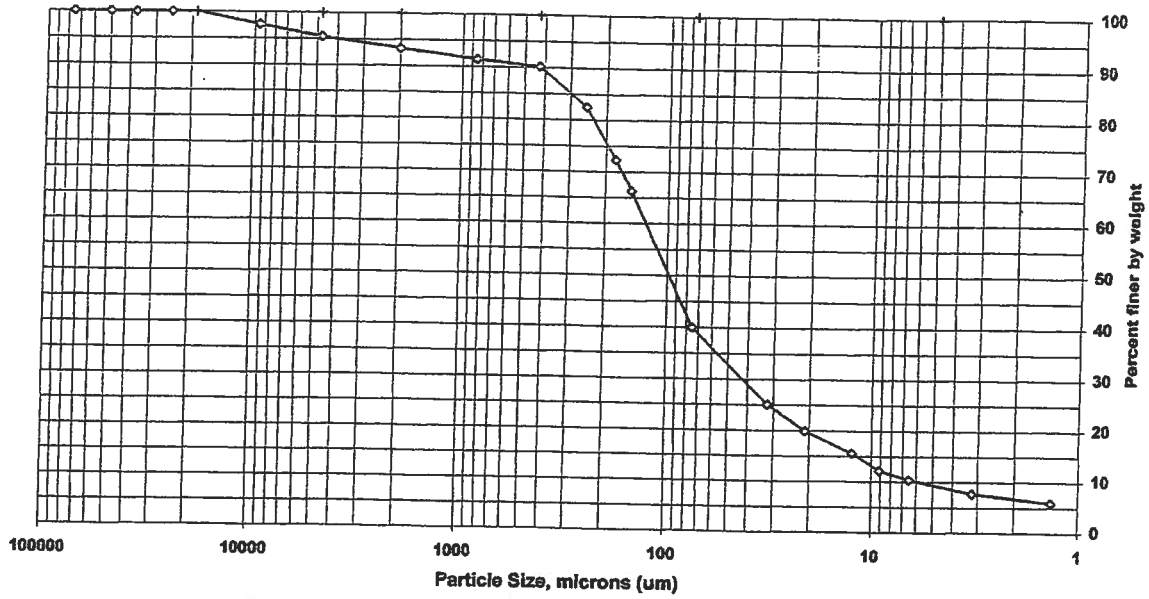
Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

G32 - SD 316 - 000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109510	Date Received:	9/2/2005
Sample ID:	D1023-16	ETR(s):	109510	Start Date:	9/23/2005
Lab ID:	636533			End Date:	9/30/2005

Percent Solids:	72.8%		Non-soil material:	shells
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subangular
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	97.6	2.4
#4	4750	95.5	2.2
#10	2000	93.3	2.2
#20	850	91.4	1.9
#40	425	90.2	1.2
#60	250	82.6	7.7
#80	180	72.3	10.3
#100	150	66.3	6.0
#200	75	40.0	26.3
Hydrometer	32.1	25.2	14.8
I	21.0	19.9	5.2
I	12.4	15.6	4.3
I	9.1	12.1	3.5
I	6.5	10.4	1.7
I	3.2	7.7	2.7
V	1.3	6.0	1.7

Soil Classification	Percent of Total Sample
Gravel	4.5
Sand	55.5
Coarse Sand	2.2
Medium Sand	3.1
Fine Sand	50.2
Silt	29.6
Clay	10.4

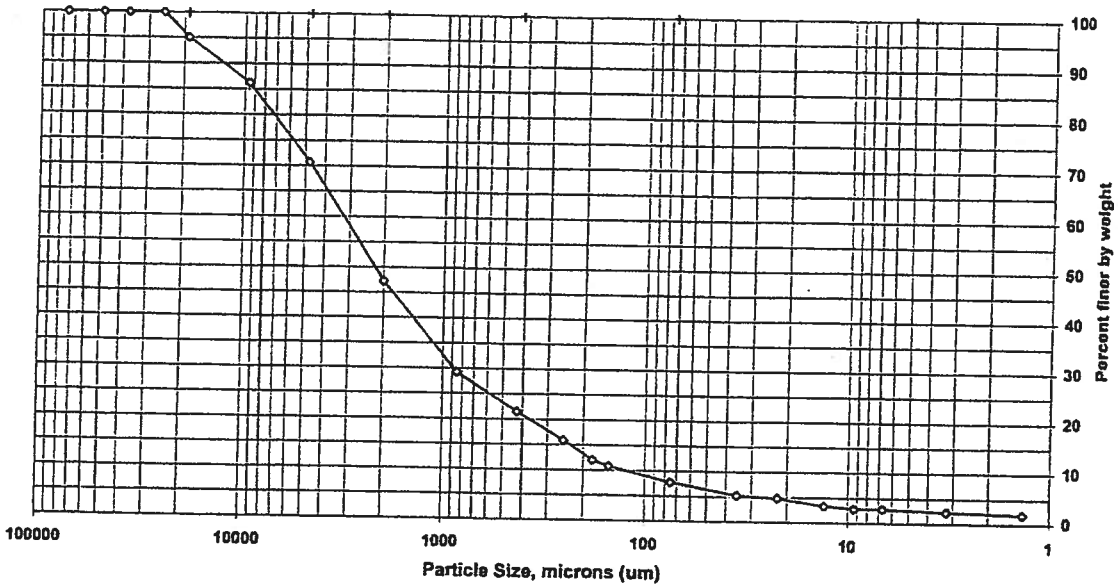
Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

G32-SD317-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1023-15	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636504			End Date:	9/29/2005

Percent Solids:	84.6%		Non-soil material:	shells
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subangular
Maximum Particle Size:	25 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	95.0	5.0
3/8 inch	9500	86.3	8.8
#4	4750	70.7	15.6
#10	2000	47.2	23.4
#20	850	29.2	18.0
#40	425	21.5	7.7
#60	250	15.9	5.6
#80	180	12.0	3.9
#100	150	10.8	1.2
#200	75	7.8	3.1
Hydrometer	35.2	5.3	2.5
I	22.4	4.8	0.5
I	13.1	3.4	1.5
I	9.3	2.9	0.5
I	6.7	2.9	0.0
I	3.2	2.3	0.5
V	1.4	1.9	0.4

Soil Classification	Percent of Total Sample
Gravel	29.3
Sand	62.9
Coarse Sand	23.4
Medium Sand	25.7
Fine Sand	13.7
Silt	4.9
Clay	2.9

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

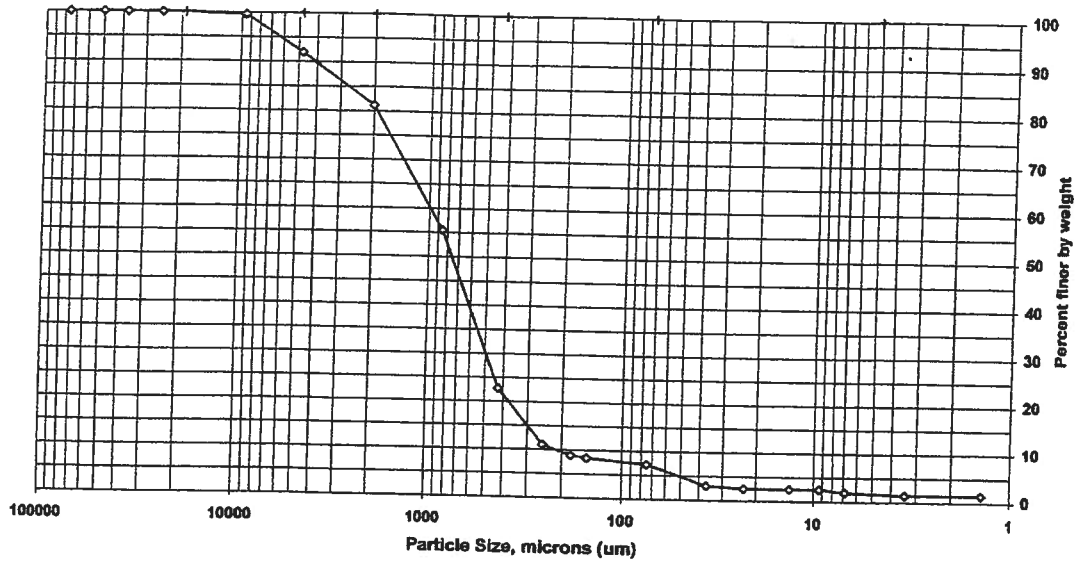
109506CPS 9/30/2005

G32-SDDUP01-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109423	Date Received:	08/30/05
Sample ID:	D1009-13	ETR(s):	109423	Start Date:	09/21/05
Lab ID:	635876			End Date:	09/28/05

Percent Solids:	81.4%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.7	0.3
#4	4750	91.9	7.8
#10	2000	81.2	10.7
#20	850	55.6	25.6
#40	425	22.7	32.9
#60	250	11.0	11.7
#80	180	8.9	2.1
#100	150	8.4	0.5
#200	75	7.2	1.2
Hydrometer	36.5	3.0	4.2
I	23.2	2.5	0.5
I	13.4	2.5	0.0
I	9.3	2.5	0.0
I	6.9	2.0	0.5
I	3.4	1.4	0.5
V	1.4	1.5	0.0

Soil Classification	Percent of Total Sample
Gravel	8.1
Sand	84.7
Coarse Sand	10.7
Medium Sand	58.5
Fine Sand	15.4
Silt	5.3
Clay	2.0

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

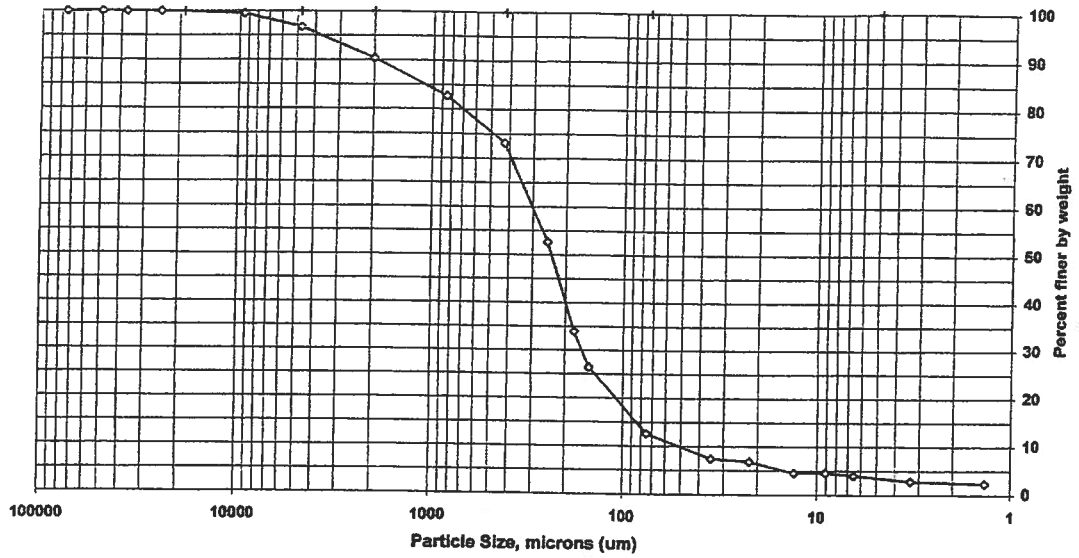
109423PS 9/29/2005

G32-SDDUP02-000.5

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109425	Date Received:	8/30/2005
Sample ID:	D1010-11	ETR(s):	109425	Start Date:	9/23/2005
Lab ID:	635893			End Date:	9/29/2005

Percent Solids:	77.7%		Non-soil material:	shell,grass
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.5	0.5
#4	4750	96.8	2.7
#10	2000	90.4	6.4
#20	850	82.7	7.6
#40	425	73.2	9.6
#60	250	52.6	20.5
#80	180	34.0	18.7
#100	150	26.5	7.5
#200	75	12.6	13.9
Hydrometer	34.8	7.4	5.2
I	22.1	6.8	0.6
I	13.0	4.6	2.3
I	9.1	4.6	0.0
I	6.5	4.0	0.6
I	3.3	2.8	1.2
V	1.4	2.3	0.5

Soil Classification	Percent of Total Sample
Gravel	3.2
Sand	84.2
Coarse Sand	6.4
Medium Sand	17.2
Fine Sand	60.6
Silt	8.6
Clay	4.0

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

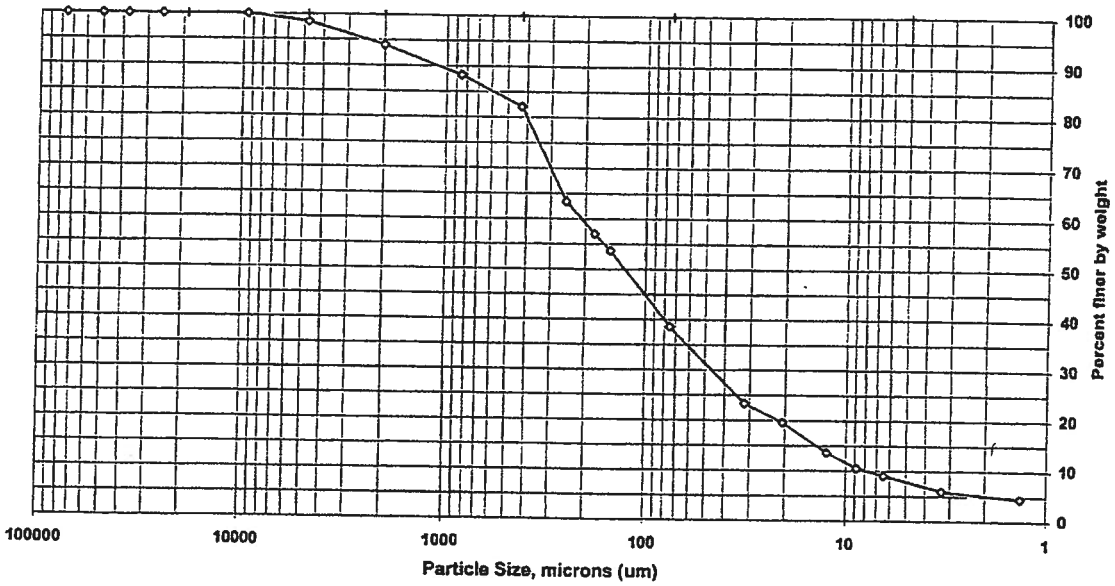
109425BPS 9/29/2005

632-SDDUP03

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1010-13	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636485			End Date:	9/29/2005

Percent Solids:	81.0%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.6	1.4
#10	2000	94.0	4.5
#20	850	88.3	5.7
#40	425	82.1	6.2
#60	250	63.4	18.7
#80	180	57.0	6.4
#100	150	53.7	3.3
#200	75	38.6	15.1
Hydrometer	31.7	23.4	15.3
I	20.6	19.6	3.8
I	12.4	13.6	6.0
I	8.8	10.6	3.0
I	6.4	9.0	1.5
I	3.3	6.0	3.0
V	1.4	4.5	1.5

Soil Classification	Percent of Total Sample
Gravel	1.4
Sand	59.9
Coarse Sand	4.5
Medium Sand	11.9
Fine Sand	43.5
Silt	29.6
Clay	9.0

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

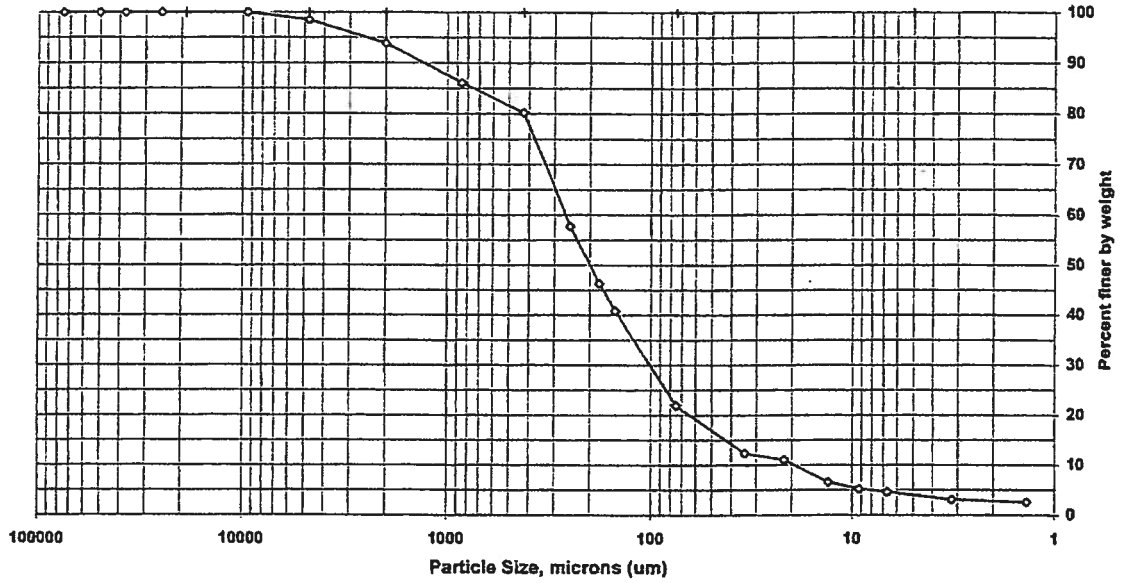
109506PS 9/30/2005

G32-SDDUP04

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1010-14	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636486			End Date:	9/29/2005

Percent Solids:	79.0%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.5	1.5
#10	2000	93.9	4.7
#20	850	86.2	7.7
#40	425	80.2	6.0
#60	250	57.7	22.4
#80	180	46.4	11.4
#100	150	40.8	5.5
#200	75	21.9	18.9
Hydrometer	34.2	12.4	9.6
I	21.9	11.0	1.4
I	13.2	6.6	4.4
I	9.2	5.2	1.4
I	6.7	4.6	0.6
I	3.2	3.1	1.5
V	1.4	2.7	0.5

Soil Classification	Percent of Total Sample
Gravel	1.5
Sand	76.6
Coarse Sand	4.7
Medium Sand	13.7
Fine Sand	58.3
Silt	17.3
Clay	4.6

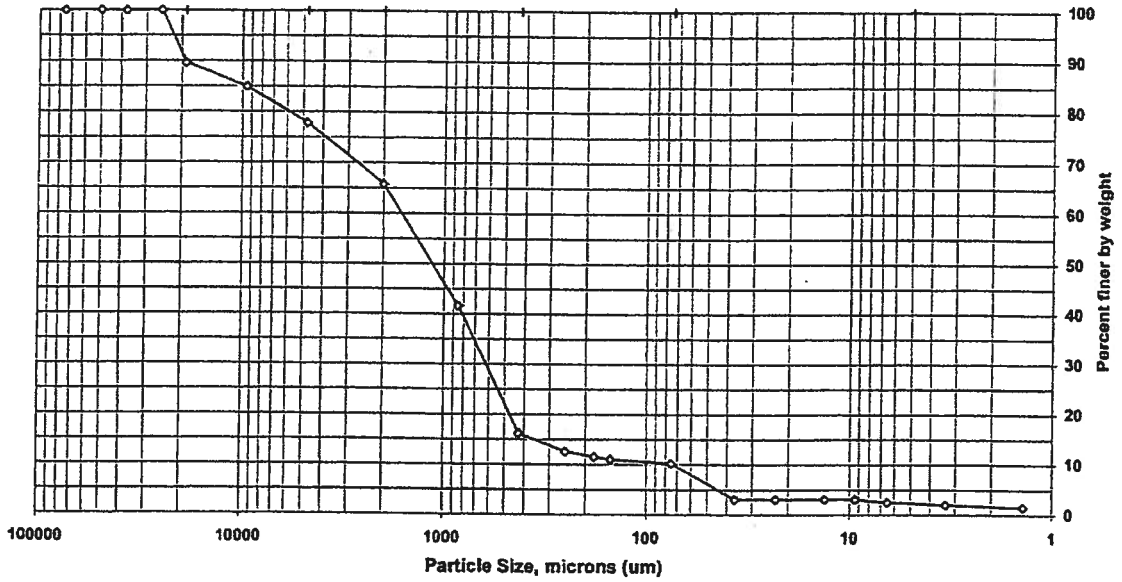
Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

G32 - SDDUP05

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109506	Date Received:	9/2/2005
Sample ID:	D1023-12	ETR(s):	109506	Start Date:	9/23/2005
Lab ID:	636501			End Date:	9/29/2005

Percent Solids:	77.3%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	25 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	89.6	10.4
3/8 inch	9500	85.0	4.6
#4	4750	77.9	7.1
#10	2000	65.8	12.1
#20	850	41.6	24.1
#40	425	16.1	25.5
#60	250	12.5	3.6
#80	180	11.5	1.1
#100	150	11.0	0.5
#200	75	10.2	0.8
Hydrometer	36.3	3.1	7.1
I	22.9	3.1	0.0
I	13.2	3.1	0.0
I	9.4	3.1	0.0
I	6.5	2.5	0.5
I	3.3	2.0	0.5
V	1.4	1.5	0.5

Soil Classification	Percent of Total Sample
Gravel	22.1
Sand	67.7
Coarse Sand	12.1
Medium Sand	49.6
Fine Sand	6.0
Silt	7.6
Clay	2.5

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

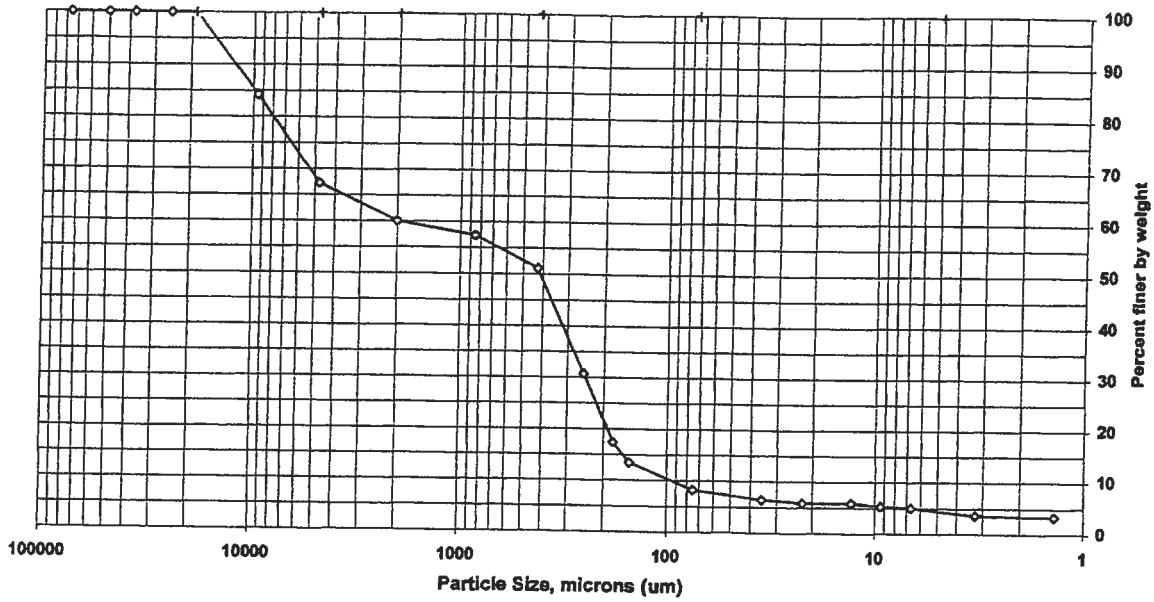
109506BPS 9/30/2005

G32-SDDUP06

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/07/05
Sample ID:	D1035-03	ETR(s):	109541	Start Date:	09/27/05
Lab ID:	636750			End Date:	10/03/05

Percent Solids:	71.9%		Non-soil material:	shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	rounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	84.2	15.8
#4	4750	67.2	17.0
#10	2000	60.1	7.2
#20	850	57.3	2.7
#40	425	51.1	6.2
#60	250	30.8	20.4
#80	180	17.4	13.4
#100	150	13.5	3.9
#200	75	8.2	5.3
Hydrometer	35.4	6.4	1.7
I	22.5	5.9	0.6
I	13.0	5.9	0.0
I	9.4	5.3	0.6
I	6.7	5.0	0.3
I	3.3	3.6	1.4
V	1.4	3.4	0.3

Soil Classification	Percent of Total Sample
Gravel	32.8
Sand	59.1
Coarse Sand	7.2
Medium Sand	8.9
Fine Sand	42.9
Silt	3.1
Clay	5.0

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

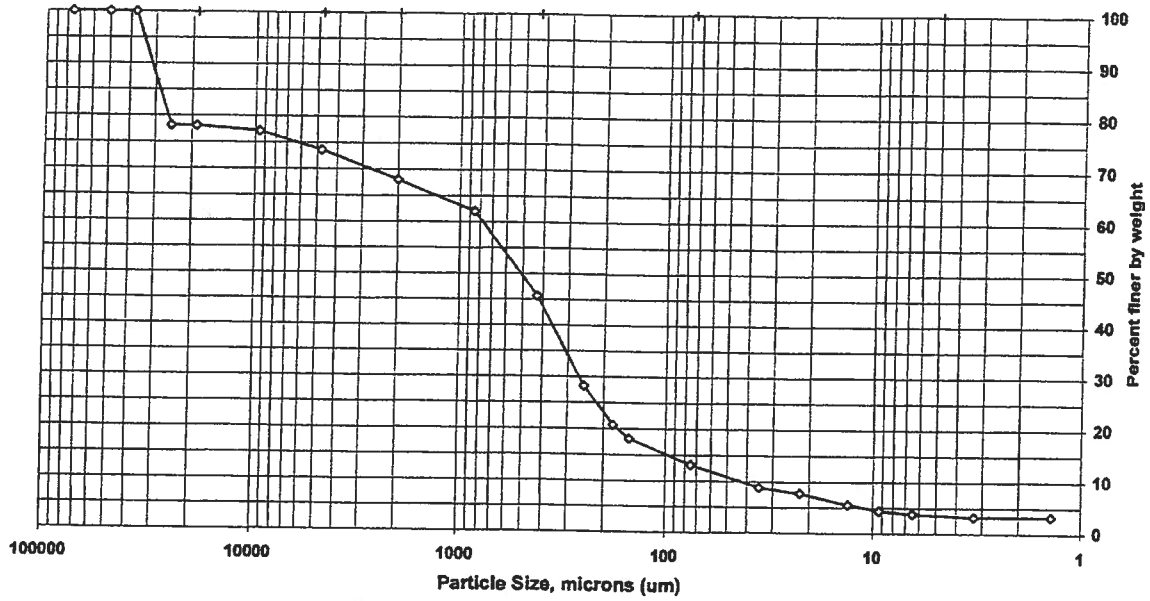
109541PS 10/5/2005

G32-SDDUP07

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109541	Date Received:	09/07/05
Sample ID:	D1035-09	ETR(s):	109541	Start Date:	09/27/05
Lab ID:	636756			End Date:	10/03/05

Percent Solids:	75.2%		Non-soil material:	plant,shell
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subrounded
Maximum Particle Size:	37.5 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	78.1	21.9
3/4 inch	19000	78.1	0.0
3/8 inch	9500	77.2	0.9
#4	4750	73.5	3.6
#10	2000	68.0	5.5
#20	850	62.1	6.0
#40	425	45.7	16.4
#60	250	28.2	17.4
#80	180	20.7	7.5
#100	150	18.1	2.6
#200	75	13.2	4.9
Hydrometer	34.8	8.9	4.3
I	22.2	7.8	1.1
I	13.1	5.5	2.2
I	9.3	4.4	1.1
I	6.5	3.9	0.6
I	3.3	3.3	0.6
V	1.4	3.3	0.0

Soil Classification	Percent of Total Sample
Gravel	26.5
Sand	60.4
Coarse Sand	5.5
Medium Sand	22.4
Fine Sand	32.5
Silt	9.3
Clay	3.9

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

FSL024:07.29.05:0
STL Burlington

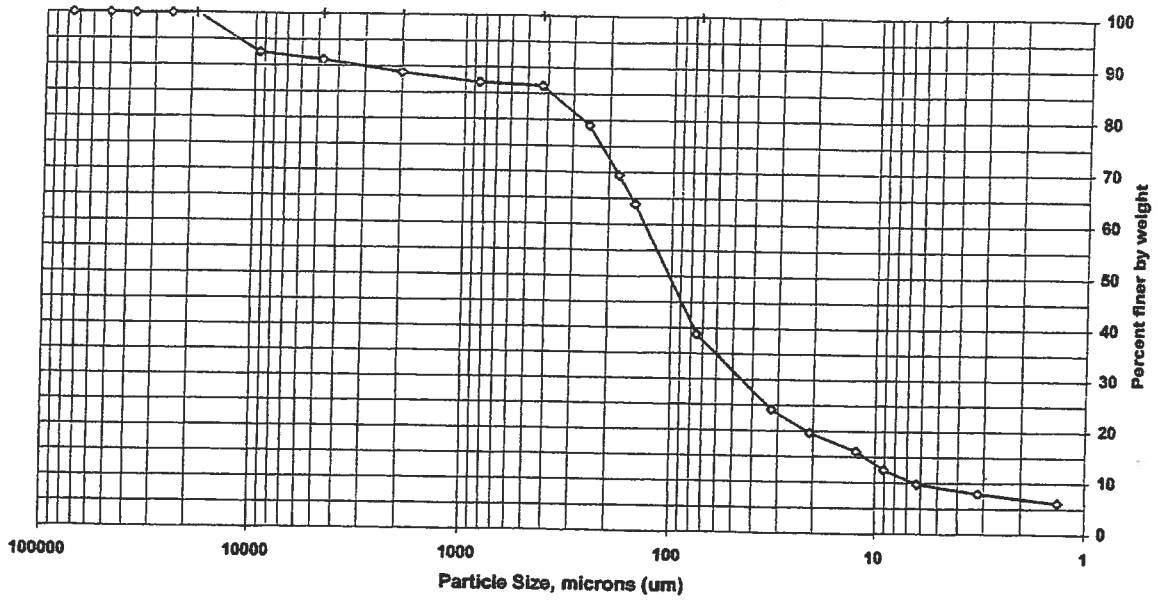
109541PS 10/5/2005

LAB
G32-SD316-000.5-DUP

Particle Size of Soils by ASTM D422

Client Code:	MITKEM	SDG:	109510	Date Received:	9/2/2005
Sample ID:	D1023-16REP	ETR(s):	109510	Start Date:	9/23/2005
Lab ID:	636533DP			End Date:	9/30/2005

Percent Solids:	72.4%		Non-soil material:	shells
Specific Gravity:	2.650	(assumed)	Shape (> #10):	subangular
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	92.5	7.5
#4	4750	91.2	1.3
#10	2000	88.8	2.3
#20	850	87.1	1.8
#40	425	86.5	0.6
#60	250	79.0	7.4
#80	180	69.4	9.6
#100	150	63.9	5.5
#200	75	38.8	25.0
Hydrometer	32.3	24.1	14.7
|	21.0	19.6	4.5
|	12.4	16.1	3.6
|	9.1	12.5	3.6
|	6.3	9.7	2.8
|	3.2	7.9	1.9
V	1.3	6.2	1.7

Soil Classification	Percent of Total Sample
Gravel	8.8
Sand	52.3
Coarse Sand	2.3
Medium Sand	2.3
Fine Sand	47.6
Silt	29.1
Clay	9.7

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

C-2 GRAIN SIZE DISTRIBUTION DATA, 2010

GeoTesting express

WARRANTY and LIABILITY

GeoTesting Express (GTX) warrants that all tests it performs are run in general accordance with the specified test procedures and accepted industry practice. GTX will correct or repeat any test that does not comply with this warranty. GTX has no specific knowledge as to conditioning, origin, sampling procedure or intended use of the material.

GTX may report engineering parameters that require us to interpret the test data. Such parameters are determined using accepted engineering procedures. However, GTX does not warrant that these parameters accurately reflect the true engineering properties of the *in situ* material. Responsibility for interpretation and use of the test data and these parameters for engineering and/or construction purposes rests solely with the user and not with GTX or any of its employees.

GTX's liability will be limited to correcting or repeating a test which fails our warranty. GTX's liability for damages to the Purchaser of testing services for any cause whatsoever shall be limited to the amount GTX received for the testing services. GTX will not be liable for any damages, or for any lost benefits or other consequential damages resulting from the use of these test results, even if GTX has been advised of the possibility of such damages. GTX will not be responsible for any liability of the Purchaser to any third party.

Commonly Used Symbols

A	pore pressure parameter for $\Delta\sigma_1 - \Delta\sigma_3$
B	pore pressure parameter for $\Delta\sigma_3$
CIU	isotropically consolidated undrained triaxial shear test
CR	compression ratio for one dimensional consolidation
C_c	coefficient of curvature, $(D_{30})^2 / (D_{10} \times D_{60})$
C_u	coefficient of uniformity, D_{60}/D_{10}
C_c	compression index for one dimensional consolidation
C_α	coefficient of secondary compression
c_v	coefficient of consolidation
c	cohesion intercept for total stresses
c'	cohesion intercept for effective stresses
D	diameter of specimen
D_{10}	diameter at which 10% of soil is finer
D_{15}	diameter at which 15% of soil is finer
D_{30}	diameter at which 30% of soil is finer
D_{50}	diameter at which 50% of soil is finer
D_{60}	diameter at which 60% of soil is finer
D_{85}	diameter at which 85% of soil is finer
d_{50}	displacement for 50% consolidation
d_{90}	displacement for 90% consolidation
d_{100}	displacement for 100% consolidation
E	Young's modulus
e	void ratio
e_c	void ratio after consolidation
e_o	initial void ratio
G	shear modulus
G_s	specific gravity of soil particles
H	height of specimen
PI	plasticity index
i	gradient
K_o	lateral stress ratio for one dimensional strain
k	permeability
LI	Liquidity Index
m_v	coefficient of volume change
n	porosity
PI	plasticity index
P_c	preconsolidation pressure
p	$(\sigma_1 + \sigma_3) / 2$, $(\sigma_v + \sigma_h) / 2$
p'	$(\sigma'_1 + \sigma'_3) / 2$, $(\sigma'_v + \sigma'_h) / 2$
p'_c	p' at consolidation
Q	quantity of flow
q	$(\sigma_1 - \sigma_3) / 2$
q_f	q at failure
q_o, q_i	initial q
q_c	q at consolidation
S	degree of saturation
SL	shrinkage limit
s_u	undrained shear strength
T	time factor for consolidation
T	temperature
t	time
U, UC	unconfined compression test
UU, Q	unconsolidated undrained triaxial test
u_a	pore gas pressure
u_e	excess pore water pressure
u, u_w	pore water pressure
V	total volume
V_g	volume of gas
V_s	volume of solids
V_v	volume of voids
V_w	volume of water
V_o	initial volume
v	velocity
W	total weight
W_s	weight of solids
W_w	weight of water
w	water content
w_c	water content at consolidation
w_f	final water content
w_l	liquid limit
w_n	natural water content
w_p	plastic limit
w_s	shrinkage limit
w_o, w_i	initial water content
α	slope of q_f versus p_f
α'	slope of q_f versus p_f'
γ_t	total unit weight
γ_d	dry unit weight
γ_s	unit weight of solids
γ_w	unit weight of water
ε	strain
ε_{vol}	volume strain
ε_h, ε_v	horizontal strain, vertical strain
μ	Poisson's ratio, also viscosity
σ	normal stress
σ'	effective normal stress
σ_c, σ'_c	consolidation stress in isotropic stress system
σ_h, σ'_h	horizontal normal stress
σ_v, σ'_v	vertical normal stress
σ_1	major principal stress
σ_2	intermediate principal stress
σ_3	minor principal stress
τ	shear stress
φ	friction angle based on total stresses
φ'	friction angle based on effective stresses
φ'_r	residual friction angle
φ_{ult}	φ for ultimate strength

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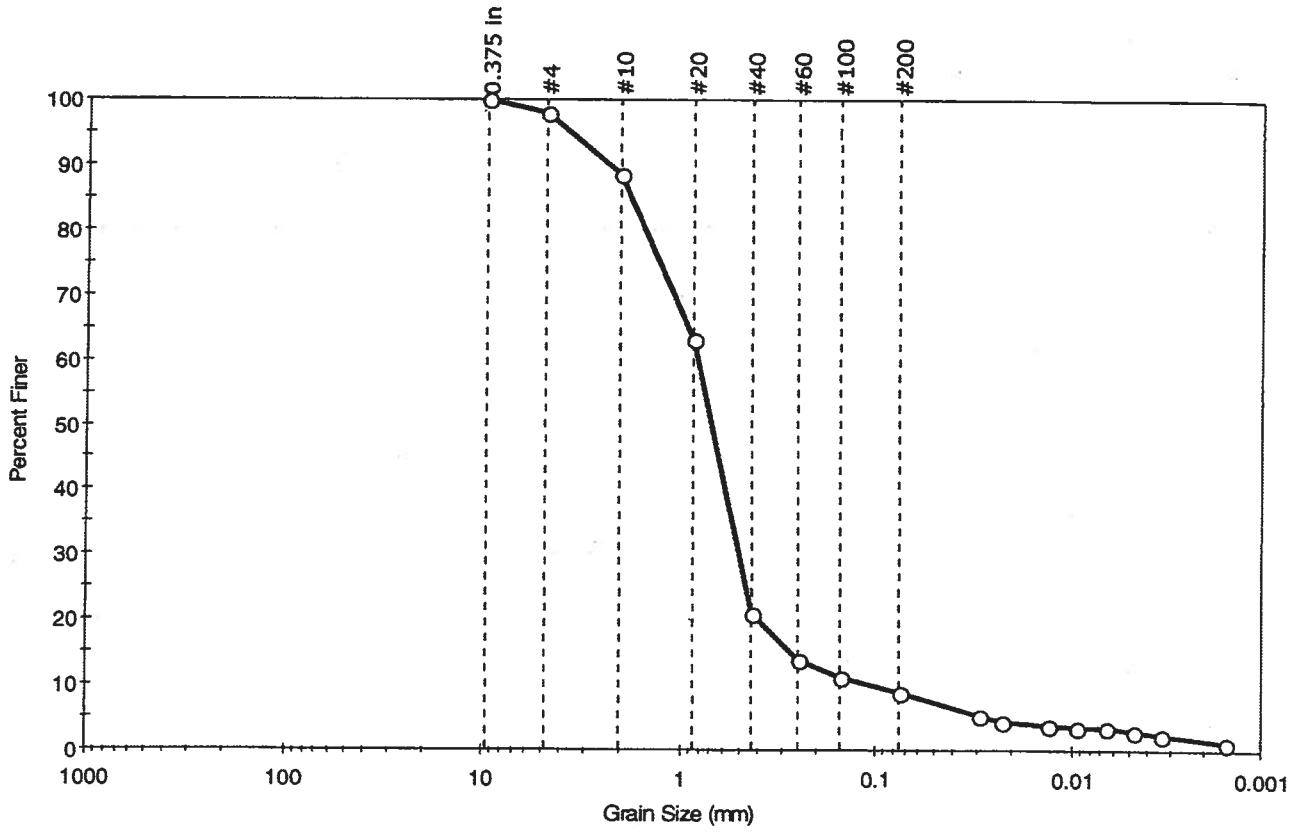
Client:	Columbia Analytical Services				
Project:	R1002384				
Location:	---			Project No:	GTX-9850
Boring ID:	R1002384-003	Sample Type:	jar	Tested By:	jbr
Sample ID:	GI-SD429-0006	Test Date:	05/12/10	Checked By:	jdt
Depth :	---	Test Id:	179569		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	2.1	88.9	9.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	88		
#20	0.85	63		
#40	0.42	21		
#60	0.25	14		
#100	0.15	11		
#200	0.075	9		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0299	5		
---	0.0229	4		
---	0.0133	4		
---	0.0094	4		
---	0.0066	4		
---	0.0047	3		
---	0.0033	2		
---	0.0015	1		

Coefficients

D_{85} = 1.7849 mm D_{30} = 0.4928 mm
D_{60} = 0.8077 mm D_{15} = 0.2738 mm
D_{50} = 0.6851 mm D_{10} = 0.1042 mm
C_u = 7.751 C_c = 2.886

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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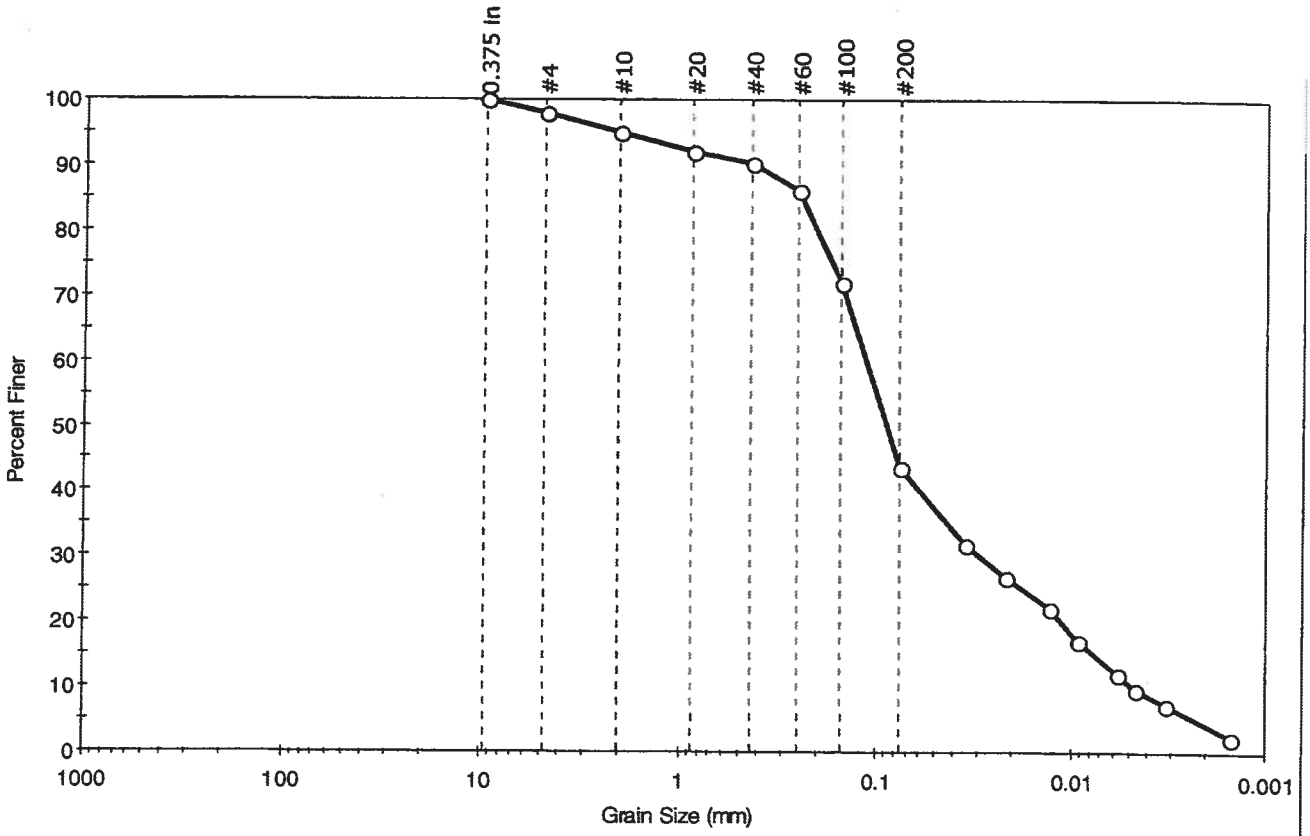
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-009	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD501-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179420		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	2.1	54.1	43.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	95		
#20	0.85	92		
#40	0.42	90		
#60	0.25	86		
#100	0.15	72		
#200	0.075	44		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0353	32		
---	0.0218	27		
---	0.0127	22		
---	0.0093	17		
---	0.0058	12		
---	0.0046	10		
---	0.0032	7		
---	0.0015	2		

Coefficients

D_{85} = 0.2405 mm	D_{30} = 0.0295 mm
D_{60} = 0.1115 mm	D_{15} = 0.0075 mm
D_{50} = 0.0873 mm	D_{10} = 0.0047 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

GeoTesting express
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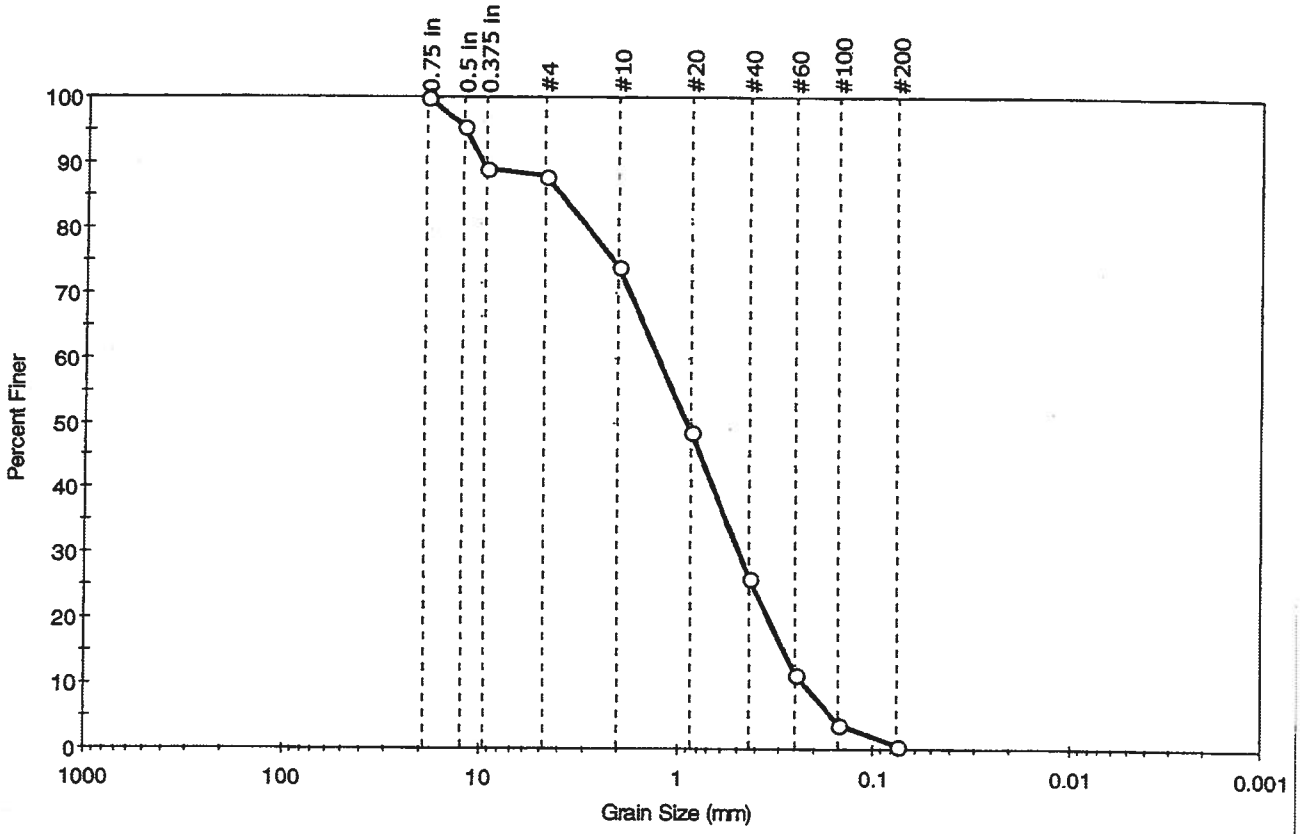
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-018	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD502-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179429		
Test Comment:	Insufficient fines, hydrometer not performed				
Sample Description:	Moist, black sand				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	11.9	87.6	0.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	96		
0.375 in	9.50	89		
#4	4.75	88		
#10	2.00	74		
#20	0.85	49		
#40	0.42	26		
#60	0.25	12		
#100	0.15	4		
#200	0.075	0		

Coefficients

D_{85} = 3.9430 mm	D_{30} = 0.4762 mm
D_{60} = 1.2473 mm	D_{15} = 0.2830 mm
D_{50} = 0.8880 mm	D_{10} = 0.2259 mm
C_u = 5.521	C_c = 0.805

Classification

ASTM: Poorly graded sand (SP)

AASHTO: Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

GeoTesting express
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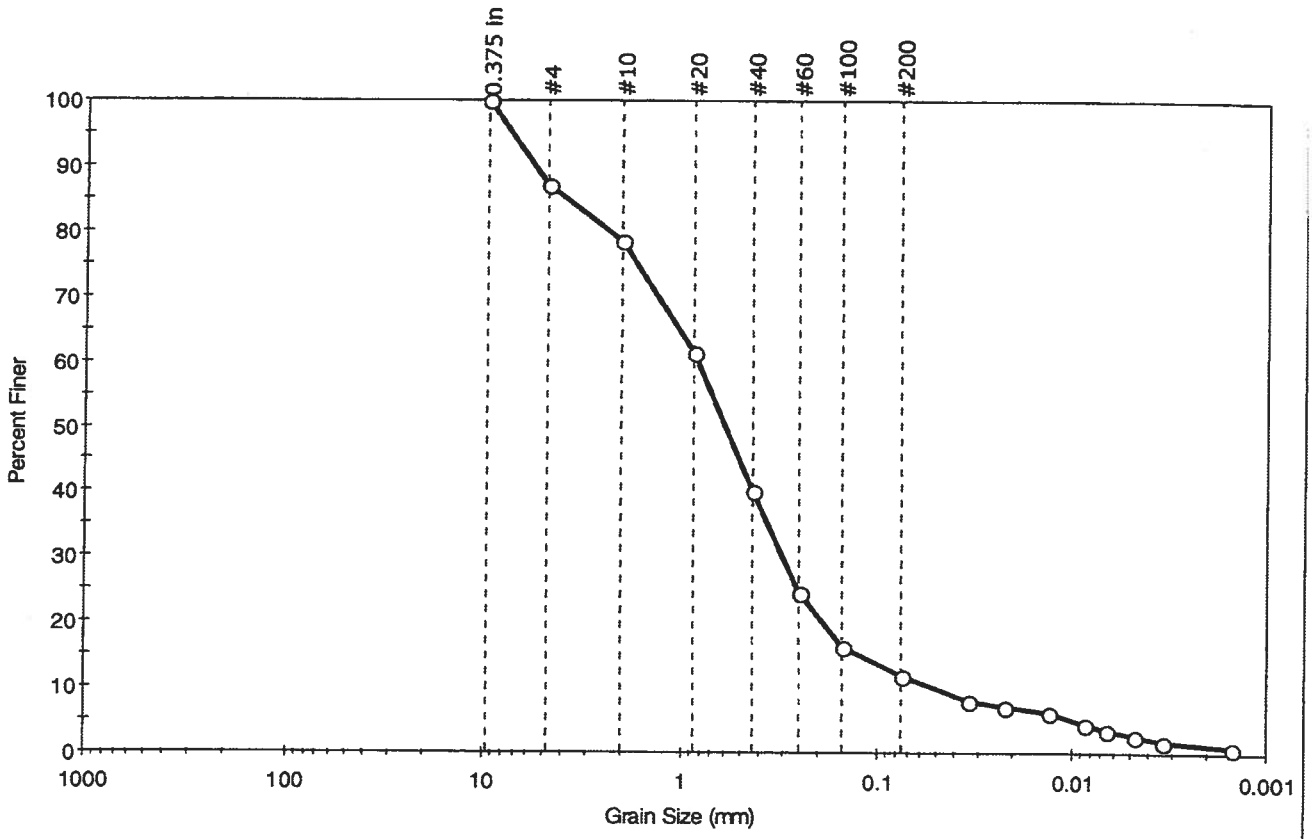
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-007	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD503-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179418		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	12.9	75.3	11.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	87		
#10	2.00	78		
#20	0.85	61		
#40	0.42	40		
#60	0.25	24		
#100	0.15	16		
#200	0.075	12		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0344	8		
---	0.0225	7		
---	0.0131	6		
---	0.0085	4		
---	0.0065	4		
---	0.0047	3		
---	0.0034	2		
---	0.0015	1		

Coefficients

D_{85} = 3.8555 mm D_{30} = 0.3020 mm
D_{60} = 0.8122 mm D_{15} = 0.1230 mm
D_{50} = 0.5871 mm D_{10} = 0.0522 mm
C_u = 15.559 C_c = 2.151

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

GeoTesting express
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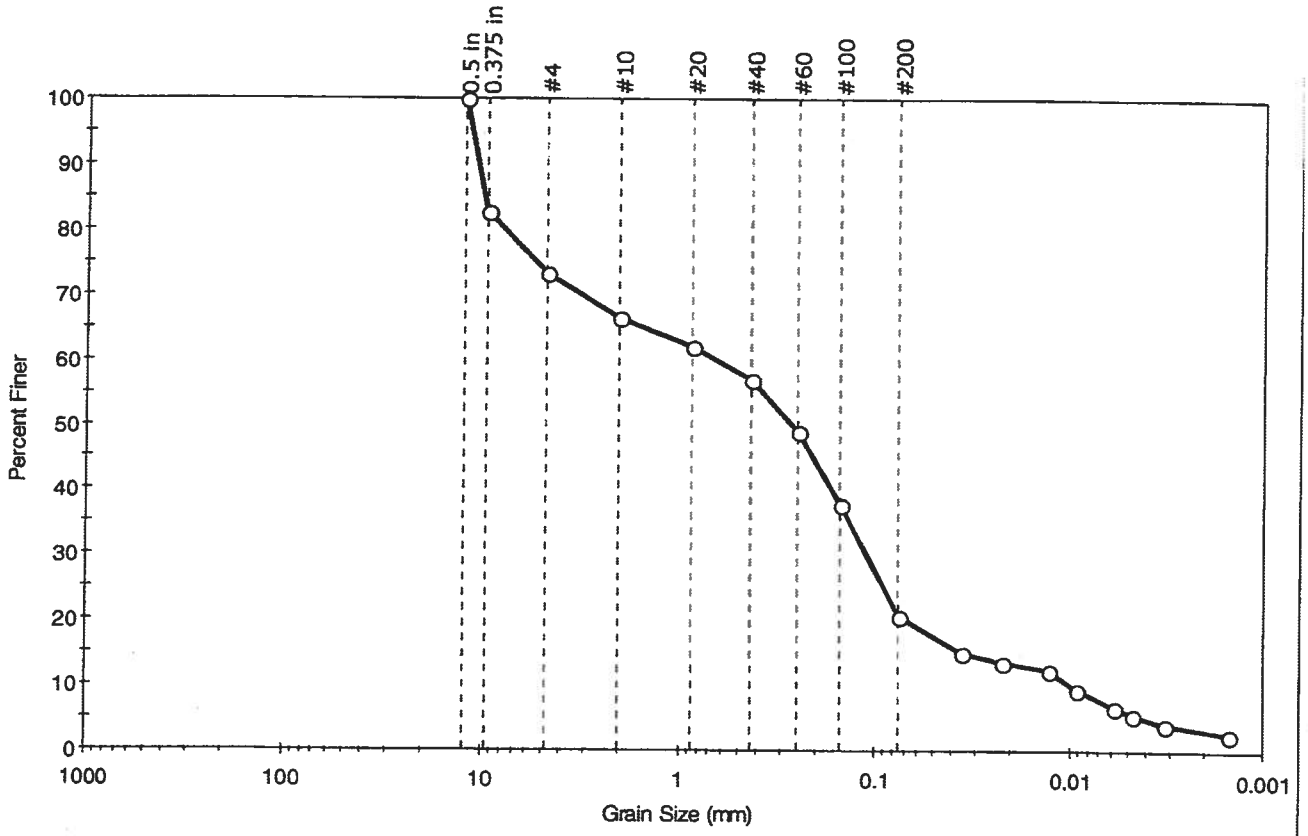
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-011	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD504-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179422		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	26.9	52.3	20.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	83		
#4	4.75	73		
#10	2.00	66		
#20	0.85	62		
#40	0.42	57		
#60	0.25	49		
#100	0.15	38		
#200	0.075	21		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0361	15		
---	0.0222	14		
---	0.0130	12		
---	0.0093	10		
---	0.0059	7		
---	0.0047	5		
---	0.0032	4		
---	0.0015	3		

Coefficients

D_{85} =9.8528 mm D_{30} =0.1096 mm
D_{60} =0.6551 mm D_{15} =0.0357 mm
D_{50} =0.2659 mm D_{10} =0.0098 mm
C_u =N/A C_c =N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

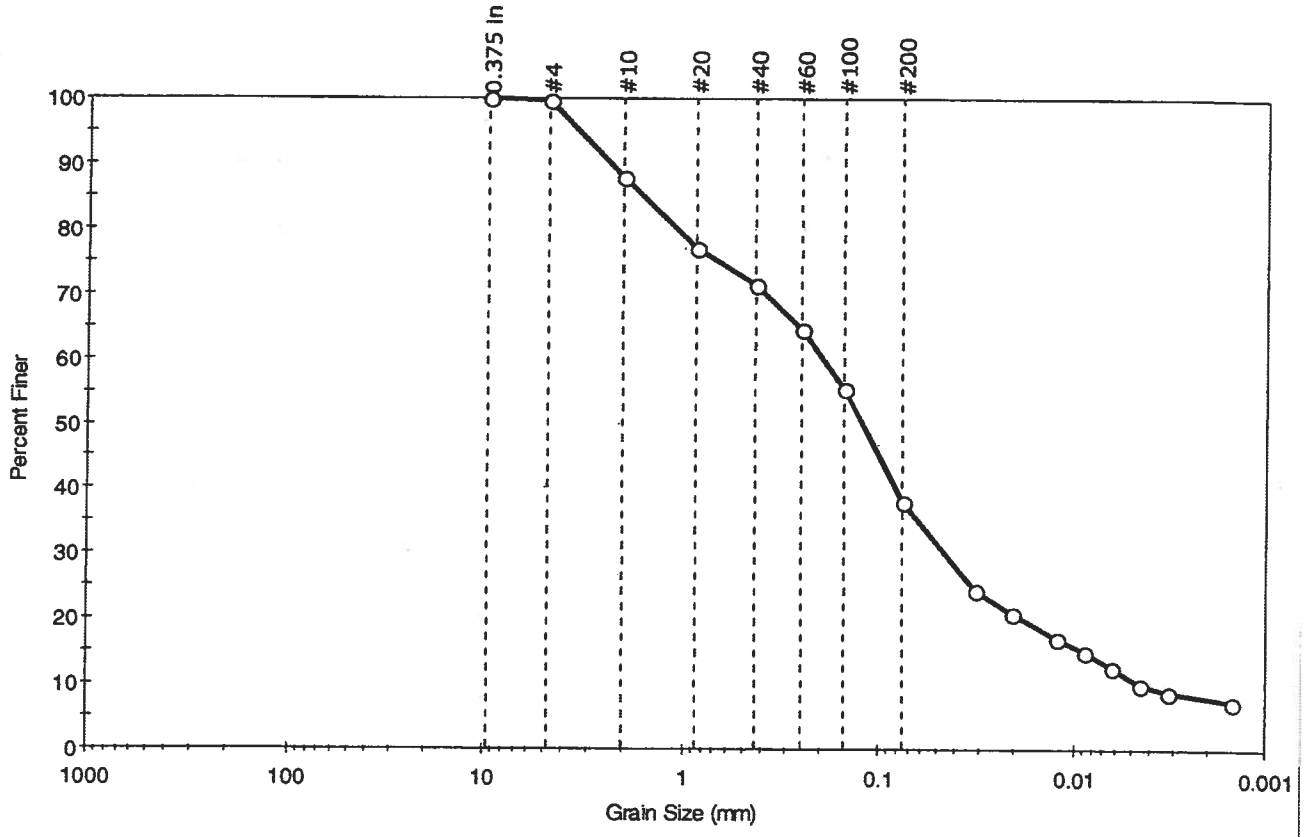
Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED
Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002384				
Location:	---			Project No:	GTX-9850
Boring ID:	R1002384-005	Sample Type:	jar	Tested By:	jbr
Sample ID:	GI-SD505-0006	Test Date:	05/12/10	Checked By:	jdt
Depth :	---	Test Id:	179571		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.2	61.6	38.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	100		
#10	2.00	88		
#20	0.85	77		
#40	0.42	71		
#60	0.25	65		
#100	0.15	55		
#200	0.075	38		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0317	24		
---	0.0208	21		
---	0.0122	17		
---	0.0089	15		
---	0.0063	13		
---	0.0045	10		
---	0.0032	9		
---	0.0015	7		

Coefficients

D_{85} = 1.6052 mm D_{30} = 0.0449 mm
D_{60} = 0.1938 mm D_{15} = 0.0089 mm
D_{50} = 0.1205 mm D_{10} = 0.0044 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

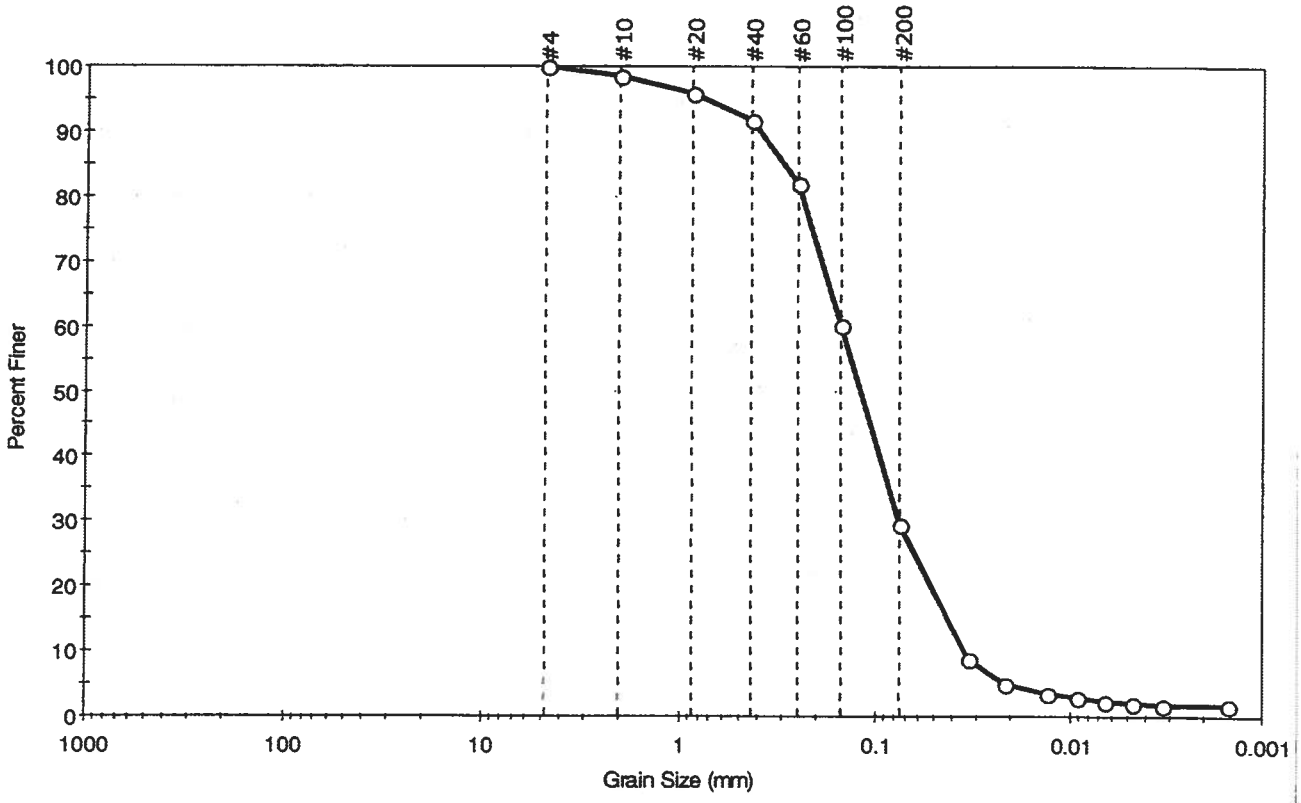
Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002384				
Location:	---			Project No:	GTX-9850
Boring ID:	R1002384-002	Sample Type:	jar	Tested By:	jbr
Sample ID:	GI-SD506-0006	Test Date:	05/12/10	Checked By:	jdt
Depth :	---	Test Id:	179568		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	70.6	29.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	98		
#20	0.85	96		
#40	0.42	92		
#60	0.25	82		
#100	0.15	60		
#200	0.075	29		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0337	9		
---	0.0217	5		
---	0.0131	4		
---	0.0092	3		
---	0.0066	2		
---	0.0047	2		
---	0.0033	2		
---	0.0015	2		

Coefficients

D_{85} = 0.2952 mm D_{30} = 0.0761 mm
D_{60} = 0.1498 mm D_{15} = 0.0430 mm
D_{50} = 0.1195 mm D_{10} = 0.0354 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

GeoTesting express
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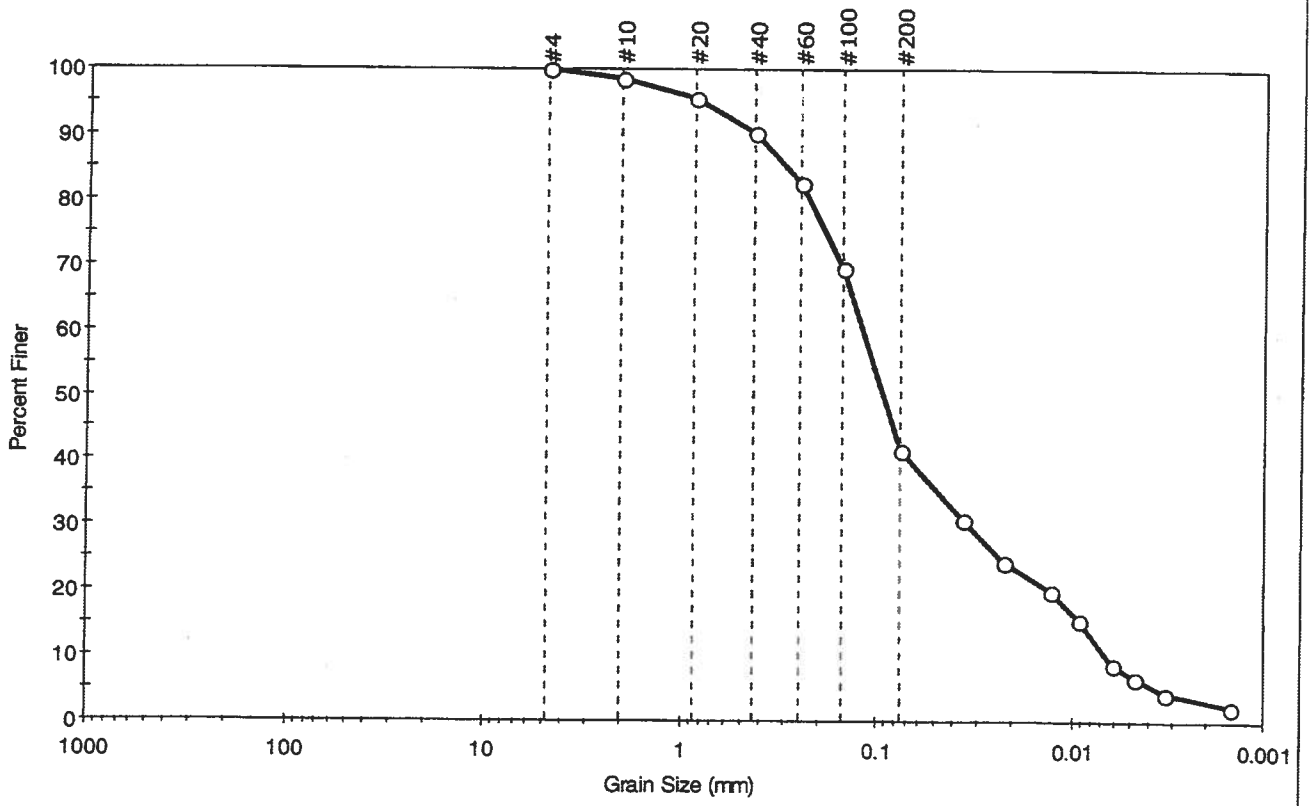
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-010	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD507-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179421		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	0.0	58.5	41.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	98		
#20	0.85	96		
#40	0.42	90		
#60	0.25	83		
#100	0.15	70		
#200	0.075	41		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0356	31		
---	0.0224	24		
---	0.0130	20		
---	0.0093	16		
---	0.0061	9		
---	0.0047	7		
---	0.0033	4		
---	0.0015	2		

Coefficients

D_{85} =0.2957 mm	D_{30} =0.0331 mm
D_{60} =0.1184 mm	D_{15} =0.0090 mm
D_{50} =0.0925 mm	D_{10} =0.0065 mm
C_u =N/A	C_c =N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

GeoTesting express
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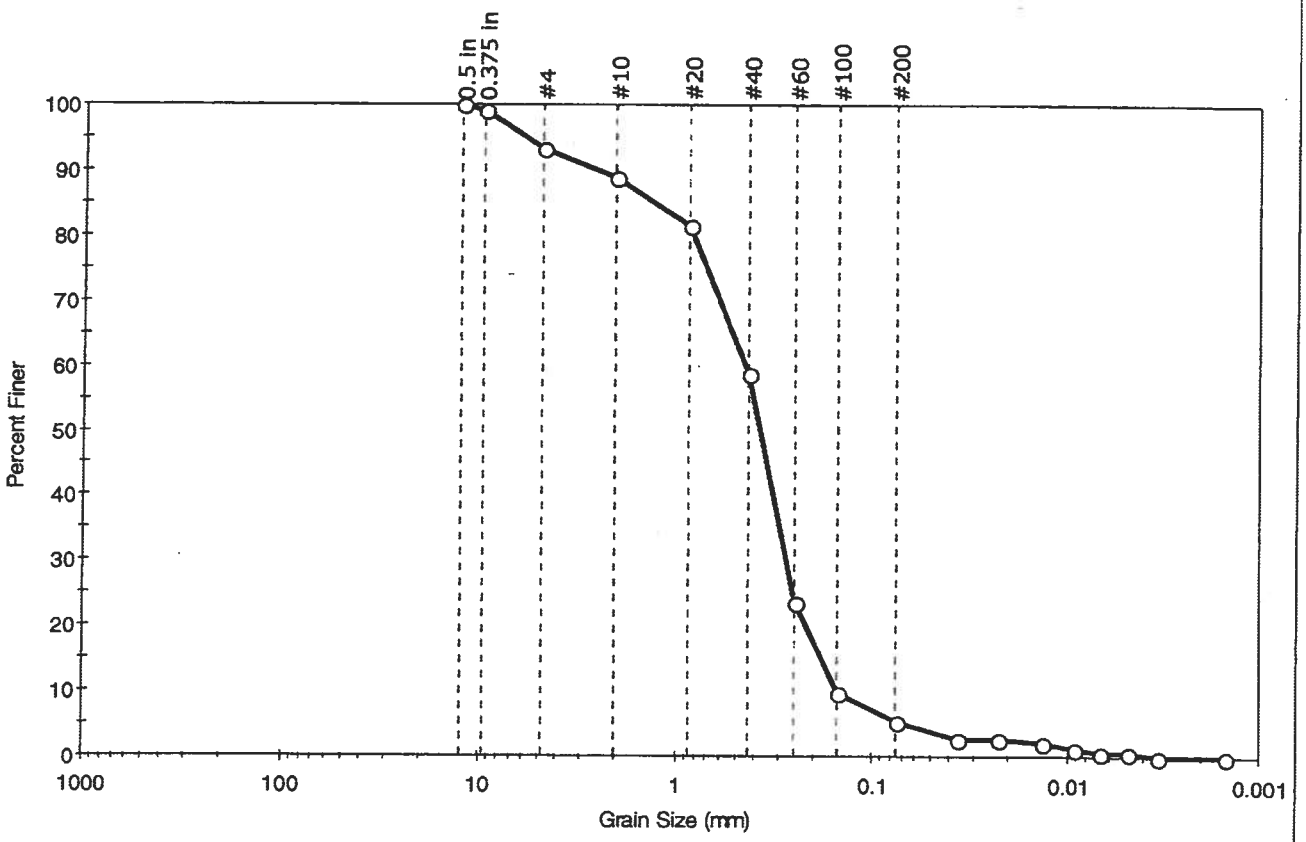
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-019	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD508-0006	Test Date:	05/11/10	Checked By:	jdt
Depth :	---	Test Id:	179430		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	6.7	87.9	5.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	99		
#4	4.75	93		
#10	2.00	89		
#20	0.85	82		
#40	0.42	59		
#60	0.25	24		
#100	0.15	10		
#200	0.075	5		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0363	3		
---	0.0227	3		
---	0.0135	2		
---	0.0091	1		
---	0.0068	1		
---	0.0048	1		
---	0.0034	0		
---	0.0015	0		

Coefficients

D_{85} = 1.2906 mm	D_{30} = 0.2756 mm
D_{60} = 0.4430 mm	D_{15} = 0.1824 mm
D_{50} = 0.3729 mm	D_{10} = 0.1517 mm
C_u = 2.920	C_c = 1.130

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

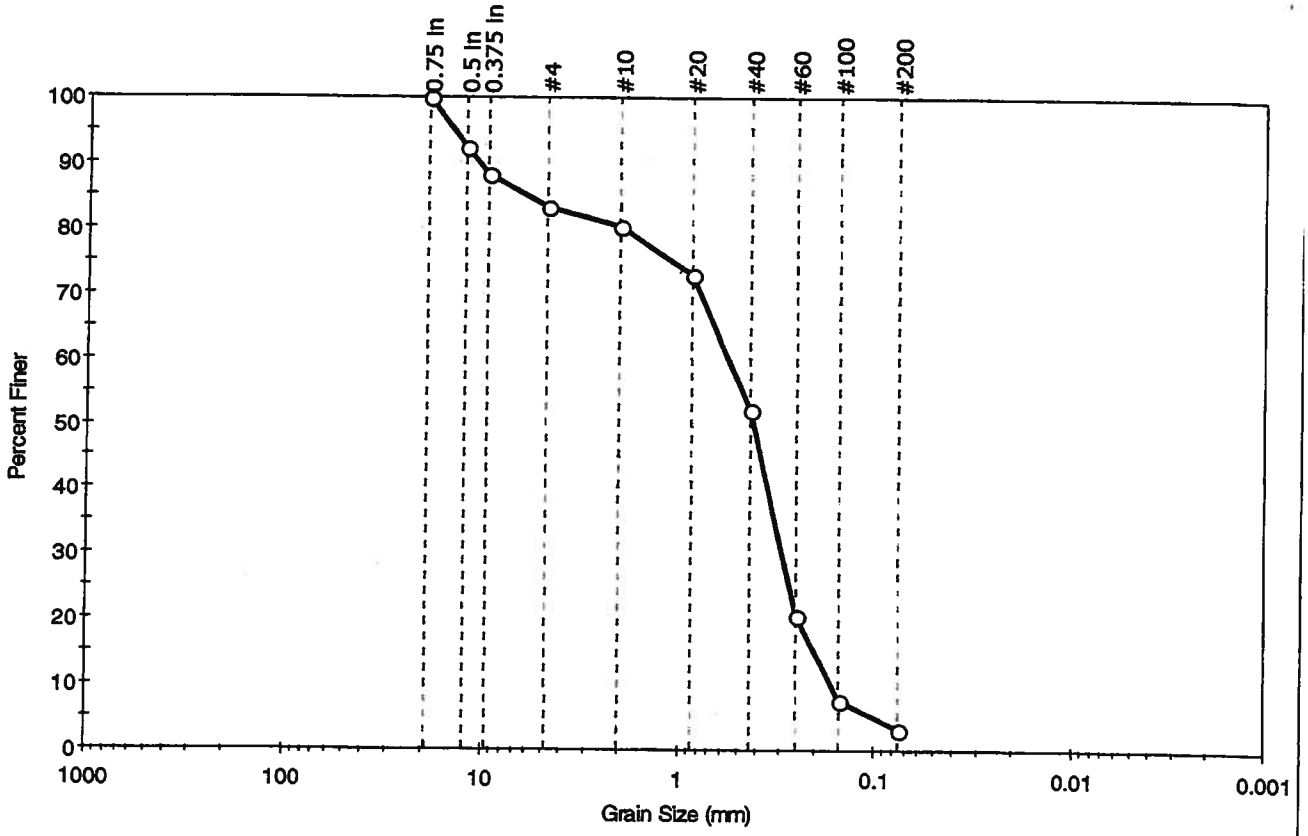
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	--- DUP of GI-SD-508-0006			Project No:	GTX-9843
Boring ID:	R1002348-020	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD-DUP02-050310	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179431		
Test Comment:	Insufficient fines, Hydrometer not performed				
Sample Description:	Moist, black sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	16.8	80.1	3.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	92		
0.375 in	9.50	88		
#4	4.75	83		
#10	2.00	80		
#20	0.85	73		
#40	0.42	52		
#60	0.25	21		
#100	0.15	8		
#200	0.075	3		

Coefficients

D_{85} = 6.1301 mm D_{30} = 0.2925 mm
D_{60} = 0.5529 mm D_{15} = 0.2001 mm
D_{50} = 0.4098 mm D_{10} = 0.1646 mm
C_u = 3.359 C_c = 0.940

Classification

ASTM Poorly graded sand with gravel (SP)

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

GeoTesting express
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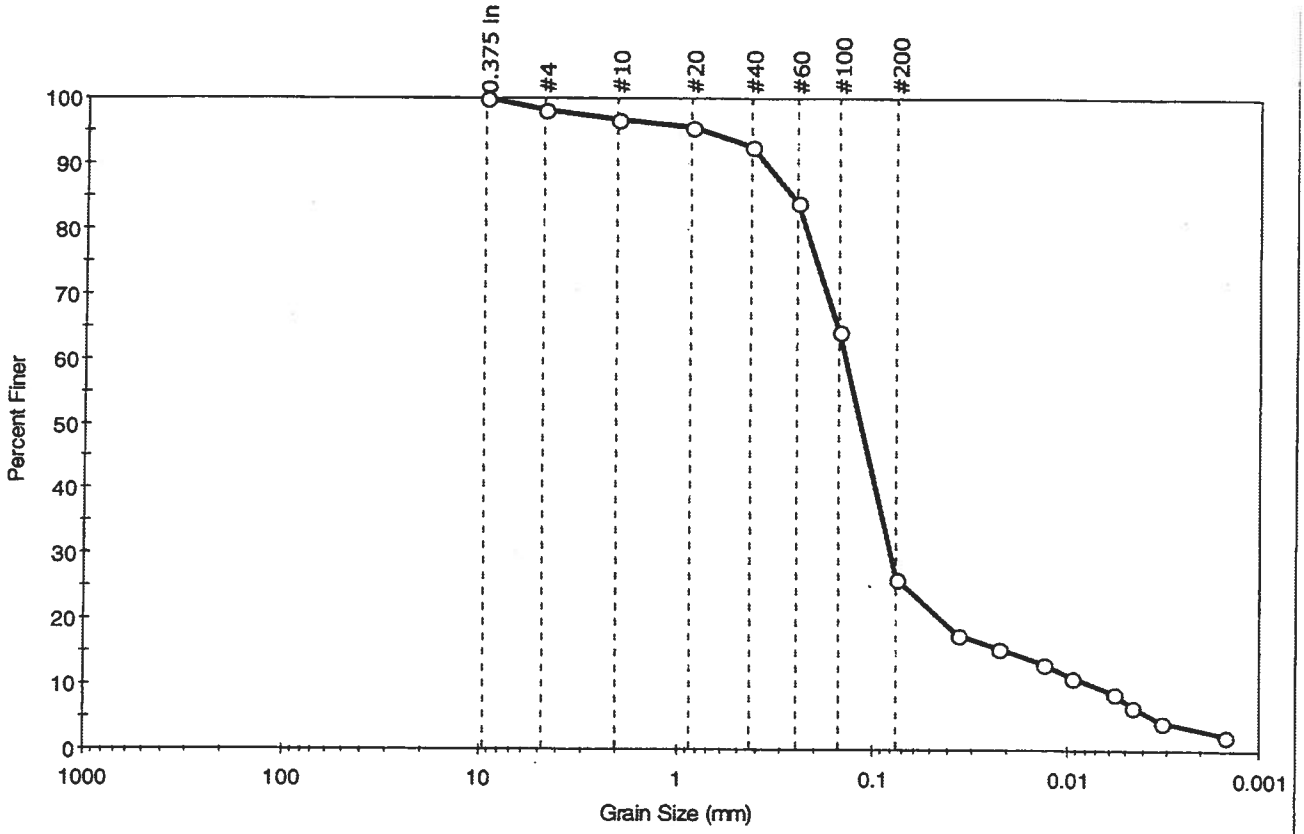
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-001	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD509-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179412		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	1.7	72.1	26.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	97		
#20	0.85	96		
#40	0.42	93		
#60	0.25	84		
#100	0.15	64		
#200	0.075	26		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0358	18		
---	0.0224	16		
---	0.0132	13		
---	0.0094	11		
---	0.0058	9		
---	0.0046	7		
---	0.0032	4		
---	0.0015	2		

Coefficients

D_{85} = 0.2652 mm	D_{30} = 0.0803 mm
D_{60} = 0.1388 mm	D_{15} = 0.0195 mm
D_{50} = 0.1157 mm	D_{10} = 0.0073 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

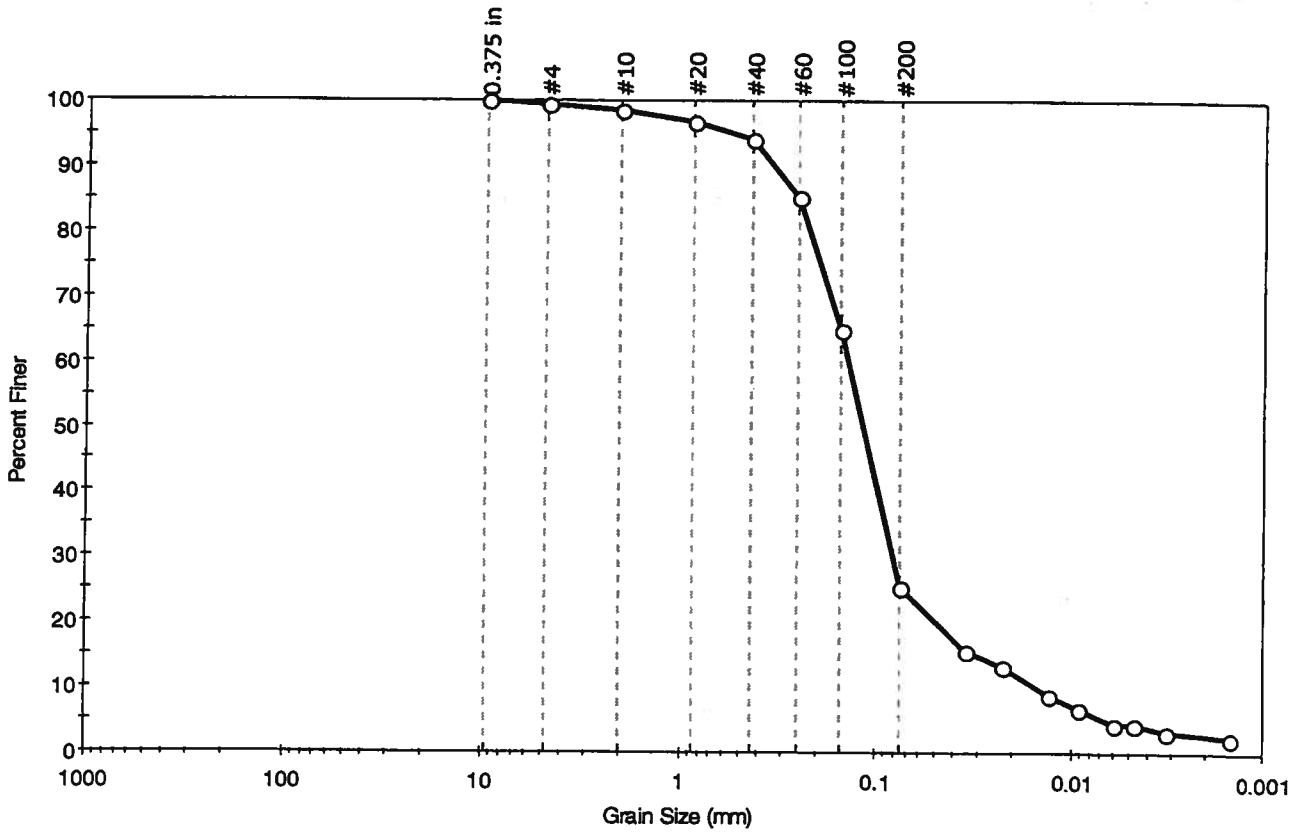
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	--- DUP OF GI-SD-509-0006			Project No:	GTX-9843
Boring ID:	R1002348-012	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD-DUP01-043010	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179423		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.5	74.3	25.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	97		
#40	0.42	94		
#60	0.25	85		
#100	0.15	65		
#200	0.075	25		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0352	16		
---	0.0230	13		
---	0.0133	9		
---	0.0093	7		
---	0.0059	4		
---	0.0047	4		
---	0.0032	3		
---	0.0015	2		

Coefficients

D_{85} = 0.2480 mm D_{30} = 0.0815 mm
D_{60} = 0.1375 mm D_{15} = 0.0311 mm
D_{50} = 0.1155 mm D_{10} = 0.0152 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

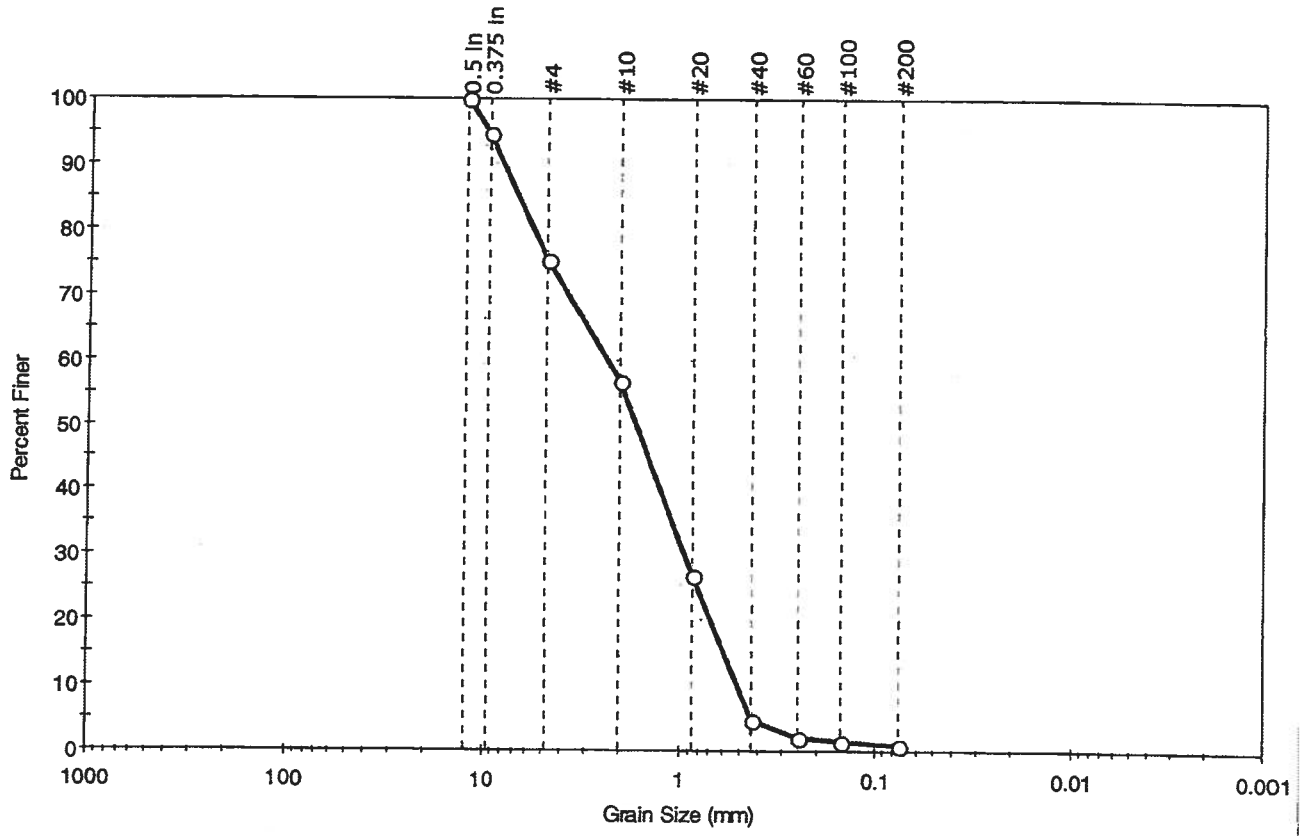
Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-008	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD510-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179419		
Test Comment:	Insufficient fines, Hydrometer not performed				
Sample Description:	Moist, light gray sand with gravel				
Sample Comment:	contains shells				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	24.8	74.3	0.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	95		
#4	4.75	75		
#10	2.00	57		
#20	0.85	27		
#40	0.42	5		
#60	0.25	2		
#100	0.15	1		
#200	0.075	1		

Coefficients

D_{85} = 6.7251 mm D_{30} = 0.9326 mm
D_{60} = 2.3363 mm D_{15} = 0.5881 mm
D_{50} = 1.6531 mm D_{10} = 0.5028 mm
C_u = 4.647 C_c = 0.740

Classification

ASTM: Poorly graded sand with gravel (SP)

AASHTO: Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

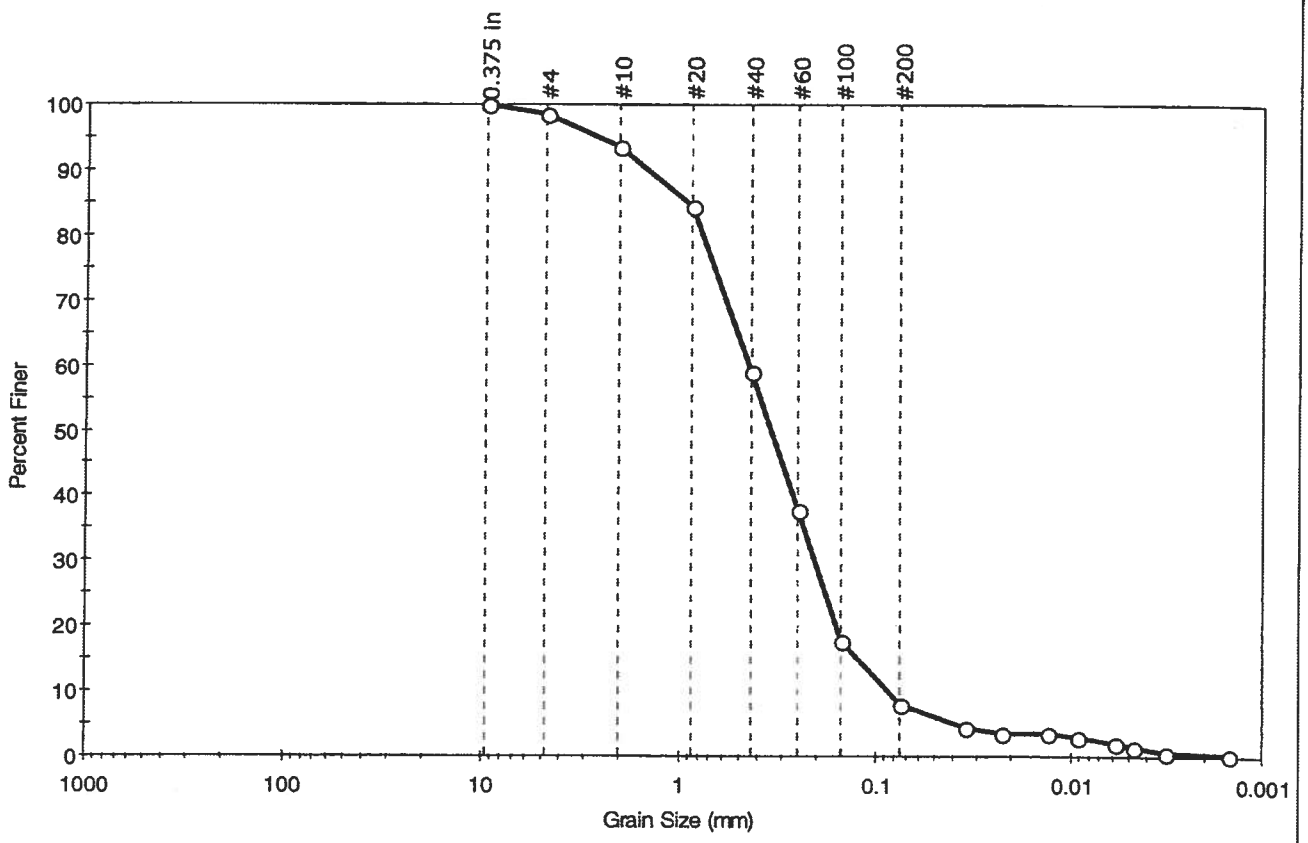
Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-002	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD511-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179413		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	1.5	90.5	8.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	94		
#20	0.85	84		
#40	0.42	59		
#60	0.25	38		
#100	0.15	18		
#200	0.075	8		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0352	4		
---	0.0227	4		
---	0.0133	4		
---	0.0091	3		
---	0.0059	2		
---	0.0047	1		
---	0.0032	1		
---	0.0015	0		

Coefficients

D_{85} = 0.8997 mm D_{30} = 0.2054 mm
D_{60} = 0.4374 mm D_{15} = 0.1230 mm
D_{50} = 0.3402 mm D_{10} = 0.0864 mm
C_u = 5.062 C_c = 1.116

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

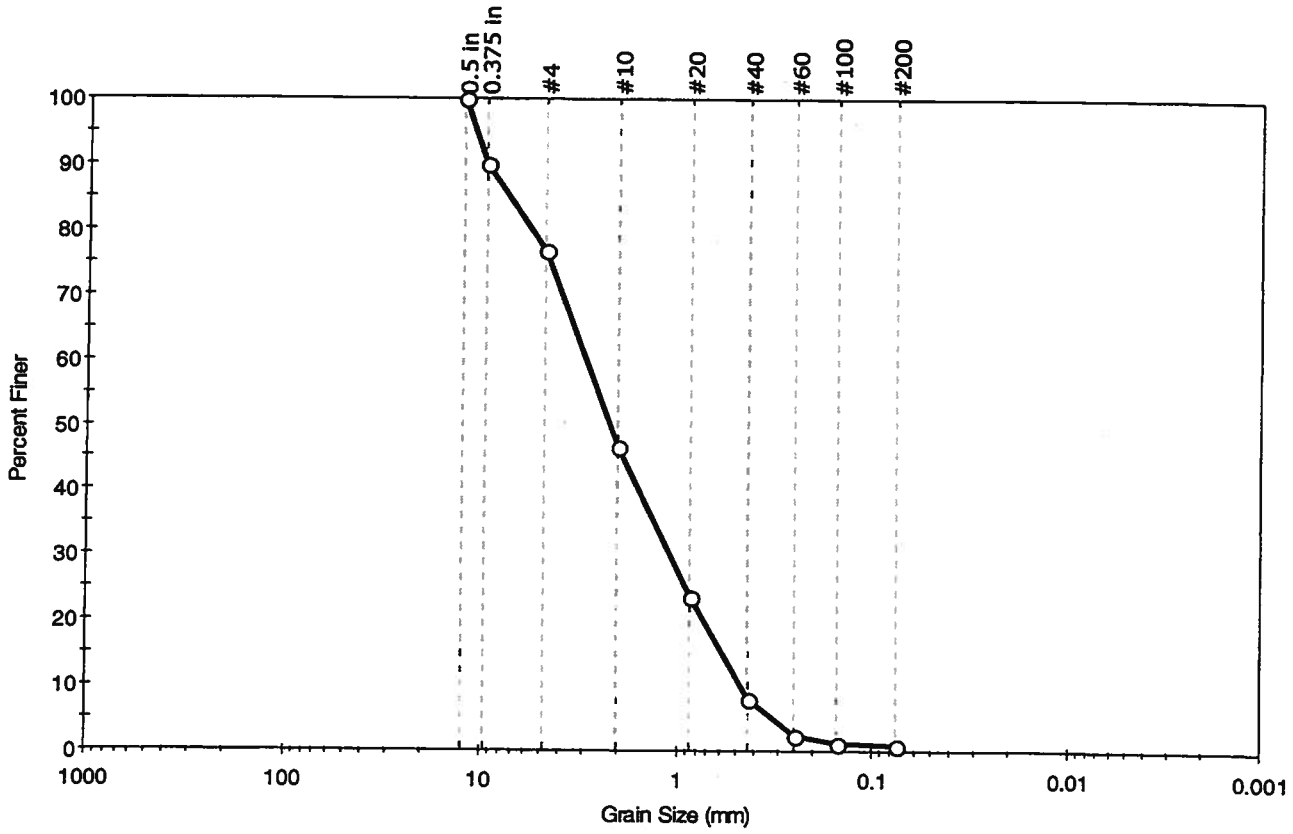
Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-008	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD512-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180700		
Test Comment:	---				
Sample Description:	Moist, dark brown sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	23.4	75.7	0.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	90		
#4	4.75	77		
#10	2.00	46		
#20	0.85	24		
#40	0.42	8		
#60	0.25	2		
#100	0.15	1		
#200	0.075	1		

Coefficients

D_{85} = 7.3661 mm D_{30} = 1.0785 mm
D_{60} = 2.9491 mm D_{15} = 0.5798 mm
D_{50} = 2.2122 mm D_{10} = 0.4647 mm
C_u = 6.346 C_c = 0.849

Classification

ASTM: Poorly graded sand with gravel (SP)

AASHTO: Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

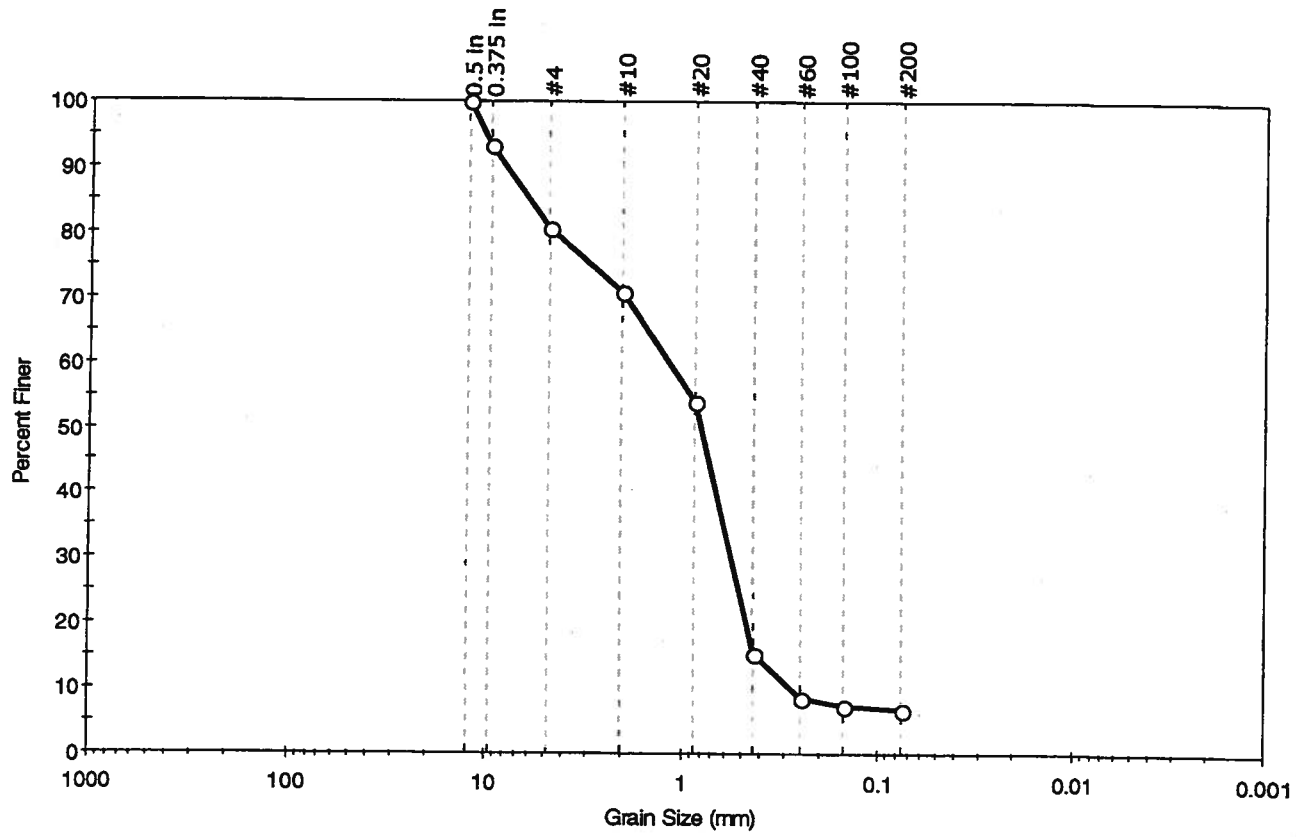
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-009	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD513-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180701		
Test Comment:	---				
Sample Description:	Moist, dark brown sand with silt and gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	19.6	73.6	6.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	93		
#4	4.75	80		
#10	2.00	71		
#20	0.85	54		
#40	0.42	15		
#60	0.25	8		
#100	0.15	7		
#200	0.075	7		

Coefficients

D_{85} = 6.0765 mm D_{30} = 0.5518 mm
D_{60} = 1.1522 mm D_{15} = 0.4109 mm
D_{50} = 0.7900 mm D_{10} = 0.2812 mm
C_u = 4.097 C_c = 0.940

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

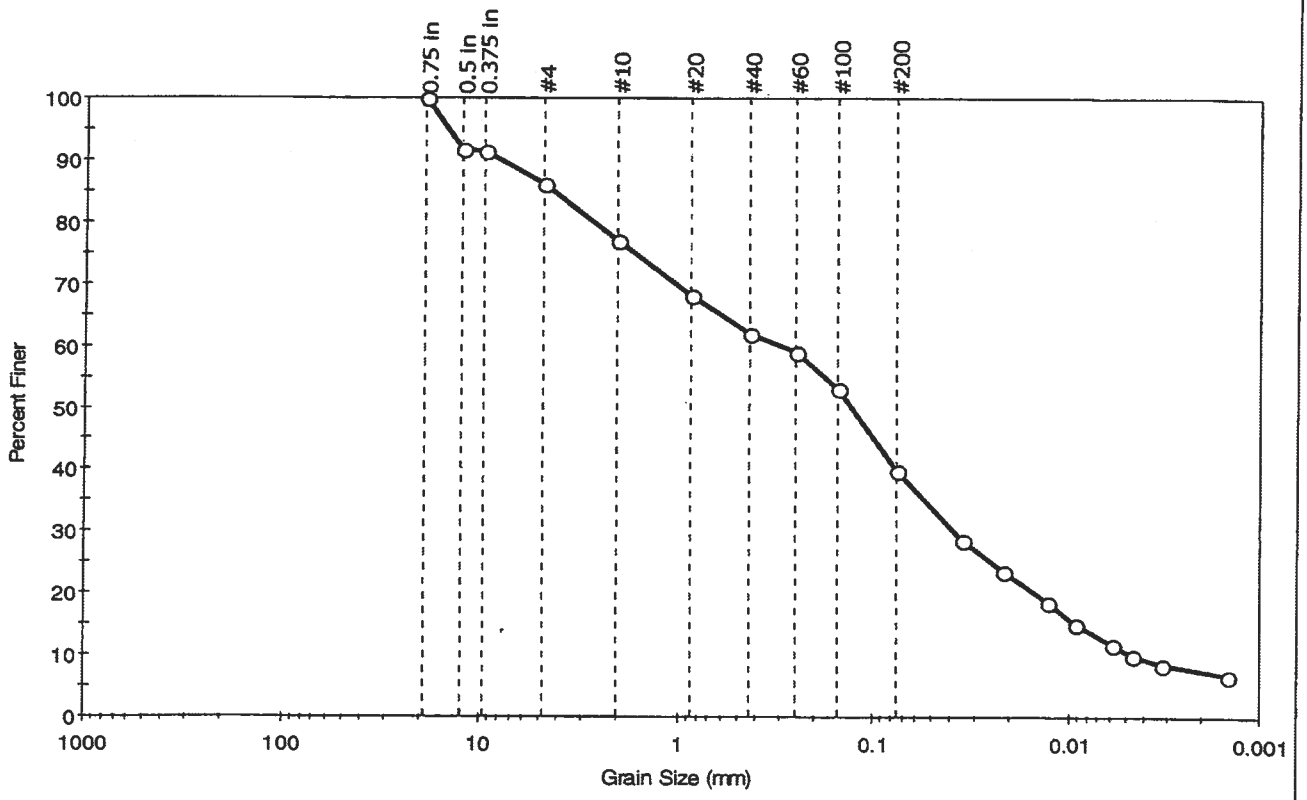
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-005	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD514-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179416		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	13.8	46.3	39.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	92		
0.375 in	9.50	92		
#4	4.75	86		
#10	2.00	77		
#20	0.85	68		
#40	0.42	62		
#60	0.25	59		
#100	0.15	53		
#200	0.075	40		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0346	29		
---	0.0216	24		
---	0.0127	19		
---	0.0092	15		
---	0.0059	12		
---	0.0046	10		
---	0.0032	8		
---	0.0015	7		

Coefficients

D_{85} = 4.2384 mm	D_{30} = 0.0380 mm
D_{60} = 0.2958 mm	D_{15} = 0.0090 mm
D_{50} = 0.1280 mm	D_{10} = 0.0045 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

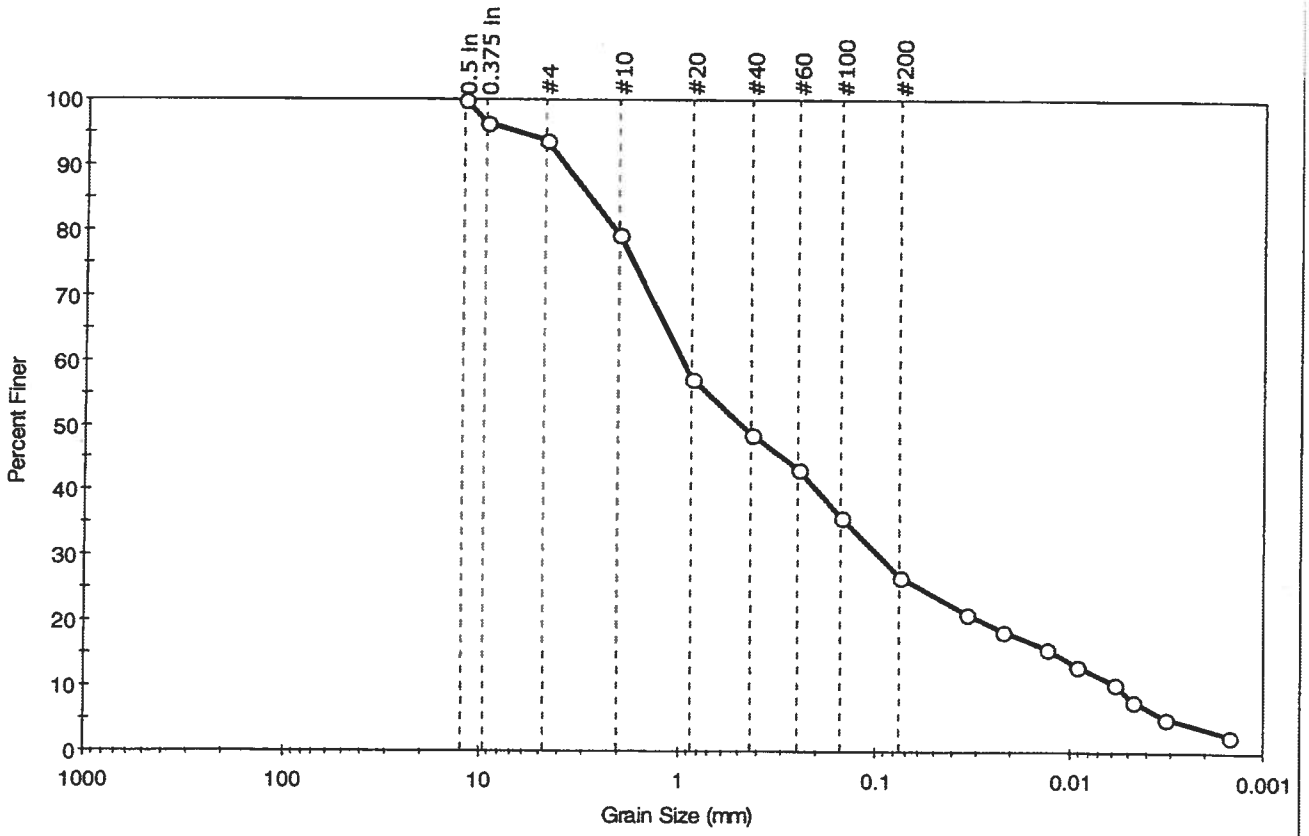
Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-006	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD515-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179417		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	6.1	67.1	26.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	96		
#4	4.75	94		
#10	2.00	79		
#20	0.85	57		
#40	0.42	49		
#60	0.25	43		
#100	0.15	36		
#200	0.075	27		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0346	21		
---	0.0222	19		
---	0.0132	16		
---	0.0093	13		
---	0.0059	11		
---	0.0047	8		
---	0.0032	5		
---	0.0015	3		

Coefficients

D_{85} = 2.8071 mm D_{30} = 0.0953 mm
D_{60} = 0.9428 mm D_{15} = 0.0116 mm
D_{50} = 0.4772 mm D_{10} = 0.0056 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

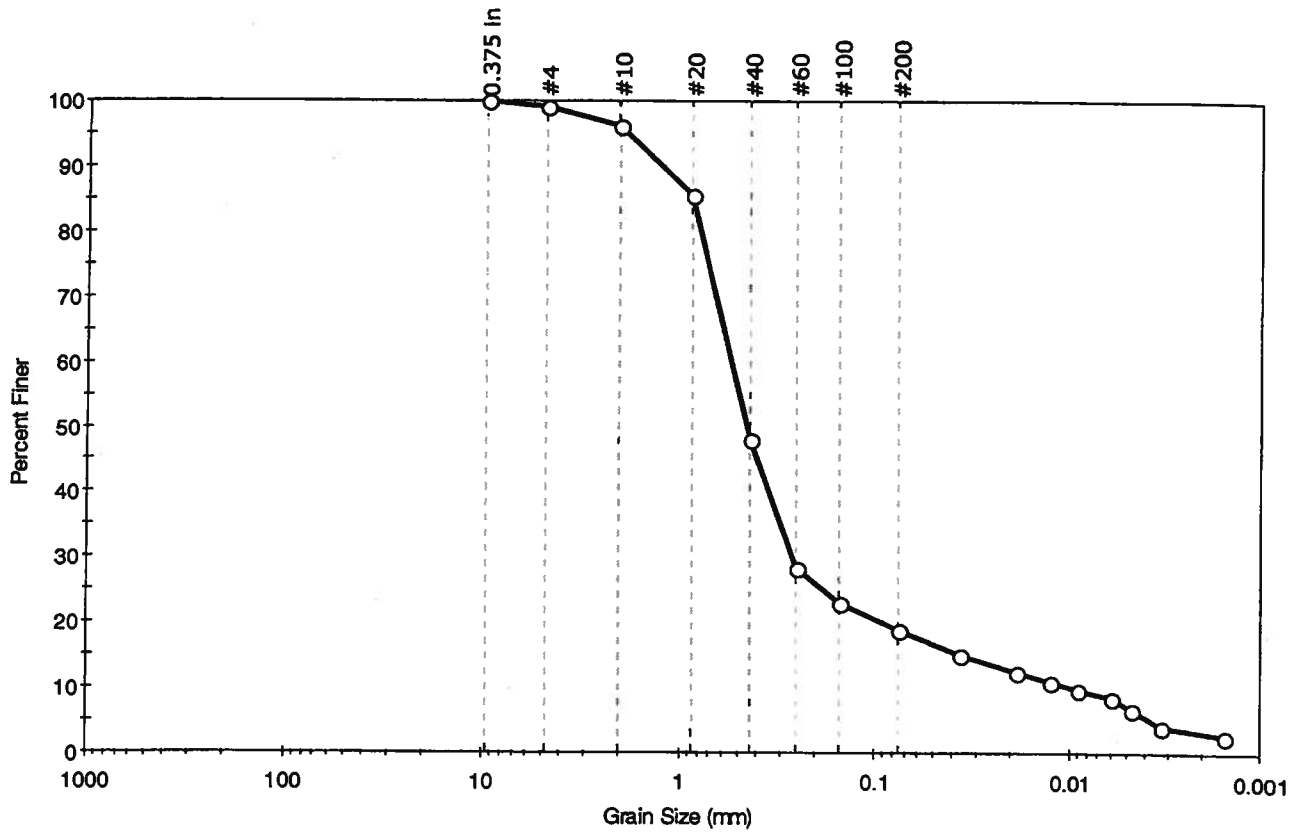
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-010	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD517-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180702		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.7	80.3	19.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	96		
#20	0.85	86		
#40	0.42	48		
#60	0.25	28		
#100	0.15	23		
#200	0.075	19		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0366	15		
---	0.0186	12		
---	0.0124	11		
---	0.0090	10		
---	0.0059	9		
---	0.0047	7		
---	0.0033	4		
---	0.0015	3		

Coefficients

D_{85} = 0.8417 mm D_{30} = 0.2623 mm
D_{60} = 0.5297 mm D_{15} = 0.0361 mm
D_{50} = 0.4401 mm D_{10} = 0.0093 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

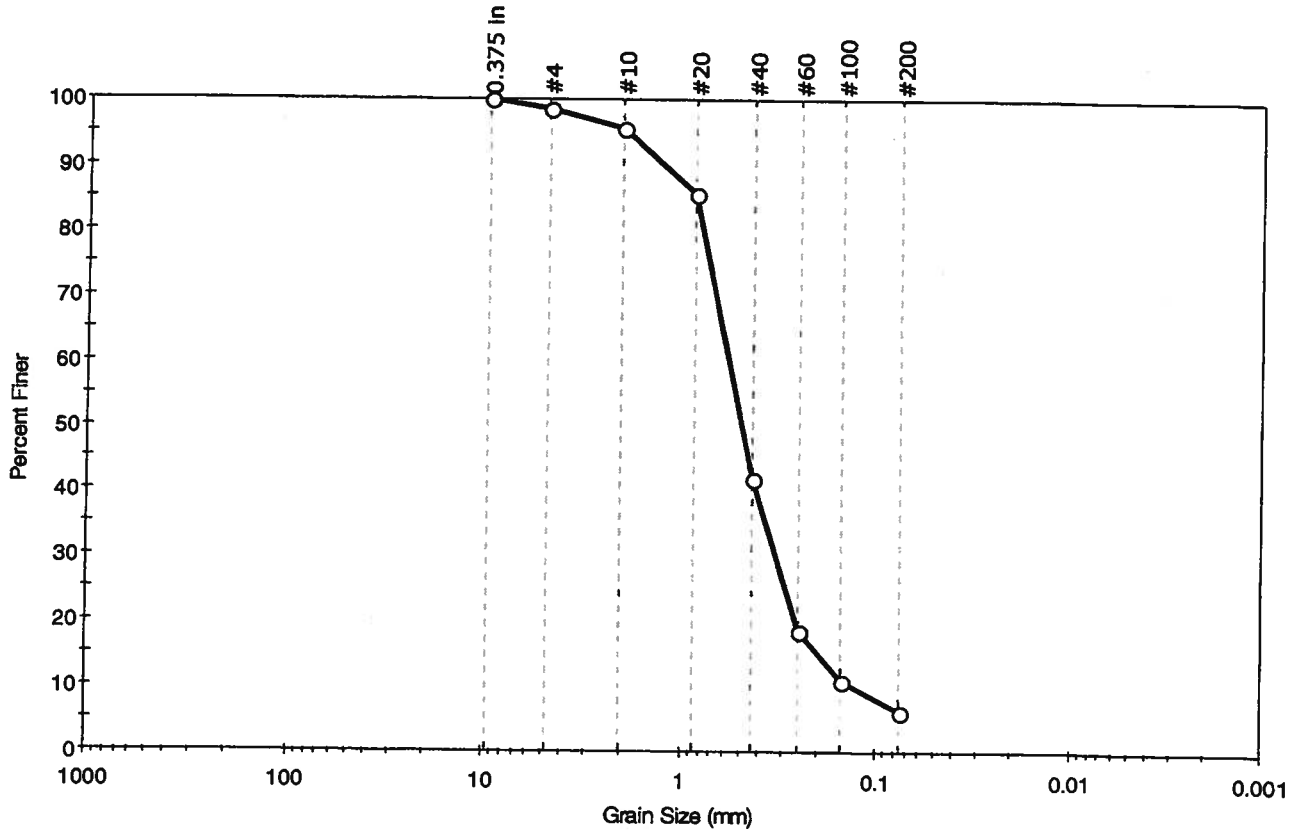
Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	--- DUP OF GI-SD-517-0006			Project No:	GTX-9886
Boring ID:	R1002638-014	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD-DUP03-051310	Test Date:	06/01/10	Checked By:	jdt
Depth :	---	Test Id:	181579		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	1.6	92.2	6.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Compiles
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	95		
#20	0.85	86		
#40	0.42	42		
#60	0.25	19		
#100	0.15	11		
#200	0.075	6		

Coefficients

D_{85} = 0.8424 mm	D_{30} = 0.3239 mm
D_{60} = 0.5667 mm	D_{15} = 0.1959 mm
D_{50} = 0.4836 mm	D_{10} = 0.1305 mm
C_u = 4.343	C_c = 1.419

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

GeoTesting express
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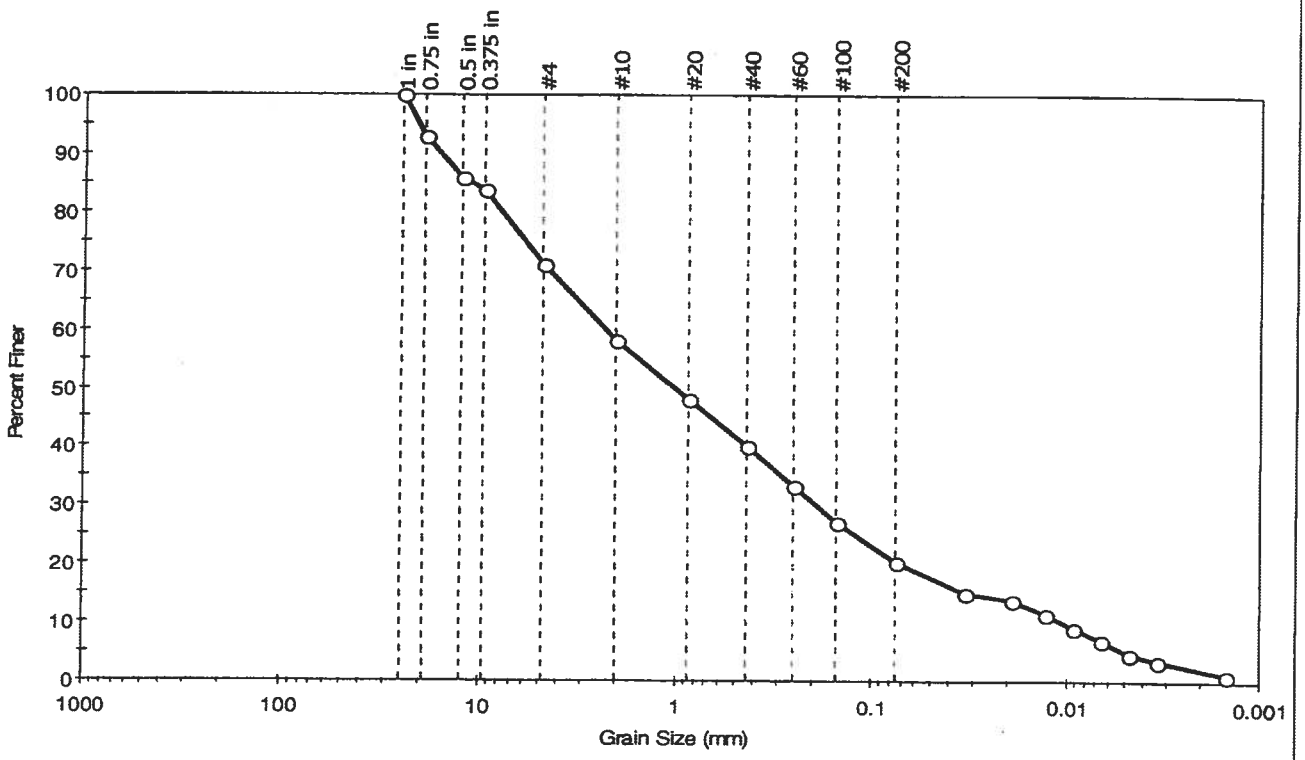
Client:	Columbia Analytical Services		
Project:	R1002348		
Location:	---	Project No:	GTX-9843
Boring ID:	R1002348-014	Sample Type: bag	Tested By: jbr
Sample ID:	GI-SD518-0006	Test Date: 05/10/10	Checked By: jdt
Depth :	---	Test Id: 179425	
Test Comment:	---		
Sample Description:	Moist, light gray silty sand with gravel		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	29.0	50.6	20.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	93		
0.5 in	12.50	86		
0.375 in	9.50	84		
#4	4.75	71		
#10	2.00	58		
#20	0.85	48		
#40	0.42	40		
#60	0.25	33		
#100	0.15	27		
#200	0.075	20		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0335	15		
---	0.0193	14		
---	0.0128	12		
---	0.0092	9		
---	0.0066	7		
---	0.0047	5		
---	0.0033	3		
---	0.0015	1		

Coefficients

D_{85} = 11.2112 mm	D_{30} = 0.1895 mm
D_{60} = 2.2535 mm	D_{15} = 0.0331 mm
D_{50} = 1.0023 mm	D_{10} = 0.0102 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

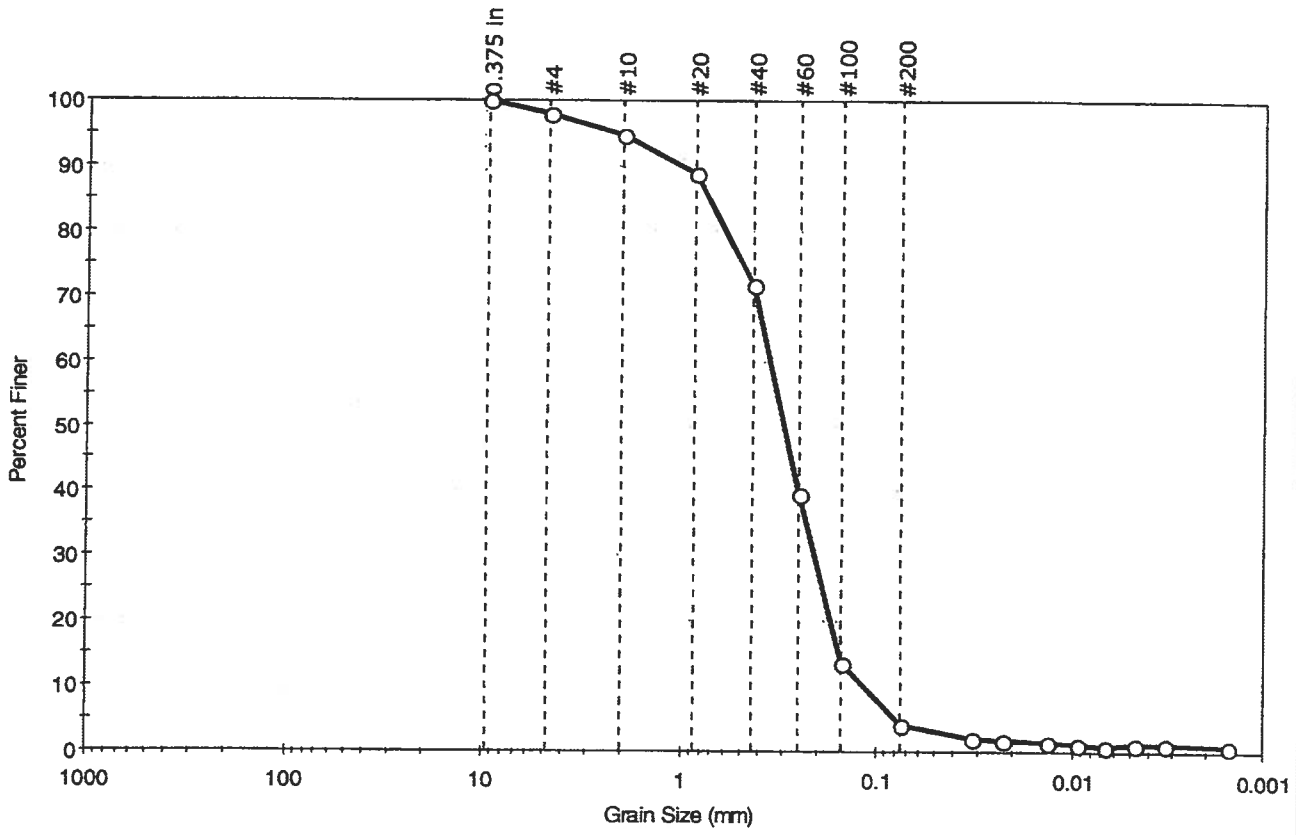
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002384				
Location:	---			Project No:	GTX-9850
Boring ID:	R1002384-004	Sample Type:	jar	Tested By:	jbr
Sample ID:	GI-SD519-0006	Test Date:	05/12/10	Checked By:	jdt
Depth :	---	Test Id:	179570		
Test Comment:	---				
Sample Description:	Moist, dark brown sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	2.2	93.6	4.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	95		
#20	0.85	89		
#40	0.42	72		
#60	0.25	39		
#100	0.15	14		
#200	0.075	4		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0325	2		
---	0.0228	2		
---	0.0134	1		
---	0.0094	1		
---	0.0067	1		
---	0.0047	1		
---	0.0033	1		
---	0.0015	1		

Coefficients

D_{85} = 0.7261 mm	D_{30} = 0.2073 mm
D_{60} = 0.3502 mm	D_{15} = 0.1540 mm
D_{50} = 0.2972 mm	D_{10} = 0.1147 mm
C_u = 3.053	C_c = 1.070

Classification

ASTM Poorly graded sand (SP)

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

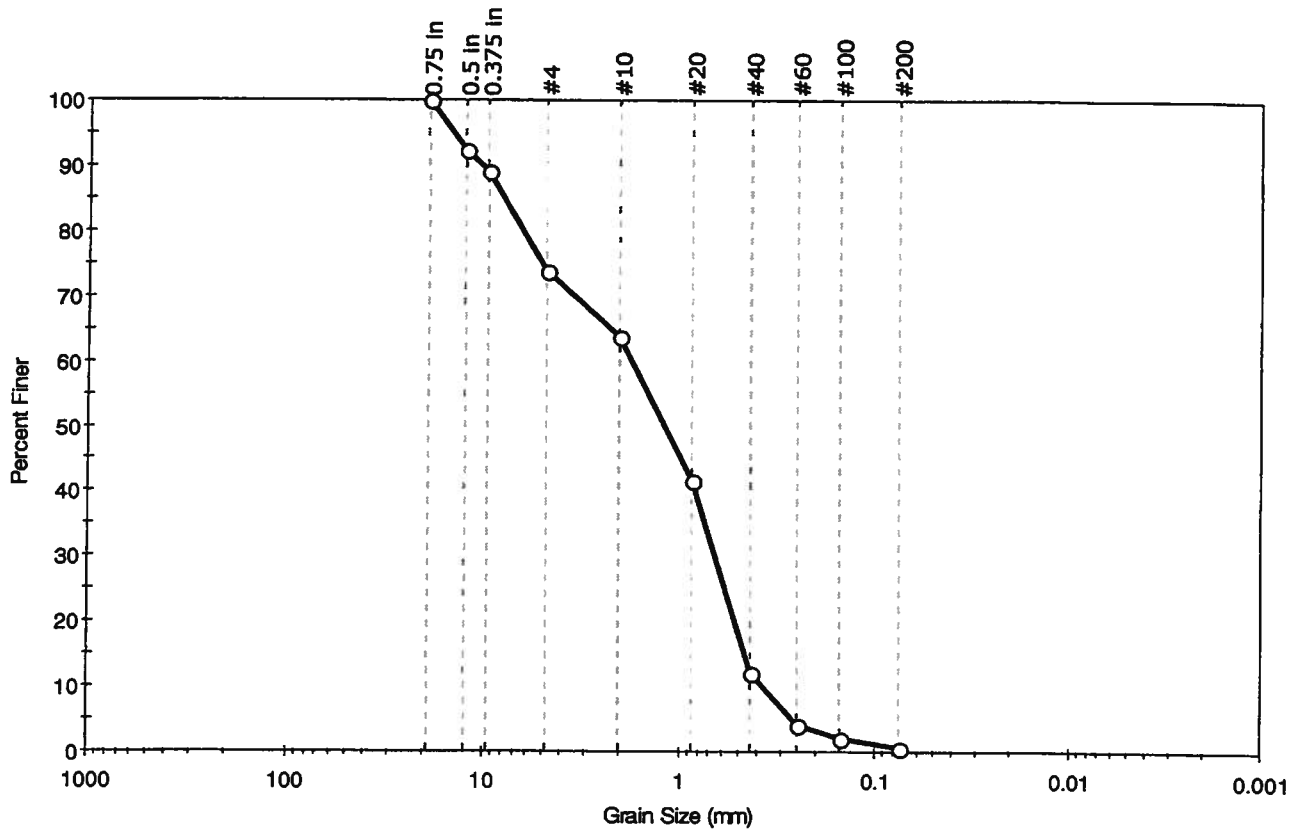
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-011	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD520-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180703		
Test Comment:	---				
Sample Description:	Moist, black sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	26.4	72.9	0.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	92		
0.375 in	9.50	89		
#4	4.75	74		
#10	2.00	64		
#20	0.85	42		
#40	0.42	12		
#60	0.25	4		
#100	0.15	2		
#200	0.075	1		

Coefficients

D_{85} = 7.9437 mm	D_{30} = 0.6473 mm
D_{60} = 1.7255 mm	D_{15} = 0.4551 mm
D_{50} = 1.1743 mm	D_{10} = 0.3702 mm
C_u = 4.661	C_c = 0.656

Classification

ASTM — Poorly graded sand with gravel (SP)

AASHTO — Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

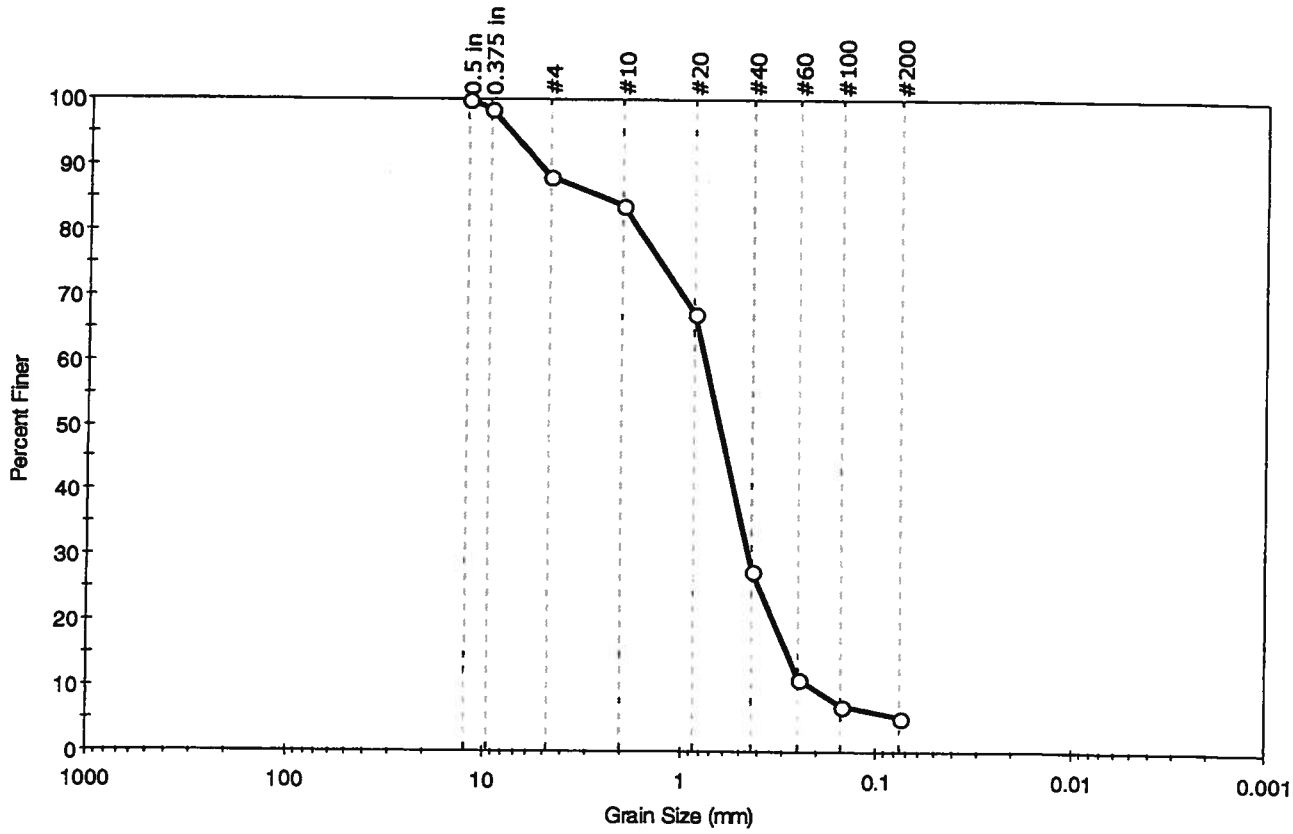
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-007	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD521-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180699		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	11.7	83.1	5.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	99		
#4	4.75	88		
#10	2.00	84		
#20	0.85	67		
#40	0.42	28		
#60	0.25	11		
#100	0.15	7		
#200	0.075	5		

Coefficients

D_{85} = 2.4875 mm D_{30} = 0.4423 mm
D_{60} = 0.7497 mm D_{15} = 0.2819 mm
D_{50} = 0.6288 mm D_{10} = 0.2151 mm
C_u = 3.485 C_c = 1.213

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

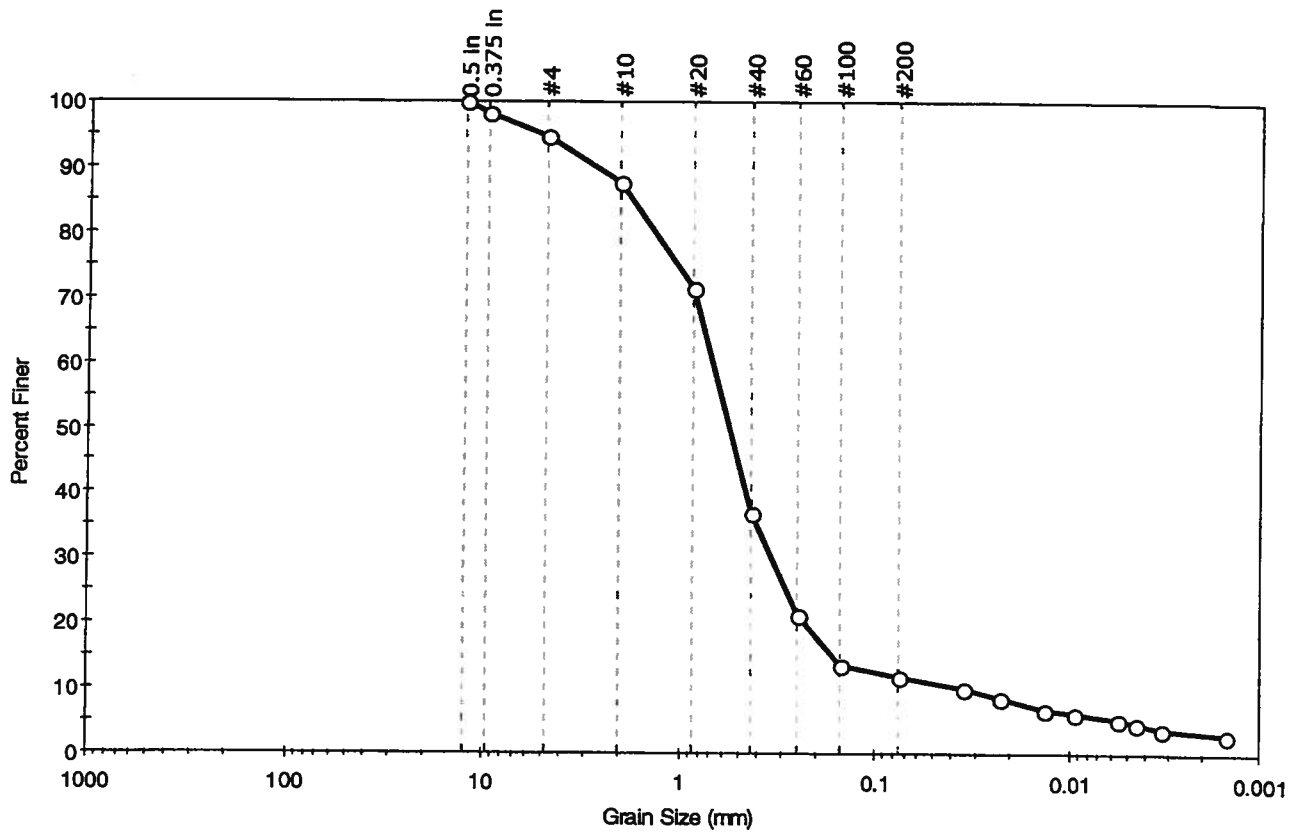
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-013	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD522-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180705		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	5.2	82.9	11.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	98		
#4	4.75	95		
#10	2.00	88		
#20	0.85	71		
#40	0.42	37		
#60	0.25	21		
#100	0.15	14		
#200	0.075	12		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0354	10		
---	0.0228	8		
---	0.0133	7		
---	0.0094	6		
---	0.0056	5		
---	0.0045	5		
---	0.0033	4		
---	0.0015	3		

Coefficients

D_{85} = 1.7390 mm	D_{30} = 0.3364 mm
D_{60} = 0.6755 mm	D_{15} = 0.1641 mm
D_{50} = 0.5523 mm	D_{10} = 0.0357 mm
C_u = 18.922	C_c = 4.693

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

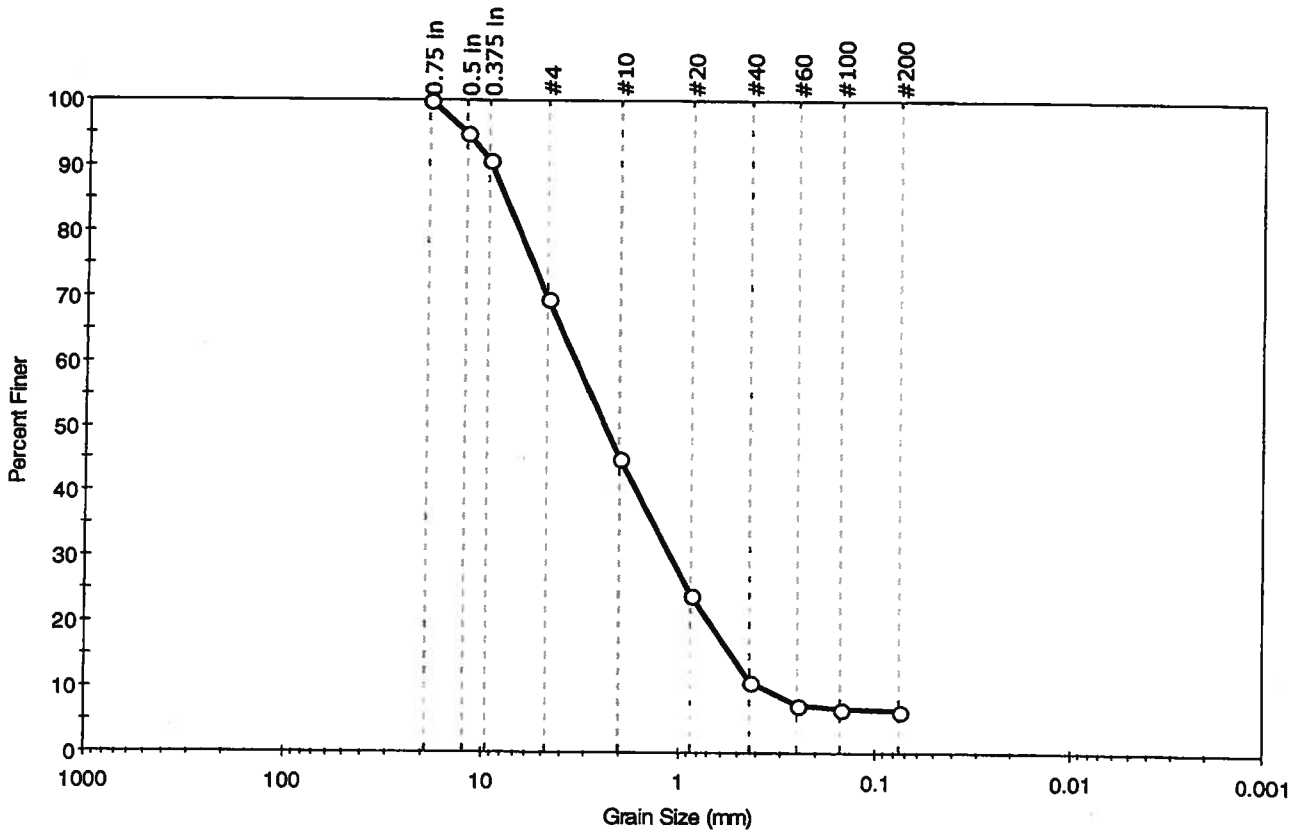
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-012	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD523-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180704		
Test Comment:	---				
Sample Description:	Moist, black sand with silt and gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	30.3	63.2	6.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	95		
0.375 in	9.50	91		
#4	4.75	70		
#10	2.00	45		
#20	0.85	24		
#40	0.42	11		
#60	0.25	7		
#100	0.15	7		
#200	0.075	7		

Coefficients

D_{85} = 7.8326 mm D_{30} = 1.0803 mm
D_{60} = 3.3734 mm D_{15} = 0.5288 mm
D_{50} = 2.3732 mm D_{10} = 0.3758 mm
C_u = 8.977 C_c = 0.921

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

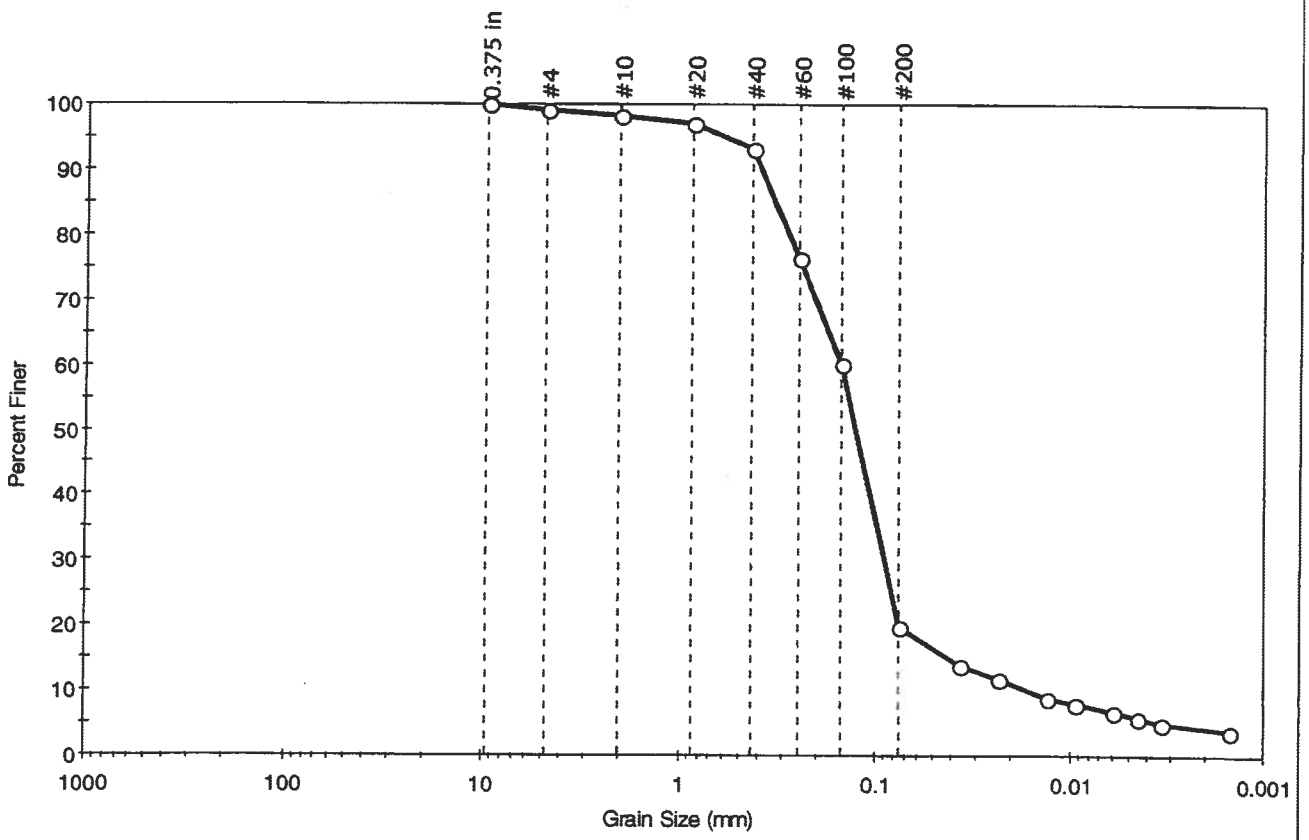
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-017	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD524-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179428		
Test Comment:	---				
Sample Description:	Moist, gray silty sand				
Sample Comment:	contains shells				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.8	79.3	19.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	97		
#40	0.42	93		
#60	0.25	76		
#100	0.15	60		
#200	0.075	20		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0365	14		
---	0.0231	12		
---	0.0132	9		
---	0.0094	8		
---	0.0060	7		
---	0.0045	6		
---	0.0034	5		
---	0.0015	4		

Coefficients

D_{85} = 0.3273 mm D_{30} = 0.0892 mm
D_{60} = 0.1495 mm D_{15} = 0.0418 mm
D_{50} = 0.1259 mm D_{10} = 0.0162 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

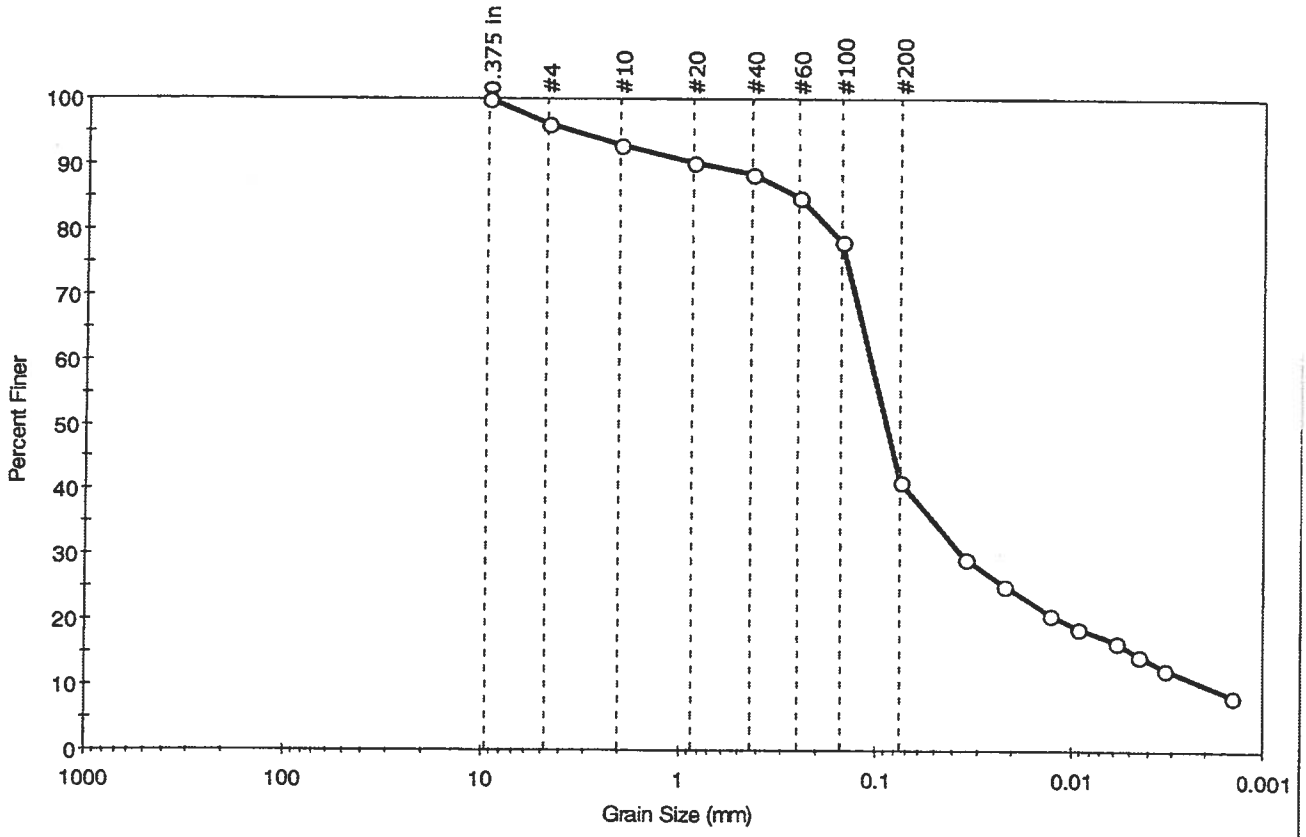
Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-016	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD525-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179427		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand				
Sample Comment:	contains shells				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	3.8	55.0	41.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	96		
#10	2.00	93		
#20	0.85	90		
#40	0.42	88		
#60	0.25	85		
#100	0.15	78		
#200	0.075	41		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0353	29		
---	0.0224	25		
---	0.0128	21		
---	0.0092	19		
---	0.0059	17		
---	0.0045	15		
---	0.0033	13		
---	0.0015	8		

Coefficients

D_{85} = 0.2513 mm D_{30} = 0.0365 mm
D_{60} = 0.1067 mm D_{15} = 0.0046 mm
D_{50} = 0.0885 mm D_{10} = 0.0020 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

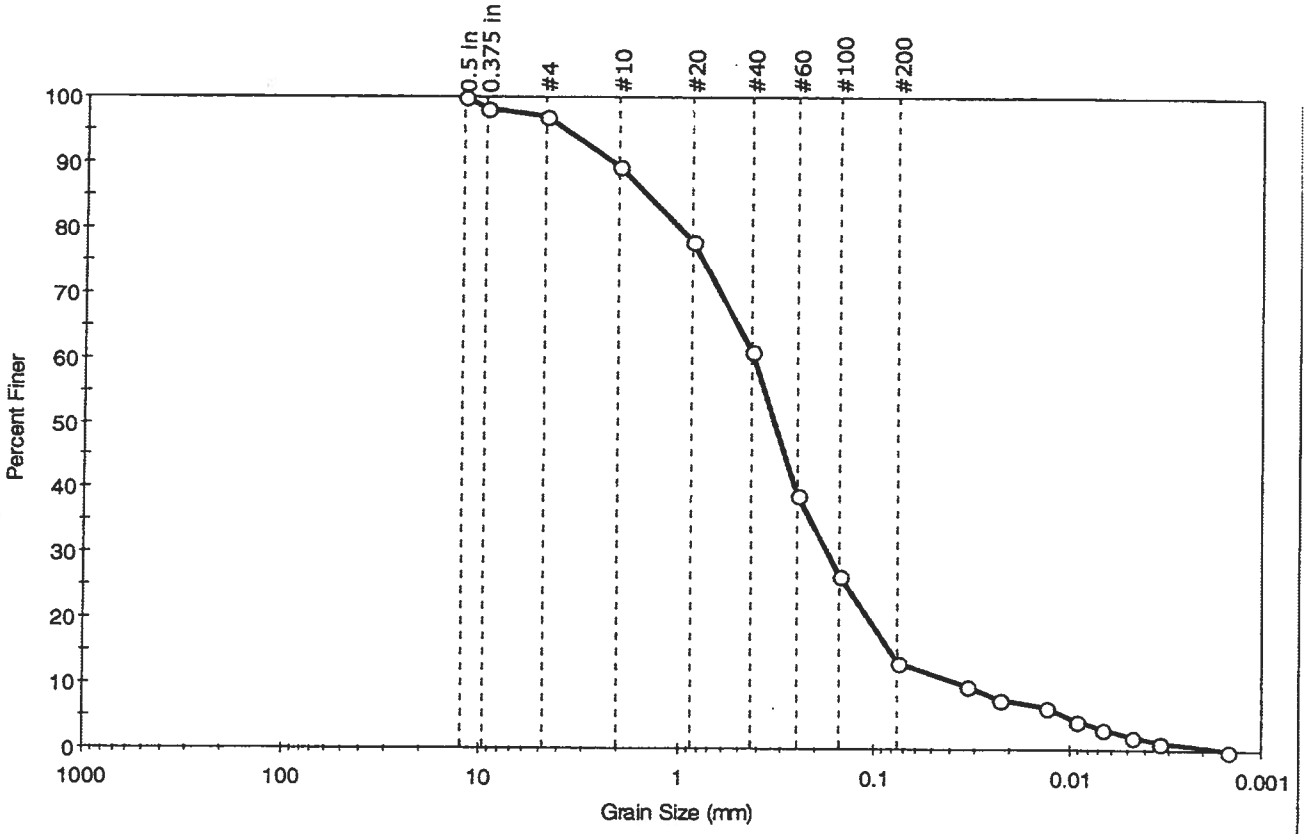
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-015	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD526-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179426		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	2.9	83.8	13.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	98		
#4	4.75	97		
#10	2.00	89		
#20	0.85	78		
#40	0.42	61		
#60	0.25	39		
#100	0.15	26		
#200	0.075	13		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0336	10		
---	0.0230	8		
---	0.0132	6		
---	0.0092	4		
---	0.0067	3		
---	0.0048	2		
---	0.0034	1		
---	0.0015	0		

Coefficients

D_{85} = 1.4537 mm D_{30} = 0.1733 mm
D_{60} = 0.4135 mm D_{15} = 0.0822 mm
D_{50} = 0.3252 mm D_{10} = 0.0358 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

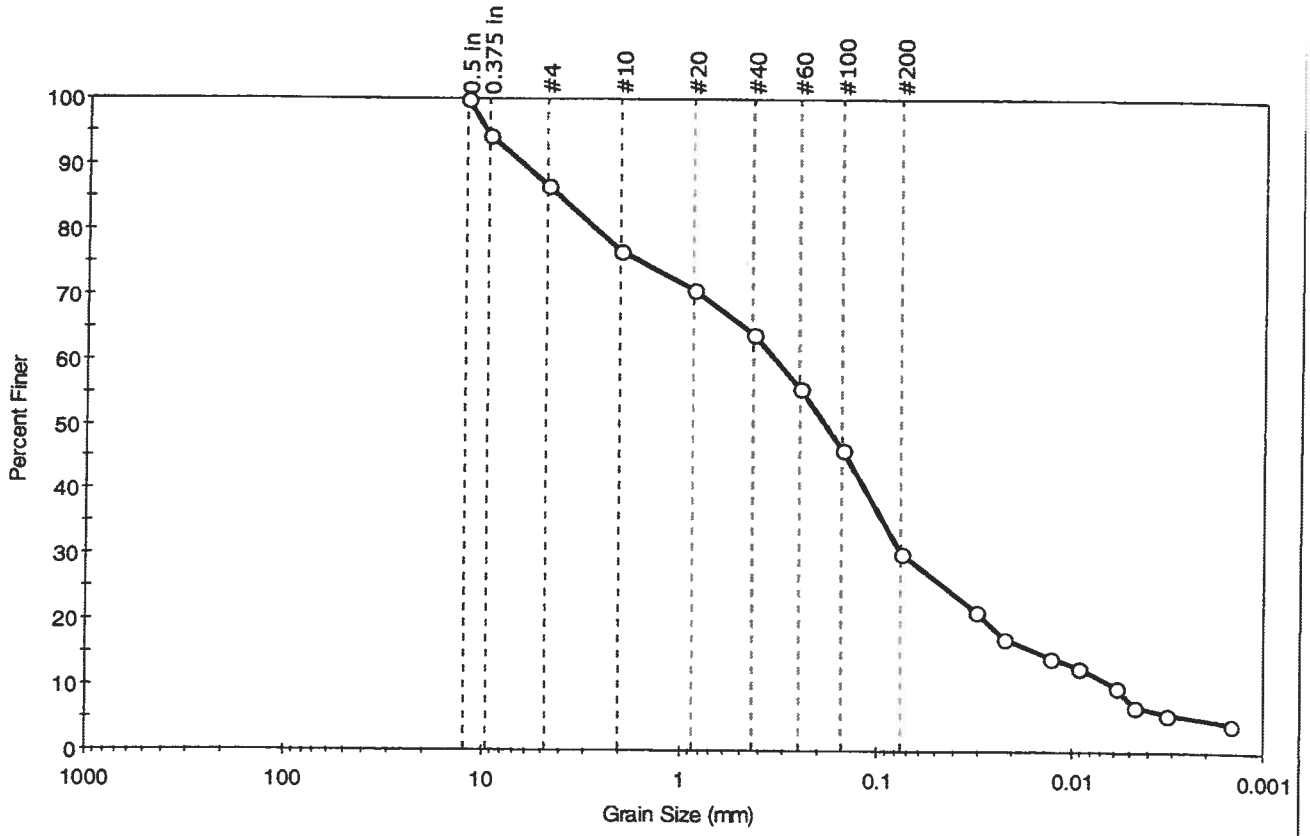
Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : SOFT

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-003	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD527-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179414		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	13.2	56.5	30.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	94		
#4	4.75	87		
#10	2.00	77		
#20	0.85	71		
#40	0.42	64		
#60	0.25	56		
#100	0.15	46		
#200	0.075	30		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0311	22		
---	0.0224	17		
---	0.0129	14		
---	0.0091	13		
---	0.0059	10		
---	0.0047	7		
---	0.0032	6		
---	0.0015	4		

Coefficients

D_{85} =4.0582 mm	D_{30} =0.0725 mm
D_{60} =0.3274 mm	D_{15} =0.0145 mm
D_{50} =0.1837 mm	D_{10} =0.0059 mm
C_u =N/A	C_c =N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

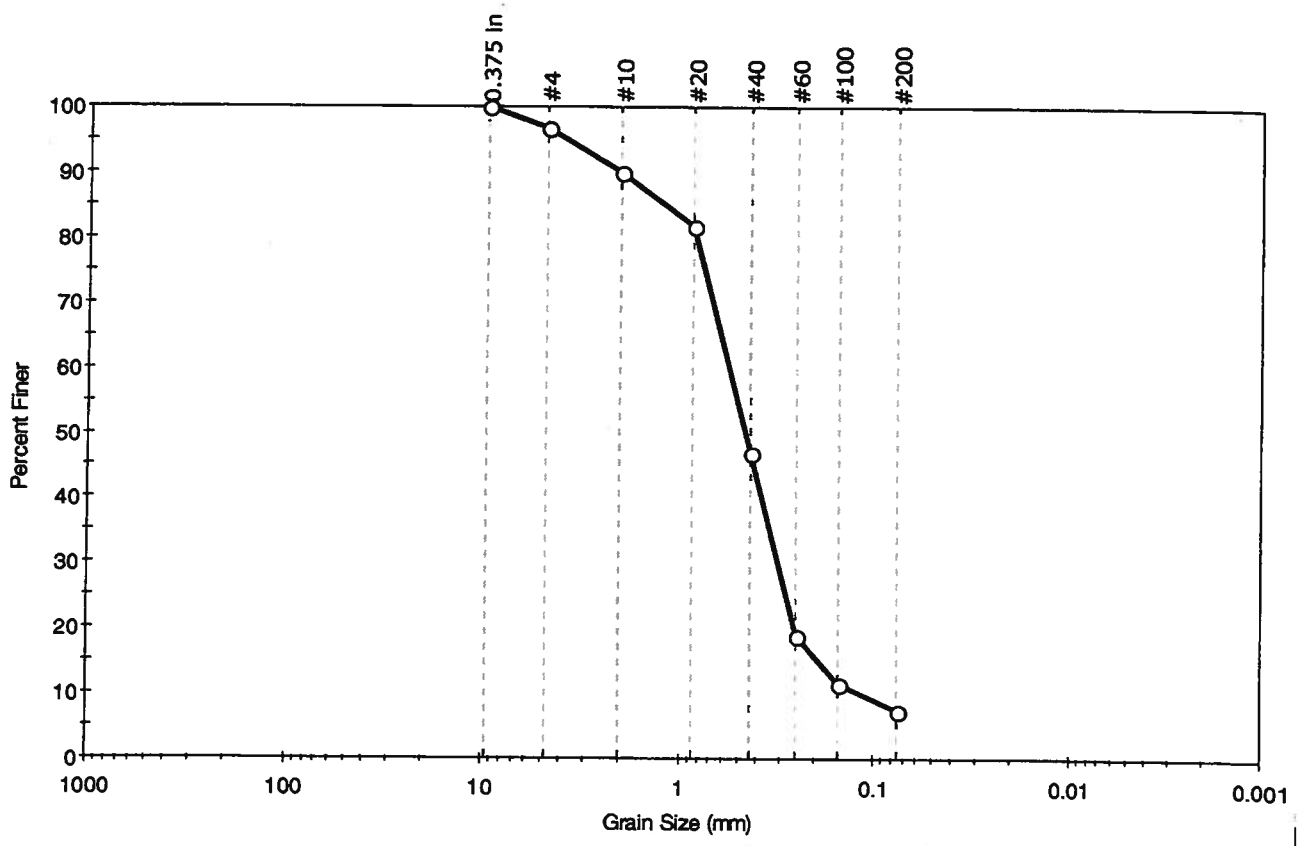
Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-005	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD528-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180697		
Test Comment:	---				
Sample Description:	Moist, dark grayish brown sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	3.4	89.4	7.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	97		
#10	2.00	90		
#20	0.85	82		
#40	0.42	47		
#60	0.25	19		
#100	0.15	11		
#200	0.075	7		

Coefficients

D_{85} = 1.1961 mm	D_{30} = 0.3089 mm
D_{60} = 0.5518 mm	D_{15} = 0.1918 mm
D_{50} = 0.4521 mm	D_{10} = 0.1180 mm
C_u = 4.676	C_c = 1.465

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

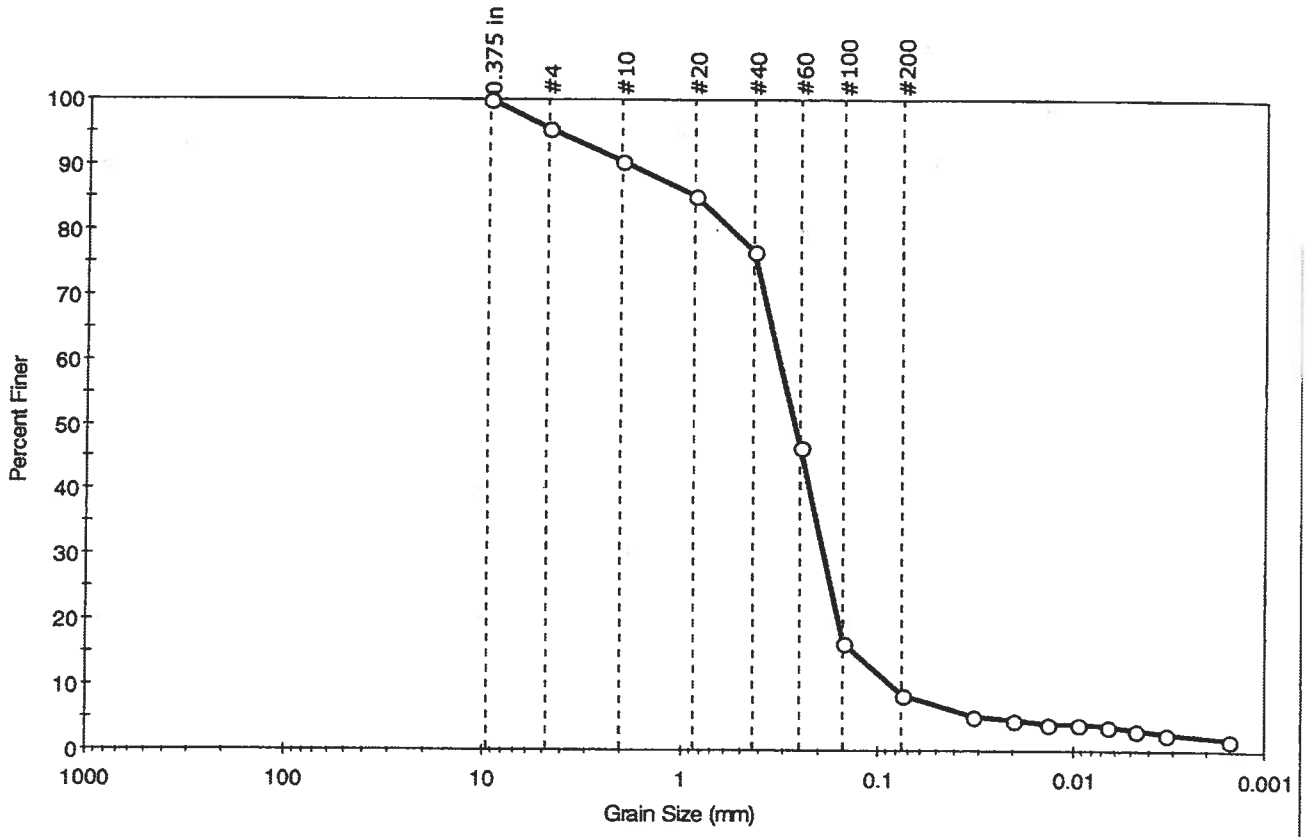
Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002384				
Location:	---			Project No:	GTX-9850
Boring ID:	R1002384-001	Sample Type:	jar	Tested By:	jbr
Sample ID:	GI-SD529-0006	Test Date:	05/12/10	Checked By:	jdt
Depth :	---	Test Id:	179567		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	contains shells				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	4.6	86.8	8.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	95		
#10	2.00	91		
#20	0.85	85		
#40	0.42	77		
#60	0.25	47		
#100	0.15	17		
#200	0.075	9		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0324	5		
---	0.0202	5		
---	0.0134	4		
---	0.0094	4		
---	0.0067	4		
---	0.0047	3		
---	0.0033	3		
---	0.0015	2		

Coefficients

D_{85} = 0.8258 mm	D_{30} = 0.1883 mm
D_{60} = 0.3164 mm	D_{15} = 0.1308 mm
D_{50} = 0.2650 mm	D_{10} = 0.0844 mm
C_u = 3.749	C_c = 1.328

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

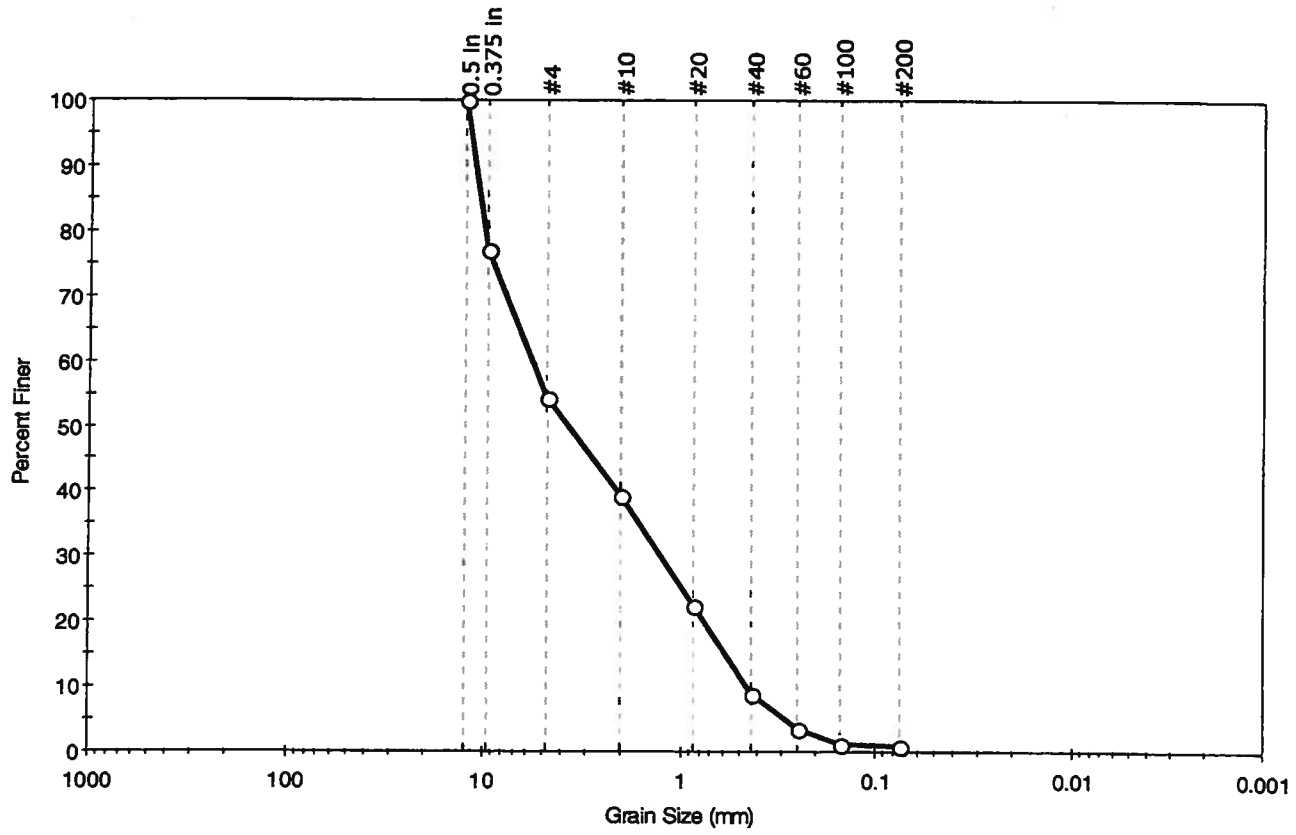
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-006	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD530-0006	Test Date:	06/01/10	Checked By:	jdt
Depth :	---	Test Id:	181580		
Test Comment:	---				
Sample Description:	Moist, black sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	45.7	53.5	0.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	77		
#4	4.75	54		
#10	2.00	39		
#20	0.85	22		
#40	0.42	9		
#60	0.25	4		
#100	0.15	1		
#200	0.075	1		

Coefficients

D_{85} = 10.4561 mm	D_{30} = 1.2568 mm
D_{60} = 5.6560 mm	D_{15} = 0.5833 mm
D_{50} = 3.7165 mm	D_{10} = 0.4507 mm
C_u = 12.549	C_c = 0.620

Classification

ASTM: Poorly graded sand with gravel (SP)

AASHTO: Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

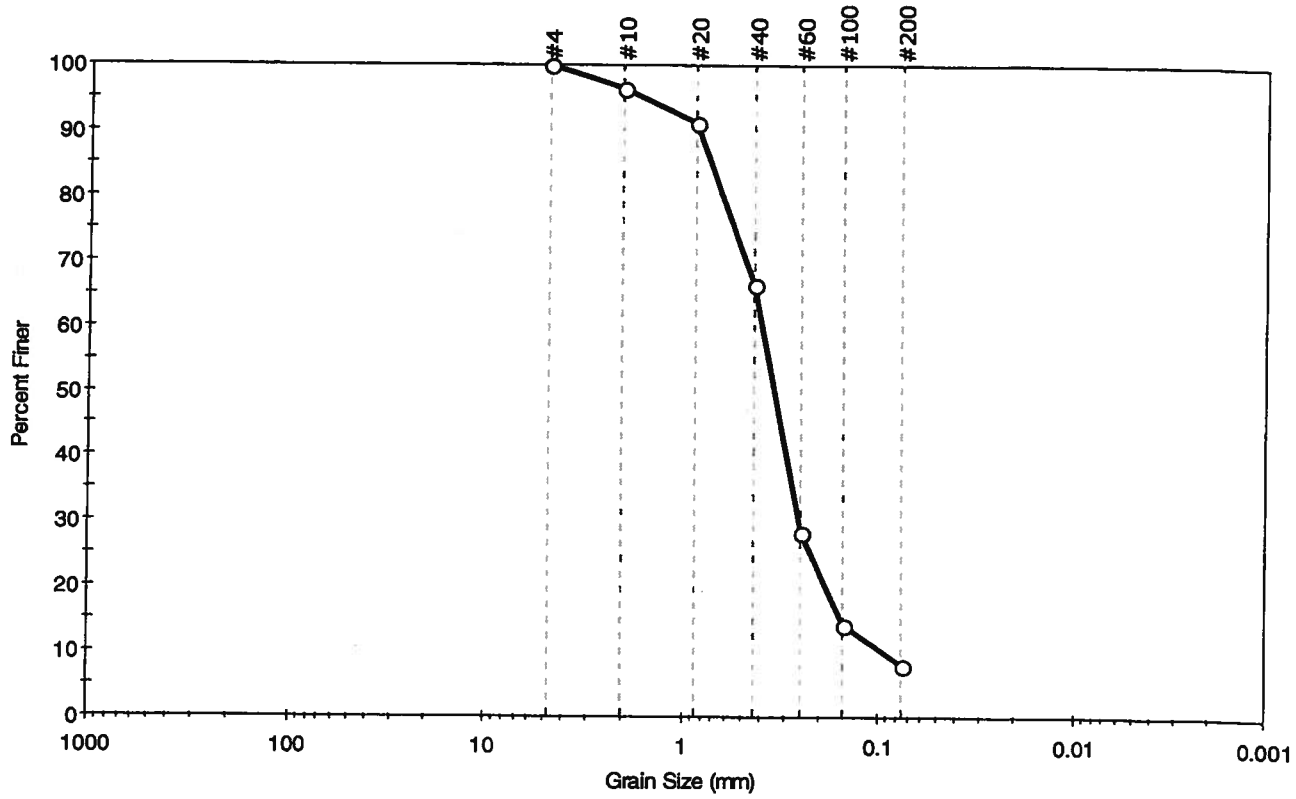
Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-004	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD531-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180696		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	—	91.9	8.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	97		
#20	0.85	91		
#40	0.42	66		
#60	0.25	28		
#100	0.15	14		
#200	0.075	8		

Coefficients

D_{85} = 0.7137 mm	D_{30} = 0.2560 mm
D_{60} = 0.3887 mm	D_{15} = 0.1546 mm
D_{50} = 0.3382 mm	D_{10} = 0.0934 mm
C_u = 4.162	C_c = 1.805

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

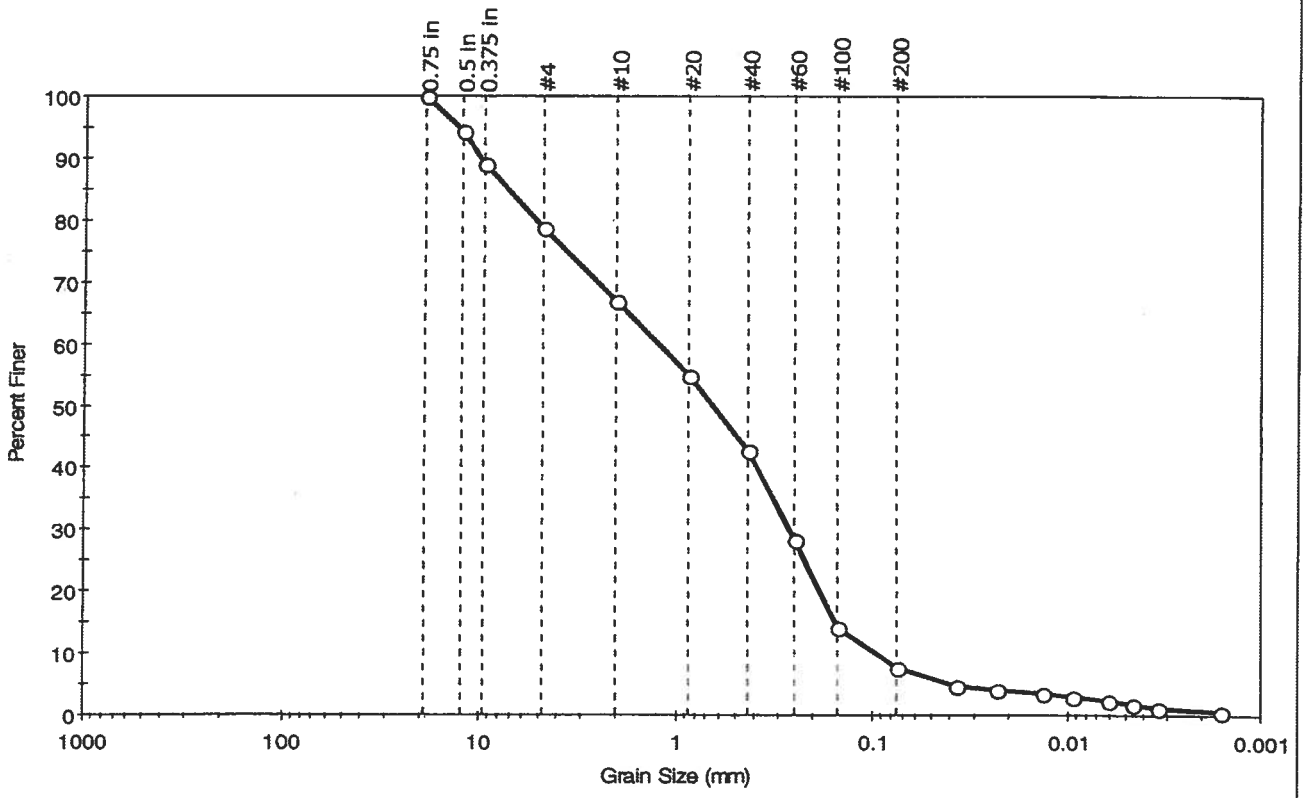
Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-013	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD532-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179424		
Test Comment:	---				
Sample Description:	Moist, light brown sand with silt and gravel				
Sample Comment:	shells in sample				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	21.2	71.2	7.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	94		
0.375 in	9.50	89		
#4	4.75	79		
#10	2.00	67		
#20	0.85	55		
#40	0.42	43		
#60	0.25	28		
#100	0.15	14		
#200	0.075	8		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0374	5		
---	0.0234	4		
---	0.0135	4		
---	0.0095	3		
---	0.0061	2		
---	0.0046	2		
---	0.0034	1		
---	0.0016	1		

Coefficients

D_{85} = 7.2280 mm	D_{30} = 0.2669 mm
D_{60} = 1.2192 mm	D_{15} = 0.1551 mm
D_{50} = 0.6407 mm	D_{10} = 0.0971 mm
C_u = 12.556	C_c = 0.602

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

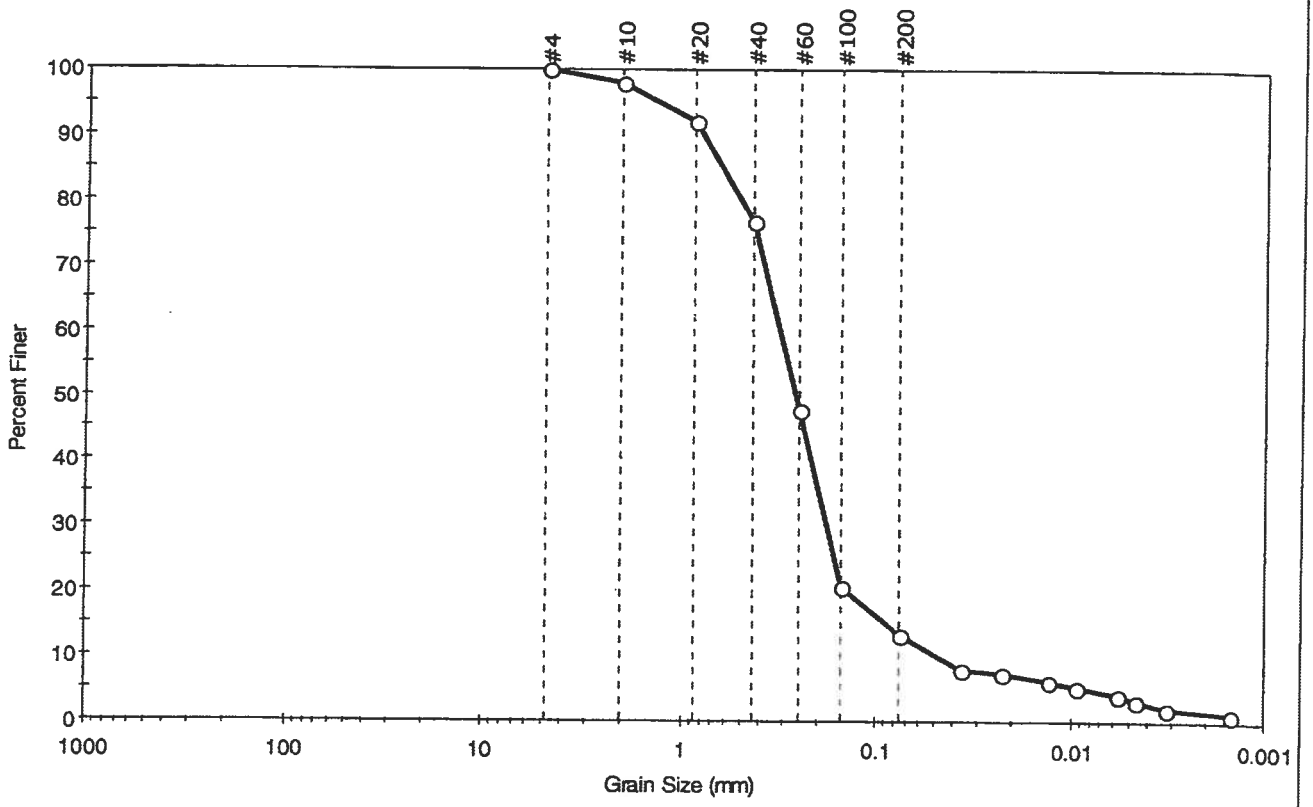
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-004	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD566-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179415		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	---	86.9	13.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	98		
#20	0.85	92		
#40	0.42	77		
#60	0.25	48		
#100	0.15	21		
#200	0.075	13		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0370	8		
---	0.0226	7		
---	0.0132	6		
---	0.0094	5		
---	0.0057	4		
---	0.0046	3		
---	0.0032	2		
---	0.0015	1		

Coefficients

D_{85} = 0.6215 mm	D_{30} = 0.1787 mm
D_{60} = 0.3134 mm	D_{15} = 0.0888 mm
D_{50} = 0.2609 mm	D_{10} = 0.0492 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

C-3 PHOTO LOGS

APPENDIX C – PHASE 2 REMEDIAL INVESTIGATION
SITE 17 GOULD ISLAND, NAVSTA NEWPORT, NEWPORT RI

Photo 1

Photo 2

Photo 1 – picture of RocTest/Telemac vane shear tester utilized during vane shear testing in the spring of 2010.

Photo 2 – picture of the east side of Building 35 at Gould Island.

-All photos presented were captured during the Phase 2 RI (Sep 2009 thru July 2010)

APPENDIX C – PHASE 2 REMEDIAL INVESTIGATION
SITE 17 GOULD ISLAND, NAVSTA NEWPORT, NEWPORT RI

Photo 3

Photo 4

Photo 3 – picture of the east side of Building 35 showing piling structure on north side of the Stillwater Area .

Photo 4 – picture showing sediment core collected during vane shear testing in the Stillwater Area. Once water above the sediment was removed the shear strength of the sediment was tested in 2 inch intervals as allowed by the sediment characteristics.

-All photos presented were captured during the Phase 2 RI (Sep 2009 thru July 2010)

APPENDIX C – PHASE 2 REMEDIAL INVESTIGATION
SITE 17 GOULD ISLAND, NAVSTA NEWPORT, NEWPORT RI

Photo 5

Photo 6

Photo 5 – picture of the south side of Building 35 taken from the barge landing at the southwest corner of the Stillwater Area . Picture shows the end of the sheetpile structure and the beginning of the pier structure where Building 35 is located.

Photo 6 – photo taken from the top of the dock located at the southeast corner of Building 35 facing east showing the piling structure at the north side of the Stillwater Area .

-All photos presented were captured during the Phase 2 RI (Sep 2009 thru July 2010)

APPENDIX C – PHASE 2 REMEDIAL INVESTIGATION
SITE 17 GOULD ISLAND, NAVSTA NEWPORT, NEWPORT RI

Photo 7

Photo 8

Photo 7 – picture of the west side of Building 35, taken from the southwest corner of Building 35 .

Photo 8 – picture of a spider crab that was collected as part of the biota investigation during the Spring of 2010.

-All photos presented were captured during the Phase 2 RI (Sep 2009 thru July 2010)

APPENDIX C – PHASE 2 REMEDIAL INVESTIGATION
SITE 17 GOULD ISLAND, NAVSTA NEWPORT, NEWPORT RI

Photo 9

Photo 10

Photo 9 – picture of a green crab that was collected as part of the biota investigation during the Spring of 2010 .

Photo 10 – photo of the southwest corner of former Building 32 where soil borings were advanced in 2005 as part of the Phase 1 RI and during 2010 as part of the Phase 2 RI. Soil borings were advanced in this area to investigate potential contamination from the former coal pile area .

-All photos presented were captured during the Phase 2 RI (Sep 2009 thru July 2010)

APPENDIX C – PHASE 2 REMEDIAL INVESTIGATION
SITE 17 GOULD ISLAND, NAVSTA NEWPORT, NEWPORT RI

Photo 11

Photo 12

Photo 11 – picture of the field team collecting a sediment core from the Stillwater area during the Step 1 sediment sampling. In this picture is the boat with the A-frame erect, this is how the vibrating hammer and core were lowered into the water.

Photo 12 – picture of the driving hammer used to collect the sediment cores . In this picture the vibrating hammer is suspended beneath the A-frame before it was lowered into the water.

-All photos presented were captured during the Phase 2 RI (Sep 2009 thru July 2010)

Photo 13

Photo 13 – picture of sediment location SD446, this picture shows the island side of the sheetpiling in the lower half and the seaside in the upper half. The sediment sample collected from SD446 was collected from the island side of the sheetpiling.

-All photos presented were captured during the Phase 2 RI (Sep 2009 thru July 2010)

APPENDIX D

CHEMICAL ANALYTICAL DATA

D-1 SOIL ANALYTICAL DATA

TABLE - D1
ANALYTICAL RESULTS - SURFACE SOIL
GI_SO_BLDG0032_SS
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB402-0006	GI-SB403-0006	GI-SB404-0006	GI-SB405-0006
LOCATION ID	GI-SB402	GI-SB403	GI-SB404	GI-SB405
SAMPLE DATE	06/02/10	06/02/10	06/03/10	06/03/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)				
1,1-BIPHENYL	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA
2-METHYLNAPHTHALENE	78 U	76 U	74 U	80 U
2-METHYLPHENOL	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D1
ANALYTICAL RESULTS - SURFACE SOIL
GI_SO_BLDG0032_SS
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB402-0006	GI-SB403-0006	GI-SB404-0006	GI-SB405-0006
LOCATION ID	GI-SB402	GI-SB403	GI-SB404	GI-SB405
SAMPLE DATE	06/02/10	06/02/10	06/03/10	06/03/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SS	SS	SS
ACENAPHTHENE	78 U	76 U	74 U	80 U
ACENAPHTHYLENE	78 U	76 U	74 U	80 U
ACETOPHENONE	NA	NA	NA	NA
ANTHRACENE	61 J	46 J	74 U	89 J
ATRAZINE	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA
BENZO(A)ANTHRACENE	220 J	220 J	89 J	330 J
BENZO(A)PYRENE	180 J	170 J	65 J	250 J
BENZO(B)FLUORANTHENE	240 J	220 J	100 J	370 J
BENZO(G,H,I)PERYLENE	120 J	99 J	74 U	140 J
BENZO(K)FLUORANTHENE	170 J	130 J	44 J	120 J
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA
CHRYSENE	250 J	250 J	110 J	340 J
DIBENZO(A,H)ANTHRACENE	78 U	76 U	74 U	41 J
DIBENZOFURAN	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA
FLUORANTHENE	430	380	170 J	660 J
FLUORENE	78 U	76 U	74 U	80 U
HEXACHLOROBENZENE	NA	NA	NA	NA

TABLE - D1
ANALYTICAL RESULTS - SURFACE SOIL
GI_SO_BLDG0032_SS
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB402-0006	GI-SB403-0006	GI-SB404-0006	GI-SB405-0006
LOCATION ID	GI-SB402	GI-SB403	GI-SB404	GI-SB405
SAMPLE DATE	06/02/10	06/02/10	06/03/10	06/03/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SS	SS	SS
HEXACHLOROBUTADIENE	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	2210 J	2030 J	718 J	2930 J
INDENO(1,2,3-CD)PYRENE	120 J	110 J	74 U	120 J
ISOPHORONE	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	431 J	296 J	86 J	499 J
NAPHTHALENE	78 U	76 U	74 UJ	80 UJ
NITROBENZENE	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA
PHENANTHRENE	370 J	250 J	86 J	410 J
PHENOL	NA	NA	NA	NA
PYRENE	480	450	140 J	560 J
TOTAL CHLORINATED VOCS	NA	NA	NA	NA
TOTAL PAHS	2640 J	2320 J	804 J	3430 J
METALS (MG/KG)				
ALUMINUM	3370	6550	5650	5800
ANTIMONY	0.54 UJ	1.4 UJ	0.25 UJ	0.28 UJ
ARSENIC	3.3	4.1	1.9 J	2.1 J
BARIUM	14.4	27.8	21.9 J	22.1 J
BERYLLIUM	0.22	0.16 J	0.21 J	0.19 J
CADMIUM	1.4	31.5	0.63 J	2.1
CALCIUM	1070	698	362	653
CHROMIUM	5.1	20.4	11.4	10.7
COBALT	2.3 J	4.2 J	3.3 J	4.9 J

TABLE - D1
ANALYTICAL RESULTS - SURFACE SOIL
GI_SO_BLDG0032_SS
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB402-0006	GI-SB403-0006	GI-SB404-0006	GI-SB405-0006
LOCATION ID	GI-SB402	GI-SB403	GI-SB404	GI-SB405
SAMPLE DATE	06/02/10	06/02/10	06/03/10	06/03/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SS	SS	SS
COPPER	7.8 J	34.3 J	30.7	28.5
CYANIDE	NA	NA	NA	NA
IRON	7440	22100	14400	15500
LEAD	13 J	194 J	84.5	41.2
MAGNESIUM	1120 J	2630 J	2160	2190
MANGANESE	259	197	96.1	116
MERCURY	0.0091 J	0.015 J	0.023 J	0.022 J
NICKEL	4.6 J	12.5 J	9.1	11.5
POTASSIUM	469 J	550 J	533	603
SELENIUM	1 UJ	1 UJ	0.9 U	1 U
SILVER	0.16 UJ	0.1 J	0.14 UJ	0.16 UJ
SODIUM	60.2	53.8 J	33 J	54.7 J
THALLIUM	0.28 J	0.32 J	0.36 U	0.4 U
VANADIUM	6.7	21.9	12.6	17.2
ZINC	41.3	97.3	22	37.2
PETROLEUM HYDROCARBONS (MG/KG)				
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA
TOTAL PETROLEUM HYDROCARBONS	55	54	60	88
PETROLEUM HYDROCARBONS (UG/KG)				
GASOLINE RANGE ORGANICS	2800 U	2900 U	3000 U	3000 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D2
ANALYTICAL RESULTS - SURFACE SOIL
GI_SO_BLDG0033_SS
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB401-0006	GI-SB406-0006	GI-SB407-0006	GI-SB408-0006	GI-SB409-0006
LOCATION ID	GI-SB401	GI-SB406	GI-SB407	GI-SB408	GI-SB409
SAMPLE DATE	06/02/10	06/01/10	06/01/10	06/01/10	05/28/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)					
2-METHYLNAPHTHALENE	81 U	70 U	98 J	72 U	72 U
ACENAPHTHENE	81 U	70 U	490	72 U	72 U
ACENAPHTHYLENE	81 U	70 U	70 U	72 U	72 U
ANTHRACENE	81 U	70 U	610	72 U	72 U
BENZO(A)ANTHRACENE	160 J	36 J	1300	80 J	140 J
BENZO(A)PYRENE	140 J	70 U	930	94 J	120 J
BENZO(B)FLUORANTHENE	170 J	70 U	1200	120 J	150 J
BENZO(G,H,I)PERYLENE	130 J	70 U	580	55 J	69 J
BENZO(K)FLUORANTHENE	120 J	70 U	520 J	44 J	97 J
CHRYSENE	190 J	41 J	1100	91 J	150 J
DIBENZO(A,H)ANTHRACENE	81 U	70 U	140 J	72 U	72 U
FLUORANTHENE	300 J	57 J	3100	120 J	300 J
FLUORENE	81 U	70 U	260 J	72 U	72 U
HIGH MOLECULAR WEIGHT PAHS	1620 J	187 J	11900 J	816 J	1350 J
INDENO(1,2,3-CD)PYRENE	100 J	70 U	520	72 J	75 J
LOW MOLECULAR WEIGHT PAHS	190 J	40 J	4530 J	87 J	130 J
NAPHTHALENE	81 U	70 U	270 J	72 U	72 UJ
PHENANTHRENE	190 J	40 J	2800	87 J	130 J
PYRENE	310 J	53 J	2500	140 J	250 J
TOTAL PAHS	1810 J	227 J	16400 J	903 J	1480 J
METALS (MG/KG)					
ALUMINUM	5800	5070	6820	6210	6190
ANTIMONY	0.9 UJ	0.62 UJ	0.7 UJ	1.7 J	2.2 UJ

TABLE - D2
ANALYTICAL RESULTS - SURFACE SOIL
GI_SO_BLDG0033_SS
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB401-0006	GI-SB406-0006	GI-SB407-0006	GI-SB408-0006	GI-SB409-0006
LOCATION ID	GI-SB401	GI-SB406	GI-SB407	GI-SB408	GI-SB409
SAMPLE DATE	06/02/10	06/01/10	06/01/10	06/01/10	05/28/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SS	SS	SS	SS
ARSENIC	2.4	2.9	2	3.8	11.4
BARIUM	19.7	16.4	27.6	30.3	27.7
BERYLLIUM	0.2	0.17 J	0.2	0.43	0.44
CADMIUM	0.15 J	0.071 J	0.14 J	0.16 J	0.023 UJ
CALCIUM	1000	1000	1550	2150	2030 J
CHROMIUM	5.8	6.1	10	7.4	8.2
COBALT	1.8 J	2.5 J	4.2 J	3.3 J	6.1
COPPER	5.3 J	8.1 J	15.9 J	13.2 J	18.7
IRON	10100	9790	16900	16100	20200
LEAD	10.6 J	7 J	19 J	17.7 J	23.2 J
MAGNESIUM	1240 J	1660 J	2640 J	1480 J	1590
MANGANESE	146	203	152	350	440
MERCURY	0.013 J	0.026 U	0.0068 J	0.013 J	0.067 J
NICKEL	3.6 J	5.2 J	9.6 J	5.5 J	9.8 J
POTASSIUM	541 J	550 J	746 J	559 J	458
SELENIUM	0.93 UJ	0.98 UJ	0.7 UJ	0.94 UJ	1.1 U
SILVER	0.15 UJ	0.16 UJ	0.11 UJ	0.15 UJ	0.15 U
SODIUM	40.3 J	22.6 J	35.5 J	33.6 J	34.6 J
THALLIUM	0.37 U	0.39 U	0.15 J	0.37 U	0.46 U
VANADIUM	9.2	8.6	12.6	11.6	10.8
ZINC	44	30.3	39.3	59.1	67.1 J
PETROLEUM HYDROCARBONS (UG/KG)					
GASOLINE RANGE ORGANICS	2700 U	3300 U	2400 U	3500 U	2300 U
PETROLEUM HYDROCARBONS (MG/KG)					

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D2
ANALYTICAL RESULTS - SURFACE SOIL
GI_SO_BLDG0033_SS
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB401-0006	GI-SB406-0006	GI-SB407-0006	GI-SB408-0006	GI-SB409-0006
LOCATION ID	GI-SB401	GI-SB406	GI-SB407	GI-SB408	GI-SB409
SAMPLE DATE	06/02/10	06/01/10	06/01/10	06/01/10	05/28/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SS	SS	SS	SS
TOTAL PETROLEUM HYDROCARBONS	60	25	34	45	52

TABLE - D3
ANALYTICAL RESULTS - SURFACE SOIL
GI_SO_BLDG0041_SS
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB410-0012	GI-SB411-0012	GI-SB412-0012	GI-SB413-0012	GI-SB413-0012-D	GI-SB413-0012-AVG
LOCATION ID	GI-SB410	GI-SB411	GI-SB412	GI-SB413	GI-SB413	GI-SB413
SAMPLE DATE	05/28/10	05/28/10	05/27/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	FD	NM
SEMIVOLATILES (UG/KG)						
2-METHYLNAPHTHALENE	70 U	70 U	330 J	76 U	70 U	73 U
ACENAPHTHENE	100 J	37 J	2500 J	76 U	70 U	73 U
ACENAPHTHYLENE	70 U	70 U	260 J	76 U	70 U	73 U
ANTHRACENE	290 J	100 J	5200 J	76 U	70 U	73 U
BENZO(A)ANTHRACENE	960 J	290 J	8400	76 UJ	70 UJ	73 UJ
BENZO(A)PYRENE	930	220 J	6700	76 U	70 U	73 U
BENZO(B)FLUORANTHENE	980 J	330 J	8200	76 UJ	70 UJ	73 UJ
BENZO(G,H,I)PERYLENE	530	130 J	4700 J	76 U	70 U	73 U
BENZO(K)FLUORANTHENE	710 J	140 J	4600 J	76 UJ	70 UJ	73 UJ
CHRYSENE	1200	300 J	8100	76 U	70 U	73 U
DIBENZO(A,H)ANTHRACENE	130 J	39 J	2000 J	76 UJ	70 UJ	73 UJ
FLUORANTHENE	1700	680	17000	39 J	46 J	42.5 J
FLUORENE	81 J	41 J	2400 J	76 U	70 U	73 U
HIGH MOLECULAR WEIGHT PAHS	9350 J	2820 J	79300 J	101 J	95 J	98 J
INDENO(1,2,3-CD)PYRENE	410	120 J	4600 J	76 U	70 U	73 U
LOW MOLECULAR WEIGHT PAHS	1400 J	538 J	24400 J	76 U	70 U	73 U
NAPHTHALENE	70 U	70 UJ	730 J	76 U	70 U	73 U
PHENANTHRENE	930	360	13000	76 U	70 U	73 U
PYRENE	1800	570	15000	62 J	49 J	55.5 J
TOTAL PAHS	10800 J	3360 J	104000 J	101 J	95 J	98 J
METALS (MG/KG)						
ALUMINUM	6950	8070	6520	6730	8090	7410

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D3
ANALYTICAL RESULTS - SURFACE SOIL
GI_SO_BLDG0041_SS
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB410-0012	GI-SB411-0012	GI-SB412-0012	GI-SB413-0012	GI-SB413-0012-D	GI-SB413-0012-AVG
LOCATION ID	GI-SB410	GI-SB411	GI-SB412	GI-SB413	GI-SB413	GI-SB413
SAMPLE DATE	05/28/10	05/28/10	05/27/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SS	SS	SS	SS	SS	SS
ANTIMONY	0.9 UJ	1.5 UJ	2.3 UJ	0.96 UJ	0.89 UJ	0.925 UJ
ARSENIC	6.6 J	5.2 J	3.8 J	2.4 J	2.7 J	2.55 J
BARIUM	40.5	41.9	50.5	28.5	48.6	38.6
BERYLLIUM	0.29	0.35	0.28	0.21	0.23	0.22
CADMIUM	0.47 J	0.25 J	1.4 J	0.02 UJ	0.24 J	0.125 J
CALCIUM	21500 J	1590 J	15100 J	2740 J	9290 J	6020 J
CHROMIUM	10.7	12	11.1	11.1	11.4	11.2
COBALT	5.1	6.1	4	3.8	4.7	4.25
COPPER	20	28.8	31.3	11.9	16.1	14
IRON	18000	22500	18500	16000	18200	17100
LEAD	26.8 J	28.7 J	115 J	10.9 J	16.8 J	13.8 J
MAGNESIUM	2900	2560	2270	2450	3470	2960
MANGANESE	331	341	263	204	225	214
MERCURY	0.046 J	0.097 J	0.049 J	0.036 J	0.024 J	0.03 J
NICKEL	10.3 J	14.2 J	10.2 J	7.7 J	9.8 J	8.75 J
POTASSIUM	511	705	585	808	1040	924
SELENIUM	1 U	1.2 UJ	0.94 U	1 UJ	1.1 U	1.05 UJ
SILVER	0.17 U	0.2 U	0.11 U	0.12 U	0.2 U	0.16 U
SODIUM	158 J	168 J	376 J	199 J	344 J	272 J
THALLIUM	0.4 U	0.5 U	0.38 U	0.4 U	0.42 U	0.41 U
VANADIUM	10.9	15.2	11.4	11.9	15.8	13.8
ZINC	76.9 J	73.6 J	234 J	32.8 J	49.1 J	41 J
PCBS (UG/KG)						
AROCLOR-1016	8.8 U	8.7 U	8.7 U	9.5 U	8.8 U	9.15 U
AROCLOR-1221	18 U	17 U	17 U	19 U	18 U	18.5 U
AROCLOR-1232	8.8 U	8.7 U	8.7 U	9.5 U	8.8 U	9.15 U
AROCLOR-1242	8.8 U	8.7 U	8.7 U	9.5 U	8.8 U	9.15 U

TABLE - D3
ANALYTICAL RESULTS - SURFACE SOIL
GI_SO_BLDG0041_SS
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB410-0012	GI-SB411-0012	GI-SB412-0012	GI-SB413-0012	GI-SB413-0012-D	GI-SB413-0012-AVG
LOCATION ID	GI-SB410	GI-SB411	GI-SB412	GI-SB413	GI-SB413	GI-SB413
SAMPLE DATE	05/28/10	05/28/10	05/27/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SS	SS	SS	SS	SS	SS
AROCLOR-1248	8.8 U	8.7 U	1200 J	9.5 U	8.8 U	9.15 U
AROCLOR-1254	8.8 U	8.7 U	640	9.5 U	8.8 U	9.15 U
AROCLOR-1260	110	87	8.7 U	9.5 U	8.8 U	9.15 U
TOTAL AROCLOR	110	87	1840 J	10.9 U	10.1 U	10.5 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D3
ANALYTICAL RESULTS - SURFACE SOIL
GI_SO_BLDG0041_SS
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB410-0012	GI-SB411-0012	GI-SB412-0012	GI-SB413-0012	GI-SB413-0012-D	GI-SB413-0012-AVG
LOCATION ID	GI-SB410	GI-SB411	GI-SB412	GI-SB413	GI-SB413	GI-SB413
SAMPLE DATE	05/28/10	05/28/10	05/27/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SS	SS	SS	SS	SS	SS

TABLE - D4
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0032_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB402-1218	GI-SB402-2430	GI-SB402-4248	GI-SB403-1218	GI-SB403-1218-D	GI-SB403-1218-AVG	GI-SB403-2430	GI-SB403-4248	GI-SB404-1218	GI-SB404-1218-D
LOCATION ID	GI-SB402	GI-SB402	GI-SB402	GI-SB403	GI-SB403	GI-SB403	GI-SB403	GI-SB403	GI-SB404	GI-SB404
SAMPLE DATE	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/03/10	06/03/10
TOP DEPTH	1 FT	2 FT	3.5 FT	1 FT	1 FT	1 FT	2 FT	3.5 FT	1 FT	1 FT
BOTTOM DEPTH	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	FD	NM	NM	NM	NM	FD
SEMIVOLATILES (UG/KG)										
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	72 U	76 U	75 U	74 U	74 U	74 U	73 U	71 U	74 U	74 U
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D4
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0032_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB402-1218	GI-SB402-2430	GI-SB402-4248	GI-SB403-1218	GI-SB403-1218-D	GI-SB403-1218-AVG	GI-SB403-2430	GI-SB403-4248	GI-SB404-1218	GI-SB404-1218-D
LOCATION ID	GI-SB402	GI-SB402	GI-SB402	GI-SB403	GI-SB403	GI-SB403	GI-SB403	GI-SB403	GI-SB404	GI-SB404
SAMPLE DATE	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/03/10	06/03/10
TOP DEPTH	1 FT	2 FT	3.5 FT	1 FT	1 FT	1 FT	2 FT	3.5 FT	1 FT	1 FT
BOTTOM DEPTH	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	72 U	76 U	200 J	74 U	74 U	74 U	73 U	71 U	74 U	74 U
ACENAPHTHYLENE	72 U	76 U	75 U	74 U	74 U	74 U	73 U	71 U	74 U	74 U
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	72 U	76 U	88 J	74 U	74 U	74 U	73 U	71 U	74 U	74 U
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	40 J	140 J	110 J	74 U	48 J	42.5 J	73 U	71 U	74 U	74 U
BENZO(A)PYRENE	72 U	110 J	75 U	74 U	74 U	74 U	73 U	71 U	74 U	74 U
BENZO(B)FLUORANTHENE	52 J	130 J	66 J	74 U	74 U	74 U	73 U	71 U	74 U	74 U
BENZO(G,H,I)PERYLENE	72 U	50 J	75 U	74 U	74 U	74 U	73 U	71 U	74 U	74 U
BENZO(K)FLUORANTHENE	72 U	57 J	71 J	74 U	74 U	74 U	73 U	71 U	74 U	74 U
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	48 J	150 J	110 J	74 U	49 J	43 J	73 U	71 U	74 U	74 U

TABLE - D4
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0032_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB402-1218	GI-SB402-2430	GI-SB402-4248	GI-SB403-1218	GI-SB403-1218-D	GI-SB403-1218-AVG	GI-SB403-2430	GI-SB403-4248	GI-SB404-1218	GI-SB404-1218-D
LOCATION ID	GI-SB402	GI-SB402	GI-SB402	GI-SB403	GI-SB403	GI-SB403	GI-SB403	GI-SB403	GI-SB404	GI-SB404
SAMPLE DATE	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/03/10	06/03/10
TOP DEPTH	1 FT	2 FT	3.5 FT	1 FT	1 FT	1 FT	2 FT	3.5 FT	1 FT	1 FT
BOTTOM DEPTH	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
DIBENZO(A,H)ANTHRACENE	72 U	76 U	75 U	74 U	74 U	74 U	73 U	71 U	74 U	74 U
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	60 J	280 J	360 J	74 U	110 J	73.5 J	39 J	71 U	74 U	74 U
FLUORENE	72 U	76 U	400	74 U	74 U	74 U	73 U	71 U	74 U	74 U
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	276 J	1220 J	967 J	74 U	301 J	169 J	39 J	71 U	74 U	74 U
INDENO(1,2,3-CD)PYRENE	72 U	47 J	75 U	74 U	74 U	74 U	73 U	71 U	74 U	74 U
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	37 J	140 J	1430 J	74 U	78 J	57.5 J	73 UJ	71 UJ	74 UJ	74 U
NAPHTHALENE	72 U	76 U	250 J	74 U	74 UJ	74 UJ	73 UJ	71 UJ	74 UJ	74 U
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	37 J	140 J	490	74 U	78 J	57.5 J	73 U	71 U	74 U	74 U

TABLE - D4
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0032_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB402-1218	GI-SB402-2430	GI-SB402-4248	GI-SB403-1218	GI-SB403-1218-D	GI-SB403-1218-AVG	GI-SB403-2430	GI-SB403-4248	GI-SB404-1218	GI-SB404-1218-D
LOCATION ID	GI-SB402	GI-SB402	GI-SB402	GI-SB403	GI-SB403	GI-SB403	GI-SB403	GI-SB403	GI-SB404	GI-SB404
SAMPLE DATE	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/03/10	06/03/10
TOP DEPTH	1 FT	2 FT	3.5 FT	1 FT	1 FT	1 FT	2 FT	3.5 FT	1 FT	1 FT
BOTTOM DEPTH	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	76 J	260 J	250 J	74 U	94 J	65.5 J	73 U	71 U	74 U	74 U
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	313 J	1360 J	2400 J	74 U	379 J	208 J	39 J	71 UJ	74 UJ	74 U
METALS (MG/KG)										
ALUMINUM	3610	8630	8270	8280	7170	7720	6880	6060	6880	7310
ANTIMONY	0.48 UJ	0.85 UJ	0.62 UJ	0.75 UJ	0.24 UJ	0.495 UJ	0.28 UJ	0.23 UJ	0.33 UJ	0.21 UJ
ARSENIC	3.7	2.4	2.5	3	1.9 J	2.45 J	0.71 J	0.57 J	1.3 J	1.8 J
BARIUM	12.9	28.2	28.1	18.4	16.8 J	17.6 J	15.1 J	13 J	20.8 J	24.6 J
BERYLLIUM	0.27	0.68	0.71	0.18	0.15 J	0.165 J	0.18 J	0.12 J	0.2 J	0.22 J
CADMIUM	0.35 J	0.47 J	0.48 J	8.8	7.2	8	2.7	0.73 J	1.7	1.7 J
CALCIUM	698	761	652	551	445	498	400	510	443	352
CHROMIUM	3.9	10.5	9.6	12.7	10.6	11.6	9.6	8	13.2	12.8
COBALT	5.3 J	12.3 J	8.1 J	3.8 J	4.3 J	4.05 J	3.9 J	3.4 J	3.9 J	3.8 J
COPPER	5.8 J	23.6 J	21.8 J	19.3 J	18.3	18.8 J	19.7	14.8	43	50.2
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	8470	19200	15900	19600	17600	18600	17100	14000	16800	17300
LEAD	9 J	23.1 J	7.4 J	12.6 J	13.4	13 J	11.1	5.4	88.2	89.5
MAGNESIUM	1130 J	3250 J	2540 J	3040 J	2630	2840 J	2570	2450	2530	2480
MANGANESE	318	246	160	148	144	146	129	116	111	110
MERCURY	0.0065 J	0.028 U	0.026 U	0.024 U	0.022 U	0.023 U	0.024 U	0.024 U	0.024 J	0.031 J
NICKEL	5.6 J	22.2 J	18.3 J	12.2 J	11.4	11.8 J	9.9	8	11.4	11.6
POTASSIUM	423 J	1760 J	598 J	698 J	600	649 J	633	807	550	586
SELENIUM	0.9 UJ	0.82 UJ	0.74 UJ	0.81 UJ	0.87 U	0.84 UJ	1 U	0.83 U	1.2 U	0.74 U
SILVER	0.14 UJ	0.13 UJ	0.12 UJ	0.13 UJ	0.14 UJ	0.135 UJ	0.16 UJ	0.13 UJ	0.19 UJ	0.12 UJ
SODIUM	28.8 J	27 J	29.2 J	44.4 J	40 J	42.2 J	31.2 J	28.1 J	26.7 J	27.3 J

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D4
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0032_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB402-1218	GI-SB402-2430	GI-SB402-4248	GI-SB403-1218	GI-SB403-1218-D	GI-SB403-1218-AVG	GI-SB403-2430	GI-SB403-4248	GI-SB404-1218	GI-SB404-1218-D
LOCATION ID	GI-SB402	GI-SB402	GI-SB402	GI-SB403	GI-SB403	GI-SB403	GI-SB403	GI-SB403	GI-SB404	GI-SB404
SAMPLE DATE	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/03/10	06/03/10
TOP DEPTH	1 FT	2 FT	3.5 FT	1 FT	1 FT	1 FT	2 FT	3.5 FT	1 FT	1 FT
BOTTOM DEPTH	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
THALLIUM	0.58 J	0.3 J	0.3 U	0.15 J	0.35 U	0.162 J	0.4 U	0.33 U	0.46 U	0.3 U
VANADIUM	5.7	18.3	12.8	15.4	14.2	14.8	11.6	10.4	12.7	12.9
ZINC	31.2	48.7	48.7	37.7	32.5	35.1	26.5	21.5	31.9	33.5
PETROLEUM HYDROCARBONS (MG/KG)										
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PETROLEUM HYDROCARBONS	26 U	37	1100	27 U	27 U	27 U	27 U	25 U	64	56
PETROLEUM HYDROCARBONS (UG/KG)										
GASOLINE RANGE ORGANICS	2400 U	2400 U	9800	2100 U	2600 U	2350 U	3000 U	2300 U	2500 U	2700 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D4
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0032_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB404-1218-AVG	GI-SB404-2430	GI-SB404-4248	GI-SB405-1218	GI-SB405-2430	GI-SB405-4248
LOCATION ID	GI-SB404	GI-SB404	GI-SB404	GI-SB405	GI-SB405	GI-SB405
SAMPLE DATE	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10
TOP DEPTH	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT
BOTTOM DEPTH	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)						
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	74 U	76 U	76 U	73 U	74 U	73 U
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA

TABLE - D4
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0032_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB404-1218-AVG	GI-SB404-2430	GI-SB404-4248	GI-SB405-1218	GI-SB405-2430	GI-SB405-4248
LOCATION ID	GI-SB404	GI-SB404	GI-SB404	GI-SB405	GI-SB405	GI-SB405
SAMPLE DATE	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10
TOP DEPTH	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT
BOTTOM DEPTH	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	74 U	76 U	130 J	73 U	74 U	73 U
ACENAPHTHYLENE	74 U	76 U	76 U	73 U	74 U	73 U
ACETOPHENONE	NA	NA	NA	NA	NA	NA
ANTHRACENE	74 U	76 U	120 J	73 U	74 U	73 U
ATRAZINE	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	74 U	95 J	250 J	73 U	74 U	41 J
BENZO(A)PYRENE	74 U	81 J	190 J	73 U	74 U	73 U
BENZO(B)FLUORANTHENE	74 U	110 J	230 J	73 U	74 U	73 U
BENZO(G,H,I)PERYLENE	74 U	48 J	97 J	73 U	74 U	73 U
BENZO(K)FLUORANTHENE	74 U	50 J	120 J	73 U	74 U	73 U
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA
CHRYSENE	74 U	110 J	230 J	73 U	74 U	46 J

TABLE - D4
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0032_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB404-1218-AVG	GI-SB404-2430	GI-SB404-4248	GI-SB405-1218	GI-SB405-2430	GI-SB405-4248
LOCATION ID	GI-SB404	GI-SB404	GI-SB404	GI-SB405	GI-SB405	GI-SB405
SAMPLE DATE	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10
TOP DEPTH	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT
BOTTOM DEPTH	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB
DIBENZO(A,H)ANTHRACENE	74 U	76 U	76 U	73 U	74 U	73 U
DIBENZOFURAN	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA
FLUORANTHENE	74 U	200 J	540	56 J	45 J	79 J
FLUORENE	74 U	76 U	150 J	73 U	74 U	73 U
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	74 U	938 J	2180 J	104 J	45 J	235 J
INDENO(1,2,3-CD)PYRENE	74 U	44 J	85 J	73 U	74 U	73 U
ISOPHORONE	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	74 UJ	120 J	840 J	41 J	74 UJ	44 J
NAPHTHALENE	74 UJ	76 UJ	76 UJ	73 UJ	74 UJ	73 UJ
NITROBENZENE	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA
PHENANTHRENE	74 U	120 J	440	41 J	74 U	44 J

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D4
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0032_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB404-1218-AVG	GI-SB404-2430	GI-SB404-4248	GI-SB405-1218	GI-SB405-2430	GI-SB405-4248
LOCATION ID	GI-SB404	GI-SB404	GI-SB404	GI-SB405	GI-SB405	GI-SB405
SAMPLE DATE	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10
TOP DEPTH	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT
BOTTOM DEPTH	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB
PHENOL	NA	NA	NA	NA	NA	NA
PYRENE	74 U	200 J	440	48 J	74 U	69 J
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA
TOTAL PAHS	74 UJ	1060 J	3020 J	145 J	45 J	279 J
METALS (MG/KG)						
ALUMINUM	7100	4900	8780	6200	5020	7340
ANTIMONY	0.27 UJ	0.84 UJ	0.8 UJ	0.33 UJ	0.2 UJ	0.3 UJ
ARSENIC	1.55 J	2 J	2.1 J	0.87 J	0.85 J	1.1 J
BARIUM	22.7 J	21.6 J	26.1 J	22.2 J	16.6 J	26.8 J
BERYLLIUM	0.21 J	0.26 J	0.34 J	0.15 J	0.14 J	0.22 J
CADMIUM	1.7 J	6.8	22.6	0.78 J	5.3	12.6
CALCIUM	398	580	484	515	369	659
CHROMIUM	13	9.5	22.6	8.7	8	13.9
COBALT	3.85 J	6.4 J	8.3 J	4.7 J	3.5 J	7.4 J
COPPER	46.6	70.3	84.8	14.7	14.9	50.4
CYANIDE	NA	NA	NA	NA	NA	NA
IRON	17000	8830	20500	14000	13000	18200
LEAD	88.8	43.2	111	9.3	13	55.1
MAGNESIUM	2500	1810	3700	2490	2080	2890
MANGANESE	110	103	179	135	87.6	132
MERCURY	0.0275 J	0.031 J	0.086	0.022 U	0.025 U	0.009 J
NICKEL	11.5	13.1	18.3	8.7	7.3	14.4
POTASSIUM	568	432	597	735	702	946
SELENIUM	0.97 U	0.63 J	1.1 U	1.2 U	0.73 U	1.1 U
SILVER	0.155 UJ	0.15 UJ	0.17 UJ	0.19 UJ	0.12 UJ	0.079 J
SODIUM	27 J	61.7	35.9 J	23.1 J	20.9 J	27.7 J

TABLE - D4
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0032_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB404-1218-AVG	GI-SB404-2430	GI-SB404-4248	GI-SB405-1218	GI-SB405-2430	GI-SB405-4248
LOCATION ID	GI-SB404	GI-SB404	GI-SB404	GI-SB405	GI-SB405	GI-SB405
SAMPLE DATE	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10
TOP DEPTH	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT
BOTTOM DEPTH	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB
THALLIUM	0.38 U	0.39 U	0.44 U	0.47 U	0.29 U	0.43 U
VANADIUM	12.8	10.8	15	13	11.5	16.4
ZINC	32.7	36.4	99	32.8	22.9	45.1
PETROLEUM HYDROCARBONS (MG/KG)						
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA
TOTAL PETROLEUM HYDROCARBONS	60	530	1200	26 U	32	49
PETROLEUM HYDROCARBONS (UG/KG)						
GASOLINE RANGE ORGANICS	2600 U	13000	83000	2300 U	2500 U	2900 U

TABLE - D5
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0033_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB401-1218	GI-SB401-2430	GI-SB401-4248	GI-SB406-1218	GI-SB406-2430	GI-SB406-2430-D	GI-SB406-2430-AVG	GI-SB406-4248
LOCATION ID	GI-SB401	GI-SB401	GI-SB401	GI-SB406	GI-SB406	GI-SB406	GI-SB406	GI-SB406
SAMPLE DATE	06/02/10	06/02/10	06/02/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10
TOP DEPTH	1 FT	2 FT	3.5 FT	1 FT	2 FT	2 FT	2 FT	3.5 FT
BOTTOM DEPTH	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	2.5 FT	2.5 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM
SEMIVOLATILES (UG/KG)								
2-METHYLNAPHTHALENE	73 U	71 U	73 U	72 U	72 U	NA	72 U	73 U
ACENAPHTHENE	40 J	71 U	73 U	72 U	72 U	NA	72 U	73 U
ACENAPHTHYLENE	73 U	71 U	73 U	72 U	72 U	NA	72 U	73 U
ANTHRACENE	92 J	71 U	73 U	72 U	72 U	NA	72 U	73 U
BENZO(A)ANTHRACENE	310 J	71 U	73 U	72 U	72 U	NA	72 U	73 U
BENZO(A)PYRENE	190 J	71 U	73 U	72 U	72 U	NA	72 U	73 U
BENZO(B)FLUORANTHENE	300 J	71 U	73 U	72 U	72 U	NA	72 U	73 U
BENZO(G,H,I)PERYLENE	110 J	71 U	73 U	72 U	72 U	NA	72 U	73 U
BENZO(K)FLUORANTHENE	110 J	71 U	73 U	72 U	72 U	NA	72 U	73 U
CHRYSENE	280 J	71 U	73 U	72 U	72 U	NA	72 U	73 U
DIBENZO(A,H)ANTHRACENE	73 U	71 U	73 U	72 U	72 U	NA	72 U	73 U
FLUORANTHENE	610	71 U	73 U	72 U	72 U	NA	72 U	73 U
FLUORENE	42 J	71 U	73 U	72 U	72 U	NA	72 U	73 U
HIGH MOLECULAR WEIGHT PAHS	2580 J	71 U	73 U	72 U	72 U	NA	72 U	73 U
INDENO(1,2,3-CD)PYRENE	98 J	71 U	73 U	72 U	72 U	NA	72 U	73 U
LOW MOLECULAR WEIGHT PAHS	574 J	71 U	73 U	72 U	72 U	NA	72 U	73 U
NAPHTHALENE	73 U	71 U	73 U	72 U	72 U	NA	72 U	73 U
PHENANTHRENE	400	71 U	73 U	72 U	72 U	NA	72 U	73 U
PYRENE	570	71 U	73 U	72 U	72 U	NA	72 U	73 U
TOTAL PAHS	3150 J	71 U	73 U	72 U	72 U	NA	72 U	73 U
METALS (MG/KG)								
ALUMINUM	5830	6300	5040	6660	5660	NA	5660	5340

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D5
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0033_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB401-1218	GI-SB401-2430	GI-SB401-4248	GI-SB406-1218	GI-SB406-2430	GI-SB406-2430-D	GI-SB406-2430-AVG	GI-SB406-4248
LOCATION ID	GI-SB401	GI-SB401	GI-SB401	GI-SB406	GI-SB406	GI-SB406	GI-SB406	GI-SB406
SAMPLE DATE	06/02/10	06/02/10	06/02/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10
TOP DEPTH	1 FT	2 FT	3.5 FT	1 FT	2 FT	2 FT	2 FT	3.5 FT
BOTTOM DEPTH	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	2.5 FT	2.5 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB
ANTIMONY	0.52 UJ	0.73 UJ	0.5 UJ	0.73 UJ	0.28 UJ	NA	0.28 UJ	0.21 UJ
ARSENIC	1.6	1.7	1.2	2.9	0.93 J	NA	0.93 J	0.81 J
BARIUM	21.6	13.6	11.6	21.3	14.4	NA	14.4	10.5
BERYLLIUM	0.16 J	0.18 J	0.15 J	0.24	0.12 J	NA	0.12 J	0.12 J
CADMIUM	0.33 J	0.018 UJ	0.022 UJ	0.02 UJ	0.15 UJ	NA	0.15 UJ	0.14 UJ
CALCIUM	1070	682	667	838	748 J	NA	748 J	786 J
CHROMIUM	10.9	10.7	8.4	9.1	10.5	NA	10.5	6.6
COBALT	3.8 J	4.4 J	3.3 J	4.7 J	4	NA	4	3.8
COPPER	11.9 J	15.6 J	9.7 J	12 J	8.2	NA	8.2	9
IRON	12500	16600	11000	16700	15100	NA	15100	13100
LEAD	14.9 J	5.8 J	4.8 J	6.2 J	4.8 J	NA	4.8 J	4.5 J
MAGNESIUM	2310 J	2500 J	1960 J	2520 J	2150	NA	2150	2100
MANGANESE	159	131	105	178	139	NA	139	130
MERCURY	0.024 U	0.026 U	0.027 U	0.022 U	0.023 UJ	NA	0.023 UJ	0.023 UJ
NICKEL	9.9 J	10.9 J	9.1 J	9.7 J	7.1 J	NA	7.1 J	6 J
POTASSIUM	823 J	614 J	509 J	785 J	644	NA	644	468
SELENIUM	1.1 UJ	0.91 UJ	1.1 UJ	1 UJ	1 U	NA	1 U	0.74 U
SILVER	0.17 UJ	0.14 UJ	0.17 UJ	0.16 UJ	0.16 UJ	NA	0.16 UJ	0.12 UJ
SODIUM	30.9 J	30.4 J	30.5 J	26.2 J	27.8 J	NA	27.8 J	25.8 J
THALLIUM	0.42 U	0.36 U	0.43 U	0.41 U	0.4 U	NA	0.4 U	0.3 U
VANADIUM	13.2	12.9	9.4	12.8	11.7	NA	11.7	10.4
ZINC	45.7	25.9	21.8	29.8	19 J	NA	19 J	17.2 J
PETROLEUM HYDROCARBONS (UG/KG)								
GASOLINE RANGE ORGANICS	2200 U	2100 U	2100 U	3600 U	2300 U	2400 U	2350 U	2500 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D5
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0033_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB401-1218	GI-SB401-2430	GI-SB401-4248	GI-SB406-1218	GI-SB406-2430	GI-SB406-2430-D	GI-SB406-2430-AVG	GI-SB406-4248
LOCATION ID	GI-SB401	GI-SB401	GI-SB401	GI-SB406	GI-SB406	GI-SB406	GI-SB406	GI-SB406
SAMPLE DATE	06/02/10	06/02/10	06/02/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10
TOP DEPTH	1 FT	2 FT	3.5 FT	1 FT	2 FT	2 FT	2 FT	3.5 FT
BOTTOM DEPTH	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	2.5 FT	2.5 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB
PETROLEUM HYDROCARBONS (MG/KG)								
TOTAL PETROLEUM HYDROCARBONS	26 U	25 U	27 U	26 U	26 U	26 U	26 U	26 U

TABLE - D5
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0033_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB401-1218	GI-SB406-4248-D	GI-SB406-4248-AVG	GI-SB407-1218	GI-SB407-2430	GI-SB407-4248	GI-SB408-1218	GI-SB408-2430
LOCATION ID	GI-SB401	GI-SB406	GI-SB406	GI-SB407	GI-SB407	GI-SB407	GI-SB408	GI-SB408
SAMPLE DATE	06/02/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10
TOP DEPTH	1 FT	3.5 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT
BOTTOM DEPTH	1.5 FT	4 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)								
2-METHYLNAPHTHALENE	73 U	73 U	73 U	71 U	72 U	70 U	71 U	70 U
ACENAPHTHENE	40 J	73 U	73 U	71 U	54 J	70 U	71 U	70 U
ACENAPHTHYLENE	73 U	73 U	73 U	71 U	72 U	70 U	71 U	70 U
ANTHRACENE	92 J	73 U	73 U	71 U	73 J	70 U	71 U	70 U
BENZO(A)ANTHRACENE	310 J	73 U	73 U	60 J	310 J	71 J	72 J	70 U
BENZO(A)PYRENE	190 J	73 U	73 U	42 J	300 J	47 J	71 U	70 U
BENZO(B)FLUORANTHENE	300 J	73 U	73 U	71 U	360 J	65 J	66 J	70 U
BENZO(G,H,I)PERYLENE	110 J	73 U	73 U	71 U	180 J	70 U	40 J	70 U
BENZO(K)FLUORANTHENE	110 J	73 U	73 U	36 J	230 J	37 J	39 J	70 U
CHRYSENE	280 J	73 U	73 U	56 J	370	70 J	70 J	70 U
DIBENZO(A,H)ANTHRACENE	73 U	73 U	73 U	71 U	72 U	70 U	71 U	70 U
FLUORANTHENE	610	73 U	73 U	95 J	630	140 J	100 J	70 U
FLUORENE	42 J	73 U	73 U	71 U	72 U	70 U	71 U	70 U
HIGH MOLECULAR WEIGHT PAHS	2580 J	73 U	73 U	379 J	3150 J	540 J	507 J	70 U
INDENO(1,2,3-CD)PYRENE	98 J	73 U	73 U	71 U	150 J	70 U	71 U	70 U
LOW MOLECULAR WEIGHT PAHS	574 J	73 U	73 U	48 J	527 J	75 J	74 J	70 U
NAPHTHALENE	73 U	73 U	73 U	71 U	72 U	70 U	71 U	70 U
PHENANTHRENE	400	73 U	73 U	48 J	400	75 J	74 J	70 U
PYRENE	570	73 U	73 U	90 J	620	110 J	120 J	70 U
TOTAL PAHS	3150 J	73 U	73 U	427 J	3680 J	615 J	581 J	70 U
METALS (MG/KG)								
ALUMINUM	5830	6220	5780	7200	7410	6900	4300	6790

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D5
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0033_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB401-1218	GI-SB406-4248-D	GI-SB406-4248-AVG	GI-SB407-1218	GI-SB407-2430	GI-SB407-4248	GI-SB408-1218	GI-SB408-2430
LOCATION ID	GI-SB401	GI-SB406	GI-SB406	GI-SB407	GI-SB407	GI-SB407	GI-SB408	GI-SB408
SAMPLE DATE	06/02/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10
TOP DEPTH	1 FT	3.5 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT
BOTTOM DEPTH	1.5 FT	4 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB
ANTIMONY	0.52 UJ	0.28 UJ	0.245 UJ	0.59 UJ	0.88 UJ	0.82 UJ	0.67 UJ	0.65 UJ
ARSENIC	1.6	0.92 J	0.865 J	2	1.4	2.1	1.5	1.7
BARIUM	21.6	10.7 J	10.6 J	27.4	37.5	30	18.7	20.7
BERYLLIUM	0.16 J	0.1 J	0.11 J	0.21	0.15 J	0.19 J	0.18 J	0.18 J
CADMIUM	0.33 J	0.15 UJ	0.145 UJ	0.26 J	0.39 J	0.11 J	0.39 J	0.024 UJ
CALCIUM	1070	862 J	824 J	1120	1740	1050	922	961
CHROMIUM	10.9	8.7	7.65	11.7	14.8	9.9	7.2	9.9
COBALT	3.8 J	5.5	4.65	4.7 J	5.6 J	3.8 J	3.2 J	4.2 J
COPPER	11.9 J	11.2	10.1	14.3 J	12.9 J	10.9 J	10.7 J	11.3 J
IRON	12500	15600	14400	18200	17500	17200	11200	14600
LEAD	14.9 J	5.3 J	4.9 J	10.7 J	26.7 J	9.2 J	9.7 J	6.5 J
MAGNESIUM	2310 J	2660	2380	2780 J	3520 J	2910 J	1640 J	2750 J
MANGANESE	159	133	132	154	149	145	120	176
MERCURY	0.024 U	0.023 UJ	0.023 UJ	0.022 U	0.01 J	0.022 U	0.026 U	0.022 U
NICKEL	9.9 J	8.3 J	7.15 J	10.5 J	11.8 J	8.3 J	6.3 J	8.5 J
POTASSIUM	823 J	551	510	1190 J	2240 J	1540 J	457 J	1020 J
SELENIUM	1.1 UJ	1 U	0.87 U	0.85 UJ	1.2 UJ	0.93 UJ	1.1 UJ	1.2 UJ
SILVER	0.17 UJ	0.16 UJ	0.14 UJ	0.14 UJ	0.18 UJ	0.15 UJ	0.18 UJ	0.2 UJ
SODIUM	30.9 J	24.7 J	25.2 J	34 J	47.2 J	39.4 J	17.4 J	23.5 J
THALLIUM	0.42 U	0.4 U	0.35 U	0.18 J	0.46 U	0.37 U	0.44 U	0.49 U
VANADIUM	13.2	15.3	12.8	14.4	18	13.4	9.9	11.7
ZINC	45.7	19.2 J	18.2 J	30.2	56.3	28	27.6	27
PETROLEUM HYDROCARBONS (UG/KG)								
GASOLINE RANGE ORGANICS	2200 U	NA	2500 U	2200 U	2600 U	2000 U	2400 U	2400 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D5
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0033_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB401-1218	GI-SB406-4248-D	GI-SB406-4248-AVG	GI-SB407-1218	GI-SB407-2430	GI-SB407-4248	GI-SB408-1218	GI-SB408-2430
LOCATION ID	GI-SB401	GI-SB406	GI-SB406	GI-SB407	GI-SB407	GI-SB407	GI-SB408	GI-SB408
SAMPLE DATE	06/02/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10
TOP DEPTH	1 FT	3.5 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT
BOTTOM DEPTH	1.5 FT	4 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB
PETROLEUM HYDROCARBONS (MG/KG)								
TOTAL PETROLEUM HYDROCARBONS	26 U	NA	26 U	26 U	56	25 U	25 U	26 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D5
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0033_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB401-1218	GI-SB408-4248	GI-SB409-1218	GI-SB409-2430	GI-SB409-4854	GI-SB409-4854-D	GI-SB409-4854-AVG
LOCATION ID	GI-SB401	GI-SB408	GI-SB409	GI-SB409	GI-SB409	GI-SB409	GI-SB409
SAMPLE DATE	06/02/10	06/01/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10
TOP DEPTH	1 FT	3.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT
BOTTOM DEPTH	1.5 FT	4 FT	1.5 FT	2.5 FT	4.5 FT	4.5 FT	4.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	FD	NM
SEMIVOLATILES (UG/KG)							
2-METHYLNAPHTHALENE	73 U	72 U	70 U	71 U	71 U	71 U	71 U
ACENAPHTHENE	40 J	72 U	70 U	71 U	71 U	71 U	71 U
ACENAPHTHYLENE	73 U	72 U	70 U	71 U	71 U	71 U	71 U
ANTHRACENE	92 J	72 U	70 U	71 U	71 U	71 U	71 U
BENZO(A)ANTHRACENE	310 J	72 U	70 U	71 U	71 U	71 U	71 U
BENZO(A)PYRENE	190 J	72 U	70 U	71 U	71 U	71 U	71 U
BENZO(B)FLUORANTHENE	300 J	72 U	70 U	71 U	71 U	71 U	71 U
BENZO(G,H,I)PERYLENE	110 J	72 U	70 U	71 U	71 U	71 U	71 U
BENZO(K)FLUORANTHENE	110 J	72 U	70 U	71 U	71 U	71 U	71 U
CHRYSENE	280 J	72 U	70 U	71 U	71 U	71 U	71 U
DIBENZO(A,H)ANTHRACENE	73 U	72 U	70 U	71 U	71 U	71 U	71 U
FLUORANTHENE	610	72 U	70 U	71 U	71 U	71 U	71 U
FLUORENE	42 J	72 U	70 U	71 U	71 U	71 U	71 U
HIGH MOLECULAR WEIGHT PAHS	2580 J	72 U	70 U	71 U	71 U	71 U	71 U
INDENO(1,2,3-CD)PYRENE	98 J	72 U	70 U	71 U	71 U	71 U	71 U
LOW MOLECULAR WEIGHT PAHS	574 J	72 U	70 UJ	71 UJ	71 UJ	71 UJ	71 UJ
NAPHTHALENE	73 U	72 U	70 UJ	71 UJ	71 UJ	71 UJ	71 UJ
PHENANTHRENE	400	72 U	70 U	71 U	71 U	71 U	71 U
PYRENE	570	72 U	70 U	71 U	71 U	71 U	71 U
TOTAL PAHS	3150 J	72 U	70 UJ	71 UJ	71 UJ	71 UJ	71 UJ
METALS (MG/KG)							
ALUMINUM	5830	5820	9490	8060	10700	10100	10400

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D5
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0033_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB401-1218	GI-SB408-4248	GI-SB409-1218	GI-SB409-2430	GI-SB409-4854	GI-SB409-4854-D	GI-SB409-4854-AVG
LOCATION ID	GI-SB401	GI-SB408	GI-SB409	GI-SB409	GI-SB409	GI-SB409	GI-SB409
SAMPLE DATE	06/02/10	06/01/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10
TOP DEPTH	1 FT	3.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT
BOTTOM DEPTH	1.5 FT	4 FT	1.5 FT	2.5 FT	4.5 FT	4.5 FT	4.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB
ANTIMONY	0.52 UJ	0.67 UJ	0.41 UJ	0.3 UJ	0.6 UJ	0.47 UJ	0.535 UJ
ARSENIC	1.6	1.6	2.1 J	1.9 J	1.9 J	2.7 J	2.3 J
BARIUM	21.6	16.9	31.4	31.6	40.5	37.7	39.1
BERYLLIUM	0.16 J	0.17 J	0.3	0.29	0.27	0.3	0.285
CADMIUM	0.33 J	0.018 UJ	0.019 UJ	0.021 UJ	0.026 UJ	0.018 UJ	0.022 UJ
CALCIUM	1070	691	1090 J	908 J	1100 J	1220 J	1160 J
CHROMIUM	10.9	8.1	11	11.4	14.7	14	14.4
COBALT	3.8 J	4.7 J	8.1	6.7	6.3	7.2	6.75
COPPER	11.9 J	11.2 J	16.6	14.3	15.5	17.7	16.6
IRON	12500	15400	19300	19000	22500	23500	23000
LEAD	14.9 J	5.8 J	6.5 J	6.6 J	7 J	8.2 J	7.6 J
MAGNESIUM	2310 J	2230 J	3320	3090	4200	4080	4140
MANGANESE	159	129	242	186	195	208	202
MERCURY	0.024 U	0.022 U	0.021 J	0.0075 J	0.0064 J	0.024 UJ	0.0092 J
NICKEL	9.9 J	9.8 J	12.2 J	10.1 J	13.2 J	12.2 J	12.7 J
POTASSIUM	823 J	615 J	1110	1190	1910	1910	1910
SELENIUM	1.1 UJ	0.92 UJ	0.96 U	1.1 U	1.3 U	0.92 U	1.11 U
SILVER	0.17 UJ	0.15 UJ	0.17 U	0.14 U	0.15 U	0.18 U	0.165 U
SODIUM	30.9 J	17.8 J	31.2 J	29.6 J	43.6 J	39 J	41.3 J
THALLIUM	0.42 U	0.37 U	0.38 U	0.42 U	0.52 U	0.37 U	0.445 U
VANADIUM	13.2	10.2	15.1	16.6	19.7	19.1	19.4
ZINC	45.7	20.5	30.2 J	27.3 J	34.6 J	33.7 J	34.2 J
PETROLEUM HYDROCARBONS (UG/KG)							
GASOLINE RANGE ORGANICS	2200 U	2200 U	2300 U	2700 U	2400 U	2600 U	2500 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D5
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0033_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB401-1218	GI-SB408-4248	GI-SB409-1218	GI-SB409-2430	GI-SB409-4854	GI-SB409-4854-D	GI-SB409-4854-AVG
LOCATION ID	GI-SB401	GI-SB408	GI-SB409	GI-SB409	GI-SB409	GI-SB409	GI-SB409
SAMPLE DATE	06/02/10	06/01/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10
TOP DEPTH	1 FT	3.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT
BOTTOM DEPTH	1.5 FT	4 FT	1.5 FT	2.5 FT	4.5 FT	4.5 FT	4.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB
PETROLEUM HYDROCARBONS (MG/KG)							
TOTAL PETROLEUM HYDROCARBONS	26 U	25 UJ	25 U	26 U	26 U	26 U	26 U

TABLE - D6
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0041_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB410-6072	GI-SB411-6072	GI-SB412-144156	GI-SB412-7296	GI-SB413-7296
LOCATION ID	GI-SB410	GI-SB411	GI-SB412	GI-SB412	GI-SB413
SAMPLE DATE	05/28/10	05/28/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	5 FT	5 FT	12 FT	6 FT	6 FT
BOTTOM DEPTH	6 FT	6 FT	13 FT	8 FT	8 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)					
2-METHYLNAPHTHALENE	69 U	70 U	76 U	75 U	74 U
ACENAPHTHENE	69 U	70 U	76 U	75 U	74 U
ACENAPHTHYLENE	69 U	70 U	76 U	75 U	74 U
ANTHRACENE	82 J	70 U	76 U	75 U	74 U
BENZO(A)ANTHRACENE	260 J	43 J	76 UJ	60 J	74 UJ
BENZO(A)PYRENE	180 J	70 U	76 U	75 U	74 U
BENZO(B)FLUORANTHENE	240 J	49 J	76 UJ	52 J	74 UJ
BENZO(G,H,I)PERYLENE	120 J	70 U	76 U	75 U	74 U
BENZO(K)FLUORANTHENE	150 J	70 UJ	76 UJ	43 J	74 UJ
CHRYSENE	350	70 U	76 U	73 J	74 U
DIBENZO(A,H)ANTHRACENE	69 UJ	70 UJ	76 UJ	75 UJ	74 UJ
FLUORANTHENE	760	69 J	76 U	110 J	74 U
FLUORENE	69 U	70 U	76 U	75 U	74 U
HIGH MOLECULAR WEIGHT PAHS	3020 J	258 J	42 J	468 J	74 UJ
INDENO(1,2,3-CD)PYRENE	85 J	70 U	76 U	75 U	74 U
LOW MOLECULAR WEIGHT PAHS	432 J	70 U	76 U	78 J	74 U
NAPHTHALENE	69 U	70 U	76 U	75 U	74 U
PHENANTHRENE	350	70 U	76 U	78 J	74 U
PYRENE	880	97 J	42 J	130 J	74 U
TOTAL PAHS	3460 J	258 J	42 J	546 J	74 UJ
METALS (MG/KG)					
ALUMINUM	6290	8280	5140	7100	7350

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D6
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0041_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB410-6072	GI-SB411-6072	GI-SB412-144156	GI-SB412-7296	GI-SB413-7296
LOCATION ID	GI-SB410	GI-SB411	GI-SB412	GI-SB412	GI-SB413
SAMPLE DATE	05/28/10	05/28/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	5 FT	5 FT	12 FT	6 FT	6 FT
BOTTOM DEPTH	6 FT	6 FT	13 FT	8 FT	8 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB
ANTIMONY	1.1 UJ	0.44 UJ	0.5 UJ	0.59 UJ	0.52 UJ
ARSENIC	10.1 J	2.8 J	1.7 J	1.8 J	2.1 J
BARIUM	32.8	37.1	13.1	23	27
BERYLLIUM	0.35	0.33	0.16 J	0.22 J	0.16 J
CADMIUM	0.21 J	0.027 UJ	0.024 UJ	0.022 UJ	0.021 UJ
CALCIUM	7260 J	1260 J	2810 J	1160 J	1030 J
CHROMIUM	9.1	14	8.3	9.8	18.8
COBALT	6.3	6.2	3.6	5.7	5.6
COPPER	17.9	16.2	7.1	13.3	13.3
IRON	22300	20500	12400	16700	18000
LEAD	22.9 J	11.6 J	7 J	7 J	7.4 J
MAGNESIUM	2100	3160	2250	2850	3570
MANGANESE	411	296	112	179	145
MERCURY	0.031 J	0.037 J	0.014 J	0.019 J	0.018 J
NICKEL	12.5 J	11.6 J	7.8 J	9.9 J	9.8 J
POTASSIUM	617	1390	654	952	1300
SELENIUM	1.1 U	1.3 U	1.2 U	1.1 U	1 U
SILVER	0.17 U	0.13 U	0.2 U	0.13 U	0.13 U
SODIUM	150 J	154 J	75.1 J	544 J	506 J
THALLIUM	0.43 U	0.53 U	0.49 U	0.44 U	0.42 U
VANADIUM	10.6	16.5	10.7	12.2	24
ZINC	65 J	46.2 J	24.5 J	27.3 J	24.8 J
PCBS (UG/KG)					
AROCLOR-1016	8.6 U	8.7 U	9.5 U	9.2 U	9.1 U
AROCLOR-1221	17 U	17 U	19 U	18 U	18 U
AROCLOR-1232	8.6 U	8.7 U	9.5 U	9.2 U	9.1 U
AROCLOR-1242	8.6 U	8.7 U	9.5 U	9.2 U	9.1 U

TABLE - D6
ANALYTICAL RESULTS - SUBSURFACE SOIL
GI_SO_BLDG0041_SB
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB410-6072	GI-SB411-6072	GI-SB412-144156	GI-SB412-7296	GI-SB413-7296
LOCATION ID	GI-SB410	GI-SB411	GI-SB412	GI-SB412	GI-SB413
SAMPLE DATE	05/28/10	05/28/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	5 FT	5 FT	12 FT	6 FT	6 FT
BOTTOM DEPTH	6 FT	6 FT	13 FT	8 FT	8 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB
AROCLOR-1248	8.6 U	8.7 U	9.5 U	9.2 U	9.1 U
AROCLOR-1254	8.6 U	8.7 U	9.5 U	9.2 U	9.1 U
AROCLOR-1260	82	8.7 U	9.5 U	9.2 U	9.1 U
TOTAL AROCLOR	82	9.89 U	10.9 U	10.5 U	10.4 U

D-2 SEDIMENT ANALYTICAL DATA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	G32-SD304F-000.5	GI-SD304-0006	GI-SD511-0006	G32-SD305A-000.5	G32-SD305B-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	05/13/10	04/30/10	08/26/05	08/26/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	IT	SD	SD	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	330 U	330 U	330 U	330 U	330 UJ	330 UJ	330 U	330 U	NA	NA	330 U	330 U
2,4,5-TRICHLOROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	NA	NA	670 U	670 U
2,4,6-TRICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
2,4-DICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
2,4-DIMETHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
2,4-DINITROPHENOL	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	670 U	NA	NA	670 U	670 UJ
2,4-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
2,6-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
2-CHLORONAPHTHALENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
2-CHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
2-METHYLNAPHTHALENE	15	9.8	20	8 J	4.7	3.3 UJ	8.32 J	19 J	3.3 U	13 J	9.3 U	3.3 U	6.4
2-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
2-NITROANILINE	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	NA	NA	670 U	670 U
2-NITROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
3,3'-DICHLOROBENZIDINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
3-NITROANILINE	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	NA	NA	670 U	670 U
4,6-DINITRO-2-METHYLPHENOL	670 UJ	670 U	670 UJ	670 UJ	670 U	670 U	670 UJ	670 UJ	670 U	NA	NA	670 U	670 U
4-BROMOPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	G32-SD304F-000.5	GI-SD304-0006	GI-SD511-0006	G32-SD305A-000.5	G32-SD305B-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	05/13/10	04/30/10	08/26/05	08/26/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	IT	SD	SD	ST	ST
4-CHLORO-3-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
4-CHLOROANILINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
4-CHLOROPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
4-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
4-NITROANILINE	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	670 U	NA	NA	670 U	670 UJ
4-NITROPHENOL	670 UJ	670 U	670 UJ	670 UJ	670 U	670 UJ	670 UJ	670 UJ	670 U	NA	NA	670 U	670 U
ACENAPHTHENE	71	75	80	47	28	16 J	43.5 J	100 J	7.5	70 J	4.2 J	4.5	25
ACENAPHTHYLENE	25	14	10	9 J	6.7	8 J	16.5 J	20 J	26	44 UJ	1.9 J	4	9
ACETOPHENONE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
ANTHRACENE	200	330	220	100 J	84	58 J	129 J	310 J	74	120 J	11	18	74
ATRAZINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
BENZALDEHYDE	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	330 UJ	330 UJ
BENZO(A)ANTHRACENE	310 J	540	350	170 J	200	110 J	210 J	550	420	220 J	25	37	140
BENZO(A)PYRENE	350	420 J	280 J	160 J	180	110 J	230 J	480	210	210 J	28	34	130
BENZO(B)FLUORANTHENE	530	600 J	360	220 J	240	160 J	345 J	610	230 J	160 J	27	51	170
BENZO(G,H,I)PERYLENE	210	290	190	96 J	97	82 J	146 J	300 J	54	120 J	21	25	86
BENZO(K)FLUORANTHENE	170	210	150	63 J	84	45 J	108 J	200 J	140	180 J	24	17	59
BIS(2-CHLOROETHOXY)METHANE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
BIS(2-CHLOROETHYL)ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	G32-SD304F-000.5	GI-SD304-0006	GI-SD511-0006	G32-SD305A-000.5	G32-SD305B-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	05/13/10	04/30/10	08/26/05	08/26/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	IT	SD	SD	ST	ST
BIS(2-ETHYLHEXYL)PHTHALATE	70 J	44 J	61 J	34 J	330 U	54 J	62 J	43 J	53 J	NA	NA	330 U	330 U
BUTYL BENZYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
CAPROLACTAM	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
CARBAZOLE	100 J	81 J	63 J	59 J	330 UJ	330 UJ	132 J	140 J	330 U	NA	NA	330 U	330 UJ
CHRYSENE	310	490	320	130 J	130	90 J	200 J	550	310 EB	230 J	31	26	110
DIBENZO(A,H)ANTHRACENE	67	89	57	27 J	30	22 J	44.5 J	90 J	22	33 J	7.1 J	7.3	25
DIBENZOFURAN	40 J	43 J	330 U	330 U	330 U	330 U	102 J	57 J	330 U	NA	NA	330 U	330 U
DIETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
DIMETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
DI-N-BUTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
DI-N-OCTYL PHTHALATE	330 U	330 UJ	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
FLUORANTHENE	620	1300	720	410	320	220 J	420 J	1300	800	520 J	49	71	290
FLUORENE	62	98	86	36 J	29	15 J	38.5 J	96 J	17	57 J	4.7 J	4.5	25
HEXACHLOROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
HEXACHLOROBUTADIENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
HEXACHLOROCYCLOPENTADIENE	330 UJ	330 UJ	330 UJ	330 R	330 UJ	330 UJ	330 UJ	330 UJ	330 U	NA	NA	330 U	330 UJ
HEXACHLOROETHANE	330 U	330 U	330 U	330 UJ	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
HIGH MOLECULAR WEIGHT PAHS	3350 J	5200 J	3340 J	1710 J	1810	1120 J	2240 J	5450 J	2850 J	2210 J	271 J	363	1350
INDENO(1,2,3-CD)PYRENE	190	260	160	83 J	90	62 J	126 J	270 J	60	130 J	16	21	73
ISOPHORONE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	G32-SD304F-000.5	GI-SD304-0006	GI-SD511-0006	G32-SD305A-000.5	G32-SD305B-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	05/13/10	04/30/10	08/26/05	08/26/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	IT	SD	SD	ST	ST
LOW MOLECULAR WEIGHT PAHS	891	1360	1150	506 J	342	211 J	551 J	1430 J	250	690 J	55.8 J	67	341
NAPHTHALENE	58	15	13	16 J	10	3.7 J	30.8 J	36 J	5.8	44 UJ	9.3 U	3.3 U	12
NITROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
N-NITROSO-DI-N-PROPYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
N-NITROSODIPHENYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
PENTACHLOROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	NA	NA	670 U	670 U
PHENANTHRENE	460	820	720	290 J	180	110 J	285 J	850	120	430 J	34	36	190
PHENOL	330 U	330 U	69 J	330 U	330 U	330 U	330 U	80 J	330 U	NA	NA	330 U	41 J
PYRENE	590	1000	750	350	440	220 J	405 J	1100	600	410 J	43	74	270
TOTAL CHLORINATED VOCS	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U
TOTAL PAHS	4240 J	6560 J	4490 J	2220 J	2150	1330 J	2780 J	6880 J	3100 J	2900 J	327 J	430	1690
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	16 U	16 U	33 U	33 UJ	33 U	16 U	16 U	3.3 U	3.3 U	NA	NA	4.2 UJ	3.3 U
4,4'-DDE	16 U	16 U	33 U	33 UJ	33 U	16 U	16 U	3.3 U	3.3 U	NA	NA	4.2 UJ	3.3 U
4,4'-DDT	16 U	16 U	33 U	33 UJ	33 U	16 U	16 U	3.3 U	6.2 R	NA	NA	4.2 UJ	3.3 U
ALDRIN	8.5 U	8.4 U	17 U	17 U	17 U	8.4 U	8.45 U	1.7 U	1.7 U	NA	NA	2.2 UJ	1.7 U
ALPHA-BHC	8.5 U	8.4 U	17 U	17 U	17 U	8.4 U	8.45 U	1.7 U	1.7 U	NA	NA	2.2 UJ	1.7 U
ALPHA-CHLORDANE	8.5 U	8.4 U	17 U	17 U	17 U	8.4 U	8.45 U	1.7 U	1.7 U	NA	NA	2.2 UJ	1.7 U
AROCLOR-1016	33 U	33 U	330 U	330 U	330 U	33 U	33 U	33 U	33 U	NA	NA	42 UJ	33 U
AROCLOR-1221	33 U	33 U	330 U	330 U	330 U	33 U	33 U	33 U	33 U	NA	NA	42 UJ	33 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	G32-SD304F-000.5	GI-SD304-0006	GI-SD511-0006	G32-SD305A-000.5	G32-SD305B-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	05/13/10	04/30/10	08/26/05	08/26/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	IT	SD	SD	ST	ST
AROCLOR-1232	33 U	33 U	330 U	330 U	330 U	33 U	33 U	33 U	33 U	NA	NA	42 UJ	33 U
AROCLOR-1242	33 U	33 U	330 U	330 U	330 U	33 U	33 U	33 U	33 U	NA	NA	42 UJ	33 U
AROCLOR-1248	33 U	33 U	330 U	330 U	330 U	33 U	33 U	33 U	33 U	NA	NA	42 UJ	33 U
AROCLOR-1254	33 U	33 U	330 U	330 U	330 U	33 U	33 U	33 U	33 U	NA	NA	42 UJ	33 U
AROCLOR-1260	840 J	880 J	3600 J	3800 J	3300 J	920 J	880 J	300 J	360	NA	NA	42 UJ	180
BETA-BHC	8.5 U	7.8 R	17 U	17 U	17 U	11 J	7.62 J	1.7 U	2.6 J	NA	NA	2.2 UJ	1.7 U
DELTA-BHC	8.5 U	8.4 U	17 U	17 U	17 U	8.4 U	8.45 U	1.7 U	1.7 U	NA	NA	2.2 UJ	1.7 U
DIELDRIN	16 U	16 U	33 U	33 U	33 U	16 U	16 U	3.3 U	3.3 U	NA	NA	4.2 UJ	3.3 U
ENDOSULFAN I	8.5 U	8.2 J	17 U	17 UJ	17 U	8.4 U	8.45 U	1.7 U	1.7 U	NA	NA	2.2 UJ	1.7 U
ENDOSULFAN II	16 U	16 U	33 U	33 UJ	33 U	16 U	16 U	3.3 U	3.3 U	NA	NA	4.2 UJ	3.3 U
ENDOSULFAN SULFATE	26 J	26 J	67 J	79 J	58 R	24 R	26 J	7.5 J	7.3 J	NA	NA	4.2 UJ	3.3 U
ENDRIN	16 U	16 U	33 U	33 U	33 U	16 U	16 U	3.3 U	3.3 U	NA	NA	4.2 UJ	3.3 U
ENDRIN ALDEHYDE	16 U	16 U	33 U	35 R	33 U	16 U	16 U	3.2 R	4.1 R	NA	NA	4.2 UJ	5.8 J
ENDRIN KETONE	16 UJ	16 U	33 U	33 UJ	33 U	19 J	13.5 J	6.7 R	7.8 J	NA	NA	4.2 UJ	3.3 U
GAMMA-BHC (LINDANE)	8.5 U	8.4 U	17 U	17 U	17 U	8.4 U	8.45 U	1.7 U	1.7 U	NA	NA	2.2 UJ	1.7 U
GAMMA-CHLORDANE	13 R	13 J	51 J	66	47 J	11 R	12 R	2.4 R	1.7 U	NA	NA	2.2 UJ	1.7 U
HEPTACHLOR	8.5 U	8.4 U	17 U	17 U	17 U	8.4 U	8.45 U	1.7 U	1.7 U	NA	NA	2.2 UJ	1.7 U
HEPTACHLOR EPOXIDE	8.5 U	8.4 U	17 U	17 U	17 U	8.4 U	8.45 U	1.7 U	1.7 U	NA	NA	2.2 UJ	1.7 U
METHOXYCHLOR	85 U	84 U	170 U	170 U	170 U	84 U	84.5 U	17 U	17 U	NA	NA	22 UJ	30
TOTAL AROCLOR	840 J	880 J	3600 J	3800 J	3300 J	920 J	880 J	300 J	360	NA	NA	42 UJ	180
TOTAL CHLORDANE	8.5 U	13 J	51 J	66	47 J	8.4 U	8.45 U	1.7 U	1.7 U	NA	NA	2.2 UJ	1.7 U
TOTAL DDD/DDE/DDT	16 U	16 U	33 U	33 UJ	33 U	16 U	16 U	3.3 U	3.3 U	NA	NA	4.2 UJ	3.3 U
TOXAPHENE	850 U	840 U	1700 U	1700 U	1700 U	840 U	845 U	170 U	170 U	NA	NA	220 UJ	170 U
PCB HOMOLOGS (UG/KG)													

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	G32-SD304F-000.5	GI-SD304-0006	GI-SD511-0006	G32-SD305A-000.5	G32-SD305B-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	05/13/10	04/30/10	08/26/05	08/26/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	IT	SD	SD	ST	ST
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.3 U	2.3 U	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.67 U	0.75 UJ	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	410	94 J	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	650	140 J	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.67 U	0.48 U	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.3 U	2.3 U	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	190	30 J	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	0.93 U	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	74	12 J	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	NA	NA	1340	276 J	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA	1340	280 J	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.67 U	0.48 U	NA	NA
METALS (MG/KG)													
ALUMINUM	4980 J	4590 J	6250 J	5960 J	5620 J	5290 J	5140 J	4290 J	6930	4840	4770	4580	4730
ANTIMONY	2.8 J	2.6 J	3.1 J	3 J	4.2 J	2.9 J	2.85 J	1.9 J	43.5 J	1.96 UJ	0.71 UJ	0.41 U	0.52 U
ARSENIC	2.4 J	2.4 J	2 J	2.9 J	2.6 J	2.1 J	2.25 J	1.9 J	0.076 UJ	0.467 J	0.278 J	2.9 J	4 J
BARIUM	11 J	9.4 J	11.2 J	12.5 J	10.3 J	15.2 J	13.1 J	11.1 J	14.1 J	8.6	9.9 J	12.5 J	11 J
BERYLLIUM	0.42	0.4	0.47	0.53	0.45	0.44	0.43	0.38	0.34	0.219	0.238	0.13	0.17
CADMIUM	0.0057 UJ	0.0057 UJ	0.0053 UJ	0.097 J	0.0056 UJ	0.0053 UJ	0.0055 UJ	0.0056 UJ	1.6 J	0.23	0.301 J	0.61 J	0.69 J

LIGHT SHADING - DETECTED;
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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	G32-SD304F-000.5	GI-SD304-0006	GI-SD511-0006	G32-SD305A-000.5	G32-SD305B-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	05/13/10	04/30/10	08/26/05	08/26/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	IT	SD	SD	ST	ST
CALCIUM	22400 J	18700 J	26900 J	10600 J	11000 J	26600 J	24500 J	9760 J	17600 J	16200	26700 J	19000 J	33200 J
CHROMIUM	10.7 J	13.7 *	12.9 J	16.2	11.7 J	10.9 J	10.8 J	8.8 J	3910	9.8 J	11.9 J	12.8	14.6
COBALT	3.1 J	2.9 J	2.7 J	3.7 J	3.1 J	2.8 J	2.95 J	2.4 J	2.8 J	3.6	3.4 J	2.8 J	3 J
COPPER	34 J	23.1 J	15.7 J	22.7 J	23.2 J	16.3 J	25.2 J	14.8 J	46.8	13.4 J	10.6 J	15 J	21.5 J
CYANIDE	0.11 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.14 J	0.12 UJ	0.115 UJ	0.13 UJ	0.12 U	NA	NA	0.12 U	0.11 U
IRON	11400	11300	14300	12600	12300	11600	11500	9470	35600	11400	14300	10100 J	11400 J
LEAD	43.6 J	20.5 J	23.5 J	59.6 J	41.9 J	35.4 J	39.5 J	15.7 J	21200	20.7 J	20.7 J	31.6 J	55.5
MAGNESIUM	2900 J	2770 J	3650 J	3050 J	2960 J	3090 J	3000 J	2390 J	3950	2870	2800 J	2400	2590
MANGANESE	108 J	99.1 J	134 J	111 J	118 J	109 J	108 J	86 J	245 J	111	117 J	91.2	102
MERCURY	0.052 J	0.043 J	0.045 J	0.047 J	0.076 J	0.044 J	0.048 J	0.034 J	0.0077 UJ	0.02 J	0.029	0.023 U	0.06
NICKEL	8.3 J	8.1 J	7.9 J	8.6 J	8.5 J	7.9 J	8.1 J	6.5 J	10.8 J	7.7	7.6 J	6.4 J	8 J
POTASSIUM	784	861	1170	980	836	988	886	768	1160	791 J	871	929 J	822 J
SELENIUM	5.2 J	5.4 J	6.5 J	5 J	6.2 J	6.4 J	5.8 J	4.4 J	0.067 UJ	1.96 U	0.71 U	0.066 U	0.064 U
SILVER	0.02 U	0.02 U	0.018 U	0.018 U	0.019 U	0.018 U	0.019 U	0.019 U	0.019 UJ	0.22 UJ	0.24 UJ	0.019 U	0.018 U
SODIUM	3300 J	4040 J	3980 J	3140 J	3250 J	3440 J	3370 J	3370 J	3440	3530	4540	2840 J	3330 J
THALLIUM	1 J	0.82 J	1.1 J	1 J	1.2 J	0.84 J	0.92 J	0.88 J	1.7 J	0.44 UJ	0.47 UJ	0.12 UJ	0.32 UJ
VANADIUM	18.5 J	15.6 J	18.5 J	16.5 J	18.4 J	18.1 J	18.3 J	13.9 J	15.2 J	15.3	18.2 J	15.5 J	15.4 J
ZINC	44.3 J	41 J	39.7 J	41.7 J	98.1 J	44.9 J	44.6 J	31.7 J	54.4 J	38.1 J	32.2 J	32.4 J	44 J
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	4400 J	7000 J	5900 J	7200 J	7900 J	8700 J	6550 J	8200 J	3000	4100	5900	13000 J	10000 J

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	G32-SD304F-000.5	GI-SD304-0006	GI-SD511-0006	G32-SD305A-000.5	G32-SD305B-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	05/13/10	04/30/10	08/26/05	08/26/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	IT	SD	SD	ST	ST
MISCELLANEOUS PARAMETERS (%)													
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	NA	NA
PERCENT CLAY	3.6	4	4.6	3.1	5.1	4	3.8	3.4	2.1	NA	NA	3.8	5.7
PERCENT COARSE SAND	5.5	2.7	8	2.8	9.9	6.4	5.95	3.2	19.2	NA	NA	3.4	6.9
PERCENT FINE SAND	60.6	61.8	50.9	69.2	39.7	60.6	60.6	71.2	11.1	NA	NA	69.2	57.3
PERCENT GRAVEL	4.1	1.7	2.4	0.8	9.4	3.2	3.65	1.2	36.6	NA	NA	1.6	0.4
PERCENT MEDIUM SAND	18.8	19.1	26.9	15.2	19	17.2	18	11.9	21.3	NA	NA	17.2	27.4
PERCENT SILT	7.3	10.7	7.2	8.9	16.9	8.6	7.95	9.1	9.9	NA	NA	4.8	2.3
PERCENT SOLIDS	77.1	81	82.3	77.7	83.4	77.7	77.4	82	91.3	NA	NA	82.6	79.5
SIEVE 1"	100	100	100	100	100	100	100	100	100	NA	100	100	100
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100	NA	NA
SIEVE 1-1/2"	100	100	100	100	100	100	100	100	100	NA	NA	100	100
SIEVE 2"	100	100	100	100	100	100	100	100	100	NA	NA	100	100
SIEVE 3"	100	100	100	100	100	100	100	100	100	NA	NA	100	100
SIEVE 3/4"	100	100	100	100	100	100	100	100	84.8	NA	100	100	100
SIEVE 3/8"	99.4	98.9	99.4	100	95.6	99.5	99.4	100	75.4	NA	100	100	100
SIEVE NO. 004	95.9	98.3	97.6	99.2	90.6	96.8	96.4	98.8	63.4	NA	99	98.4	99.6
SIEVE NO. 010	90.4	95.6	89.6	96.4	80.7	90.4	90.4	95.5	44.3	NA	94	95	92.7
SIEVE NO. 020	82.7	90	77.5	90	70.9	82.7	82.7	89.9	33.6	NA	84	88.5	80.2
SIEVE NO. 040	71.5	76.5	62.7	81.2	61.7	73.2	72.4	83.7	23	NA	59	77.8	65.3
SIEVE NO. 060	51.4	56.7	44	51.8	49.5	52.6	52	56.2	16.5	NA	38	58	42.7
SIEVE NO. 080	32.3	38	30.7	31	39.1	34	33.2	35	14.2	NA	NA	37.5	26.9
SIEVE NO. 100	24.8	28.4	23.7	24.1	34	26.5	25.6	27.3	13.4	NA	18	25.6	19.1

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	G32-SD304F-000.5	GI-SD304-0006	GI-SD511-0006	G32-SD305A-000.5	G32-SD305B-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	05/13/10	04/30/10	08/26/05	08/26/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	IT	SD	SD	ST	ST
SIEVE NO. 200	10.9	14.7	11.8	12	22	12.6	11.8	12.5	11.9	NA	8	8.7	8
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	7 J	11.5 J	10.5 J	3.1 J	2.6 J	3.6 J	5.3 J	1.2 J	0.9 J	NA	NA	3.8 J	8 J
CADMIUM	0.0043 UJ	0.0036 UJ	0.0051 UJ	0.038 J	0.0031 UJ	0.0017 UJ	0.003 UJ	0.0031 UJ	0.0021 UJ	NA	NA	0.0059 UJ	0.0016 UJ
COPPER	0.23 J	0.15 J	0.17 J	0.16 J	0.14 J	0.18 J	0.205 J	0.17 J	0.1 J	NA	NA	0.1 J	0.15 J
LEAD	0.099 J	0.095 J	0.11 J	0.16 J	2.1 J	0.28 J	0.19 J	0.089 J	0.22 J	NA	NA	0.075 J	0.19 J
MERCURY	0.00026 J	0.00021 J	0.00022 J	0.00023 J	0.00038 J	0.00022 J	0.00024 J	0.00017 J	0.00003 UJ	NA	NA	0.00011 U	0.0003
NICKEL	0.63 J	0.039 J	0.036 J	0.037 J	0.046 J	0.043 J	0.336 J	0.26 J	0.02 UJ	NA	NA	0.031 J	0.23 J
ZINC	0.36 J	0.56 J	0.36 J	0.49 J	0.85 J	0.71 J	0.535 J	0.34 J	0.14 J	NA	NA	0.37 J	0.38 J
AVS/SEM (RATIO)													
SEM/AVS	0.19	0.073	0.064	0.29	1.2	0.34	0.265	0.72	0.51	NA	NA	0.15	0.12
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
1,1,2,2-TETRACHLOROETHANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
1,1,2-TRICHLOROETHANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
1,1,2-TRICHLOROTRIFLUOROETHANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
1,1-DICHLOROETHANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
1,1-DICHLOROETHENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	6	5 U	NA	NA	6 U	7 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	G32-SD304F-000.5	GI-SD304-0006	GI-SD511-0006	G32-SD305A-000.5	G32-SD305B-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	05/13/10	04/30/10	08/26/05	08/26/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	IT	SD	SD	ST	ST
1,2,4-TRICHLOROBENZENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
1,2-DIBROMO-3-CHLOROPROPANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
1,2-DIBROMOETHANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
1,2-DICHLOROBENZENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
1,2-DICHLOROETHANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
1,2-DICHLOROPROPANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
1,3-DICHLOROBENZENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
1,4-DICHLOROBENZENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
2-BUTANONE	6 U	6 U	9 U	5 J	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
2-HEXANONE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
4-METHYL-2-PENTANONE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
ACETONE	23 JEB	18 JEB	43 JEB	18 JEB	12 JEB	16 JEB	19.5 JEB	16 JEB	42 UJ	NA	NA	240 JEB	81 JEB
BENZENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
BROMODICHLOROMETHANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
BROMOFORM	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
BROMOMETHANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 UJ	7 U
BTEX	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
CARBON DISULFIDE	2 J	4 J	3 J	7	2 J	3 J	2.5 J	12	3 J	NA	NA	5 J	2 J
CARBON TETRACHLORIDE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
CHLOROBENZENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
CHLORODIBROMOMETHANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
CHLOROETHANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	G32-SD304F-000.5	GI-SD304-0006	GI-SD511-0006	G32-SD305A-000.5	G32-SD305B-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	05/13/10	04/30/10	08/26/05	08/26/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	IT	SD	SD	ST	ST
CHLOROFORM	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
CHLOROMETHANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
CIS-1,2-DICHLOROETHENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
CIS-1,3-DICHLOROPROPENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
CYCLOHEXANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
DICHLORODIFLUOROMETHANE	6 U	6 U	9 U	6 U	6 U	4 UJ	5 UJ	5 U	5 U	NA	NA	6 U	7 U
ETHYLBENZENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
ISOPROPYLBENZENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA	NA
METHYL ACETATE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
METHYL CYCLOHEXANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
METHYL TERT-BUTYL ETHER	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
METHYLENE CHLORIDE	56 U	50 U	100 U	39 UJ	73 U	48 U	52 U	12 U	11 U	NA	NA	130 U	160 U
O-XYLENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
P-XYLENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	NA	NA	NA	6 U	7 U
STYRENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
TETRACHLOROETHENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
TOLUENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
TOTAL 1,2-DICHLOROETHENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
TOTAL CHLORINATED ETHENES	6 U	6 U	9 U	6 U	6 U	4 U	5 U	6	5 U	NA	NA	6 U	7 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	G32-SD304F-000.5	GI-SD304-0006	GI-SD511-0006	G32-SD305A-000.5	G32-SD305B-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	05/13/10	04/30/10	08/26/05	08/26/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	IT	SD	SD	ST	ST
TOTAL CHLORINATED VOCS	6 U	6 U	9 U	6 U	6 U	4 UJ	5 UJ	6	5 U	NA	NA	6 U	7 U
TOTAL XYLENES	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
TRANS-1,2-DICHLOROETHENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
TRANS-1,3-DICHLOROPROPENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
TRICHLOROETHENE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
TRICHLOROFLUOROMETHANE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
VINYL CHLORIDE	6 U	6 U	9 U	6 U	6 U	4 U	5 U	5 U	5 U	NA	NA	6 U	7 U
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	46	38	41	69	35	46	46	51	25	NA	NA	25	36
GASOLINE RANGE ORGANICS	11 U	6.1 U	17 U	9.5 U	8.6 U	7 U	9 U	10 U	8.5 U	NA	NA	7.1 U	9.5 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD305F-000.5	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5	G32-SD306B-000.5	G32-SD306C-000.5	GI-SD528-0006	G32-SD306D-000.5-D
LOCATION ID	G32-SD304	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	41 J	NA	330 U
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U	330 UJ	330 UJ	330 U	NA	330 U
2,4,5-TRICHLOROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U	660 U	670 U	NA	670 U
2,4,6-TRICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2,4-DICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2,4-DIMETHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2,4-DINITROPHENOL	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	670 U	660 UJ	670 UJ	670 UJ	660 UJ	670 UJ	NA	670 UJ
2,4-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2,6-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2-CHLORONAPHTHALENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2-CHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2-METHYLNAPHTHALENE	15	4.1	4.6	3.3 U	5.1	3.3 U	5	3.3 U	3.3 U	3.3 U	110	3.1 J	3.3 U
2-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2-NITROANILINE	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U	660 U	670 U	NA	670 U
2-NITROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
3,3'-DICHLOROBENZIDINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
3-NITROANILINE	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U	660 U	670 U	NA	670 U
4,6-DINITRO-2-METHYLPHENOL	670 UJ	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U	660 U	670 UJ	NA	670 U
4-BROMOPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD305F-000.5	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5	G32-SD306B-000.5	G32-SD306C-000.5	GI-SD528-0006	G32-SD306D-000.5-D
LOCATION ID	G32-SD304	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	ST
4-CHLORO-3-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
4-CHLOROANILINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
4-CHLOROPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
4-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	490	330 U	330 U	330 U	400	330 U	NA	330 U
4-NITROANILINE	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	670 U	660 UJ	670 UJ	670 UJ	660 UJ	670 UJ	NA	670 UJ
4-NITROPHENOL	670 UJ	670 U	670 U	670 U	670 U	670 U	660 UJ	670 U	670 UJ	660 UJ	670 UJ	NA	670 U
ACENAPHTHENE	71	25	16	12	21	3.3 U	33	28 J	6.3	4.6	500	13	5.7
ACENAPHTHYLENE	25	5	8.3	6.8	6.1	3.8	6.8	6.7 J	6.6	5.3	12	2.2 J	3.3 U
ACETOPHENONE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
ANTHRACENE	200	68	54	49	68	10	88 J	86 J	22	17	830	22	21 J
ATRAZINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
BENZALDEHYDE	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	330 UJ
BENZO(A)ANTHRACENE	310 J	110	81	80	100	22	180 J	140 J	47	39	1100	55	28 J
BENZO(A)PYRENE	350	100	70	72	91	25	150 J	140 J	43	26	820	53 J	27 J
BENZO(B)FLUORANTHENE	530	120	110	88	120	35	180 J	180 J	57	48	1000	46	36 J
BENZO(G,H,I)PERYLENE	210	64	46	46	58	11	100 J	76 J	35	29	380 J	38 J	16 J
BENZO(K)FLUORANTHENE	170	45	30	37	36	15	60 J	65 J	18	18	330	40	13 J
BIS(2-CHLOROETHOXY)METHANE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
BIS(2-CHLOROETHYL)ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD305F-000.5	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5	G32-SD306B-000.5	G32-SD306C-000.5	GI-SD528-0006	G32-SD306D-000.5-D
LOCATION ID	G32-SD304	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	ST
BIS(2-ETHYLHEXYL)PHTHALATE	70 J	46 J	52 J	44 J	43 J	53 J	57 J	40 J	39 J	330 U	35 J	NA	41 J
BUTYL BENZYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
CAPROLACTAM	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
CARBAZOLE	100 J	330 UJ	330 UJ	330 UJ	330 UJ	330 U	330 UJ	330 UJ	330 UJ	330 U	560 J	NA	330 UJ
CHRYSENE	310	73	74	53	68	27 EB	120 J	100 J	29	27	1100	54	21 J
DIBENZO(A,H)ANTHRACENE	67	18	14	13	17	3.6	28 J	22 J	9.3	8.6	150	12	5.4 J
DIBENZOFURAN	40 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	300 J	NA	330 U
DIETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
DIMETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
DI-N-BUTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
DI-N-OCTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
FLUORANTHENE	620	230	270	150	200	49	440	290 J	68	50	2700	120	47 J
FLUORENE	62	21	12	11	21	3.3 U	26	24 J	5.1	4.8	390	9.3	5.6
HEXACHLOROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
HEXACHLOROBUTADIENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
HEXACHLOROCYCLOPENTADIENE	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	330 UJ
HEXACHLOROETHANE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
HIGH MOLECULAR WEIGHT PAHS	3350 J	1000	945	736	921	239	1660 J	1410 J	414	326	10100 J	551 J	269 J
INDENO(1,2,3-CD)PYRENE	190	53	40	37	51	11	87 J	68 J	26	22	380 J	33	14 J
ISOPHORONE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD305F-000.5	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5	G32-SD306B-000.5	G32-SD306C-000.5	GI-SD528-0006	G32-SD306D-000.5-D
LOCATION ID	G32-SD304	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	ST
LOW MOLECULAR WEIGHT PAHS	891	291	213	192	270	31.8	406 J	320 J	73	64	4530	124 J	68.8 J
NAPHTHALENE	58	8.2	7.7	3.7	8.4	3.3 U	7.2	5.1 J	3.3 U	4.3	290	8.8 U	4.5
NITROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
N-NITROSO-DI-N-PROPYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
N-NITROSODIPHENYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
PENTACHLOROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U	660 U	670 U	NA	670 U
PHENANTHRENE	460	160	110	110	140	18	240 J	170 J	33	28	2400	74	32 J
PHENOL	330 U	330 U	330 U	330 U	330 U	220 J	330 U	330 U	36 J	370	330 U	NA	330 U
PYRENE	590	190	210	160	180	40	310 J	330 J	82	58	2100	100 J	62 J
TOTAL CHLORINATED VOCS	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
TOTAL PAHS	4240 J	1290	1160	928	1190	270	2060 J	1730 J	487	390	14600 J	675 J	338 J
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	16 U	3.3 U	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	4.3 U	3.3 U	NA	3.3 U
4,4'-DDE	16 U	3.3 U	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	4.3 U	3.3 U	NA	3.3 U
4,4'-DDT	16 U	3.3 U	16 U	3.3 U	3.3 U	5.8 R	3.3 U	3.3 U	3.5 U	4.3 U	3.3 U	NA	3.3 U
ALDRIN	8.5 U	2 J	8.5 U	1.9 J	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	2.2 U	1.7 U	NA	1.7 U
ALPHA-BHC	8.5 U	1.7 U	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	2.2 U	1.7 U	NA	1.7 U
ALPHA-CHLORDANE	8.5 U	1.7 U	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	2.2 U	1.7 U	NA	1.7 U
AROCLOR-1016	33 U	33 U	330 U	33 U	33 U	33 U	33 U	33 U	35 U	43 U	33 U	NA	33 U
AROCLOR-1221	33 U	33 U	330 U	33 U	33 U	33 U	33 U	33 U	35 U	43 U	33 U	NA	33 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD305F-000.5	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5	G32-SD306B-000.5	G32-SD306C-000.5	GI-SD528-0006	G32-SD306D-000.5-D
LOCATION ID	G32-SD304	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	ST
AROCLOR-1232	33 U	33 U	330 U	33 U	33 U	33 U	33 U	33 U	35 U	43 U	33 U	NA	33 U
AROCLOR-1242	33 U	33 U	330 U	33 U	33 U	33 U	33 U	33 U	35 U	43 U	33 U	NA	33 U
AROCLOR-1248	33 U	33 U	330 U	33 U	33 U	39 J	33 U	33 U	35 U	43 U	33 U	NA	33 U
AROCLOR-1254	33 U	33 U	330 U	33 U	33 U	33 U	33 U	33 U	35 U	43 U	33 U	NA	33 U
AROCLOR-1260	840 J	230	2200 J	220	350	280	170 J	33 UJ	230 J	100	520 J	NA	33 UJ
BETA-BHC	8.5 U	2.1 J	8.5 U	4.1 J	2.8	1.7 U	1.7 U	1.7 U	1.8 U	2.2 U	1.7 U	NA	1.7 U
DELTA-BHC	8.5 U	1.7 U	8.5 U	1.6 J	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	2.2 U	1.7 U	NA	1.7 U
DIELDRIN	16 U	3.3 U	16 J	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	4.3 U	3.3 U	NA	3.3 U
ENDOSULFAN I	8.5 U	1.7 U	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	2.2 U	1.7 U	NA	1.7 U
ENDOSULFAN II	16 U	3.3 U	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	4.3 U	3.3 U	NA	3.3 U
ENDOSULFAN SULFATE	26 J	6.4 J	16 U	3.3 U	9.4 J	6.9 J	4.6 J	3.3 U	7.8 J	4.3 U	11 J	NA	3.3 U
ENDRIN	16 U	3.3 U	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	4.3 U	3.3 U	NA	3.3 U
ENDRIN ALDEHYDE	16 U	3.3 U	20 R	3.3 U	3.9 R	3.3 U	3.3 U	3.3 U	3.5 U	4.3 U	4.9 R	NA	3.3 U
ENDRIN KETONE	16 UJ	3.3 U	16 U	3.3 R	3.3 U	6.4 J	3.3 U	3.3 U	3.4 J	4.3 U	3.3 U	NA	3.3 U
GAMMA-BHC (LINDANE)	8.5 U	1.7 U	8.5 U	1.7 U	1.1 J	1.7 U	1.7 U	1.7 U	1.8 U	2.2 U	1.7 U	NA	1.7 U
GAMMA-CHLORDANE	13 R	1.7 U	8.5 U	1.9 J	2 R	2.7 J	1.7 U	1.7 U	3.6	2.2 U	6	NA	1.7 U
HEPTACHLOR	8.5 U	1.7 U	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	2.2 U	1.7 U	NA	1.7 U
HEPTACHLOR EPOXIDE	8.5 U	1.7 U	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	2.2 U	1.7 U	NA	1.7 U
METHOXYCHLOR	85 U	17 U	85 U	17 U	17 U	17 U	17 U	17 U	18 U	22 U	17 U	NA	17 U
TOTAL AROCLOR	840 J	230	2200 J	220	350	319 J	170 J	33 UJ	230 J	100	520 J	NA	33 UJ
TOTAL CHLORDANE	8.5 U	1.7 U	8.5 U	1.9 J	1.7 U	2.7 J	1.7 U	1.7 U	3.6	2.2 U	6	NA	1.7 U
TOTAL DDD/DDE/DDT	16 U	3.3 U	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	4.3 U	3.3 U	NA	3.3 U
TOXAPHENE	850 U	170 U	850 U	170 U	170 U	170 U	170 U	170 U	180 U	220 U	170 U	NA	170 U
PCB HOMOLOGS (UG/KG)													

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD305F-000.5	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5	G32-SD306B-000.5	G32-SD306C-000.5	GI-SD528-0006	G32-SD306D-000.5-D
LOCATION ID	G32-SD304	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	ST
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2 U	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.45 U	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.45 U	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2 U	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.8 U	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.88 U	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.1 J	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	56.1 J	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	63.8 J	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.45 U	NA
METALS (MG/KG)													
ALUMINUM	4980 J	5500 J	6020 J	6010 J	5000 J	7010	7210 J	6820 J	7640 J	7050	5840 J	4450	6160 J
ANTIMONY	2.8 J	3.2 J	2.8 J	3.2 J	2 J	0.055 UJ	2.6 J	2.7 J	2.4 J	0.055 UJ	3 J	0.67 UJ	2.6 J
ARSENIC	2.4 J	2.1 J	2.3 J	2.1 J	1.8 J	4.6 J	2.1 J	2.4 J	1.9 J	3 J	1.8 J	0.841 J	2.1 J
BARIUM	11 J	8.7 J	10.7 J	10.3 J	10.5 J	8.5 J	13.6 J	13.4 J	16.2 J	27 J	11.9 J	12.9	14.5 J
BERYLLIUM	0.42	0.39	0.47	0.43	0.42	0.32	0.51	0.5	0.51	0.41	0.47	0.253	0.47
CADMIUM	0.0057 UJ	0.0054 UJ	0.0055 UJ	0.0055 UJ	0.0056 UJ	0.47 UJ	0.0053 UJ	0.0053 UJ	0.0056 UJ	0.3 UJ	0.0053 UJ	0.17 J	0.0055 UJ

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD305F-000.5	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5	G32-SD306B-000.5	G32-SD306C-000.5	GI-SD528-0006	G32-SD306D-000.5-D
LOCATION ID	G32-SD304	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	ST
CALCIUM	22400 J	41100 J	36600 J	43300 J	24900 J	21900 J	29400 J	4950 J	22000 J	11000 J	22300 J	35400	15500 J
CHROMIUM	10.7 J	14.1 J	16.2	15.5 J	17.4	26.3 J	12.2 J	12.1 J	13.9 J	12.5	12.3 J	8.9 J	11 J
COBALT	3.1 J	2.5 J	3 J	3.2 J	2.4 J	3.9 J	3.5 J	3.5 J	4 J	3.4 J	3.3 J	3	3.1 J
COPPER	34 J	23.3 J	38 J	23.8 J	26 J	77.8	17.3 J	18.5 J	20.4 J	20.7	14.1 J	16.4 J	14.7 J
CYANIDE	0.11 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	NA	0.12 UJ
IRON	11400	13200	13200	13000	10900	57300	15100	12900	15800	17200 J	11700	12100	12100
LEAD	43.6 J	35 J	48.8 J	29.4 J	24.6 J	17.7 J	68.8 J	32.9 J	419 J	690 J	61.6 J	96.8 J	85.9 J
MAGNESIUM	2900 J	3210 J	3360 J	3660 J	3440 J	6340	3610 J	3080 J	4220 J	3390	3040 J	2660	2940 J
MANGANESE	108 J	123 J	127 J	124 J	114 J	418 J	142 J	116 J	153 J	140 J	118 J	127	115 J
MERCURY	0.052 J	0.036 J	0.061 J	0.057 J	0.054 J	0.0072 U	0.047 J	0.041 J	0.045 J	0.066 J	0.045 J	0.018 J	0.022 J
NICKEL	8.3 J	7.6 J	9.3 J	9.8 J	7.1 J	19 J	9.2 J	9.3 J	9.1 J	9.8 J	8 J	7.3	8.3 J
POTASSIUM	784	858	981	898	746	941	1020	922	984	954 J	928	788 J	878
SELENIUM	5.2 J	7 J	7.6 J	6.6 J	5.6 J	0.066 UJ	6.5 J	4.5 J	6 J	0.066 UJ	6.6 J	2 U	4.8 J
SILVER	0.02 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 UJ	0.018 U	0.018 U	0.019 U	0.019 UJ	0.018 U	0.254 UJ	0.019 U
SODIUM	3300 J	3570 J	3760 J	3490 J	3240 J	2750	3260 J	2460 J	3800 J	2870 J	3080 J	3410	2880 J
THALLIUM	1 J	0.71 UJ	0.84 UJ	0.78 UJ	0.91 J	1.1 J	1.3 J	1.2 J	1.3 J	0.078 U	1.1 J	0.123 J	1.1 J
VANADIUM	18.5 J	15.3 J	20.6 J	19.4 J	16.6 J	16.5 J	24 J	15.6 J	24.1 J	19.1 J	17 J	14.2	15.7 J
ZINC	44.3 J	47 J	46.8 J	50 J	44.8 J	39.5 J	44.6 J	43.5 J	64.4 J	131 J	40.5 J	40 J	41.2 J
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	4400 J	5400 J	4800 J	8600 J	5400 J	7400 J	14000 J	9800 J	12000 J	3800	7500 J	4400	6800 J

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD305F-000.5	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5	G32-SD306B-000.5	G32-SD306C-000.5	GI-SD528-0006	G32-SD306D-000.5-D
LOCATION ID	G32-SD304	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	ST
MISCELLANEOUS PARAMETERS (%)													
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-9999	NA
PERCENT CLAY	3.6	4.1	5.2	5.2	4	2.7	6.2	8.9	4.5	7.5	5.8	NA	9
PERCENT COARSE SAND	5.5	9.4	9.1	10	8.4	25.2	6.3	2.1	5.6	9.1	3.5	NA	4.5
PERCENT FINE SAND	60.6	42.8	54	43.7	60.1	9	34.6	37.4	27.8	32.1	47.2	NA	43.5
PERCENT GRAVEL	4.1	2.9	3.6	9.6	2.9	28.9	9.4	2.3	3	3.7	0.8	NA	1.4
PERCENT MEDIUM SAND	18.8	36	22.8	24.1	20.7	30	28.7	19.5	51.9	38.1	21	NA	11.9
PERCENT SILT	7.3	4.9	5.3	7.5	3.9	4.1	14.8	29.8	7.2	9.6	21.7	NA	29.6
PERCENT SOLIDS	77.1	80.6	80.3	79.6	83.6	77.9	79.8	82.6	78.9	79.4	80.1	NA	81
SIEVE 1"	100	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100	NA
SIEVE 1-1/2"	100	100	100	100	100	100	100	100	100	100	100	NA	100
SIEVE 2"	100	100	100	100	100	100	100	100	100	100	100	NA	100
SIEVE 3"	100	100	100	100	100	100	100	100	100	100	100	NA	100
SIEVE 3/4"	100	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE 3/8"	99.4	100	100	94.8	100	85	93.1	98.5	99	100	100	100	100
SIEVE NO. 004	95.9	97.1	96.4	90.4	97.1	71.1	90.6	97.7	97	96.3	99.2	97	98.6
SIEVE NO. 010	90.4	87.6	87.2	80.4	88.7	45.8	84.3	95.6	91.4	87.3	95.7	90	94
SIEVE NO. 020	82.7	71	76	68.5	80.2	28.5	73.7	91.3	74.8	78.5	87.8	82	88.3
SIEVE NO. 040	71.5	51.7	64.4	56.4	67.9	15.9	55.6	76.1	39.5	49.2	74.7	47	82.1
SIEVE NO. 060	51.4	35.3	48.2	43.7	49.1	9.5	35.2	66.7	20.7	29.2	56.4	19	63.4
SIEVE NO. 080	32.3	23.3	32.5	31.3	32.6	8.2	30.2	60	17.1	24.8	46.6	NA	57
SIEVE NO. 100	24.8	16.8	23.2	23.8	22.7	7.9	28.1	55	15.9	22.6	41.8	11	53.7

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD305F-000.5	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5	G32-SD306B-000.5	G32-SD306C-000.5	GI-SD528-0006	G32-SD306D-000.5-D
LOCATION ID	G32-SD304	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	ST
SIEVE NO. 200	10.9	8.9	10.5	12.6	7.8	6.8	21	38.6	11.7	17.1	27.6	7	38.6
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	7 J	7.4 J	5.9 J	7.3 J	2 J	7.9 J	2.7 J	3.3 J	0.61 UJ	4 J	3.6 J	NA	7.2 J
CADMIUM	0.0043 UJ	0.00086 UJ	0.0025 UJ	0.0073 UJ	0.0052 UJ	0.0021 UJ	0.0021 UJ	0.0049 UJ	0.019 UJ	0.0061 UJ	0.0064 UJ	NA	0.0048 UJ
COPPER	0.23 J	0.077 J	0.42 J	0.17 J	0.16 J	0.083 UJ	0.076 UJ	0.16 J	0.14 J	0.39 J	0.21 J	NA	0.2 J
LEAD	0.099 J	0.057 J	0.083 J	0.088 J	0.23 J	0.028 UJ	0.29 J	0.078 J	1.1 J	2.3 J	0.24 J	NA	0.5 J
MERCURY	0.00026 J	0.00018 J	0.0003 J	0.00028 J	0.00027 J	0.00003 U	0.00023 J	0.0002 J	0.00022 J	0.00033 J	0.00022 J	NA	0.00011 J
NICKEL	0.63 J	0.031 J	1.2 J	0.061 J	0.048 J	0.11 UJ	0.036 UJ	0.073 UJ	0.031 UJ	0.57 J	0.48 J	NA	0.037 UJ
ZINC	0.36 J	0.31 J	0.33 J	0.44 J	0.49 J	0.16 J	0.38 J	0.32 J	0.92 J	0.72 J	0.37 J	NA	0.47 J
AVS/SEM (RATIO)													
SEM/AVS	0.19	0.064	0.34	0.1	0.46	0.02	0.25	0.17	3.5	1	0.36	NA	0.16
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
1,1,2,2-TETRACHLOROETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
1,1,2-TRICHLOROETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
1,1-DICHLOROETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
1,1-DICHLOROETHENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD305F-000.5	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5	G32-SD306B-000.5	G32-SD306C-000.5	GI-SD528-0006	G32-SD306D-000.5-D
LOCATION ID	G32-SD304	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	ST
1,2,4-TRICHLOROBENZENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
1,2-DIBROMO-3-CHLOROPROPANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
1,2-DIBROMOETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
1,2-DICHLOROBENZENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
1,2-DICHLOROETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
1,2-DICHLOROPROPANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
1,3-DICHLOROBENZENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
1,4-DICHLOROBENZENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
2-BUTANONE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	2 J	7	8 U	NA	5 U
2-HEXANONE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
4-METHYL-2-PENTANONE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
ACETONE	23 JEB	20 JEB	62 JEB	80 JEB	20 JEB	36 UJ	29 JEB	31 JEB	190 JEB	34 JEB	93 JEB	NA	31 JEB
BENZENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
BROMODICHLOROMETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
BROMOFORM	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
BROMOMETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
BTEX	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
CARBON DISULFIDE	2 J	2 J	3 J	2 J	7 J	3 J	2 J	10	6 U	2 J	2 J	NA	3 J
CARBON TETRACHLORIDE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
CHLOROBENZENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
CHLORODIBROMOMETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
CHLOROETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD305F-000.5	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5	G32-SD306B-000.5	G32-SD306C-000.5	GI-SD528-0006	G32-SD306D-000.5-D
LOCATION ID	G32-SD304	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	ST
CHLOROFORM	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
CHLOROMETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
CIS-1,2-DICHLOROETHENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
CIS-1,3-DICHLOROPROPENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
CYCLOHEXANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
DICHLORODIFLUOROMETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 UJ	7 UJ	6 UJ	6 UJ	8 UJ	NA	5 UJ
ETHYLBENZENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
ISOPROPYLBENZENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
M+P-XYLENES	NA	NA	NA	NA	NA	5 U	NA	NA	NA	6 U	NA	NA	NA
METHYL ACETATE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
METHYL CYCLOHEXANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
METHYL TERT-BUTYL ETHER	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
METHYLENE CHLORIDE	56 U	62 U	83 U	91 U	86 U	37 U	22 UJ	7 U	10 U	14 U	14 U	NA	9 UJ
O-XYLENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
P-XYLENE	6 U	7 U	9 U	7 U	8 U	NA	7 U	7 U	6 U	NA	8 U	NA	5 U
STYRENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
TETRACHLOROETHENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
TOLUENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
TOTAL 1,2-DICHLOROETHENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
TOTAL CHLORINATED ETHENES	6 U	7 U	9 U	7 U	8 U	5 U	7 U	1 J	6 U	6 U	8 U	NA	5 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD305F-000.5	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5	G32-SD306B-000.5	G32-SD306C-000.5	GI-SD528-0006	G32-SD306D-000.5-D
LOCATION ID	G32-SD304	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	ST
TOTAL CHLORINATED VOCS	6 U	7 U	9 U	7 U	8 U	5 U	7 UJ	1 J	6 UJ	6 UJ	8 UJ	NA	5 UJ
TOTAL XYLENES	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
TRANS-1,2-DICHLOROETHENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
TRANS-1,3-DICHLOROPROPENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
TRICHLOROETHENE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	1 J	6 U	6 U	8 U	NA	5 U
TRICHLOROFLUOROMETHANE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
VINYL CHLORIDE	6 U	7 U	9 U	7 U	8 U	5 U	7 U	7 U	6 U	6 U	8 U	NA	5 U
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	46	49	28	31	35	36 J	34	24 J	32	35	28	NA	26
GASOLINE RANGE ORGANICS	11 U	11 U	12 U	8.7 U	9.8 U	6.5 U	13 U	8 U	10 U	8.1 U	9.5 U	NA	8.5 U

LIGHT SHADING - DETECTED;
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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	G32-SD306F-000.5	GI-SD531-0006	G32-SD307-000.5	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5
LOCATION ID	G32-SD304	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD306F	G32-SD307	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309
SAMPLE DATE	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/30/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	SD	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	330 U	330 UJ	330 U	330 U	330 U	NA	330 U	330 U	330 UJ	330 UJ	330 UJ	330 UJ
2,4,5-TRICHLOROPHENOL	670 U	670 U	665 U	670 U	670 U	670 U	NA	670 U	670 U	660 U	670 U	670 U	670 U
2,4,6-TRICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DIMETHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DINITROPHENOL	670 UJ	670 UJ	665 UJ	670 UJ	670 UJ	670 U	NA	670 UJ	670 UJ	660 UJ	670 UJ	670 UJ	670 UJ
2,4-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 UJ	330 U	330 U	330 U	330 U	330 U
2,6-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
2-CHLORONAPHTHALENE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
2-CHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
2-METHYLNAPHTHALENE	15	6.9	3.32	4.28	3.3 U	3.3 U	3.5 J	3.3 U	4.2	3.3 U	3.3 U	3.3 U	5.1
2-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
2-NITROANILINE	670 U	670 U	665 U	670 U	670 U	670 U	NA	670 U	670 U	660 U	670 U	670 U	670 U
2-NITROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
3,3'-DICHLOROBENZIDINE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
3-NITROANILINE	670 U	670 U	665 U	670 U	670 U	670 U	NA	670 U	670 U	660 U	670 U	670 U	670 U
4,6-DINITRO-2-METHYLPHENOL	670 UJ	670 UJ	665 U	670 UJ	670 U	670 U	NA	670 U	670 UJ	660 U	670 U	670 U	670 U
4-BROMOPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	G32-SD306F-000.5	GI-SD531-0006	G32-SD307-000.5	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5
LOCATION ID	G32-SD304	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD306F	G32-SD307	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309
SAMPLE DATE	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/30/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	SD	ST	ST	ST	ST	ST	ST
4-CHLORO-3-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
4-CHLOROANILINE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
4-CHLOROPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
4-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	400	NA	43 J	330 U	170 J	47 J	330 U	330 U
4-NITROANILINE	670 UJ	670 UJ	665 UJ	670 UJ	670 UJ	670 U	NA	670 U	670 UJ	660 UJ	670 UJ	670 UJ	670 UJ
4-NITROPHENOL	670 UJ	670 UJ	665 UJ	670 UJ	670 U	670 U	NA	670 U	670 UJ	660 UJ	670 UJ	670 UJ	670 UJ
ACENAPHTHENE	71	54 J	19.4	41 J	6.8	4.2	17	6.7	14	3.3 U	12	3.3 U	27
ACENAPHTHYLENE	25	17 J	4.22	11.8 J	5.3	12	6 J	6.2	3.3 U	3.3 U	3.3 U	3.3 U	4.2
ACETOPHENONE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
ANTHRACENE	200	260 J	54.5 J	173 J	43	24	32	15	45	9.6	46	9.4	72
ATRAZINE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
BENZALDEHYDE	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
BENZO(A)ANTHRACENE	310 J	460	104 J	300 J	99	56	69	30	56	16	59	27	100
BENZO(A)PYRENE	350	400	88.5 J	270 J	130	68	77 J	33	43	17	47	28	83
BENZO(B)FLUORANTHENE	530	520	108 J	350 J	170	92	93	49	48	26	57	35	100
BENZO(G,H,I)PERYLENE	210	260 J	58 J	168 J	66	31	78 J	13	30	12	34	24	52
BENZO(K)FLUORANTHENE	170	170 J	36.5 J	118 J	60	38	64	19	17	9.2	21	13	38
BIS(2-CHLOROETHOXY)METHANE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
BIS(2-CHLOROETHYL)ETHER	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U

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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	G32-SD306F-000.5	GI-SD531-0006	G32-SD307-000.5	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5
LOCATION ID	G32-SD304	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD306F	G32-SD307	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309
SAMPLE DATE	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/30/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	SD	ST	ST	ST	ST	ST	ST
BIS(2-ETHYLHEXYL)PHTHALATE	70 J	40 J	49 J	40 J	330 U	51 J	NA	330 U	47 J	330 U	330 U	330 U	330 U
BUTYL BENZYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
CAPROLACTAM	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
CARBAZOLE	100 J	330 UJ	330 UJ	330 UJ	330 UJ	330 U	NA	330 U	330 UJ	330 U	330 U	330 U	330 U
CHRYSENE	310	440	70.5 J	270 J	83	61 EB	82	30	39	18	38	18	75
DIBENZO(A,H)ANTHRACENE	67	72 J	16.7 J	47 J	20	10	25	4	8.6	3.3 U	9.2	6.6	17
DIBENZOFURAN	40 J	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
DIETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
DIMETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
DI-N-BUTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
DI-N-OCTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
FLUORANTHENE	620	1100 J	244 J	695 J	120	96	140	70	110	36	120	36	220
FLUORENE	62	52 J	15.8	38 J	6.4	6	13	7.3	12	3.3 U	14	3.3 U	31
HEXACHLOROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
HEXACHLOROBUTADIENE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
HEXACHLOROCYCLOPENTADIENE	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 U	NA	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
HEXACHLOROETHANE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
HIGH MOLECULAR WEIGHT PAHS	3350 J	4550 J	964 J	2980 J	1030	591	824 J	313	466	175	505	238	891
INDENO(1,2,3-CD)PYRENE	190	230 J	50.5 J	149 J	60	29	66	13	25	9.8	28	18	46
ISOPHORONE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	G32-SD306F-000.5	GI-SD531-0006	G32-SD307-000.5	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5
LOCATION ID	G32-SD304	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD306F	G32-SD307	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309
SAMPLE DATE	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/30/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	SD	ST	ST	ST	ST	ST	ST
LOW MOLECULAR WEIGHT PAHS	891	961 J	237 J	640 J	108	90.1	166 J	79.2	177	26.6	172	29.4	327
NAPHTHALENE	58	11 J	5.85	8.05 J	3.3 U	3.9	10 U	4	9.5	3.3 U	6	3.3 U	7.3
NITROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
N-NITROSO-DI-N-PROPYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
N-NITROSODIPHENYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
PENTACHLOROPHENOL	670 U	670 U	665 U	670 U	670 U	670 U	NA	670 U	670 U	660 U	670 U	670 U	670 U
PHENANTHRENE	460	560	136 J	365 J	46	40	95	40	92	17	94	20	180
PHENOL	330 U	330 U	330 U	330 U	330 U	290 J	NA	36 J	330 U	330 U	62 J	330 U	330 U
PYRENE	590	900 J	186 J	615 J	220	110	130 J	52	89	31	92	32	160
TOTAL CHLORINATED VOCS	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 U
TOTAL PAHS	4240 J	5510 J	1200 J	3620 J	1140	681	990 J	392	642	202	677	267	1220
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	4.1 U	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U
4,4'-DDE	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	4.1 U	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U
4,4'-DDT	16 U	3.3 U	3.3 U	3.3 U	3.3 U	4.9 R	NA	4.1 U	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U
ALDRIN	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.1 U	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U
ALPHA-BHC	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.1 U	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U
ALPHA-CHLORDANE	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.1 U	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U
AROCLOR-1016	33 U	33 U	33 U	33 U	33 U	33 U	NA	41 U	33 U	42 U	41 U	46 U	52 U
AROCLOR-1221	33 U	33 U	33 U	33 U	33 U	33 U	NA	41 U	33 U	42 U	41 U	46 U	52 U

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ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	G32-SD306F-000.5	GI-SD531-0006	G32-SD307-000.5	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5
LOCATION ID	G32-SD304	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD306F	G32-SD307	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309
SAMPLE DATE	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/30/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	SD	ST	ST	ST	ST	ST	ST
AROCLOR-1232	33 U	33 U	33 U	33 U	33 U	33 U	NA	41 U	33 U	42 U	41 U	46 U	52 U
AROCLOR-1242	33 U	33 U	33 U	33 U	33 U	33 U	NA	41 U	33 U	42 U	41 U	46 U	52 U
AROCLOR-1248	33 U	33 U	33 U	33 U	33 U	33 U	NA	41 U	33 U	42 U	41 U	46 U	52 U
AROCLOR-1254	33 U	33 U	33 U	33 U	33 U	33 U	NA	41 U	33 U	42 U	41 U	46 U	52 U
AROCLOR-1260	840 J	74 J	93.2 J	45.2 J	33 U	190 J	NA	41 U	33 U	42 U	50	46 U	52 U
BETA-BHC	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	3.9	NA	4.1 J	1.7 U	2.2 U	2.1 U	2.4 U	6.4
DELTA-BHC	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.1 U	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U
DIELDRIN	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	4.1 U	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U
ENDOSULFAN I	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.1 U	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U
ENDOSULFAN II	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	4.1 U	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U
ENDOSULFAN SULFATE	26 J	3.3 U	3.12 J	3.3 U	3.3 U	4.2 R	NA	4.1 U	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U
ENDRIN	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	4.1 U	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U
ENDRIN ALDEHYDE	16 U	5.6	3.3 U	3.62	3.3 U	4.2 R	NA	4.1 U	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U
ENDRIN KETONE	16 UJ	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	4.1 U	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U
GAMMA-BHC (LINDANE)	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.1 U	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U
GAMMA-CHLORDANE	13 R	1.7 U	1.7 U	1.7 U	1.7 U	2.5 R	NA	2.1 U	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U
HEPTACHLOR	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.1 U	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U
HEPTACHLOR EPOXIDE	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.1 U	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U
METHOXYCHLOR	85 U	17 U	17 U	17 U	17 U	17 U	NA	21 U	17 U	22 U	21 U	24 U	27 U
TOTAL AROCLOR	840 J	74 J	93.2 J	45.2 J	33 U	190 J	NA	41 U	33 U	42 U	50	46 U	52 U
TOTAL CHLORDANE	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.1 U	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U
TOTAL DDD/DDE/DDT	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	4.1 U	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U
TOXAPHENE	850 U	170 U	170 U	170 U	170 U	170 U	NA	210 U	170 U	220 U	210 U	240 U	270 U
PCB HOMOLOGS (UG/KG)													

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

SAMPLE ID	G32-SD304D-000.5	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	G32-SD306F-000.5	GI-SD531-0006	G32-SD307-000.5	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5
LOCATION ID	G32-SD304	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD306F	G32-SD307	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309
SAMPLE DATE	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/30/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	SD	ST	ST	ST	ST	ST	ST
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	3.8 U	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	0.77 U	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	5.1 J	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	14	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	0.77 U	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	3.8 U	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	6.5 UJ	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	1.5 U	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	1.9 U	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	19.1 J	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	33.1 J	NA	NA	NA	NA	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	9 U	NA	NA	NA	NA	NA	NA
METALS (MG/KG)													
ALUMINUM	4980 J	5800 J	6680 J	6310 J	6600 J	5640	4570	4450	4850 J	4870	5310	5220	6300
ANTIMONY	2.8 J	2.5 J	2.6 J	2.6 J	2.2 J	0.82 UJ	0.75 UJ	0.055 UJ	2.7 J	0.055 UJ	0.056 UJ	0.11 UJ	0.41 UJ
ARSENIC	2.4 J	2.1 J	2.1 J	2.25 J	2.1 J	3.9 J	1.4 J	1.6 J	1.8 J	2.6 J	1.7 J	1.7 J	2.3 J
BARIUM	11 J	10.6 J	14 J	12 J	11.8 J	13.6 J	10.7	7.5 J	7.9 J	21.1 J	19 J	10.1 J	9.6 J
BERYLLIUM	0.42	0.42	0.49	0.46	0.56	0.37	0.242 J	0.24	0.42	0.22	0.21	0.22	0.31
CADMIUM	0.0057 UJ	0.0056 UJ	0.0054 UJ	0.00545 UJ	0.0053 UJ	0.21 UJ	0.288	0.055 UJ	0.0053 UJ	0.069 UJ	0.066 UJ	0.046 UJ	0.13 UJ

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	G32-SD306F-000.5	GI-SD531-0006	G32-SD307-000.5	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5
LOCATION ID	G32-SD304	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD306F	G32-SD307	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309
SAMPLE DATE	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/30/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	SD	ST	ST	ST	ST	ST	ST
CALCIUM	22400 J	10100 J	22400 J	7520 J	9390 J	33200 J	18000	34800 J	46700 J	20900 J	36800 J	49100 J	55200 J
CHROMIUM	10.7 J	11.1 J	11.6 J	11.6 J	10.5 J	16.7 J	11.3 J	9.3	11.8 J	12.4	10.4	11.2	13.5
COBALT	3.1 J	4 J	3.3 J	3.75 J	3.6 J	2.9 J	4	2.1 J	2.3 J	2.7 J	2.2 J	2.4 J	3.6 J
COPPER	34 J	20.7 J	16 J	19.6 J	16.6 J	32.6	102 J	15.9	11.6 J	17.7	11.3	13.9	15.1
CYANIDE	0.11 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	NA	0.12 UJ	0.12 UJ	0.11 UJ	0.12 UJ	0.21 UJ	0.12 UJ
IRON	11400	12500	13600	12700	13000	21900	16500	11800 J	12800	13400 J	11700 J	13100 J	13300 J
LEAD	43.6 J	43.7 J	77.4 J	38.3 J	25.3 J	177	199 J	24.9 J	14.9 J	16.6 J	9.3 J	9.5 J	127 J
MAGNESIUM	2900 J	2910 J	3280 J	3000 J	2830 J	3800	3040	3010	3050 J	3420	3120	3510	4100
MANGANESE	108 J	110 J	128 J	113 J	116 J	179 J	122	121 J	127 J	126 J	120 J	135 J	150 J
MERCURY	0.052 J	0.039 J	0.0345 J	0.04 J	0.035 J	0.74	0.229	0.023 J	0.03 J	0.037 J	0.032 J	0.023 J	0.045 J
NICKEL	8.3 J	9.1 J	8.75 J	9.2 J	9.1 J	8.7 J	8.2	6.4 J	8.1 J	10.4 J	6.4 J	6.8 J	8.7 J
POTASSIUM	784	783	949	852	902	1240	894 J	658 J	840	654 J	731 J	725 J	1060 J
SELENIUM	5.2 J	5.3 J	5.65 J	4.9 J	5.9 J	0.068 UJ	2.24 U	0.065 UJ	7.9 J	0.066 UJ	0.067 UJ	0.066 UJ	0.067 UJ
SILVER	0.02 U	0.019 U	0.0185 U	0.0185 U	0.018 U	0.019 UJ	0.25 UJ	0.019 UJ	0.018 U	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ
SODIUM	3300 J	2870 J	3070 J	2660 J	2200 J	5820	5480	3330 J	3460 J	2920 J	4210 J	4120 J	5110 J
THALLIUM	1 J	1.2 J	1.2 J	1.2 J	1.2 J	0.16 J	0.5 UJ	0.077 U	0.64 UJ	0.078 U	0.79 UJ	0.22 UJ	0.96 UJ
VANADIUM	18.5 J	14.3 J	19.8 J	15 J	16.3 J	22.6 J	23.8	17.3 J	17.4 J	16 J	13 J	13.8 J	22.6 J
ZINC	44.3 J	37.1 J	42.9 J	40.3 J	45.3 J	64.4 J	47.2 J	30.9 J	46.2 J	34 J	35.1 J	39 J	42.1 J
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	4400 J	12000 J	10400 J	10900 J	7900 J	15000 J	6460	10000 J	7500 J	6900 J	11000 J	12000 J	5000 J

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	G32-SD306F-000.5	GI-SD531-0006	G32-SD307-000.5	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5
LOCATION ID	G32-SD304	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD306F	G32-SD307	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309
SAMPLE DATE	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/30/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	SD	ST	ST	ST	ST	ST	ST
MISCELLANEOUS PARAMETERS (%)													
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	-9999	NA	NA	NA	NA	NA	NA
PERCENT CLAY	3.6	4.6	7.6	6.75	5.8	5.2	NA	2.2	4.1	4.1	5.6	3.6	5.2
PERCENT COARSE SAND	5.5	4.7	5.4	3.4	4.2	3.7	NA	10.6	7	5.5	6.7	7.6	7.7
PERCENT FINE SAND	60.6	58.3	39	47.8	49.1	30.3	NA	28.3	22	16.4	13	12.7	13.8
PERCENT GRAVEL	4.1	1.5	5.4	1.9	0.6	34.7	NA	14.7	10.5	27.7	12.2	19.8	13.2
PERCENT MEDIUM SAND	18.8	13.7	20.3	16.6	14.5	20.2	NA	37.4	49.4	45.6	60.4	55.2	56.9
PERCENT SILT	7.3	17.3	22.2	23.6	25.8	5.8	NA	6.9	7	0.8	2	1.2	3.2
PERCENT SOLIDS	77.1	79	80.4	80.8	83.1	68.6	NA	85.7	64.3	83.8	77.5	78.6	78.7
SIEVE 1"	100	100	100	100	100	66.7	100	100	100	100	100	100	100
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA
SIEVE 1-1/2"	100	100	100	100	100	100	NA	100	100	100	100	100	100
SIEVE 2"	100	100	100	100	100	100	NA	100	100	100	100	100	100
SIEVE 3"	100	100	100	100	100	100	NA	100	100	100	100	100	100
SIEVE 3/4"	100	100	100	100	100	66.7	100	100	100	93.1	100	87.7	100
SIEVE 3/8"	99.4	100	96.6	99.2	100	66.2	100	92.7	94.1	77	91.9	85.4	91.2
SIEVE NO. 004	95.9	98.5	94.6	98.1	99.4	65.3	100	85.3	89.5	72.3	87.8	80.2	86.8
SIEVE NO. 010	90.4	93.9	89.2	94.8	95.2	61.6	97	74.8	82.4	66.8	81	72.6	79.1
SIEVE NO. 020	82.7	86.2	81	88.8	90.2	55.6	91	62.1	68.1	57.8	68.5	61	66
SIEVE NO. 040	71.5	80.2	68.8	78.2	80.7	41.3	66	37.4	33.1	21.2	20.6	17.5	22.2
SIEVE NO. 060	51.4	57.7	49.3	62.2	69.2	22	28	15	15.1	8.5	11.6	7.3	12.2
SIEVE NO. 080	32.3	46.4	43.6	53.2	59.6	16.4	NA	11.7	13.2	6.6	9.9	6.1	10.6
SIEVE NO. 100	24.8	40.8	40.9	47.9	52.8	14.8	14	10.9	12.7	5.9	9.2	5.6	9.9

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	G32-SD306F-000.5	GI-SD531-0006	G32-SD307-000.5	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5
LOCATION ID	G32-SD304	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD306F	G32-SD307	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309
SAMPLE DATE	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/30/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	SD	ST	ST	ST	ST	ST	ST
SIEVE NO. 200	10.9	21.9	29.8	30.2	31.6	11	8	9.1	11.1	4.8	7.6	4.8	8.4
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	7 J	6.8 J	4.95 J	5.05 J	6.1 J	7 J	NA	1.1 J	5.4 J	2.7 J	1.7 J	1.4 J	8.4 J
CADMIUM	0.0043 UJ	0.0024 UJ	0.00345 UJ	0.00365 UJ	0.0063 UJ	0.0043 UJ	NA	0.0014 UJ	0.0028 UJ	0.0029 UJ	0.0045 UJ	0.004 UJ	0.0044 UJ
COPPER	0.23 J	0.15 J	0.119 J	0.155 J	0.094 J	0.19 J	NA	0.11 J	0.091 UJ	0.08 UJ	0.071 UJ	0.055 UJ	0.12 J
LEAD	0.099 J	0.19 J	0.395 J	0.134 J	0.12 J	0.28 J	NA	0.052 J	0.069 J	0.048 UJ	0.05 UJ	0.059 J	0.076 J
MERCURY	0.00026 J	0.00019 J	0.00017 J	0.000195 J	0.00017 J	0.0037	NA	0.00011 J	0.00015 J	0.00018 J	0.00016 J	0.00011 J	0.00022 J
NICKEL	0.63 J	0.22 UJ	0.0365 UJ	0.146 UJ	0.037 UJ	0.036 UJ	NA	0.024 UJ	0.2 UJ	0.032 UJ	0.24 UJ	0.2 UJ	0.051 UJ
ZINC	0.36 J	0.4 J	0.425 J	0.36 J	0.3 J	0.49 J	NA	0.26 J	0.5 J	0.42 J	0.99 J	0.24 J	0.43 J
AVS/SEM (RATIO)													
SEM/AVS	0.19	0.11	0.205	0.14	0.084	0.14	NA	0.38	0.11	0.16	0.58	0.21	0.075
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
1,1,2,2-TETRACHLOROETHANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
1,1,2-TRICHLOROETHANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
1,1,2-TRICHLOROTRIFLUOROETHANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
1,1-DICHLOROETHANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
1,1-DICHLOROETHENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	G32-SD306F-000.5	GI-SD531-0006	G32-SD307-000.5	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5
LOCATION ID	G32-SD304	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD306F	G32-SD307	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309
SAMPLE DATE	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/30/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	SD	ST	ST	ST	ST	ST	ST
1,2,4-TRICHLOROBENZENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
1,2-DIBROMO-3-CHLOROPROPANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
1,2-DIBROMOETHANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
1,2-DICHLOROBENZENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
1,2-DICHLOROETHANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
1,2-DICHLOROPROPANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
1,3-DICHLOROBENZENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
1,4-DICHLOROBENZENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
2-BUTANONE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
2-HEXANONE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
4-METHYL-2-PENTANONE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
ACETONE	23 JEB	130 JEB	30 JEB	80.5 JEB	56 JEB	34 UJ	NA	45 JEB	46 JEB	140 JEB	40 JEB	88 JEB	56 JEB
BENZENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
BROMODICHLOROMETHANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
BROMOFORM	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
BROMOMETHANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
BTEX	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
CARBON DISULFIDE	2 J	6 U	2.5 J	6.5	2 J	3 J	NA	1 J	6 U	6 U	7 U	1 J	2 J
CARBON TETRACHLORIDE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
CHLOROBENZENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
CHLORODIBROMOMETHANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
CHLOROETHANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	G32-SD306F-000.5	GI-SD531-0006	G32-SD307-000.5	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5
LOCATION ID	G32-SD304	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD306F	G32-SD307	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309
SAMPLE DATE	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/30/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	SD	ST	ST	ST	ST	ST	ST
CHLOROFORM	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
CHLOROMETHANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
CIS-1,2-DICHLOROETHENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
CIS-1,3-DICHLOROPROPENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
CYCLOHEXANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
DICHLORODIFLUOROMETHANE	6 U	6 UJ	6 UJ	6.5 UJ	6 UJ	6 U	NA	5 U	6 UJ	6 U	7 U	5 UJ	6 U
ETHYLBENZENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
ISOPROPYLBENZENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
M+P-XYLENES	NA	NA	NA	NA	NA	6 U	NA	5 U	NA	6 U	7 U	5 U	6 U
METHYL ACETATE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
METHYL CYCLOHEXANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
METHYL TERT-BUTYL ETHER	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
METHYLENE CHLORIDE	56 U	11 U	15.5 UJ	9 U	16 U	16 U	NA	8 U	19 U	6 U	14 U	5 U	21 U
O-XYLENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
P-XYLENE	6 U	6 U	6 U	6.5 U	6 U	NA	NA	NA	6 U	NA	NA	NA	NA
STYRENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
TETRACHLOROETHENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
TOLUENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
TOTAL 1,2-DICHLOROETHENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
TOTAL CHLORINATED ETHENES	6 U	6 U	6 U	2 J	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	G32-SD306F-000.5	GI-SD531-0006	G32-SD307-000.5	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5
LOCATION ID	G32-SD304	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD306F	G32-SD307	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309
SAMPLE DATE	08/26/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	08/30/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	SD	ST	ST	ST	ST	ST	ST
TOTAL CHLORINATED VOCS	6 U	6 UJ	6 UJ	2 J	6 UJ	6 U	NA	5 U	6 UJ	6 U	7 U	5 UJ	6 U
TOTAL XYLENES	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
TRANS-1,2-DICHLOROETHENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
TRANS-1,3-DICHLOROPROPENE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
TRICHLOROETHENE	6 U	6 U	6 U	2 J	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
TRICHLOROFLUOROMETHANE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
VINYL CHLORIDE	6 U	6 U	6 U	6.5 U	6 U	6 U	NA	5 U	6 U	6 U	7 U	5 U	6 U
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	46	53 J	30	38.5 J	30	53 J	NA	33	31	24	23	29	31
GASOLINE RANGE ORGANICS	11 U	8.3 U	10.8 U	8.15 U	8.6 U	12 U	NA	7.9 U	9.5 U	6.7 U	7.8 U	9 U	9 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD513-0006	G32-SD309F-000.5	GI-SD512-0006	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5	G32-SD310E-000.5	GI-SD510-0006	G32-SD310A-000.5-D
LOCATION ID	G32-SD304	G32-SD309	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/26/05	05/13/10	08/29/05	05/13/10	08/29/05	08/29/05	08/31/05	08/31/05	08/31/05	08/31/05	08/31/05	04/30/10	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	ORIG	NORMAL	DUP	AVG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	SD	IT	SD	IT	IT	ST	ST	ST	ST	ST	SD	ST
QC TYPE	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	FD
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	68 J	330 U	NA	330 U
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	NA	330 U	NA	330 U	330 U	320 UJ	330 U	330 UJ	330 UJ	330 UJ	NA	330 UJ
2,4,5-TRICHLOROPHENOL	670 U	NA	670 U	NA	670 U	670 U	660 U	660 U	670 U	680 U	660 U	NA	670 U
2,4,6-TRICHLOROPHENOL	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
2,4-DICHLOROPHENOL	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
2,4-DIMETHYLPHENOL	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
2,4-DINITROPHENOL	670 UJ	NA	670 U	NA	670 U	670 U	660 UJ	660 U	670 UJ	680 UJ	660 UJ	NA	670 UJ
2,4-DINITROTOLUENE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
2,6-DINITROTOLUENE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
2-CHLORONAPHTHALENE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
2-CHLOROPHENOL	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
2-METHYLNAPHTHALENE	15	1.4 J	3.2 UJ	42 J	14 J	7.8 J	6.4	3.3 U	3.3 U	220	3.3 U	8.4 UJ	3.3 U
2-METHYLPHENOL	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
2-NITROANILINE	670 U	NA	670 U	NA	670 U	670 U	660 U	660 U	670 U	680 U	660 U	NA	670 U
2-NITROPHENOL	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
3,3'-DICHLOROBENZIDINE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
3-NITROANILINE	670 U	NA	670 U	NA	670 U	670 U	660 U	660 U	670 U	680 U	660 U	NA	670 U
4,6-DINITRO-2-METHYLPHENOL	670 UJ	NA	670 U	NA	670 U	670 U	660 U	660 U	670 U	680 U	660 U	NA	670 U
4-BROMOPHENYL PHENYL ETHER	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD513-0006	G32-SD309F-000.5	GI-SD512-0006	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5	G32-SD310E-000.5	GI-SD510-0006	G32-SD310A-000.5-D
LOCATION ID	G32-SD304	G32-SD309	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/26/05	05/13/10	08/29/05	05/13/10	08/29/05	08/29/05	08/31/05	08/31/05	08/31/05	08/31/05	08/31/05	04/30/10	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	ORIG	NORMAL	DUP	AVG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	SD	IT	SD	IT	IT	ST	ST	ST	ST	ST	SD	ST
4-CHLORO-3-METHYLPHENOL	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
4-CHLOROANILINE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
4-METHYLPHENOL	330 U	NA	990	NA	1500	1240	120 J	330 U	330 U	330 U	330 U	NA	330 U
4-NITROANILINE	670 UJ	NA	670 U	NA	670 U	670 U	660 UJ	660 U	670 UJ	680 UJ	660 UJ	NA	670 UJ
4-NITROPHENOL	670 UJ	NA	670 U	NA	670 U	670 U	660 UJ	660 U	670 UJ	680 UJ	660 UJ	NA	670 UJ
ACENAPHTHENE	71	9 U	4.4 J	190 J	72 J	38.2 J	59 J	3.3 U	17	1300	3.8	11 J	23 J
ACENAPHTHYLENE	25	12	3.9 J	32 UJ	6.3 J	5.1 J	3.2 U	3.9	3.4	7.8	3.7	12 J	3.3 U
ACETOPHENONE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
ANTHRACENE	200	9 U	18 J	360 J	160 J	89 J	79 J	7.5	24	1300	16	76 J	36 J
ATRAZINE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
BENZALDEHYDE	330 UJ	NA	330 UJ	NA	330 UJ	330 UJ	320 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	330 UJ
BENZO(A)ANTHRACENE	310 J	28	170	420 J	260	215	130	17	39	1400	35	96 J	100
BENZO(A)PYRENE	350	31 J	140	380 J	220	180	120	21	42	980	27	130 J	88
BENZO(B)FLUORANTHENE	530	22	210	280 J	280	245	150	32	58	1200	43	120 J	110
BENZO(G,H,I)PERYLENE	210	25 J	53 J	190 J	96 J	74.5 J	65	13	26	410 J	12	71 J	40
BENZO(K)FLUORANTHENE	170	24	77	260 J	120	98.5	57	12	22	760	15	93 J	43
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
BIS(2-CHLOROETHYL)ETHER	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD513-0006	G32-SD309F-000.5	GI-SD512-0006	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5	G32-SD310E-000.5	GI-SD510-0006	G32-SD310A-000.5-D
LOCATION ID	G32-SD304	G32-SD309	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/26/05	05/13/10	08/29/05	05/13/10	08/29/05	08/29/05	08/31/05	08/31/05	08/31/05	08/31/05	08/31/05	04/30/10	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	ORIG	NORMAL	DUP	AVG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	SD	IT	SD	IT	IT	ST	ST	ST	ST	ST	SD	ST
BIS(2-ETHYLHEXYL)PHTHALATE	70 J	NA	50 J	NA	74 J	62 J	320 U	330 U	330 U	330 U	330 U	NA	330 U
BUTYL BENZYL PHTHALATE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
CAPROLACTAM	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
CARBAZOLE	100 J	NA	330 U	NA	93 J	129 J	320 U	330 U	330 U	910	330 U	NA	330 U
CHRYSENE	310	31	170 EB	370 J	230 SB	200 EB	120	22	41	1200	40	140 J	95
DIBENZO(A,H)ANTHRACENE	67	6.8 J	21	70 J	31	26	17	3.6	6.5	140	3.7	26 J	13
DIBENZOFURAN	40 J	NA	330 U	NA	40 J	102 J	320 U	330 U	330 U	510	330 U	NA	330 U
DIETHYL PHTHALATE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
DIMETHYL PHTHALATE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
DI-N-BUTYL PHTHALATE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
DI-N-OCTYL PHTHALATE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
FLUORANTHENE	620	48	180 J	1000 J	670 J	425 J	300 J	34	97	3400	77	150 J	170 J
FLUORENE	62	9 U	6 J	170 J	78 J	42 J	35 J	3.3 U	11	820	3.7	23 J	13 J
HEXACHLOROBENZENE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
HEXACHLOROBUTADIENE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
HEXACHLOROCYCLOPENTADIENE	330 UJ	NA	330 U	NA	330 U	330 U	320 UJ	330 U	330 UJ	330 UJ	330 UJ	NA	330 UJ
HEXACHLOROETHANE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
HIGH MOLECULAR WEIGHT PAHS	3350 J	283 J	1260 J	3910 J	2540 J	1900 J	1260 J	196	428	12500 J	312	1020 J	838 J
INDENO(1,2,3-CD)PYRENE	190	19	60	190 J	97	78.5	61	12	21	400 J	12	73 J	39
ISOPHORONE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD513-0006	G32-SD309F-000.5	GI-SD512-0006	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5	G32-SD310E-000.5	GI-SD510-0006	G32-SD310A-000.5-D
LOCATION ID	G32-SD304	G32-SD309	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/26/05	05/13/10	08/29/05	05/13/10	08/29/05	08/29/05	08/31/05	08/31/05	08/31/05	08/31/05	08/31/05	04/30/10	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	ORIG	NORMAL	DUP	AVG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	SD	IT	SD	IT	IT	ST	ST	ST	ST	ST	SD	ST
LOW MOLECULAR WEIGHT PAHS	891	38.4 J	73.9 J	1880 J	944 J	509 J	433 J	27.4	134	7680	53.2	244 J	178 J
NAPHTHALENE	58	9 U	4.6 J	130 J	34 J	19.3 J	14 J	3.3 U	6.6	730	3.3 U	12 J	6.1 J
NITROBENZENE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
N-NITROSODIPHENYLAMINE	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
PENTACHLOROPHENOL	670 U	NA	670 U	NA	670 U	670 U	660 U	660 U	670 U	680 U	660 U	NA	670 U
PHENANTHRENE	460	25	37 J	990 J	580	308 J	240 J	16	72	3300	26	110 J	100 J
PHENOL	330 U	NA	520	NA	420	470	150 J	330 U	330 U	330 U	330 U	NA	38 J
PYRENE	590	48 J	180 J	750 J	540	360 J	240 J	29	76	2600	47	120 J	140 J
TOTAL CHLORINATED VOCS	330 U	NA	330 U	NA	330 U	330 U	320 U	330 U	330 U	330 U	330 U	NA	330 U
TOTAL PAHS	4240 J	321 J	1330 J	5790 J	3490 J	2410 J	1690 J	223	562	20200 J	365	1260 J	1020 J
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	16 U	NA	3.3 U	NA	3.3 U	3.3 U	4.2 U	4.1 U	4.6 U	4.3 U	4.1 U	NA	4.4 U
4,4'-DDE	16 U	NA	3.3 U	NA	3.3 U	3.3 U	4.2 U	4.1 U	4.6 U	4.3 U	4.1 U	NA	4.4 U
4,4'-DDT	16 U	NA	3.3 U	NA	3.3 U	3.3 U	4.2 U	4.1 U	4.6 U	4.3 U	4.1 U	NA	4.4 U
ALDRIN	8.5 U	NA	1.7 U	NA	0.95 R	1.7 U	2.2 U	2.1 U	2.4 U	2.2 U	2.1 U	NA	2.3 U
ALPHA-BHC	8.5 U	NA	1.7 U	NA	1.6 J	1.22 J	2.2 U	2.1 U	2.4 U	2.2 U	2.1 U	NA	2.3 U
ALPHA-CHLORDANE	8.5 U	NA	1.7 U	NA	1.7 U	1.7 U	2.2 U	2.1 U	2.4 U	2.2 U	2.1 U	NA	2.3 U
AROCLOR-1016	33 U	NA	33 U	NA	33 U	33 U	42 U	41 U	46 U	43 U	41 U	NA	44 U
AROCLOR-1221	33 U	NA	33 U	NA	33 U	33 U	42 U	41 U	46 U	43 U	41 U	NA	44 U

LIGHT SHADING - DETECTED;
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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD513-0006	G32-SD309F-000.5	GI-SD512-0006	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5	G32-SD310E-000.5	GI-SD510-0006	G32-SD310A-000.5-D
LOCATION ID	G32-SD304	G32-SD309	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/26/05	05/13/10	08/29/05	05/13/10	08/29/05	08/29/05	08/31/05	08/31/05	08/31/05	08/31/05	08/31/05	04/30/10	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	ORIG	NORMAL	DUP	AVG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	SD	IT	SD	IT	IT	ST	ST	ST	ST	ST	SD	ST
AROCLOR-1232	33 U	NA	33 U	NA	33 U	33 U	42 U	41 U	46 U	43 U	41 U	NA	44 U
AROCLOR-1242	33 U	NA	33 U	NA	33 U	33 U	42 U	41 U	46 U	43 U	41 U	NA	44 U
AROCLOR-1248	33 U	NA	170	NA	33 U	93.2	42 U	41 U	46 U	43 U	41 U	NA	44 U
AROCLOR-1254	33 U	NA	33 U	NA	33 U	33 U	42 U	41 U	46 U	43 U	41 U	NA	44 U
AROCLOR-1260	840 J	NA	33 U	NA	33 U	33 U	42 U	41	46 U	43 U	41 U	NA	44 U
BETA-BHC	8.5 U	NA	1.7 U	NA	1.7 U	1.7 U	2.2 U	2.1 U	2.4 U	2.2 U	2.1 U	NA	2.3 U
DELTA-BHC	8.5 U	NA	1.7 U	NA	0.98 J	0.915 J	2.2 U	2.1 U	2.4 U	2.2 U	2.1 U	NA	2.3 U
DIELDRIN	16 U	NA	3.3 U	NA	3.3 U	3.3 U	4.2 U	4.1 U	4.6 U	4.3 U	4.1 U	NA	4.4 U
ENDOSULFAN I	8.5 U	NA	1.7 U	NA	1.7 U	1.7 U	2.2 U	2.1 U	2.4 U	2.2 U	2.1 U	NA	2.3 U
ENDOSULFAN II	16 U	NA	3.3 U	NA	3.3 U	3.3 U	4.2 U	4.1 U	4.6 U	4.3 U	4.1 U	NA	4.4 U
ENDOSULFAN SULFATE	26 J	NA	3.3 U	NA	3.3 U	3.3 U	4.2 U	4.1 U	4.6 U	4.3 U	4.1 U	NA	4.4 U
ENDRIN	16 U	NA	3.3 U	NA	3.3 U	3.3 U	4.2 U	4.1 U	4.6 U	4.3 U	4.1 U	NA	4.4 U
ENDRIN ALDEHYDE	16 U	NA	3.3 U	NA	1.9 J	1.78 J	4.2 U	4.1 U	4.6 U	4.3 U	4.1 U	NA	4.4 U
ENDRIN KETONE	16 UJ	NA	3.3 U	NA	3.3 U	3.3 U	4.2 U	4.1 U	4.6 U	4.3 U	4.1 U	NA	4.4 U
GAMMA-BHC (LINDANE)	8.5 U	NA	1.7 U	NA	0.86 R	1.7 U	2.2 U	2.1 U	2.4 U	2.2 U	2.1 U	NA	2.3 U
GAMMA-CHLORDANE	13 R	NA	1.7 U	NA	1.7 U	1.7 U	2.2 U	2.1 U	2.4 U	2.2 U	2.1 U	NA	2.3 U
HEPTACHLOR	8.5 U	NA	1.7 U	NA	1.7 U	1.7 U	2.2 U	2.1 U	2.4 U	2.2 U	2.1 U	NA	2.3 U
HEPTACHLOR EPOXIDE	8.5 U	NA	1.7 U	NA	1.7 U	1.7 U	2.2 U	2.1 U	2.4 U	2.2 U	2.1 U	NA	2.3 U
METHOXYCHLOR	85 U	NA	17 U	NA	17 U	17 U	22 U	21 U	24 U	22 U	21 U	NA	23 U
TOTAL AROCLOR	840 J	NA	170	NA	33 U	93.2	42 U	41	46 U	43 U	41 U	NA	44 U
TOTAL CHLORDANE	8.5 U	NA	1.7 U	NA	1.7 U	1.7 U	2.2 U	2.1 U	2.4 U	2.2 U	2.1 U	NA	2.3 U
TOTAL DDD/DDE/DDT	16 U	NA	3.3 U	NA	3.3 U	3.3 U	4.2 U	4.1 U	4.6 U	4.3 U	4.1 U	NA	4.4 U
TOXAPHENE	850 U	NA	170 U	NA	170 U	170 U	220 U	210 U	240 U	220 U	210 U	NA	230 U
PCB HOMOLOGS (UG/KG)													

LIGHT SHADING - DETECTED;
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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD513-0006	G32-SD309F-000.5	GI-SD512-0006	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5	G32-SD310E-000.5	GI-SD510-0006	G32-SD310A-000.5-D
LOCATION ID	G32-SD304	G32-SD309	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/26/05	05/13/10	08/29/05	05/13/10	08/29/05	08/29/05	08/31/05	08/31/05	08/31/05	08/31/05	08/31/05	04/30/10	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	ORIG	NORMAL	DUP	AVG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	SD	IT	SD	IT	IT	ST	ST	ST	ST	ST	SD	ST
DECACHLOROBIPHENYL	NA	2.3 U	NA	2 U	NA	NA	NA	NA	NA	NA	NA	3.2 U	NA
DICHLOROBIPHENYLS	NA	0.5 U	NA	0.41 U	NA	NA	NA	NA	NA	NA	NA	0.65 U	NA
HEPTACHLOROBIPHENYLS	NA	1.2 U	NA	1 U	NA	NA	NA	NA	NA	NA	NA	1.6 U	NA
HEXACHLOROBIPHENYL	NA	4.3 J	NA	3.2 J	NA	NA	NA	NA	NA	NA	NA	1.3 U	NA
MONOCHLOROBIPHENYLS	NA	0.47 U	NA	0.41 U	NA	NA	NA	NA	NA	NA	NA	0.65 U	NA
NONACHLOROBIPHENYLS	NA	2.3 U	NA	2 U	NA	NA	NA	NA	NA	NA	NA	3.2 U	NA
PENTACHLOROBIPHENYLS	NA	4.7 UJ	NA	3.9 UJ	NA	NA	NA	NA	NA	NA	NA	7.2 UJ	NA
TETRACHLOROBIPHENYLS	NA	0.9 U	NA	0.79 U	NA	NA	NA	NA	NA	NA	NA	1.3 U	NA
TOTAL OCTACHLOROBIPHENYLS	NA	1.2 U	NA	1 U	NA	NA	NA	NA	NA	NA	NA	1.6 U	NA
TOTAL PCB HOMOLOGS	NA	4.3 J	NA	3.2 J	NA	NA	NA	NA	NA	NA	NA	2.14 UJ	NA
TOTAL PCB HOMOLOGS-HALFND	NA	11.3 J	NA	9.16 J	NA	NA	NA	NA	NA	NA	NA	2.14 UJ	NA
TOTAL TRICHLOROBIPHENYLS	NA	0.47 U	NA	0.41 U	NA	NA	NA	NA	NA	NA	NA	0.65 U	NA
METALS (MG/KG)													
ALUMINUM	4980 J	4570	5090	5730	5390	5240	4750	5630	6500	5470	6120	8070	6810
ANTIMONY	2.8 J	2.05 UJ	0.14 UJ	1.77 UJ	0.057 UJ	0.0985 UJ	0.29 UJ	0.26 UJ	0.92 UJ	0.32 UJ	0.054 UJ	0.63 UJ	0.056 UJ
ARSENIC	2.4 J	0.13 UJ	4.8 J	2.9 J	3.3 J	4.05 J	2.7 J	2.4 J	2.2 J	2 J	3 J	2.2 J	2.3 J
BARIUM	11 J	12.8	9.2 J	7.9 J	9.2 J	9.2 J	7.4 J	7.9 J	9.4 J	12.1 J	8.1 J	11.3 J	10.4 J
BERYLLIUM	0.42	0.214 J	0.32	0.234	0.34	0.33	0.22	0.28	0.79	0.23	0.27	0.222 J	0.35
CADMIUM	0.0057 UJ	0.166 J	0.25 UJ	0.555	1.7 J	0.912 J	0.06 UJ	0.13 UJ	3.2 J	0.11 UJ	0.077 UJ	0.443 J	0.092 UJ

LIGHT SHADING - DETECTED;
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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD513-0006	G32-SD309F-000.5	GI-SD512-0006	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5	G32-SD310E-000.5	GI-SD510-0006	G32-SD310A-000.5-D
LOCATION ID	G32-SD304	G32-SD309	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/26/05	05/13/10	08/29/05	05/13/10	08/29/05	08/29/05	08/31/05	08/31/05	08/31/05	08/31/05	08/31/05	04/30/10	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	ORIG	NORMAL	DUP	AVG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	SD	IT	SD	IT	IT	ST	ST	ST	ST	ST	SD	ST
CALCIUM	22400 J	112000	30400 J	11500	40200 J	35300 J	32500 J	34100 J	42100 J	46100 J	14800 J	35900 J	27100 J
CHROMIUM	10.7 J	8.4 J	16.6 J	19.9 J	12.2 J	14.4 J	15.1	21.4	16.5	10.5	10.6	16.1 J	14.1
COBALT	3.1 J	2.8	2.7 J	6	2.6 J	2.65 J	2.3 J	5 J	2.9	2.1 J	2.7 J	4.7 J	3.1 J
COPPER	34 J	6.8 J	36.4	30.6 J	24.7	30.6	21.8	24.5	20.7	14.7	15.9	17.7 J	19.6
CYANIDE	0.11 UJ	NA	0.12 UJ	NA	0.12 UJ	0.12 UJ	0.14 UJ	0.12 UJ	0.12 UJ	0.14 UJ	0.12 UJ	NA	0.13 J
IRON	11400	9830	23900	31900	17600	20800	20300 J	23200 J	24700 J	13200 J	19200 J	22900	19400 J
LEAD	43.6 J	7.3 J	29.8 J	8.4 J	35.8	32.8 J	8.8 J	178 J	11.7 J	13.2 J	14.1 J	10.7 J	10.9 J
MAGNESIUM	2900 J	3610	3360	3140	3830	3600	2740	3280	3890	3360	3900	4220 J	4380
MANGANESE	108 J	175	177 J	211	156 J	166 J	152 J	156 J	179 J	139 J	163 J	210 J	175 J
MERCURY	0.052 J	0.039 U	0.031 U	0.006 J	0.03 U	0.0305 U	0.034 J	0.025 J	0.027 J	0.036 J	0.007 U	0.012 J	0.025 J
NICKEL	8.3 J	6.2	10.2 J	33.4	8.3 J	9.25 J	8.7 J	14.8 J	11 J	5.9 J	7.7 J	10.8 J	9.3 J
POTASSIUM	784	1040 J	1220	1170 J	1150	1180	728 J	881 J	964 J	868 J	795 J	869	948 J
SELENIUM	5.2 J	2.05 U	0.067 UJ	5.91 U	0.068 UJ	0.0675 UJ	0.067 UJ	0.066 UJ	0.067 UJ	0.067 UJ	0.064 UJ	0.63 U	0.067 UJ
SILVER	0.02 U	0.524	0.019 UJ	0.2 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.018 UJ	0.017 U	0.019 UJ
SODIUM	3300 J	5600	5310	2240	6040	5680	3170 J	3600 J	3580 J	4490 J	2810 J	3120	3430 J
THALLIUM	1 J	2.4	0.22 J	1.18 UJ	0.081 UJ	0.13 J	2 UJ	1.1 UJ	0.34 UJ	0.23 UJ	0.076 U	0.42 UJ	0.11 UJ
VANADIUM	18.5 J	13	19.2 J	12.3	17.8 J	18.5 J	13.4 J	17.4 J	17.5 J	13.6 J	15.5 J	13.9 J	17.9 J
ZINC	44.3 J	27.6 J	195 J	43.4 J	50.9 J	123 J	33.6 J	65.8 J	44.9 J	51.6 J	55.1 J	43.9 J	46.7 J
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	4400 J	6700	16000 J	2330	5900 J	11000 J	2800	7400 J	13000 J	15000 J	12000 J	4740	18000 J

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD513-0006	G32-SD309F-000.5	GI-SD512-0006	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5	G32-SD310E-000.5	GI-SD510-0006	G32-SD310A-000.5-D
LOCATION ID	G32-SD304	G32-SD309	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/26/05	05/13/10	08/29/05	05/13/10	08/29/05	08/29/05	08/31/05	08/31/05	08/31/05	08/31/05	08/31/05	04/30/10	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	ORIG	NORMAL	DUP	AVG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	SD	IT	SD	IT	IT	ST	ST	ST	ST	ST	SD	ST
MISCELLANEOUS PARAMETERS (%)													
HYDROMETER-0.002MM	NA	-9999	NA	-9999	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT CLAY	3.6	NA	6.2	NA	3.9	5.05	4.2	4.1	2.5	4.3	2.5	NA	2.5
PERCENT COARSE SAND	5.5	NA	6.2	NA	5.5	5.85	14.2	11.5	15.2	11.7	14.7	NA	12.1
PERCENT FINE SAND	60.6	NA	46.8	NA	32.5	39.6	7.2	14.1	4.1	5.3	4.6	NA	6
PERCENT GRAVEL	4.1	NA	6.1	NA	26.5	16.3	15	23.9	13.4	32.2	17.8	NA	22.1
PERCENT MEDIUM SAND	18.8	NA	30	NA	22.4	26.2	53	44.5	50.5	40.7	52.9	NA	49.6
PERCENT SILT	7.3	NA	4.8	NA	9.3	7.05	6.4	2	14.3	5.8	7.6	NA	7.6
PERCENT SOLIDS	77.1	NA	68.1	NA	75.2	71.6	77.3	77.4	79.5	78.5	75.8	NA	77.3
SIEVE 1"	100	100	100	100	78.1	89	100	100	100	100	100	100	100
SIEVE 1/2"	NA	100	NA	100	NA	NA	NA	NA	NA	NA	NA	100	NA
SIEVE 1-1/2"	100	NA	100	NA	100	100	100	100	100	100	100	NA	100
SIEVE 2"	100	NA	100	NA	100	100	100	100	100	100	100	NA	100
SIEVE 3"	100	NA	100	NA	100	100	100	100	100	100	100	NA	100
SIEVE 3/4"	100	100	100	100	78.1	89	100	100	100	84.4	100	100	89.6
SIEVE 3/8"	99.4	93	97.2	90	77.2	87.2	92.3	86.9	94.1	78.5	91.2	95	85
SIEVE NO. 004	95.9	80	93.9	77	73.5	83.7	85	76.1	86.6	67.8	82.2	75	77.9
SIEVE NO. 010	90.4	71	87.8	46	68	77.9	70.8	64.6	71.4	56.1	67.5	57	65.8
SIEVE NO. 020	82.7	54	80.3	24	62.1	71.2	46.5	41.1	45.1	37.8	40.1	27	41.6
SIEVE NO. 040	71.5	15	57.8	8	45.7	51.8	17.8	20.2	20.9	15.4	14.6	5	16.1
SIEVE NO. 060	51.4	8	33.2	2	28.2	30.7	13.4	10	18.5	12.2	11.7	2	12.5
SIEVE NO. 080	32.3	NA	22.3	NA	20.7	21.5	12.2	8.1	17.8	11.3	11	NA	11.5
SIEVE NO. 100	24.8	7	18.4	1	18.1	18.2	11.6	7.6	17.5	10.9	10.7	1	11

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD513-0006	G32-SD309F-000.5	GI-SD512-0006	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5	G32-SD310E-000.5	GI-SD510-0006	G32-SD310A-000.5-D
LOCATION ID	G32-SD304	G32-SD309	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/26/05	05/13/10	08/29/05	05/13/10	08/29/05	08/29/05	08/31/05	08/31/05	08/31/05	08/31/05	08/31/05	04/30/10	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	ORIG	NORMAL	DUP	AVG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	SD	IT	SD	IT	IT	ST	ST	ST	ST	ST	SD	ST
SIEVE NO. 200	10.9	7	10.9	1	13.2	12	10.6	6.1	16.8	10.1	10	1	10.2
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	7 J	NA	24.7 J	NA	12.3 J	18.5 J	0.8 J	6.6 J	2.2 J	1.3 J	0.57 J	NA	2 J
CADMIUM	0.0043 UJ	NA	0.02 UJ	NA	0.0028 UJ	0.0114 UJ	0.0022 UJ	0.0021 UJ	0.0023 UJ	0.0023 UJ	0.002 UJ	NA	0.0024 UJ
COPPER	0.23 J	NA	0.15 J	NA	0.23 J	0.19 J	0.085 J	0.077 J	0.063 UJ	0.057 UJ	0.12 J	NA	0.077 UJ
LEAD	0.099 J	NA	0.063 J	NA	0.11 J	0.0865 J	0.052 UJ	0.31 J	0.035 UJ	0.039 UJ	0.048 J	NA	0.031 UJ
MERCURY	0.00026 J	NA	0.00015 U	NA	0.00015 U	0.00015 U	0.00017 J	0.00012 J	0.00013 J	0.00018 J	0.00003 U	NA	0.00012 J
NICKEL	0.63 J	NA	0.051 UJ	NA	0.072 UJ	0.0615 UJ	0.043 UJ	0.036 UJ	0.065 UJ	0.066 UJ	0.1 UJ	NA	0.037 UJ
ZINC	0.36 J	NA	0.41 J	NA	0.7 J	0.555 J	0.29 J	0.43 J	0.31 J	0.26 J	0.35 J	NA	0.24 J
AVS/SEM (RATIO)													
SEM/AVS	0.19	NA	0.025	NA	0.085	0.055	0.47	0.12	0.14	0.2	0.91	NA	0.12
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
1,1,2,2-TETRACHLOROETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
1,1,2-TRICHLOROETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
1,1,2-TRICHLOROTRIFLUOROETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
1,1-DICHLOROETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
1,1-DICHLOROETHENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD513-0006	G32-SD309F-000.5	GI-SD512-0006	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5	G32-SD310E-000.5	GI-SD510-0006	G32-SD310A-000.5-D
LOCATION ID	G32-SD304	G32-SD309	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/26/05	05/13/10	08/29/05	05/13/10	08/29/05	08/29/05	08/31/05	08/31/05	08/31/05	08/31/05	08/31/05	04/30/10	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	ORIG	NORMAL	DUP	AVG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	SD	IT	SD	IT	IT	ST	ST	ST	ST	ST	SD	ST
1,2,4-TRICHLOROBENZENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
1,2-DIBROMO-3-CHLOROPROPANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
1,2-DIBROMOETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
1,2-DICHLOROBENZENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
1,2-DICHLOROETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
1,2-DICHLOROPROPANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
1,3-DICHLOROBENZENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
1,4-DICHLOROBENZENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
2-BUTANONE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
2-HEXANONE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
4-METHYL-2-PENTANONE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
ACETONE	23 JEB	NA	93 UJ	NA	7 UJ	50 UJ	10 JEB	110 JEB	25 JEB	100 JEB	32 JEB	NA	24 JEB
BENZENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
BROMODICHLOROMETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
BROMOFORM	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
BROMOMETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
BTEX	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
CARBON DISULFIDE	2 J	NA	9	NA	7 U	6.25	7 U	5 U	7 U	7 U	5 U	NA	6 U
CARBON TETRACHLORIDE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
CHLOROBENZENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
CHLORODIBROMOMETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
CHLOROETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD513-0006	G32-SD309F-000.5	GI-SD512-0006	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5	G32-SD310E-000.5	GI-SD510-0006	G32-SD310A-000.5-D
LOCATION ID	G32-SD304	G32-SD309	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/26/05	05/13/10	08/29/05	05/13/10	08/29/05	08/29/05	08/31/05	08/31/05	08/31/05	08/31/05	08/31/05	04/30/10	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	ORIG	NORMAL	DUP	AVG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	SD	IT	SD	IT	IT	ST	ST	ST	ST	ST	SD	ST
CHLOROFORM	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
CHLOROMETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
CIS-1,2-DICHLOROETHENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
CIS-1,3-DICHLOROPROPENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
CYCLOHEXANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
DICHLORODIFLUOROMETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
ETHYLBENZENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
ISOPROPYLBENZENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
M+P-XYLENES	NA	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
METHYL ACETATE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
METHYL CYCLOHEXANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
METHYL TERT-BUTYL ETHER	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
METHYLENE CHLORIDE	56 U	NA	15 U	NA	18 U	16.5 U	12 U	5 U	7 U	10 U	13 U	NA	21 U
O-XYLENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
P-XYLENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
TETRACHLOROETHENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
TOLUENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
TOTAL 1,2-DICHLOROETHENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
TOTAL CHLORINATED ETHENES	6 U	NA	7 U	NA	2 J	2.75 J	7 U	5 U	7 U	7 U	5 U	NA	6 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD513-0006	G32-SD309F-000.5	GI-SD512-0006	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5	G32-SD310E-000.5	GI-SD510-0006	G32-SD310A-000.5-D
LOCATION ID	G32-SD304	G32-SD309	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/26/05	05/13/10	08/29/05	05/13/10	08/29/05	08/29/05	08/31/05	08/31/05	08/31/05	08/31/05	08/31/05	04/30/10	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	ORIG	NORMAL	DUP	AVG	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP
SUBMATRIX	ST	SD	IT	SD	IT	IT	ST	ST	ST	ST	ST	SD	ST
TOTAL CHLORINATED VOCS	6 U	NA	7 U	NA	2 J	2.75 J	7 U	5 U	7 U	7 U	5 U	NA	6 U
TOTAL XYLENES	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
TRANS-1,2-DICHLOROETHENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
TRANS-1,3-DICHLOROPROPENE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
TRICHLOROETHENE	6 U	NA	7 U	NA	2 J	2.75 J	7 U	5 U	7 U	7 U	5 U	NA	6 U
TRICHLOROFLUOROMETHANE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
VINYL CHLORIDE	6 U	NA	7 U	NA	7 U	7 U	7 U	5 U	7 U	7 U	5 U	NA	6 U
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	46	NA	56 J	NA	12 UJ	31 J	30	31	34	27	44	NA	49
GASOLINE RANGE ORGANICS	11 U	NA	10 U	NA	12 U	11 U	7.9 U	6.3 U	8.6 U	12 U	5.5 U	NA	8.4 U

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD310A-000.5-AVG	G32-SD310F-000.5	G32-SD315-000.5	G32-SD317-000.5	GI-SD530-0006	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006
LOCATION ID	G32-SD304	G32-SD310	G32-SD310F	G32-SD315	G32-SD317	G32-SD317	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425
SAMPLE DATE	08/26/05	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	ST	IT	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	325 UJ	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	670 U	665 U	670 U	670 U	660 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	330 U	325 U	330 U	330 UJ	320 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	670 UJ	665 UJ	670 U	670 UJ	660 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	15	4.02	3.3 U	3.3 U	3.2 U	3.2 J	3.3 U	6.2	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2-METHYLPHENOL	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	670 U	665 U	670 U	670 U	660 U	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	670 U	665 U	670 U	670 U	660 U	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	670 UJ	665 U	670 U	670 U	660 U	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD310A-000.5-AVG	G32-SD310F-000.5	G32-SD315-000.5	G32-SD317-000.5	GI-SD530-0006	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006
LOCATION ID	G32-SD304	G32-SD310	G32-SD310F	G32-SD315	G32-SD317	G32-SD317	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425
SAMPLE DATE	08/26/05	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	ST	IT	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	330 U	142 J	1700	330 U	300 J	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	670 UJ	665 UJ	670 U	670 U	660 U	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	670 UJ	665 UJ	670 U	670 U	660 U	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	71	41 J	3.3 U	5	3.2 U	7.9 J	4.5	18	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ACENAPHTHYLENE	25	3.25 U	5	15	3.2 U	6.9 J	3.9	7.8	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ACETOPHENONE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	200	57.5 J	15	23	13	23	11	54	3.3 U	3.3 U	3.3 U	6.9	3.3 U
ATRAZINE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	330 UJ	325 UJ	330 UJ	330 UJ	320 UJ	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	310 J	115	34	74	17	68	24	100	3.6	5.2	4.4	12	7.9
BENZO(A)PYRENE	350	104	31	53	15	67 J	23	90	3.3 U	3.8	2.72	12	19
BENZO(B)FLUORANTHENE	530	130	46	130	24	59	27	110	4.3	5.5	4.9	16	21
BENZO(G,H,I)PERYLENE	210	52.5	16	20	7.2	40 J	10	54	3.3 U	3.3 U	3.3 U	7.2	9.4
BENZO(K)FLUORANTHENE	170	50	16	46	8.6	55	17	82	3.3 U	3.6	2.62	11	17
BIS(2-CHLOROETHOXY)METHANE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD310A-000.5-AVG	G32-SD310F-000.5	G32-SD315-000.5	G32-SD317-000.5	GI-SD530-0006	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006
LOCATION ID	G32-SD304	G32-SD310	G32-SD310F	G32-SD315	G32-SD317	G32-SD317	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425
SAMPLE DATE	08/26/05	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	ST	IT	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	70 J	325 U	42 J	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	100 J	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	310	108	38 EB	120	22	100	24	100	3.7	4.3	4	16	8.3
DIBENZO(A,H)ANTHRACENE	67	15	4.3	7.9	3.2 U	15	3.3	18	3.3 U	3.3 U	3.3 U	3.3 U	4.4
DIBENZOFURAN	40 J	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	620	235 J	70	140	52	140	42	220	5.3	6.4	5.85	16	7.8
FLUORENE	62	24 J	5.5	7.8	5.2	7.9 J	4.7	25	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
HEXACHLOROBENZENE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 UJ	325 UJ	330 U	330 UJ	320 U	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	3350 J	1050 J	329	735	187	711 J	211	1000	21.1	34.5	27.8	111	114
INDENO(1,2,3-CD)PYRENE	190	50	15	24	6.4	37	9.9	51	3.3 U	3.3 U	3.3 U	7	11
ISOPHORONE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD310A-000.5-AVG	G32-SD310F-000.5	G32-SD315-000.5	G32-SD317-000.5	GI-SD530-0006	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006
LOCATION ID	G32-SD304	G32-SD310	G32-SD310F	G32-SD315	G32-SD317	G32-SD317	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425
SAMPLE DATE	08/26/05	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	ST	IT	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD
LOW MOLECULAR WEIGHT PAHS	891	306 J	60.6	90.8	49.8	123 J	54.1	283	3.3 U	16.1	8.88	20.9	3.4
NAPHTHALENE	58	10 J	6.1	3.3 U	4.6	9.2 U	3.3 U	12	3.3 U	7.9	4.78	3.3 U	3.3 U
NITROBENZENE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	670 U	665 U	670 U	670 U	660 U	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	460	170 J	29	40	27	74	30	160	3.3 U	8.2	4.92	14	3.4
PHENOL	330 U	94 J	820	330 U	270 J	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	590	190 J	59	120	35	130 J	31	180	4.2	5.7	4.95	14	8.2
TOTAL CHLORINATED VOCS	330 U	325 U	330 U	330 U	320 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	4240 J	1360 J	390	826	237	834 J	265	1290	21.1	50.6	35.8	132	117
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	16 U	4.3 U	3.3 U	4.6 U	3.9 U	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	16 U	4.3 U	3.3 U	5.1 J	3.9 U	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	16 U	4.3 U	3.3 U	10 R	3.9 U	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	8.5 U	2.25 U	1.7 U	2.4 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	8.5 U	2.25 U	1.7 U	2.4 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	8.5 U	2.25 U	1.7 U	2.4 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	33 U	43 U	33 U	46 U	39 U	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1221	33 U	43 U	33 U	46 U	39 U	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U

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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD310A-000.5-AVG	G32-SD310F-000.5	G32-SD315-000.5	G32-SD317-000.5	GI-SD530-0006	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006
LOCATION ID	G32-SD304	G32-SD310	G32-SD310F	G32-SD315	G32-SD317	G32-SD317	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425
SAMPLE DATE	08/26/05	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	ST	IT	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD
AROCLOR-1232	33 U	43 U	33 U	46 U	39 U	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1242	33 U	43 U	33 U	46 U	39 U	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1248	33 U	43 U	33 U	46 U	39 U	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1254	33 U	43 U	33 U	46 U	39 U	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1260	840 J	43 U	33 U	500	39 U	NA	33 U	100	33 U	33 U	33 U	33 U	33 U
BETA-BHC	8.5 U	2.25 U	1.7 U	4.7	2 U	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	8.5 U	2.25 U	1.7 U	2.4 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	16 U	4.3 U	3.3 U	4.6 U	3.9 U	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	8.5 U	2.25 U	1.7 U	2.4 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	16 U	4.3 U	3.3 U	4.6 U	3.9 U	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	26 J	4.3 U	3.3 U	12 J	3.9 U	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	16 U	4.3 U	3.3 U	4.6 U	3.9 U	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	16 U	4.3 U	3.3 U	4.6 U	3.9 U	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	16 UJ	4.3 U	3.3 U	4.6 U	3.9 U	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	8.5 U	2.25 U	1.7 U	2.4 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	13 R	2.25 U	1.7 U	11	2 U	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	8.5 U	2.25 U	1.7 U	2.4 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	8.5 U	2.25 U	1.7 U	2.4 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	85 U	22.5 U	17 U	24 U	20 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	840 J	43 U	33 U	500	39 U	NA	33 U	100	33 U	33 U	33 U	33 U	33 U
TOTAL CHLORDANE	8.5 U	2.25 U	1.7 U	11	2 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	16 U	4.3 U	3.3 U	5.1 J	3.9 U	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	850 U	225 U	170 U	240 U	200 U	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)													

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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD310A-000.5-AVG	G32-SD310F-000.5	G32-SD315-000.5	G32-SD317-000.5	GI-SD530-0006	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006
LOCATION ID	G32-SD304	G32-SD310	G32-SD310F	G32-SD315	G32-SD317	G32-SD317	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425
SAMPLE DATE	08/26/05	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	ST	IT	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	5.8 U	NA	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	2.9 U	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	8.1 J	NA	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	5.8 U	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	2.3 U	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	2.3 U	NA	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	2.9 U	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	8.1 J	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	20.9 J	NA	NA	NA	NA	NA	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)													
ALUMINUM	4980 J	5780	6090	4890	5560	6060	6890 *E	4520 E	5490 *E	5010 *E	5250 *E	6940 *E	5390 E
ANTIMONY	2.8 J	0.173 UJ	0.055 UJ	0.18 UJ	0.46 UJ	0.69 UJ	0.21 BN	0.11 BN	0.26 BN	0.074 UN	0.148 BN	0.39 BN	0.082 UN
ARSENIC	2.4 J	2.5 J	5.2 J	1.7 J	4.8 J	5.6 J	2.3	2.8 *	3.1	2.6	2.85	4.1	2.1 *
BARIUM	11 J	8.9 J	15.8 J	8.2 J	8.7 J	10.2 J	10.1 E	10.5 E	6.5 E	5.2 E	5.85 E	11.1 E	13.9 E
BERYLLIUM	0.42	0.285	0.41	0.27	0.27	0.254	0.29 E	0.11 BE	0.25 E	0.19 E	0.22 E	0.33 E	0.065 BE
CADMIUM	0.0057 UJ	0.076 UJ	0.36 UJ	0.15 UJ	398	0.724	0.26	0.028 B*	0.81	0.42	0.615	0.59	0.0059 U*

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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD310A-000.5-AVG	G32-SD310F-000.5	G32-SD315-000.5	G32-SD317-000.5	GI-SD530-0006	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006
LOCATION ID	G32-SD304	G32-SD310	G32-SD310F	G32-SD315	G32-SD317	G32-SD317	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425
SAMPLE DATE	08/26/05	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	ST	IT	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD
CALCIUM	22400 J	29800 J	25700 J	19200 J	5630 J	33400	8770 *	33400 *	5160 *	5180 *	5170 *	19500 *	30400 *
CHROMIUM	10.7 J	14.6	15.2 J	10.6	72.1	28.1 J	10.1 E	10.1 E	11.7 E	10.2 E	11 E	16.5 E	10.4 E
COBALT	3.1 J	2.7 J	2.9 J	2.3 J	2 J	5.2	4.1 *E	2.6 E	3.3 *E	3.5 *E	3.4 *E	4.8 *E	2.8 E
COPPER	34 J	20.7	33.4	17.2	36.5	186 J	25.5 N	14.9 E	20.3 N	12.8 N	16.6 N	19.4 N	9.8 E
CYANIDE	0.11 UJ	0.1 J	0.12 UJ	0.13 UJ	0.12 UJ	NA	NA	NA	NA	NA	NA	NA	NA
IRON	11400	19800 J	25700	11000 J	71800 J	37400	18100 *	12300 *	23700 *	14700 *	19200 *	21800 *	14700 *
LEAD	43.6 J	9.85 J	32.6 J	14 J	56.4 J	20.9 J	138 N*E	10.8 NE	9.8 N*E	5.7 N*E	7.75 N*E	32.8 N*E	6.4 NE
MAGNESIUM	2900 J	3560	4020	3180	3660	3050	2860 *E	2390 E	2670 *E	2520 *E	2600 *E	3790 *E	2940 E
MANGANESE	108 J	164 J	239 J	111 J	348 J	230	152 *E	140 *E	139 *E	109 *E	124 *E	141 *E	119 *E
MERCURY	0.052 J	0.0295 J	0.05 U	0.026 J	0.0099 J	0.031	0.0075 B	0.032	0.003 U	0.0079 B	0.0047 B	0.029	0.0098 B
NICKEL	8.3 J	9 J	11 J	6.9 J	8.7 J	32.8	8 *E	6 E	8.5 *E	7.8 *E	8.15 *E	9.5 *E	5.9 E
POTASSIUM	784	838 J	1430	819 J	787 J	712 J	724 *	996 *	600 *	444 *	522 *	1110 *	1070 *
SELENIUM	5.2 J	0.067 UJ	0.066 UJ	0.067 UJ	0.065 UJ	2.08 U	0.86	0.38 U	1.1	0.66	0.88	0.79	0.35 U
SILVER	0.02 U	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.23 UJ	0.031 U	0.039 U	0.03 U	0.032 U	0.031 U	0.033 U	0.036 U
SODIUM	3300 J	3300 J	5330	3890	2560 J	3700	2180	4400 E	1780	1520	1650	3140	3510 E
THALLIUM	1 J	1.06 UJ	0.14 J	0.67 UJ	1.1 UJ	0.46 UJ	0.094 U	0.12 U	0.14 B	0.15 B	0.145 B	0.23 B	0.11 U
VANADIUM	18.5 J	15.6 J	21.6 J	19.6 J	14.6 J	14.9	11 *E	11.5 E	8.9 *E	12 *E	10.4 *E	21.9 *E	12.8 E
ZINC	44.3 J	40.2 J	73 J	36.8 J	145 J	41.2 J	26.1 E	31.1 E	119 E	31.9 E	75.4 E	164 E	27.2 E
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	4400 J	10400 J	13000 J	6800 J	3000	5000	NA	NA	NA	NA	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD310A-000.5-AVG	G32-SD310F-000.5	G32-SD315-000.5	G32-SD317-000.5	GI-SD530-0006	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006
LOCATION ID	G32-SD304	G32-SD310	G32-SD310F	G32-SD315	G32-SD317	G32-SD317	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425
SAMPLE DATE	08/26/05	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	ST	IT	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD
MISCELLANEOUS PARAMETERS (%)													
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	-9999	NA	NA	NA	NA	NA	NA	NA
PERCENT CLAY	3.6	3.35	5.4	3.1	2.9	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	5.5	13.2	13.2	7.5	23.4	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	60.6	6.6	9.4	31.6	13.7	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	4.1	18.6	42.8	22.7	29.3	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	18.8	51.3	21.8	30.7	25.7	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SILT	7.3	7	7.4	4.4	4.9	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	77.1	77.3	77.7	80.8	84.6	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	100	88.1	100	100	100	NA	NA	NA	NA	NA	NA	NA
SIEVE 1/2"	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA
SIEVE 1-1/2"	100	100	100	100	100	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	100	100	100	100	100	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	100	100	100	100	100	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	94.8	79.6	100	95	100	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/8"	99.4	88.6	66.2	84.6	86.3	77	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 004	95.9	81.4	57.2	77.3	70.7	54	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 010	90.4	68.3	44	69.8	47.2	39	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 020	82.7	44	34.5	60.5	29.2	22	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 040	71.5	17	22.2	39.1	21.5	9	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 060	51.4	13	15.7	14.3	15.9	4	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 080	32.3	11.8	14.3	10.8	12	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	24.8	11.3	13.9	9.9	10.8	1	NA	NA	NA	NA	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD310A-000.5-AVG	G32-SD310F-000.5	G32-SD315-000.5	G32-SD317-000.5	GI-SD530-0006	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006
LOCATION ID	G32-SD304	G32-SD310	G32-SD310F	G32-SD315	G32-SD317	G32-SD317	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425
SAMPLE DATE	08/26/05	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	ST	IT	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD
SIEVE NO. 200	10.9	10.4	12.7	7.5	7.8	1	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	7 J	1.4 J	14.3 J	6.6 J	3.8 J	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	0.0043 UJ	0.0023 UJ	0.0033 UJ	0.0016 UJ	0.0021 UJ	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	0.23 J	0.0618 J	0.2 J	0.071 J	0.19 J	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.099 J	0.0415 UJ	0.11 J	0.1 J	0.17 J	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.00026 J	0.000145 J	0.00025 U	0.00013 J	0.00004 J	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	0.63 J	0.04 UJ	0.082 UJ	0.026 UJ	0.078 UJ	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	0.36 J	0.265 J	1.9 J	0.3 J	0.26 J	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)													
SEM/AVS	0.19	0.295	0.15	0.071	0.16	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	6 U	6.5 U	7 U	6 UJ	4 U	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD310A-000.5-AVG	G32-SD310F-000.5	G32-SD315-000.5	G32-SD317-000.5	GI-SD530-0006	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006
LOCATION ID	G32-SD304	G32-SD310	G32-SD310F	G32-SD315	G32-SD317	G32-SD317	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425
SAMPLE DATE	08/26/05	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	ST	IT	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD
1,2,4-TRICHLOROBENZENE	6 U	6.5 U	7 U	6 UJ	4 U	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	6 U	6.5 U	7 U	6 UJ	4 U	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	6 U	6.5 U	7 U	6 UJ	4 U	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	6 U	6.5 U	7 U	6 UJ	4 U	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	6 U	6.5 U	7 U	6 UJ	4 U	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	23 JEB	17 JEB	37 UJ	700 UJ	30 JEB	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	2 J	6.5 U	4 J	6 U	1 J	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD310A-000.5-AVG	G32-SD310F-000.5	G32-SD315-000.5	G32-SD317-000.5	GI-SD530-0006	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006
LOCATION ID	G32-SD304	G32-SD310	G32-SD310F	G32-SD315	G32-SD317	G32-SD317	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425
SAMPLE DATE	08/26/05	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	ST	IT	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD
CHLOROFORM	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	56 U	16.5 U	31 U	17 U	15 U	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	G32-SD310A-000.5-AVG	G32-SD310F-000.5	G32-SD315-000.5	G32-SD317-000.5	GI-SD530-0006	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006
LOCATION ID	G32-SD304	G32-SD310	G32-SD310F	G32-SD315	G32-SD317	G32-SD317	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425
SAMPLE DATE	08/26/05	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	ST	IT	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD
TOTAL CHLORINATED VOCS	6 U	6.5 U	7 U	6 UJ	4 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	6 U	6.5 U	7 U	6 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	46	39.5	52 J	38	21	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	11 U	8.15 U	13 U	8.4 U	6.8 U	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006
LOCATION ID	G32-SD304	GI-SD426	GI-SD427	GI-SD428	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435
SAMPLE DATE	08/26/05	10/05/09	09/21/09	09/21/09	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	670 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	670 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	15	3.3 U	3.3 U	3.3 U	9 J	3.3 U	3.3 U	24	117 UJ	19	15	26 J	3.3 U
2-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	670 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	670 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	670 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006
LOCATION ID	G32-SD304	GI-SD426	GI-SD427	GI-SD428	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435
SAMPLE DATE	08/26/05	10/05/09	09/21/09	09/21/09	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	670 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	670 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	71	3.3 U	25	3.9	110	8.1	14	110	220 J	120	130	150 J	23
ACENAPHTHYLENE	25	6.5	3.3 U	3.3 U	18 U	3.3 U	3.3 U	4.5	47 J	7.9	9.3	14 J	4
ACETOPHENONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	200	5.9	41	7.1	130	14	20	210	500 J	220	160	260 J	49
ATRAZINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	310 J	8.7	67	17	200	30	30	540 D	910 J	420 D	250	510 J	100
BENZO(A)PYRENE	350	7.4	60	21	190	27	22	480 D	890 J	290	220	530 J	88
BENZO(B)FLUORANTHENE	530	13	68	30	150	32	24	590 D	700 J	400 D	300	440 J	120
BENZO(G,H,I)PERYLENE	210	5.4	39	17	120	18	9.1	290	490 J	170	130	290 J	55
BENZO(K)FLUORANTHENE	170	4.1	47	9.6	120	25	16	240	630 J	170	110	340 J	47
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006
LOCATION ID	G32-SD304	GI-SD426	GI-SD427	GI-SD428	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435
SAMPLE DATE	08/26/05	10/05/09	09/21/09	09/21/09	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	70 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	100 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	310	8	58	16	190	29	22	450 D	940 J	330	230	500 J	98
DIBENZO(A,H)ANTHRACENE	67	3.3 U	11	4.8	38	5.3	3.3 U	110	170 J	74	43	100 J	22
DIBENZOFURAN	40 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	620	13	150	34	480	61	49	1300 D	2000 J	1000 D	670 D	1100 J	230
FLUORENE	62	3.3 U	19	3.5	59	5	14	88	200 J	89	68	100 J	16
HEXACHLOROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	3350 J	75.9	655	191	1970	298	221	5250	8700 J	3810	2600	4970 J	1020
INDENO(1,2,3-CD)PYRENE	190	5.3	35	14	110	16	8.6	250	470 J	160	120	300 J	50
ISOPHORONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006
LOCATION ID	G32-SD304	GI-SD426	GI-SD427	GI-SD428	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435
SAMPLE DATE	08/26/05	10/05/09	09/21/09	09/21/09	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
LOW MOLECULAR WEIGHT PAHS	891	52.4	220	43.7	730 J	71.1	130	1230	2470 J	1290	961	1390 J	257
NAPHTHALENE	58	30	5.5	4.2	22	3.3 U	10	78	117 UJ	42	49	54 J	5
NITROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	670 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	460	10	130	25	400	44	72	720 D	1500 J	790 D	530 D	790 J	160
PHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	590	11	120	28	370	55	40	1000 D	1500 J	800 D	530 D	860 J	210
TOTAL CHLORINATED VOCS	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	4240 J	128	876	235	2700 J	369	351	6480	11200 J	5100	3560	6360 J	1280
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U	33 U	NA	160 U
AROCLOR-1221	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U	33 U	NA	160 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006
LOCATION ID	G32-SD304	GI-SD426	GI-SD427	GI-SD428	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435
SAMPLE DATE	08/26/05	10/05/09	09/21/09	09/21/09	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
AROCLOR-1232	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U	33 U	NA	160 U
AROCLOR-1242	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U	33 U	NA	160 U
AROCLOR-1248	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U	33 U	NA	160 U
AROCLOR-1254	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U	33 U	NA	160 U
AROCLOR-1260	840 J	33 U	33 U	33 U	NA	42	33 U	360	NA	170	400	NA	890
BETA-BHC	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	26 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	16 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	13 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	85 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	840 J	33 U	33 U	33 U	NA	42	33 U	360	NA	170	400	NA	890
TOTAL CHLORDANE	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	850 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)													

LIGHT SHADING - DETECTED;
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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006
LOCATION ID	G32-SD304	GI-SD426	GI-SD427	GI-SD428	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435
SAMPLE DATE	08/26/05	10/05/09	09/21/09	09/21/09	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
DECACHLOROBIPHENYL	NA	NA	NA	NA	2.2 U	NA	NA	NA	7.4 U	NA	NA	6.7 U	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	0.46 U	NA	NA	NA	1.5 U	NA	NA	1.4 U	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	4.1 J	NA	NA	NA	3.7 UJ	NA	NA	120	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	6.9	NA	NA	NA	16 J	NA	NA	160	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	0.46 U	NA	NA	NA	1.5 U	NA	NA	1.4 U	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	2.2 U	NA	NA	NA	7.4 U	NA	NA	6.7 U	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	0.89 U	NA	NA	NA	2.9 U	NA	NA	26 U	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	0.89 U	NA	NA	NA	2.9 U	NA	NA	2.7 U	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	1.4 J	NA	NA	NA	3.7 U	NA	NA	9.5 J	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	12.4 J	NA	NA	NA	16 J	NA	NA	290 J	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	16.2 J	NA	NA	NA	32.2 J	NA	NA	313 J	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	0.46 U	NA	NA	NA	1.5 U	NA	NA	1.4 U	NA
METALS (MG/KG)													
ALUMINUM	4980 J	6810 *E	5140 E	4660 E	6160	4520 E	7500 *E	3220 E	4090	3340 E	3530 E	3860	3380 E
ANTIMONY	2.8 J	0.36 BN	0.15 BN	0.21 BN	0.666 UJ	0.089 BN	0.25 BN	0.084 UN	0.89 UJ	0.098 BN	0.21 BN	0.253 J	0.21 BN
ARSENIC	2.4 J	2.6	1.9 *	2.6 *	0.7 J	2.4 *	3.8	2 *	0.59 UJ	4.5 *	7.6 *	2.6 J	2.4 *
BARIUM	11 J	11.6 E	13.6 E	6.2 E	7.6	8.6 E	19.9 E	6.2 E	15.9 J	13.3 E	10.1 E	15.4 J	7.9 E
BERYLLIUM	0.42	0.33 E	0.077 BE	0.15 E	0.204 J	0.097 BE	0.37 E	0.074 BE	0.333 J	0.15 E	0.076 BE	0.275 J	0.072 BE
CADMIUM	0.0057 UJ	0.33	0.052 B*	0.037 B*	0.2 J	0.053 B*	0.35	0.011 B*	0.327 UJ	0.083 B*	0.26 *	0.465 J	0.091 B*

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006
LOCATION ID	G32-SD304	GI-SD426	GI-SD427	GI-SD428	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435
SAMPLE DATE	08/26/05	10/05/09	09/21/09	09/21/09	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CALCIUM	22400 J	8060 *	21100 *	42400 *	30500 J	38500 *	19100 *	77800 *	206000 J	140000 *	80300 *	140000 J	45800 *
CHROMIUM	10.7 J	12.2 E	10.2 E	9.3 E	12	10.5 E	17.5 E	6.2 E	13.5 J	10.4 E	25.8 E	20.4 J	9.4 E
COBALT	3.1 J	4.8 *E	2.9 E	3.6 E	3.8	2.7 E	4.5 *E	1.9 E	2.6 J	1.8 E	2.9 E	2.6 J	2.2 E
COPPER	34 J	16 N	7.3 E	28.2 E	7.5 J	7.5 E	10.7 N	7.2 E	13.9 J	12.1 E	21.4 E	18.7 J	11.8 E
CYANIDE	0.11 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	11400	21800 *	13700 *	14500 *	12500	12200 *	22100 *	6220 *	11400	6340 *	42500 *	17900	13100 *
LEAD	43.6 J	34.7 N*E	8.2 NE	7.6 NE	11.2	11.4 NE	10.3 N*E	13.8 NE	23 J	14.6 NE	9.3 NE	18.3 J	14.7 NE
MAGNESIUM	2900 J	3930 *E	2810 E	2690 E	3390	2560 E	3820 *E	1960 E	3140 J	2460 E	2400 E	3210 J	2200 E
MANGANESE	108 J	121 *E	108 *E	124 *E	137	118 *E	141 *E	93.8 *E	188 J	134 *E	193 *E	146 J	93.4 *E
MERCURY	0.052 J	0.018 B	0.025 B	0.011 B	0.026 J	0.037	0.014 B	0.02 B	0.087	0.059	0.021 B	0.239	0.025 B
NICKEL	8.3 J	9.3 *E	6.3 E	6.4 E	7.4	5.7 E	10.2 *E	3.8 E	6.3 J	4.1 E	15.4 E	8.2 J	5.1 E
POTASSIUM	784	937 *	942 *	761 *	758	831 *	1800 *	677 *	1390 J	1330 *	804 *	1120 J	686 *
SELENIUM	5.2 J	1.2	0.34 U	0.38 U	0.666 U	0.36 U	0.8	0.36 U	2.7 U	0.39 U	0.38 U	2.4 U	0.38 U
SILVER	0.02 U	0.035 U	0.035 U	0.039 U	0.222 UJ	0.037 U	0.034 U	0.037 U	0.3 U	0.04 U	0.038 U	0.27 U	0.038 U
SODIUM	3300 J	4230	3430 E	3640 E	3390	3880 E	2620	4070 E	9070	10900 E	4700 E	8420	4900 E
THALLIUM	1 J	0.24 B	0.11 U	0.12 U	0.444 UJ	0.11 U	0.23 B	0.43 B	4.9 J	0.89	0.12 U	3.5 J	0.12 U
VANADIUM	18.5 J	19.2 *E	12.4 E	14 E	15	11.8 E	23.3 *E	7.8 E	14.9 J	12.8 E	11.9 E	16.8 J	9.9 E
ZINC	44.3 J	40.1 E	30.6 E	23.9 E	34.4 J	26.5 E	36 E	19.3 E	47.2 J	29.9 E	21.1 E	37 J	33.9 E
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	4400 J	NA	NA	NA	5860	NA	NA	NA	13700	NA	NA	14700	NA

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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006
LOCATION ID	G32-SD304	GI-SD426	GI-SD427	GI-SD428	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435
SAMPLE DATE	08/26/05	10/05/09	09/21/09	09/21/09	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
MISCELLANEOUS PARAMETERS (%)													
HYDROMETER-0.002MM	NA	NA	NA	NA	1	NA	NA	NA	7	NA	NA	4	NA
PERCENT CLAY	3.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	5.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	60.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	4.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	18.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SILT	7.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	77.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	NA	NA	NA	100	NA	NA	NA	100	NA	NA	100	NA
SIEVE 1/2"	NA	NA	NA	NA	100	NA	NA	NA	92	NA	NA	100	NA
SIEVE 1-1/2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	NA	NA	NA	100	NA	NA	NA	100	NA	NA	100	NA
SIEVE 3/8"	99.4	NA	NA	NA	100	NA	NA	NA	92	NA	NA	96	NA
SIEVE NO. 004	95.9	NA	NA	NA	98	NA	NA	NA	86	NA	NA	94	NA
SIEVE NO. 010	90.4	NA	NA	NA	88	NA	NA	NA	77	NA	NA	79	NA
SIEVE NO. 020	82.7	NA	NA	NA	63	NA	NA	NA	68	NA	NA	57	NA
SIEVE NO. 040	71.5	NA	NA	NA	21	NA	NA	NA	62	NA	NA	49	NA
SIEVE NO. 060	51.4	NA	NA	NA	14	NA	NA	NA	59	NA	NA	43	NA
SIEVE NO. 080	32.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	24.8	NA	NA	NA	11	NA	NA	NA	53	NA	NA	36	NA

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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006
LOCATION ID	G32-SD304	GI-SD426	GI-SD427	GI-SD428	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435
SAMPLE DATE	08/26/05	10/05/09	09/21/09	09/21/09	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
SIEVE NO. 200	10.9	NA	NA	NA	9	NA	NA	NA	40	NA	NA	27	NA
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	7 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	0.0043 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	0.23 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.099 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.00026 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	0.63 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	0.36 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)													
SEM/AVS	0.19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006
LOCATION ID	G32-SD304	GI-SD426	GI-SD427	GI-SD428	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435
SAMPLE DATE	08/26/05	10/05/09	09/21/09	09/21/09	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
1,2,4-TRICHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	23 JEB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	2 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SAMPLE ID	G32-SD304D-000.5	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006
LOCATION ID	G32-SD304	GI-SD426	GI-SD427	GI-SD428	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435
SAMPLE DATE	08/26/05	10/05/09	09/21/09	09/21/09	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CHLOROFORM	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	56 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006
LOCATION ID	G32-SD304	GI-SD426	GI-SD427	GI-SD428	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435
SAMPLE DATE	08/26/05	10/05/09	09/21/09	09/21/09	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
TOTAL CHLORINATED VOCS	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	11 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD566-0006	GI-SD436-0006	GI-SD517-0006	GI-SD437-0006	GI-SD517-0006-D	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD446-0006	GI-SD447-0006	GI-SD518-0006	GI-SD447-0006-D	GI-SD447-0006-AVG
LOCATION ID	G32-SD304	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437	GI-SD437	GI-SD438	GI-SD446	GI-SD447	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	08/26/05	04/30/10	09/21/09	05/13/10	09/21/09	05/13/10	05/13/10	05/13/10	09/22/09	09/22/09	05/03/10	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	FD	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	670 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	670 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	15	13 J	3.3 U	1.5 J	3.3 U	2.4 J	1.95 J	18 J	3.3 U	5.9	37 U	4.5	5.2
2-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	670 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	670 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	670 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SAMPLE ID	G32-SD304D-000.5	GI-SD566-0006	GI-SD436-0006	GI-SD517-0006	GI-SD437-0006	GI-SD517-0006-D	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD446-0006	GI-SD447-0006	GI-SD518-0006	GI-SD447-0006-D	GI-SD447-0006-AVG
LOCATION ID	G32-SD304	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437	GI-SD437	GI-SD438	GI-SD446	GI-SD447	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	08/26/05	04/30/10	09/21/09	05/13/10	09/21/09	05/13/10	05/13/10	05/13/10	09/22/09	09/22/09	05/03/10	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	670 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	670 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	71	91 J	15	3.1 J	21	2.4 J	2.75 J	85 J	16	67	70	50	58.5
ACENAPHTHYLENE	25	5.7 J	3.3 U	3.6 J	3.3 U	3.9 J	3.75 J	89 UJ	3.3 U	12	13 J	9.5	10.8
ACETOPHENONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	200	190 J	28	12 UJ	42	10 U	11 UJ	130 UJ	40	150	160	110	130
ATRAZINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	310 J	340 J	58	42 J	110	32	37 J	270 J	110	400 D	560	290	345 D
BENZO(A)PYRENE	350	330 J	53	37 J	99	37 J	37 J	290 J	96	300	540	250	275
BENZO(B)FLUORANTHENE	530	250 J	71	39 J	140	38	38.5 J	220 J	140	510 D	430	310	410 D
BENZO(G,H,I)PERYLENE	210	180 J	33	26 J	61	22 J	24 J	150 J	57	180	330	160	170
BENZO(K)FLUORANTHENE	170	230 J	25	32 J	50	32	32 J	200 J	49	190	360	180	185
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD566-0006	GI-SD436-0006	GI-SD517-0006	GI-SD437-0006	GI-SD517-0006-D	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD446-0006	GI-SD447-0006	GI-SD518-0006	GI-SD447-0006-D	GI-SD447-0006-AVG
LOCATION ID	G32-SD304	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437	GI-SD437	GI-SD438	GI-SD446	GI-SD447	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	08/26/05	04/30/10	09/21/09	05/13/10	09/21/09	05/13/10	05/13/10	05/13/10	09/22/09	09/22/09	05/03/10	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	70 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	100 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	310	340 J	56	52 J	110	32	42 J	270 J	100	350 D	560	290	320 D
DIBENZO(A,H)ANTHRACENE	67	74 J	9.8	8.2 J	22	7.2 J	7.7 J	67 J	18	72	110	57	64.5
DIBENZOFURAN	40 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	620	770 J	130	64 J	220	49	56.5 J	630 J	230	890 D	1000	770 D	830 D
FLUORENE	62	66 J	8.5	4.6 J	15	2.9 J	3.75 J	67 J	13	60	57	29	44.5
HEXACHLOROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	3350 J	3290 J	576	377 J	1070	307 J	342 J	2700 J	1040	3770	5100	3070	3420
INDENO(1,2,3-CD)PYRENE	190	190 J	30	23 J	56	21	22 J	150 J	52	170	310	140	155
ISOPHORONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD566-0006	GI-SD436-0006	GI-SD517-0006	GI-SD437-0006	GI-SD517-0006-D	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD446-0006	GI-SD447-0006	GI-SD518-0006	GI-SD447-0006-D	GI-SD447-0006-AVG
LOCATION ID	G32-SD304	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437	GI-SD437	GI-SD438	GI-SD446	GI-SD447	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	08/26/05	04/30/10	09/21/09	05/13/10	09/21/09	05/13/10	05/13/10	05/13/10	09/22/09	09/22/09	05/03/10	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
LOW MOLECULAR WEIGHT PAHS	891	949 J	140	40.8 J	226	33.6 J	37.2 J	660 J	205	826	840 J	622	724
NAPHTHALENE	58	33 J	3.5	10 UJ	7.6	10 U	10 UJ	89 UJ	5.6	11	37 U	8.6	9.8
NITROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	670 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	460	550 J	85	28 J	140	22	25 J	490 J	130	520 D	540	410 D	465 D
PHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	590	590 J	110	54 J	200	37 J	45.5 J	450 J	190	710 D	900	620 D	665 D
TOTAL CHLORINATED VOCS	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	4240 J	4240 J	716	418 J	1290	341 J	380 J	3360 J	1250	4600	5940 J	3690	4140
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	33 U	NA	33 U	NA	33 U	NA	NA	NA	33 U	33 U	NA	33 U	33 U
AROCLOR-1221	33 U	NA	33 U	NA	33 U	NA	NA	NA	33 U	33 U	NA	33 U	33 U

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TABLE - D7
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GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD566-0006	GI-SD436-0006	GI-SD517-0006	GI-SD437-0006	GI-SD517-0006-D	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD446-0006	GI-SD447-0006	GI-SD518-0006	GI-SD447-0006-D	GI-SD447-0006-AVG
LOCATION ID	G32-SD304	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437	GI-SD437	GI-SD438	GI-SD446	GI-SD447	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	08/26/05	04/30/10	09/21/09	05/13/10	09/21/09	05/13/10	05/13/10	05/13/10	09/22/09	09/22/09	05/03/10	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
AROCLOR-1232	33 U	NA	33 U	NA	33 U	NA	NA	NA	33 U	33 U	NA	33 U	33 U
AROCLOR-1242	33 U	NA	33 U	NA	33 U	NA	NA	NA	33 U	33 U	NA	33 U	33 U
AROCLOR-1248	33 U	NA	33 U	NA	33 U	NA	NA	NA	33 U	33 U	NA	33 U	33 U
AROCLOR-1254	33 U	NA	33 U	NA	33 U	NA	NA	NA	33 U	33 U	NA	33 U	33 U
AROCLOR-1260	840 J	NA	170	NA	310	NA	NA	NA	140	240	NA	130	185
BETA-BHC	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	26 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	16 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	13 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	85 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	840 J	NA	170	NA	310	NA	NA	NA	140	240	NA	130	185
TOTAL CHLORDANE	8.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	850 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)													

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ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD566-0006	GI-SD436-0006	GI-SD517-0006	GI-SD437-0006	GI-SD517-0006-D	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD446-0006	GI-SD447-0006	GI-SD518-0006	GI-SD447-0006-D	GI-SD447-0006-AVG
LOCATION ID	G32-SD304	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437	GI-SD437	GI-SD438	GI-SD446	GI-SD447	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	08/26/05	04/30/10	09/21/09	05/13/10	09/21/09	05/13/10	05/13/10	05/13/10	09/22/09	09/22/09	05/03/10	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
DECACHLOROBIPHENYL	NA	12 U	NA	2.6 U	NA	2.4 U	2.5 U	1.1 U	NA	NA	4.7 U	NA	NA
DICHLOROBIPHENYLS	NA	2.4 U	NA	0.62 J	NA	0.49 U	0.432 J	0.23 U	NA	NA	1 U	NA	NA
HEPTACHLOROBIPHENYLS	NA	41	NA	27 J	NA	67 J	47 J	38 J	NA	NA	62	NA	NA
HEXACHLOROBIPHENYL	NA	88	NA	39 J	NA	88 J	63.5 J	50 J	NA	NA	95	NA	NA
MONOCHLOROBIPHENYLS	NA	2.4 U	NA	0.52 U	NA	0.49 U	0.505 U	0.23 U	NA	NA	1 U	NA	NA
NONACHLOROBIPHENYLS	NA	12 U	NA	2.6 U	NA	2.4 U	2.5 U	1.1 U	NA	NA	4.7 U	NA	NA
PENTACHLOROBIPHENYLS	NA	16 UJ	NA	12 U	NA	20	13	11 J	NA	NA	15 U	NA	NA
TETRACHLOROBIPHENYLS	NA	4.7 U	NA	1 U	NA	0.95 U	0.975 U	0.44 U	NA	NA	1.9 U	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	6 U	NA	7	NA	7.2	7.1	6.7 J	NA	NA	7 J	NA	NA
TOTAL PCB HOMOLOGS	NA	129 J	NA	117 J	NA	182 J	150 J	106 J	NA	NA	164 J	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	158 J	NA	126 J	NA	186 J	156 J	107 J	NA	NA	179 J	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	2.4 U	NA	43 J	NA	0.49 UJ	21.6 J	0.23 U	NA	NA	1 U	NA	NA
METALS (MG/KG)													
ALUMINUM	4980 J	4430	3660 E	4620	4100 E	5070	4840	5400	7800 E	7020 E	5910	7100 E	7060 E
ANTIMONY	2.8 J	0.71 UJ	0.081 UN	0.76 UJ	0.085 UN	2.17 UJ	1.46 UJ	0.67 UJ	0.22 BN	0.26 BN	0.57 UJ	0.29 BN	0.275 BN
ARSENIC	2.4 J	0.84 J	1.7 *	1.7 J	2.3 *	1.5 J	1.6 J	2.6 J	2.3 *	2.8 *	0.643 J	2.4 *	2.6 *
BARIUM	11 J	8.1 J	5.4 E	8.6	9.4 E	8.5	8.55	11.2	26.7 E	23.8 E	19.3 J	20.2 E	22 E
BERYLLIUM	0.42	0.222 J	0.08 BE	0.274	0.086 BE	0.281	0.278	0.257	0.25 E	0.2 E	0.286	0.2 E	0.2 E
CADMIUM	0.0057 UJ	0.256 J	0.062 B*	0.264	0.16 *	0.243	0.254	0.283	0.11 B*	0.15 *	0.282 J	0.13 *	0.14 *

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD566-0006	GI-SD436-0006	GI-SD517-0006	GI-SD437-0006	GI-SD517-0006-D	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD446-0006	GI-SD447-0006	GI-SD518-0006	GI-SD447-0006-D	GI-SD447-0006-AVG
LOCATION ID	G32-SD304	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437	GI-SD437	GI-SD438	GI-SD446	GI-SD447	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	08/26/05	04/30/10	09/21/09	05/13/10	09/21/09	05/13/10	05/13/10	05/13/10	09/22/09	09/22/09	05/03/10	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CALCIUM	22400 J	33100 J	42900 *	15000	28500 *	13800	14400	39200	2950 *	1680 *	1390 J	1640 *	1660 *
CHROMIUM	10.7 J	11.9 J	7.9 E	16.8 J	9.4 E	12.1 J	14.4 J	15.5 J	10.5 E	9.9 E	8.9 J	11 E	10.4 E
COBALT	3.1 J	3 J	2 E	4.3	2.6 E	5.1	4.7	4.9	6.9 E	5.8 E	4.9 J	5.8 E	5.8 E
COPPER	34 J	16 J	12.6 E	14.2 J	9.6 E	13.3 J	13.8 J	15.7 J	17.1 E	29.7 E	17.9 J	23.4 E	26.6 E
CYANIDE	0.11 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	11400	13800	10400 *	17400	13100 *	16200	16800	19500	20300 *	17600 *	13700	19200 *	18400 *
LEAD	43.6 J	17.7 J	18.6 NE	54.4 J	24.3 NE	28.9 J	41.6 J	108 J	9.8 NE	20.3 NE	14.5 J	14.9 NE	17.6 NE
MAGNESIUM	2900 J	2650 J	1920 E	2960	2320 E	3050	3000	3460	4410 E	2910 E	2530 J	3330 E	3120 E
MANGANESE	108 J	127 J	84.6 *E	141	108 *E	142	142	164	261 *E	152 *E	142 J	160 *E	156 *E
MERCURY	0.052 J	0.03	0.068	0.022 J	0.029 B	0.04	0.031 J	0.012 J	0.004 U	0.041	0.023	0.019 B	0.03 B
NICKEL	8.3 J	8.8 J	4.5 E	8.4	5.9 E	8.6	8.5	11.4	10.9 E	11.3 E	9.6 J	11.7 E	11.5 E
POTASSIUM	784	817	631 *	857 J	768 *	869 J	863 J	794 J	1050 *	1020 *	932	1170 *	1100 *
SELENIUM	5.2 J	0.71 U	0.35 U	2.28 U	0.37 U	2.17 U	2.22 U	6.74 U	0.33 U	0.42 B	0.57 U	0.32 U	0.29 B
SILVER	0.02 U	0.24 UJ	0.036 U	0.25 UJ	0.037 U	0.24 UJ	0.245 UJ	0.248 UJ	0.034 U	0.034 U	0.19 U	0.032 U	0.033 U
SODIUM	3300 J	4490	3370 E	4750	3440 E	4100	4420	3560	1690 E	2490 E	810	2080 E	2280 E
THALLIUM	1 J	0.47 UJ	0.11 U	0.51 UJ	0.11 U	0.48 UJ	0.495 UJ	0.45 UJ	0.1 U	0.1 U	1.1 UJ	0.098 U	0.099 U
VANADIUM	18.5 J	12.5 J	11.2 E	23.7	13.9 E	22.5	23.1	14.4	14 E	12.9 E	11.2 J	14.7 E	13.8 E
ZINC	44.3 J	36.4 J	23.6 E	39.9 J	28.1 E	40.8 J	40.4 J	35.8 J	37.3 E	44.8 E	38.3 J	40.8 E	42.8 E
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	4400 J	10300	NA	9700	NA	6800	8250	5550	NA	NA	9700	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD566-0006	GI-SD436-0006	GI-SD517-0006	GI-SD437-0006	GI-SD517-0006-D	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD446-0006	GI-SD447-0006	GI-SD518-0006	GI-SD447-0006-D	GI-SD447-0006-AVG
LOCATION ID	G32-SD304	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437	GI-SD437	GI-SD438	GI-SD446	GI-SD447	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	08/26/05	04/30/10	09/21/09	05/13/10	09/21/09	05/13/10	05/13/10	05/13/10	09/22/09	09/22/09	05/03/10	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
MISCELLANEOUS PARAMETERS (%)													
HYDROMETER-0.002MM	NA	1	NA	3	NA	-9999	-5000	NA	NA	NA	2	NA	NA
PERCENT CLAY	3.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	5.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	60.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	4.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	18.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SILT	7.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	77.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	100	NA	100	NA	100	100	NA	NA	NA	100	NA	NA
SIEVE 1/2"	NA	100	NA	100	NA	100	100	NA	NA	NA	86	NA	NA
SIEVE 1-1/2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	100	NA	100	NA	100	100	NA	NA	NA	93	NA	NA
SIEVE 3/8"	99.4	100	NA	100	NA	100	100	NA	NA	NA	84	NA	NA
SIEVE NO. 004	95.9	100	NA	99	NA	98	98.5	NA	NA	NA	71	NA	NA
SIEVE NO. 010	90.4	98	NA	96	NA	95	95.5	NA	NA	NA	58	NA	NA
SIEVE NO. 020	82.7	92	NA	86	NA	86	86	NA	NA	NA	48	NA	NA
SIEVE NO. 040	71.5	77	NA	48	NA	42	45	NA	NA	NA	40	NA	NA
SIEVE NO. 060	51.4	48	NA	28	NA	19	23.5	NA	NA	NA	33	NA	NA
SIEVE NO. 080	32.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	24.8	21	NA	23	NA	11	17	NA	NA	NA	27	NA	NA

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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD566-0006	GI-SD436-0006	GI-SD517-0006	GI-SD437-0006	GI-SD517-0006-D	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD446-0006	GI-SD447-0006	GI-SD518-0006	GI-SD447-0006-D	GI-SD447-0006-AVG
LOCATION ID	G32-SD304	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437	GI-SD437	GI-SD438	GI-SD446	GI-SD447	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	08/26/05	04/30/10	09/21/09	05/13/10	09/21/09	05/13/10	05/13/10	05/13/10	09/22/09	09/22/09	05/03/10	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
SIEVE NO. 200	10.9	13	NA	19	NA	6	12.5	NA	NA	NA	20	NA	NA
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	7 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	0.0043 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	0.23 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.099 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.00026 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	0.63 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	0.36 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)													
SEM/AVS	0.19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
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TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD566-0006	GI-SD436-0006	GI-SD517-0006	GI-SD437-0006	GI-SD517-0006-D	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD446-0006	GI-SD447-0006	GI-SD518-0006	GI-SD447-0006-D	GI-SD447-0006-AVG
LOCATION ID	G32-SD304	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437	GI-SD437	GI-SD438	GI-SD446	GI-SD447	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	08/26/05	04/30/10	09/21/09	05/13/10	09/21/09	05/13/10	05/13/10	05/13/10	09/22/09	09/22/09	05/03/10	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
1,2,4-TRICHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	23 JEB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	2 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD566-0006	GI-SD436-0006	GI-SD517-0006	GI-SD437-0006	GI-SD517-0006-D	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD446-0006	GI-SD447-0006	GI-SD518-0006	GI-SD447-0006-D	GI-SD447-0006-AVG
LOCATION ID	G32-SD304	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437	GI-SD437	GI-SD438	GI-SD446	GI-SD447	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	08/26/05	04/30/10	09/21/09	05/13/10	09/21/09	05/13/10	05/13/10	05/13/10	09/22/09	09/22/09	05/03/10	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CHLOROFORM	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	56 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD566-0006	GI-SD436-0006	GI-SD517-0006	GI-SD437-0006	GI-SD517-0006-D	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD446-0006	GI-SD447-0006	GI-SD518-0006	GI-SD447-0006-D	GI-SD447-0006-AVG
LOCATION ID	G32-SD304	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437	GI-SD437	GI-SD438	GI-SD446	GI-SD447	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	08/26/05	04/30/10	09/21/09	05/13/10	09/21/09	05/13/10	05/13/10	05/13/10	09/22/09	09/22/09	05/03/10	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
TOTAL CHLORINATED VOCS	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	11 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

SAMPLE ID	G32-SD304D-000.5	GI-SD449-0006	GI-SD450-0006	GI-SD519-0006
LOCATION ID	G32-SD304	GI-SD449	GI-SD450	GI-SD519
SAMPLE DATE	08/26/05	09/22/09	09/22/09	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD
QC TYPE	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)				
1,1-BIPHENYL	330 U	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	NA	NA	NA
2,4,5-TRICHLOROPHENOL	670 U	NA	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	NA	NA	NA
2,4-DICHLOROPHENOL	330 U	NA	NA	NA
2,4-DIMETHYLPHENOL	330 U	NA	NA	NA
2,4-DINITROPHENOL	670 UJ	NA	NA	NA
2,4-DINITROTOLUENE	330 U	NA	NA	NA
2,6-DINITROTOLUENE	330 U	NA	NA	NA
2-CHLORONAPHTHALENE	330 U	NA	NA	NA
2-CHLOROPHENOL	330 U	NA	NA	NA
2-METHYLNAPHTHALENE	15	3.3 U	3.3 U	1.8 J
2-METHYLPHENOL	330 U	NA	NA	NA
2-NITROANILINE	670 U	NA	NA	NA
2-NITROPHENOL	330 U	NA	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	NA	NA	NA
3-NITROANILINE	670 U	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	670 UJ	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	NA	NA	NA

SAMPLE ID	G32-SD304D-000.5	GI-SD449-0006	GI-SD450-0006	GI-SD519-0006
LOCATION ID	G32-SD304	GI-SD449	GI-SD450	GI-SD519
SAMPLE DATE	08/26/05	09/22/09	09/22/09	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	NA	NA	NA
4-CHLOROANILINE	330 U	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	NA	NA
4-METHYLPHENOL	330 U	NA	NA	NA
4-NITROANILINE	670 UJ	NA	NA	NA
4-NITROPHENOL	670 UJ	NA	NA	NA
ACENAPHTHENE	71	3.3 U	3.3 U	6.8 J
ACENAPHTHYLENE	25	31	3.3 U	2.3 J
ACETOPHENONE	330 U	NA	NA	NA
ANTHRACENE	200	53	3.3 U	25
ATRAZINE	330 U	NA	NA	NA
BENZALDEHYDE	330 UJ	NA	NA	NA
BENZO(A)ANTHRACENE	310 J	16	3.3 U	68
BENZO(A)PYRENE	350	7.3	3.3 U	68
BENZO(B)FLUORANTHENE	530	14	3.3 U	60
BENZO(G,H,I)PERYLENE	210	4.3	3.3 U	37
BENZO(K)FLUORANTHENE	170	5.5	3.3 U	49
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	NA	NA	NA

SAMPLE ID	G32-SD304D-000.5	GI-SD449-0006	GI-SD450-0006	GI-SD519-0006
LOCATION ID	G32-SD304	GI-SD449	GI-SD450	GI-SD519
SAMPLE DATE	08/26/05	09/22/09	09/22/09	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	70 J	NA	NA	NA
BUTYL BENZYL PHTHALATE	330 U	NA	NA	NA
CAPROLACTAM	330 U	NA	NA	NA
CARBAZOLE	100 J	NA	NA	NA
CHRYSENE	310	21	3.3 U	74
DIBENZO(A,H)ANTHRACENE	67	3.3 U	3.3 U	13
DIBENZOFURAN	40 J	NA	NA	NA
DIETHYL PHTHALATE	330 U	NA	NA	NA
DIMETHYL PHTHALATE	330 U	NA	NA	NA
DI-N-BUTYL PHTHALATE	330 U	NA	NA	NA
DI-N-OCTYL PHTHALATE	330 U	NA	NA	NA
FLUORANTHENE	620	160	3.3 U	120
FLUORENE	62	100	3.3 U	6.3 J
HEXACHLOROBENZENE	330 U	NA	NA	NA
HEXACHLOROBUTADIENE	330 U	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 UJ	NA	NA	NA
HEXACHLOROETHANE	330 U	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	3350 J	372	3.3 U	633
INDENO(1,2,3-CD)PYRENE	190	4.3	3.3 U	34
ISOPHORONE	330 U	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD449-0006	GI-SD450-0006	GI-SD519-0006
LOCATION ID	G32-SD304	GI-SD449	GI-SD450	GI-SD519
SAMPLE DATE	08/26/05	09/22/09	09/22/09	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD
LOW MOLECULAR WEIGHT PAHS	891	484	3.3 U	112 J
NAPHTHALENE	58	110	3.3 U	2.7 J
NITROBENZENE	330 U	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	NA	NA
N-NITROSODIPHENYLAMINE	330 U	NA	NA	NA
PENTACHLOROPHENOL	670 U	NA	NA	NA
PHENANTHRENE	460	190	3.3 U	67
PHENOL	330 U	NA	NA	NA
PYRENE	590	140	3.3 U	110
TOTAL CHLORINATED VOCS	330 U	NA	NA	NA
TOTAL PAHS	4240 J	856	3.3 U	745 J
PESTICIDES/PCBS (UG/KG)				
4,4'-DDD	16 U	NA	NA	NA
4,4'-DDE	16 U	NA	NA	NA
4,4'-DDT	16 U	NA	NA	NA
ALDRIN	8.5 U	NA	NA	NA
ALPHA-BHC	8.5 U	NA	NA	NA
ALPHA-CHLORDANE	8.5 U	NA	NA	NA
AROCLOR-1016	33 U	33 U	33 U	NA
AROCLOR-1221	33 U	33 U	33 U	NA

SAMPLE ID	G32-SD304D-000.5	GI-SD449-0006	GI-SD450-0006	GI-SD519-0006
LOCATION ID	G32-SD304	GI-SD449	GI-SD450	GI-SD519
SAMPLE DATE	08/26/05	09/22/09	09/22/09	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD
AROCLOR-1232	33 U	33 U	33 U	NA
AROCLOR-1242	33 U	33 U	33 U	NA
AROCLOR-1248	33 U	340	33 U	NA
AROCLOR-1254	33 U	33 U	33 U	NA
AROCLOR-1260	840 J	33 U	33 U	NA
BETA-BHC	8.5 U	NA	NA	NA
DELTA-BHC	8.5 U	NA	NA	NA
DIELDRIN	16 U	NA	NA	NA
ENDOSULFAN I	8.5 U	NA	NA	NA
ENDOSULFAN II	16 U	NA	NA	NA
ENDOSULFAN SULFATE	26 J	NA	NA	NA
ENDRIN	16 U	NA	NA	NA
ENDRIN ALDEHYDE	16 U	NA	NA	NA
ENDRIN KETONE	16 UJ	NA	NA	NA
GAMMA-BHC (LINDANE)	8.5 U	NA	NA	NA
GAMMA-CHLORDANE	13 R	NA	NA	NA
HEPTACHLOR	8.5 U	NA	NA	NA
HEPTACHLOR EPOXIDE	8.5 U	NA	NA	NA
METHOXYCHLOR	85 U	NA	NA	NA
TOTAL AROCLOR	840 J	340	33 U	NA
TOTAL CHLORDANE	8.5 U	NA	NA	NA
TOTAL DDD/DDE/DDT	16 U	NA	NA	NA
TOXAPHENE	850 U	NA	NA	NA
PCB HOMOLOGS (UG/KG)				

SAMPLE ID	G32-SD304D-000.5	GI-SD449-0006	GI-SD450-0006	GI-SD519-0006
LOCATION ID	G32-SD304	GI-SD449	GI-SD450	GI-SD519
SAMPLE DATE	08/26/05	09/22/09	09/22/09	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD
DECACHLOROBIPHENYL	NA	NA	NA	3.4 U
DICHLOROBIPHENYLS	NA	NA	NA	0.69 U
HEPTACHLOROBIPHENYLS	NA	NA	NA	100
HEXACHLOROBIPHENYL	NA	NA	NA	150
MONOCHLOROBIPHENYLS	NA	NA	NA	0.69 U
NONACHLOROBIPHENYLS	NA	NA	NA	3.4 U
PENTACHLOROBIPHENYLS	NA	NA	NA	26
TETRACHLOROBIPHENYLS	NA	NA	NA	1.3 U
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	10
TOTAL PCB HOMOLOGS	NA	NA	NA	286
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	291
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	0.69 U
METALS (MG/KG)				
ALUMINUM	4980 J	6950 E	7410 E	4520
ANTIMONY	2.8 J	0.079 UN	0.19 BN	0.665 UJ
ARSENIC	2.4 J	2.5 *	2.9 *	0.554 J
BARIUM	11 J	19.1 E	25.1 E	10.5
BERYLLIUM	0.42	0.27 E	0.2 E	0.205 J
CADMIUM	0.0057 UJ	0.11 B*	0.0056 U*	0.177 J

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD449-0006	GI-SD450-0006	GI-SD519-0006
LOCATION ID	G32-SD304	GI-SD449	GI-SD450	GI-SD519
SAMPLE DATE	08/26/05	09/22/09	09/22/09	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD
CALCIUM	22400 J	414 *	3010 *	20000
CHROMIUM	10.7 J	7.9 E	9 E	9.3
COBALT	3.1 J	10.8 E	5.5 E	3
COPPER	34 J	11 E	11.9 E	10.9 J
CYANIDE	0.11 UJ	NA	NA	NA
IRON	11400	12900 *	15100 *	10400
LEAD	43.6 J	9 NE	10.1 NE	17.9
MAGNESIUM	2900 J	2090 E	2550 E	2570
MANGANESE	108 J	84.9 *E	122 *E	107
MERCURY	0.052 J	0.019 B	0.0083 B	0.02 J
NICKEL	8.3 J	13.1 E	10.1 E	6
POTASSIUM	784	718 *	819 *	709
SELENIUM	5.2 J	0.63 B	0.52 B	0.665 U
SILVER	0.02 U	0.034 U	0.034 U	0.222 UJ
SODIUM	3300 J	2070 E	2110 E	3100
THALLIUM	1 J	0.1 U	0.1 U	0.443 U
VANADIUM	18.5 J	12.5 E	12.1 E	12.4
ZINC	44.3 J	78.9 E	26.7 E	30.9 J
MISCELLANEOUS PARAMETERS (MG/KG)				
TOTAL ORGANIC CARBON	4400 J	NA	NA	5240

SAMPLE ID	G32-SD304D-000.5	GI-SD449-0006	GI-SD450-0006	GI-SD519-0006
LOCATION ID	G32-SD304	GI-SD449	GI-SD450	GI-SD519
SAMPLE DATE	08/26/05	09/22/09	09/22/09	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD
MISCELLANEOUS PARAMETERS (%)				
HYDROMETER-0.002MM	NA	NA	NA	1
PERCENT CLAY	3.6	NA	NA	NA
PERCENT COARSE SAND	5.5	NA	NA	NA
PERCENT FINE SAND	60.6	NA	NA	NA
PERCENT GRAVEL	4.1	NA	NA	NA
PERCENT MEDIUM SAND	18.8	NA	NA	NA
PERCENT SILT	7.3	NA	NA	NA
PERCENT SOLIDS	77.1	NA	NA	NA
SIEVE 1"	100	NA	NA	100
SIEVE 1/2"	NA	NA	NA	100
SIEVE 1-1/2"	100	NA	NA	NA
SIEVE 2"	100	NA	NA	NA
SIEVE 3"	100	NA	NA	NA
SIEVE 3/4"	100	NA	NA	100
SIEVE 3/8"	99.4	NA	NA	100
SIEVE NO. 004	95.9	NA	NA	98
SIEVE NO. 010	90.4	NA	NA	95
SIEVE NO. 020	82.7	NA	NA	89
SIEVE NO. 040	71.5	NA	NA	72
SIEVE NO. 060	51.4	NA	NA	39
SIEVE NO. 080	32.3	NA	NA	NA
SIEVE NO. 100	24.8	NA	NA	14

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD449-0006	GI-SD450-0006	GI-SD519-0006
LOCATION ID	G32-SD304	GI-SD449	GI-SD450	GI-SD519
SAMPLE DATE	08/26/05	09/22/09	09/22/09	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD
SIEVE NO. 200	10.9	NA	NA	4
AVS/SEM (UMO/G)				
ACID VOLATILE SULFIDE	7 J	NA	NA	NA
CADMIUM	0.0043 UJ	NA	NA	NA
COPPER	0.23 J	NA	NA	NA
LEAD	0.099 J	NA	NA	NA
MERCURY	0.00026 J	NA	NA	NA
NICKEL	0.63 J	NA	NA	NA
ZINC	0.36 J	NA	NA	NA
AVS/SEM (RATIO)				
SEM/AVS	0.19	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)				
1,1,1-TRICHLOROETHANE	6 U	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	6 U	NA	NA	NA
1,1,2-TRICHLOROETHANE	6 U	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	6 U	NA	NA	NA
1,1-DICHLOROETHANE	6 U	NA	NA	NA
1,1-DICHLOROETHENE	6 U	NA	NA	NA

SAMPLE ID	G32-SD304D-000.5	GI-SD449-0006	GI-SD450-0006	GI-SD519-0006
LOCATION ID	G32-SD304	GI-SD449	GI-SD450	GI-SD519
SAMPLE DATE	08/26/05	09/22/09	09/22/09	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD
1,2,4-TRICHLOROBENZENE	6 U	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	6 U	NA	NA	NA
1,2-DIBROMOETHANE	6 U	NA	NA	NA
1,2-DICHLOROBENZENE	6 U	NA	NA	NA
1,2-DICHLOROETHANE	6 U	NA	NA	NA
1,2-DICHLOROPROPANE	6 U	NA	NA	NA
1,3-DICHLOROBENZENE	6 U	NA	NA	NA
1,4-DICHLOROBENZENE	6 U	NA	NA	NA
2-BUTANONE	6 U	NA	NA	NA
2-HEXANONE	6 U	NA	NA	NA
4-METHYL-2-PENTANONE	6 U	NA	NA	NA
ACETONE	23 JEB	NA	NA	NA
BENZENE	6 U	NA	NA	NA
BROMODICHLOROMETHANE	6 U	NA	NA	NA
BROMOFORM	6 U	NA	NA	NA
BROMOMETHANE	6 U	NA	NA	NA
BTEX	6 U	NA	NA	NA
CARBON DISULFIDE	2 J	NA	NA	NA
CARBON TETRACHLORIDE	6 U	NA	NA	NA
CHLOROBENZENE	6 U	NA	NA	NA
CHLORODIBROMOMETHANE	6 U	NA	NA	NA
CHLOROETHANE	6 U	NA	NA	NA

SAMPLE ID	G32-SD304D-000.5	GI-SD449-0006	GI-SD450-0006	GI-SD519-0006
LOCATION ID	G32-SD304	GI-SD449	GI-SD450	GI-SD519
SAMPLE DATE	08/26/05	09/22/09	09/22/09	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD
CHLOROFORM	6 U	NA	NA	NA
CHLOROMETHANE	6 U	NA	NA	NA
CIS-1,2-DICHLOROETHENE	6 U	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	6 U	NA	NA	NA
CYCLOHEXANE	6 U	NA	NA	NA
DICHLORODIFLUOROMETHANE	6 U	NA	NA	NA
ETHYLBENZENE	6 U	NA	NA	NA
ISOPROPYLBENZENE	6 U	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA
METHYL ACETATE	6 U	NA	NA	NA
METHYL CYCLOHEXANE	6 U	NA	NA	NA
METHYL TERT-BUTYL ETHER	6 U	NA	NA	NA
METHYLENE CHLORIDE	56 U	NA	NA	NA
O-XYLENE	6 U	NA	NA	NA
P-XYLENE	6 U	NA	NA	NA
STYRENE	6 U	NA	NA	NA
TETRACHLOROETHENE	6 U	NA	NA	NA
TOLUENE	6 U	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	6 U	NA	NA	NA
TOTAL CHLORINATED ETHENES	6 U	NA	NA	NA

TABLE - D7
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5	GI-SD449-0006	GI-SD450-0006	GI-SD519-0006
LOCATION ID	G32-SD304	GI-SD449	GI-SD450	GI-SD519
SAMPLE DATE	08/26/05	09/22/09	09/22/09	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD
TOTAL CHLORINATED VOCS	6 U	NA	NA	NA
TOTAL XYLENES	6 U	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	6 U	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	6 U	NA	NA	NA
TRICHLOROETHENE	6 U	NA	NA	NA
TRICHLOROFLUOROMETHANE	6 U	NA	NA	NA
VINYL CHLORIDE	6 U	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)				
EXTRACTABLE PETROLEUM HYDROCARBONS	46	NA	NA	NA
GASOLINE RANGE ORGANICS	11 U	NA	NA	NA

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD302F-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5	G32-SD308E-000.5	GI-SD520-0006	G32-SD308F-000.5
LOCATION ID	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302F	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308F
SAMPLE DATE	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	IT
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	54 J	NA	330 U
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2,4,5-TRICHLOROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	NA	670 U
2,4,6-TRICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2,4-DICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2,4-DIMETHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2,4-DINITROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	NA	670 U
2,4-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2,6-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2-CHLORONAPHTHALENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2-CHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2-METHYLNAPHTHALENE	6.1	11	6.7	3.4	4.1	11	3.7	3.3 U	14	3.8	280	8.9 J	18
2-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
2-NITROANILINE	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	NA	670 U
2-NITROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
3,3'-DICHLOROBENZIDINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
3-NITROANILINE	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	NA	670 U
4,6-DINITRO-2-METHYLPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	NA	670 U
4-BROMOPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD302F-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5	G32-SD308E-000.5	GI-SD520-0006	G32-SD308F-000.5
LOCATION ID	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302F	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308F
SAMPLE DATE	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	IT
4-CHLORO-3-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
4-CHLOROANILINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
4-CHLOROPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
4-METHYLPHENOL	330 U	330 U	330 U	330 U	82 J	330 U	480	330 U	200 J	330 U	330 U	NA	330 U
4-NITROANILINE	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	NA	670 U
4-NITROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	NA	670 U
ACENAPHTHENE	23	52	48	12	12	69	9.1	9.8	25	19	620	21 J	88
ACENAPHTHYLENE	4.5	5.6	10	4.2	3.2 J	5.6	3.3 U	3.3 U	3.4	3.3 U	9.9	12 J	30
ACETOPHENONE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
ANTHRACENE	59	120	180	41	37	160	48	28	98	44	880	70 J	300
ATRAZINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
BENZALDEHYDE	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	330 UJ
BENZO(A)ANTHRACENE	120	230	280	75	72	380	72	74	310 J	87	1200	150 J	1000
BENZO(A)PYRENE	98	160	220	65	65	270	64	63	290	74	960	150 J	510
BENZO(B)FLUORANTHENE	110 J	200 J	270	75 J	78 J	270 J	73 J	88	310	91	1100	110 J	560
BENZO(G,H,I)PERYLENE	62	100	130	44	45	110	47	42	180	58	300 J	92 J	150
BENZO(K)FLUORANTHENE	44	58	84	27	27	140	24	26	110	30	790	110 J	300
BIS(2-CHLOROETHOXY)METHANE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
BIS(2-CHLOROETHYL)ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD302F-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5	G32-SD308E-000.5	GI-SD520-0006	G32-SD308F-000.5
LOCATION ID	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302F	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308F
SAMPLE DATE	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	IT
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	330 U	330 U	380 U	330 U	56 J	330 U	330 U	330 U	330 U	330 U	NA	46 J
BUTYL BENZYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
CAPROLACTAM	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
CARBAZOLE	35 J	71 J	81 J	330 U	330 U	76 J	330 U	330 U	57 J	330 U	710 J	NA	110 J
CHRYSENE	79	150	190	51	49	320 EB	47	53	210	59	1300	160 J	850
DIBENZO(A,H)ANTHRACENE	18	30	39	12	13	37	14	13	59	16	190	29 J	56
DIBENZOFURAN	330 U	330 U	330 U	330 U	330 U	36 J	330 U	330 U	330 U	330 U	350	NA	63 J
DIETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
DIMETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
DI-N-BUTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
DI-N-OCTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
FLUORANTHENE	220	470	590	140	160	830	160	150	510	170	2400	360 J	3100
FLUORENE	24	49	63	17	14	71	11	9.5	33	14	510	34 J	120
HEXACHLOROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
HEXACHLOROBUTADIENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
HEXACHLOROCYCLOPENTADIENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
HEXACHLOROETHANE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
HIGH MOLECULAR WEIGHT PAHS	958 J	1860 J	2360	620 J	677 J	3150 J	687 J	655	2610 J	767	10800 J	1520 J	9100
INDENO(1,2,3-CD)PYRENE	57	96	110	38	38	110	36	36	170	42	320 J	82 J	170
ISOPHORONE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD302F-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5	G32-SD308E-000.5	GI-SD520-0006	G32-SD308F-000.5
LOCATION ID	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302F	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308F
SAMPLE DATE	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	IT
LOW MOLECULAR WEIGHT PAHS	313	616	825	202	187 J	935	167	133	479	197	4920	425 J	1680
NAPHTHALENE	6.6	18	7.2	4.4	7.1	18	5.4	4.6	16	6.6	220	19 J	25
NITROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
N-NITROSO-DI-N-PROPYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
N-NITROSODIPHENYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
PENTACHLOROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	NA	670 U
PHENANTHRENE	190	360	510	120	110	600	90	81	290	110	2400	260 J	1100
PHENOL	330 U	330 U	330 U	330 U	330 U	330 U	1400	330 U	180 J	330 U	330 U	NA	330 U
PYRENE	150	370	450	93	130	680	150	110	460	140	2200	280 J	2400
TOTAL CHLORINATED VOCS	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	330 U
TOTAL PAHS	1270 J	2480 J	3190	822 J	864 J	4080 J	854 J	788	3090 J	964	15700 J	1950 J	10800
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U
4,4'-DDE	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U
4,4'-DDT	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U
ALDRIN	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U
ALPHA-BHC	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U
ALPHA-CHLORDANE	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U
AROCLOR-1016	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U
AROCLOR-1221	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD302F-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5	G32-SD308E-000.5	GI-SD520-0006	G32-SD308F-000.5
LOCATION ID	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302F	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308F
SAMPLE DATE	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	IT
AROCLOR-1232	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U
AROCLOR-1242	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U
AROCLOR-1248	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U
AROCLOR-1254	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U
AROCLOR-1260	46	33 U	33 U	33 J	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U
BETA-BHC	1.7 U	1.7 U	1.8 R	1.7 U	1.7 U	1.7 U	6.8 J	1.7 J	4.2 J	1.7 R	2 R	NA	3 R
DELTA-BHC	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U
DIELDRIN	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U
ENDOSULFAN I	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U
ENDOSULFAN II	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U
ENDOSULFAN SULFATE	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U
ENDRIN	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U
ENDRIN ALDEHYDE	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U
ENDRIN KETONE	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	5.2 J
GAMMA-BHC (LINDANE)	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U
GAMMA-CHLORDANE	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U
HEPTACHLOR	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U
HEPTACHLOR EPOXIDE	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U
METHOXYCHLOR	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	NA	17 U
TOTAL AROCLOR	46	33 U	33 U	33 J	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U
TOTAL CHLORDANE	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U
TOTAL DDD/DDE/DDT	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U
TOXAPHENE	170 U	170 U	170 U	170 U	170 U	170 U	170 U	170 U	170 U	170 U	170 U	NA	170 U
PCB HOMOLOGS (UG/KG)													

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD302F-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5	G32-SD308E-000.5	GI-SD520-0006	G32-SD308F-000.5
LOCATION ID	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302F	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308F
SAMPLE DATE	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	IT
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2 U	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.45 U	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.1 U	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.1 J	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.45 U	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2 U	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.7 U	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.88 U	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.1 U	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.7 J	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.2 J	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.6 J	NA
METALS (MG/KG)													
ALUMINUM	9100	5930	5500	7440	5390	6850	5770	5540	5970	5250	5500	4400	4400
ANTIMONY	0.72 U	0.33 U	0.44 U	0.74 U	0.43 U	0.26 UJ	0.32 U	0.39 U	0.42 U	0.45 U	0.41 U	0.67 UJ	0.056 UJ
ARSENIC	7.1 J	4.6 J	3.1 J	4 J	3.3 J	3.4 J	2.9 J	2.7 J	3.9 J	3.9 J	3.2 J	0.193 J	2.1 J
BARIUM	24.9 J	15 J	10.6 J	13.7 J	16.3 J	15.7 J	9.4 J	10.4 J	10.3 J	11.1 J	12.7 J	10.4	9.2 J
BERYLLIUM	0.45	0.25	0.19	0.24	0.11	0.35	0.28	0.12	0.13	0.16	0.12	0.194 J	0.25
CADMIUM	0.83 J	0.62 J	0.48 UJ	0.6 J	0.5 J	0.31 UJ	0.54 UJ	0.48 UJ	0.56 UJ	0.63 J	0.46 UJ	0.15 J	0.41 UJ

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD302F-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5	G32-SD308E-000.5	GI-SD520-0006	G32-SD308F-000.5
LOCATION ID	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302F	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308F
SAMPLE DATE	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	IT
CALCIUM	16700 J	32300 J	8860 J	15200 J	22900 J	30100 J	25400 J	14700 J	34800 J	35600 J	36800 J	45500	39200 J
CHROMIUM	28.4	22.1	12.6	16	12.7	13.1 J	11	11.2	12.2	14.2	10.4	8.2 J	9.3 J
COBALT	4.5 J	3.1 J	3.1 J	3.6 J	3.4 J	3.5 J	3.1 J	3.4 J	3.4 J	3.2 J	2.7 J	3	1.8 J
COPPER	26.5 J	18.2 J	9.7 J	16.2 J	9.1 J	35.1	9.6 J	9 J	12.4 J	13 J	10.1 J	6.5 J	26.4
CYANIDE	0.12 U	0.12 U	0.12 U	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.11 U	NA	0.12 U
IRON	15200 J	10700 J	10800 J	13100 J	10600 J	17800	12300 J	11400 J	12600 J	13000 J	10600 J	11000	22300
LEAD	33.6 J	21.7 J	14.1 J	40.3 J	12.5 J	23.4 J	14 J	14.2 J	14.1 J	13.5 J	11.8 J	9.3 J	18.9 J
MAGNESIUM	4760	3040	3080	3930	3050	4450	3230	3170	3690	3140	3590	2950	2770
MANGANESE	158	114	117	154	121	214 J	134	124	172	135	140	155	203 J
MERCURY	0.13	0.11	0.06	0.051	0.04	0.0068 U	0.013 UJ	0.054	0.018 UJ	0.012 UJ	0.011 UJ	0.015 J	0.0095 UJ
NICKEL	13.1 J	13 J	7.2 J	10 J	7.1 J	11.6 J	7.2 J	7.5 J	8.3 J	8.9 J	6.8 J	6.7	6.4 J
POTASSIUM	2400 J	1320 J	974 J	1250 J	1080 J	958	805 J	814 J	909 J	923 J	853 J	852 J	742
SELENIUM	0.068 U	0.068 U	0.063 U	0.068 U	0.065 U	0.066 UJ	0.064 U	0.066 U	0.065 U	0.068 U	0.063 U	2 U	0.067 UJ
SILVER	0.019 U	0.019 U	0.018 U	0.019 U	0.018 U	0.019 UJ	0.018 U	0.019 U	0.018 U	0.019 U	0.018 U	0.435 J	0.019 UJ
SODIUM	9580	4780 J	3940 J	4830 J	3260 J	3200	3190 J	3090 J	4420 J	3660 J	3670 J	4180	3070
THALLIUM	0.33 UJ	0.081 U	0.074 U	0.081 U	0.38 UJ	0.078 UJ	0.12 UJ	0.078 U	0.22 UJ	0.26 UJ	0.41 UJ	0.107 J	0.079 UJ
VANADIUM	28.4 J	17.8 J	16.7 J	17.1 J	17.9 J	15.1 J	16.2 J	17.5 J	15 J	22.8 J	14 J	13.2	10.8 J
ZINC	72.3	48.1	34.6 J	63.2	33.3 J	54.1 J	35.8 J	33.4 J	38.1 J	34.9 J	32 J	26.8 J	34.7 J
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	15000 J	5400 J	9400 J	7200 J	2400	5000 J	4800 J	2500	2500	6500 J	6000 J	4290	29000 J

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD302F-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5	G32-SD308E-000.5	GI-SD520-0006	G32-SD308F-000.5
LOCATION ID	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302F	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308F
SAMPLE DATE	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	IT
MISCELLANEOUS PARAMETERS (%)													
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-9999	NA
PERCENT CLAY	6.9	9.4	5	6.3	3.8	2.7	2.8	2.8	2.2	3.2	2.3	NA	2.3
PERCENT COARSE SAND	6.5	5.8	8.4	8	8.8	21.8	8.5	7.3	12.2	6.5	10	NA	20.3
PERCENT FINE SAND	33	36.7	26	30.7	28.9	11.8	18.9	23.2	21.4	25.9	18.7	NA	7
PERCENT GRAVEL	9.1	4.8	7.3	4.2	5.2	38.2	8.8	8.8	13.5	12.3	12.6	NA	60.6
PERCENT MEDIUM SAND	24	17.1	41.4	38.9	45.4	18.8	51	49.7	41.6	46	44.2	NA	8.2
PERCENT SILT	20.5	26.2	12	11.9	7.9	6.7	10	8.2	9.1	6.1	12.3	NA	1.5
PERCENT SOLIDS	74.9	77	82.7	76.9	82.9	85.6	83.1	82.9	83.5	82.5	87.4	NA	81.3
SIEVE 1"	100	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	92	NA
SIEVE 1-1/2"	100	100	100	100	100	100	100	100	100	100	100	NA	100
SIEVE 2"	100	100	100	100	100	100	100	100	100	100	100	NA	100
SIEVE 3"	100	100	100	100	100	100	100	100	100	100	100	NA	100
SIEVE 3/4"	100	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE 3/8"	96.2	98.8	99	99.7	98.6	86.5	95.1	95.4	94.2	90.1	95.3	89	73.6
SIEVE NO. 004	90.9	95.2	92.7	95.8	94.8	61.8	91.2	91.2	86.5	87.7	87.4	74	39.4
SIEVE NO. 010	84.3	89.4	84.3	87.8	86.1	40.1	82.7	83.9	74.3	81.2	77.5	64	19
SIEVE NO. 020	74	80.4	69.7	71.9	69.8	31.9	61.3	64.9	53.3	63.5	56.5	42	15.4
SIEVE NO. 040	60.3	72.3	42.9	48.9	40.7	21.2	31.7	34.2	32.7	35.2	33.3	12	10.8
SIEVE NO. 060	51.2	62	27.5	36.1	26.7	15.6	17.6	17.8	17.2	15.5	18.6	4	7.6
SIEVE NO. 080	45.9	56.6	23.8	31.2	21.8	13.4	15.2	14.6	14.3	12.4	16.6	NA	6
SIEVE NO. 100	42.3	52.9	22.2	28.4	19.2	12.3	14.6	13.7	13.5	11.5	16.1	2	5.4

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD302F-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5	G32-SD308E-000.5	GI-SD520-0006	G32-SD308F-000.5
LOCATION ID	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302F	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308F
SAMPLE DATE	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	IT
SIEVE NO. 200	27.4	35.6	17	18.2	11.8	9.5	12.8	11	11.3	9.3	14.6	1	3.8
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	5.4 J	5.7 J	4.7 J	3.4 J	1.8 J	10.2 J	3.1 J	7.1 J	2.6 J	1.9 J	2.5 J	NA	5.7 J
CADMIUM	0.0034 UJ	0.0017 UJ	0.0012 UJ	0.0098 UJ	0.0013 UJ	0.0023 UJ	0.00086 UJ	0.00088 UJ	0.00098 UJ	0.0016 UJ	0.0028 UJ	NA	0.0022 UJ
COPPER	0.14 J	0.16 J	0.088 J	2.4 J	0.063 UJ	0.33 J	0.098 J	0.022 UJ	0.068 UJ	0.063 UJ	0.09 J	NA	0.34 J
LEAD	0.062 J	0.08 J	0.045 J	0.05 J	0.044 J	0.074 J	0.026 UJ	0.03 UJ	0.043 J	0.034 J	0.035 J	NA	0.056 J
MERCURY	0.00065	0.00055	0.0003	0.00025	0.0002	0.00003 U	0.00006 UJ	0.00027	0.00009 UJ	0.00006 UJ	0.00005 UJ	NA	0.00004 UJ
NICKEL	0.058 J	0.058 J	0.14 J	3.2 J	0.026 J	0.037 UJ	0.36 J	0.015 J	0.027 J	0.044 J	0.037 J	NA	0.5 UJ
ZINC	0.45 J	0.54 J	0.32 J	0.35 J	0.33 J	0.36 J	0.21 J	0.21 J	0.29 J	0.4 J	0.28 J	NA	0.43 J
AVS/SEM (RATIO)													
SEM/AVS	0.13	0.15	0.13	1.8	0.22	0.075	0.22	0.032	0.14	0.25	0.18	NA	0.14
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
1,1,2,2-TETRACHLOROETHANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
1,1,2-TRICHLOROETHANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
1,1,2-TRICHLOROTRIFLUOROETHANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
1,1-DICHLOROETHANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
1,1-DICHLOROETHENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
1,2,4-TRICHLOROBENZENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD302F-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5	G32-SD308E-000.5	GI-SD520-0006	G32-SD308F-000.5
LOCATION ID	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302F	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308F
SAMPLE DATE	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	IT
1,2-DIBROMO-3-CHLOROPROPANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
1,2-DIBROMOETHANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
1,2-DICHLOROBENZENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
1,2-DICHLOROETHANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
1,2-DICHLOROPROPANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
1,3-DICHLOROBENZENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
1,4-DICHLOROBENZENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
2-BUTANONE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
2-HEXANONE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
4-METHYL-2-PENTANONE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
ACETONE	59 JEB	14 JEB	35 JEB	19 JEB	240 JEB	200 J	76 JEB	27 JEB	27 JEB	94 JEB	24 JEB	NA	66 UJ
BENZENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
BROMODICHLOROMETHANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
BROMOFORM	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
BROMOMETHANE	6 U	3 U	2 U	2 U	4 UJ	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
BTEX	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
CARBON DISULFIDE	6	1 J	2 U	2 J	4 UJ	2 J	3 U	3 U	3 U	3 U	3 U	NA	3 J
CARBON TETRACHLORIDE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
CHLOROBENZENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
CHLORODIBROMOMETHANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
CHLOROETHANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
CHLOROFORM	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD302F-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5	G32-SD308E-000.5	GI-SD520-0006	G32-SD308F-000.5
LOCATION ID	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302F	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308F
SAMPLE DATE	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	IT
CHLOROMETHANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
CIS-1,2-DICHLOROETHENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
CIS-1,3-DICHLOROPROPENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
CYCLOHEXANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
DICHLORODIFLUOROMETHANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
ETHYLBENZENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
ISOPROPYLBENZENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
M+P-XYLENES	NA	NA	NA	NA	NA	6 U	NA	NA	NA	NA	NA	NA	4 U
METHYL ACETATE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
METHYL CYCLOHEXANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
METHYL TERT-BUTYL ETHER	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
METHYLENE CHLORIDE	67 U	15 U	19 U	16 U	54 U	14 U	22 U	19 U	22 U	16 U	21 U	NA	9 U
O-XYLENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
P-XYLENE	6 U	3 U	2 U	2 U	4 U	NA	3 U	3 U	3 U	3 U	3 U	NA	NA
STYRENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
TETRACHLOROETHENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
TOLUENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
TOTAL 1,2-DICHLOROETHENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
TOTAL CHLORINATED ETHENES	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
TOTAL CHLORINATED VOCS	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD302F-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5	G32-SD308E-000.5	GI-SD520-0006	G32-SD308F-000.5
LOCATION ID	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302F	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308	G32-SD308F
SAMPLE DATE	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	IT	ST	ST	ST	ST	ST	SD	IT
TOTAL XYLENES	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
TRANS-1,2-DICHLOROETHENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
TRANS-1,3-DICHLOROPROPENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
TRICHLOROETHENE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
TRICHLOROFLUOROMETHANE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
VINYL CHLORIDE	6 U	3 U	2 U	2 U	4 U	6 U	3 U	3 U	3 U	3 U	3 U	NA	4 U
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	28 J	20	33	15 J	21	38 J	31	27	45	27	41	NA	42
GASOLINE RANGE ORGANICS	9.9 U	4.9 U	6.2 U	5.5 U	6.9 U	7.4 U	4.4 U	4.5 U	5.5 U	4.3 U	5.3 U	NA	6 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD521-0006	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5	GI-SD522-0006	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	G32-SD313F-000.5	GI-SD523-0006	GI-SD439-0006
LOCATION ID	G32-SD302	G32-SD308F	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD313F	GI-SD439
SAMPLE DATE	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	05/13/10	10/05/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	ST	ST	ST	ST	ST	SD	ST	ST	IT	SD	SD
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
2,4,5-TRICHLOROPHENOL	670 U	NA	670 U	670 U	670 U	670 UJ	670 U	NA	670 U	670 U	670 U	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
2,4-DICHLOROPHENOL	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
2,4-DIMETHYLPHENOL	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
2,4-DINITROPHENOL	670 U	NA	670 UJ	670 U	670 U	670 UJ	670 U	NA	670 U	670 UJ	670 U	NA	NA
2,4-DINITROTOLUENE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
2,6-DINITROTOLUENE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
2-CHLORONAPHTHALENE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
2-CHLOROPHENOL	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
2-METHYLNAPHTHALENE	6.1	31 J	3.3 U	3.5	4.5	6	4.2	2.9 J	3.3 U	3.3 U	53	4.8 J	4.6
2-METHYLPHENOL	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
2-NITROANILINE	670 U	NA	670 U	670 U	670 U	670 UJ	670 U	NA	670 U	670 U	670 U	NA	NA
2-NITROPHENOL	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
3-NITROANILINE	670 U	NA	670 U	670 U	670 U	670 UJ	670 U	NA	670 U	670 U	670 U	NA	NA
4,6-DINITRO-2-METHYLPHENOL	670 U	NA	670 U	670 U	670 U	670 UJ	670 U	NA	670 U	670 U	670 U	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD521-0006	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5	GI-SD522-0006	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	G32-SD313F-000.5	GI-SD523-0006	GI-SD439-0006
LOCATION ID	G32-SD302	G32-SD308F	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD313F	GI-SD439
SAMPLE DATE	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	05/13/10	10/05/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	ST	ST	ST	ST	ST	SD	ST	ST	IT	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
4-CHLOROANILINE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
4-METHYLPHENOL	330 U	NA	51 J	330 U	330 U	95 J	210 J	NA	35 J	43 J	330 U	NA	NA
4-NITROANILINE	670 U	NA	670 U	670 U	670 U	670 UJ	670 U	NA	670 U	670 U	670 U	NA	NA
4-NITROPHENOL	670 U	NA	670 U	670 U	670 U	670 UJ	670 U	NA	670 U	670 U	670 U	NA	NA
ACENAPHTHENE	23	290 J	9.6 J	16	24	40	19	7.5 J	23 J	16.3 J	210	30	12
ACENAPHTHYLENE	4.5	12 J	3.3 U	4.6	3.6	7	5.3	5.2 J	3.3 U	3.3 U	42	2 J	8.1
ACETOPHENONE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
ANTHRACENE	59	780 J	29 J	52	65	110	58	25	99 J	64 J	520	65	25
ATRAZINE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
BENZALDEHYDE	330 UJ	NA	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	330 UJ	330 UJ	330 UJ	NA	NA
BENZO(A)ANTHRACENE	120	1600 J	55 J	120	290	210	100	130	230 J	142 J	1600	150	56
BENZO(A)PYRENE	98	1400 J	50 J	100	320	180	92	81 J	150 J	100 J	760	150	51
BENZO(B)FLUORANTHENE	110 J	990 J	54 J	140	320 J	230	120	76	210 J	132 J	1200	110	59
BENZO(G,H,I)PERYLENE	62	680 J	36 J	64	180	110	57	43 J	82 J	59 J	270	89	30
BENZO(K)FLUORANTHENE	44	1100 J	17 J	41	130	83	38	89	62 J	39.5 J	910	110	43
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD521-0006	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5	GI-SD522-0006	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	G32-SD313F-000.5	GI-SD523-0006	GI-SD439-0006
LOCATION ID	G32-SD302	G32-SD308F	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD313F	GI-SD439
SAMPLE DATE	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	05/13/10	10/05/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	ST	ST	ST	ST	ST	SD	ST	ST	IT	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	NA	330 U	330 U	330 UJ	330 UJ	330 U	NA	330 U	330 U	51 J	NA	NA
BUTYL BENZYL PHTHALATE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
CAPROLACTAM	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
CARBAZOLE	35 J	NA	330 U	330 U	330 U	330 UJ	330 U	NA	38 J	102 J	230 J	NA	NA
CHRYSENE	79	1500 J	43 J	84	200	160	76	160	150 J	96.5 J	1500	150	45
DIBENZO(A,H)ANTHRACENE	18	270 J	10 J	20	58	35	17	15	25 J	17.5 J	100	30	11
DIBENZOFURAN	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	140 J	NA	NA
DIETHYL PHTHALATE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
DIMETHYL PHTHALATE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
DI-N-BUTYL PHTHALATE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
DI-N-OCTYL PHTHALATE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
FLUORANTHENE	220	3300 J	130 J	250	440 J	270 J	240	490	380	255 J	3400	320	77
FLUORENE	24	290 J	12	16	20	45	19	6.9 J	19	15.5	240	28	11
HEXACHLOROBENZENE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
HEXACHLOROBUTADIENE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 U	NA	330 R	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
HEXACHLOROETHANE	330 U	NA	330 UJ	330 U	330 U	330 UJ	330 U	NA	330 U	330 UJ	330 U	NA	NA
HIGH MOLECULAR WEIGHT PAHS	958 J	14100 J	584 J	1060	2560 J	1640 J	956	1490 J	1720 J	1150 J	12800	1450 J	476
INDENO(1,2,3-CD)PYRENE	57	690 J	29 J	55	170	95	46	42	73 J	51 J	280	84	28
ISOPHORONE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD521-0006	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5	GI-SD522-0006	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	G32-SD313F-000.5	GI-SD523-0006	GI-SD439-0006
LOCATION ID	G32-SD302	G32-SD308F	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD313F	GI-SD439
SAMPLE DATE	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	05/13/10	10/05/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	ST	ST	ST	ST	ST	SD	ST	ST	IT	SD	SD
LOW MOLECULAR WEIGHT PAHS	313	3800 J	165 J	238	325	527	262	116 J	389 J	277 J	2680	360 J	163
NAPHTHALENE	6.6	78 UJ	4.6	5.6	8.3	8.6	6	11 U	7.7	6.15	110	7.9 UJ	23
NITROBENZENE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
N-NITROSODIPHENYLAMINE	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
PENTACHLOROPHENOL	670 U	NA	670 U	670 U	670 U	670 UJ	670 U	NA	670 U	670 U	670 U	NA	NA
PHENANTHRENE	190	2400 J	110 J	140	200	310	150	69	240 J	175 J	1500	230	79
PHENOL	330 U	NA	65 J	39 J	330 U	39 J	250 J	NA	35 J	50 J	330 U	NA	NA
PYRENE	150	2600 J	160 J	190	450 J	270 J	170	360 J	360 J	260 J	2800	260 J	76
TOTAL CHLORINATED VOCS	330 U	NA	330 U	330 U	330 U	330 UJ	330 U	NA	330 U	330 U	330 U	NA	NA
TOTAL PAHS	1270 J	17900 J	749 J	1300	2880 J	2170 J	1220	1600 J	2110 J	1430 J	15500	1810 J	639
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	3.3 U	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U	NA	NA
4,4'-DDE	3.3 U	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U	NA	NA
4,4'-DDT	3.3 U	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U	NA	NA
ALDRIN	1.7 U	NA	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U	NA	NA
ALPHA-BHC	1.7 U	NA	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U	NA	NA
ALPHA-CHLORDANE	1.7 U	NA	1.7 UJ	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 UJ	1.7 U	NA	NA
AROCLOR-1016	33 U	NA	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U
AROCLOR-1221	33 U	NA	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD521-0006	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5	GI-SD522-0006	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	G32-SD313F-000.5	GI-SD523-0006	GI-SD439-0006
LOCATION ID	G32-SD302	G32-SD308F	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD313F	GI-SD439
SAMPLE DATE	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	05/13/10	10/05/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	ST	ST	ST	ST	ST	SD	ST	ST	IT	SD	SD
AROCLOR-1232	33 U	NA	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U
AROCLOR-1242	33 U	NA	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U
AROCLOR-1248	33 U	NA	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U
AROCLOR-1254	33 U	NA	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U
AROCLOR-1260	46	NA	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U
BETA-BHC	1.7 U	NA	3.3 J	3.2	1.7 U	2.3	2.4 J	NA	1.8 J	2.55 J	14 R	NA	NA
DELTA-BHC	1.7 U	NA	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U	NA	NA
DIELDRIN	3.3 U	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U	NA	NA
ENDOSULFAN I	1.7 U	NA	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U	NA	NA
ENDOSULFAN II	3.3 U	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U	NA	NA
ENDOSULFAN SULFATE	3.3 U	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U	NA	NA
ENDRIN	3.3 U	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U	NA	NA
ENDRIN ALDEHYDE	3.3 U	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U	NA	NA
ENDRIN KETONE	3.3 U	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	5 J	NA	NA
GAMMA-BHC (LINDANE)	1.7 U	NA	1.7 UJ	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 UJ	1.7 U	NA	NA
GAMMA-CHLORDANE	1.7 U	NA	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U	NA	NA
HEPTACHLOR	1.7 U	NA	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U	NA	NA
HEPTACHLOR EPOXIDE	1.7 U	NA	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U	NA	NA
METHOXYCHLOR	17 U	NA	17 U	17 U	17 U	17 U	17 U	NA	17 U	17 U	7.3 J	NA	NA
TOTAL AROCLOR	46	NA	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	NA	33 U
TOTAL CHLORDANE	1.7 U	NA	1.7 UJ	1.7 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 UJ	1.7 U	NA	NA
TOTAL DDD/DDE/DDT	3.3 U	NA	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U	NA	NA
TOXAPHENE	170 U	NA	170 U	170 U	170 U	170 U	170 U	NA	170 U	170 U	170 U	NA	NA
PCB HOMOLOGS (UG/KG)													

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD521-0006	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5	GI-SD522-0006	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	G32-SD313F-000.5	GI-SD523-0006	GI-SD439-0006
LOCATION ID	G32-SD302	G32-SD308F	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD313F	GI-SD439
SAMPLE DATE	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	05/13/10	10/05/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	ST	ST	ST	ST	ST	SD	ST	ST	IT	SD	SD
DECACHLOROBIPHENYL	NA	2.9 U	NA	NA	NA	NA	NA	2.9 U	NA	NA	NA	1 U	NA
DICHLOROBIPHENYLS	NA	0.6 U	NA	NA	NA	NA	NA	0.59 U	NA	NA	NA	0.2 U	NA
HEPTACHLOROBIPHENYLS	NA	1.5 U	NA	NA	NA	NA	NA	1.5 U	NA	NA	NA	0.5 U	NA
HEXACHLOROBIPHENYL	NA	1.2 U	NA	NA	NA	NA	NA	6.4 J	NA	NA	NA	3.2	NA
MONOCHLOROBIPHENYLS	NA	0.6 U	NA	NA	NA	NA	NA	0.59 U	NA	NA	NA	0.2 U	NA
NONACHLOROBIPHENYLS	NA	2.9 U	NA	NA	NA	NA	NA	2.9 U	NA	NA	NA	1 U	NA
PENTACHLOROBIPHENYLS	NA	1.2 U	NA	NA	NA	NA	NA	8.8 U	NA	NA	NA	5.2 U	NA
TETRACHLOROBIPHENYLS	NA	1.2 U	NA	NA	NA	NA	NA	1.1 U	NA	NA	NA	0.4 U	NA
TOTAL OCTACHLOROBIPHENYLS	NA	1.5 U	NA	NA	NA	NA	NA	1.5 U	NA	NA	NA	0.5 U	NA
TOTAL PCB HOMOLOGS	NA	1.42 U	NA	NA	NA	NA	NA	6.4 J	NA	NA	NA	3.92 J	NA
TOTAL PCB HOMOLOGS-HALFND	NA	1.42 U	NA	NA	NA	NA	NA	16.6 J	NA	NA	NA	8.42 J	NA
TOTAL TRICHLOROBIPHENYLS	NA	0.6 U	NA	NA	NA	NA	NA	0.59 U	NA	NA	NA	0.72 J	NA
METALS (MG/KG)													
ALUMINUM	9100	4210	5350	6720	5540	5870	5200	6990	5760	5560	3880	5460	7870 *E
ANTIMONY	0.72 U	0.58 UJ	0.7 U	0.35 U	0.44 U	1.1 U	0.55 U	2.6 UJ	0.34 U	0.52 U	2 UJ	0.6 UJ	2.6 N
ARSENIC	7.1 J	1.2 J	4.6 J	3.8 J	2.7 J	6.9 J	4.4 J	5.3 J	3.5 J	4.05 J	7.3 J	3.3 J	6.8
BARIUM	24.9 J	7.4	11.4 J	14.1 J	10.5 J	15.3 J	12.1 J	10.6 J	15.4 J	13.4 J	10.8 J	13.1	25.3 E
BERYLLIUM	0.45	0.188 J	0.11	0.18	0.15	0.16	0.19	0.495	0.14	0.125	0.23	0.188 J	0.73 E
CADMIUM	0.83 J	0.212	20.7 J	0.64 UJ	0.47 UJ	1.2 UJ	0.75 J	1	3.9 J	12.3 J	0.6 UJ	0.783	0.9

LIGHT SHADING - DETECTED;
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TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD521-0006	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5	GI-SD522-0006	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	G32-SD313F-000.5	GI-SD523-0006	GI-SD439-0006
LOCATION ID	G32-SD302	G32-SD308F	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD313F	GI-SD439
SAMPLE DATE	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	05/13/10	10/05/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	ST	ST	ST	ST	ST	SD	ST	ST	IT	SD	SD
CALCIUM	16700 J	8220	30200 J	17700 J	21400 J	16000 J	38300 J	16800	16500 J	23400 J	21000 J	13800	19900 *
CHROMIUM	28.4	10.1 J	15.5	13.3	10.8	23.5	11.9	24.7 J	10.8	13.2	37.7 J	18 J	21.8 E
COBALT	4.5 J	3.7	3 J	3.8 J	3.4 J	4 J	2.8 J	5.7	3.2 J	3.1 J	2.9 J	4.4	5.7 *E
COPPER	26.5 J	22.9 J	37.7 J	18	11.8	42.7	20.9 J	40.6 J	16.8 J	27.2 J	64.4	37.7 J	33 N
CYANIDE	0.12 U	NA	0.12 U	0.11 U	0.12 U	0.11 U	0.12 U	NA	0.12 U	0.12 U	0.35 J	NA	NA
IRON	15200 J	13800	24000 J	16400 J	11200 J	27000 J	16100 J	46500	12800 J	18400 J	72100	35200	34100 *
LEAD	33.6 J	13.2 J	19.3 J	14.8 J	13.2 J	21.3 J	15.8 J	22.2 J	13.8 J	16.6 J	17.9 J	35.9 J	51.4 N*E
MAGNESIUM	4760	2550	3360	3590	3350	3840	3100	4450	3360	3360	2770	3460	3810 *E
MANGANESE	158	136	164 J	145	135	240	167	281	143	154 J	306 J	229	185 *E
MERCURY	0.13	0.019 J	0.017 UJ	0.018 UJ	0.022 UJ	0.02 UJ	0.02 UJ	0.039	0.017 UJ	0.017 UJ	0.008 UJ	0.005 J	0.043
NICKEL	13.1 J	9.4	10.2 J	8.7 J	7.8 J	23.9 J	7.8 J	21.6	8.8 J	9.5 J	47.4 J	17.2	16.9 *E
POTASSIUM	2400 J	742 J	921 J	1200 J	922 J	991 J	917 J	1190 J	840 J	880 J	757	897 J	1820 *
SELENIUM	0.068 U	2.89 U	0.072 U	0.064 U	0.067 U	0.066 U	0.064 U	8.68 U	0.069 U	0.0705 U	0.066 UJ	6 U	0.47 B
SILVER	0.019 U	0.19 UJ	0.02 U	0.018 U	0.019 U	0.019 U	0.018 U	0.492 J	0.019 U	0.0195 U	0.019 UJ	0.277 UJ	0.037 U
SODIUM	9580	2710	3270 J	3820 J	3460 J	3680 J	4110 J	6610	2900 J	3080 J	2380	3380	4290
THALLIUM	0.33 UJ	1.93 UJ	0.085 U	0.075 U	0.08 U	0.078 U	0.18 UJ	1.74 UJ	0.081 U	0.083 U	2.5 J	1.2 UJ	0.18 B
VANADIUM	28.4 J	12	12.6 J	17.6 J	16.9 J	16.1 J	13.2 J	21.4	12.3 J	12.4 J	11.3 J	11	21.8 *E
ZINC	72.3	33.7 J	37.5 J	42.2 J	35 J	48.2 J	45.7 J	65.4 J	39.3 J	38.4 J	39.7 J	50.7 J	67.5 E
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	15000 J	2960	2800	4800 J	2300 J	9000 J	10000 J	11900	3700 J	3250 J	7500 J	3660	NA

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD521-0006	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5	GI-SD522-0006	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	G32-SD313F-000.5	GI-SD523-0006	GI-SD439-0006
LOCATION ID	G32-SD302	G32-SD308F	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD313F	GI-SD439
SAMPLE DATE	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	05/13/10	10/05/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	ST	ST	ST	ST	ST	SD	ST	ST	IT	SD	SD
MISCELLANEOUS PARAMETERS (%)													
HYDROMETER-0.002MM	NA	-9999	NA	NA	NA	NA	NA	3	NA	NA	NA	-9999	NA
PERCENT CLAY	6.9	NA	2.3	3.1	2.5	3.4	2.9	NA	2	2.15	1.8	NA	NA
PERCENT COARSE SAND	6.5	NA	11.1	9.1	7.3	18.7	14	NA	10.7	10.9	20.7	NA	NA
PERCENT FINE SAND	33	NA	17.2	11.1	15.5	14.7	10.5	NA	15.4	16.3	9.3	NA	NA
PERCENT GRAVEL	9.1	NA	7.7	20.2	21.9	14.3	16.5	NA	8.1	7.9	57.1	NA	NA
PERCENT MEDIUM SAND	24	NA	54.3	52.1	48.5	44.9	48.8	NA	58.5	56.4	9.5	NA	NA
PERCENT SILT	20.5	NA	7.3	4.4	4.3	4	7.4	NA	5.3	6.3	1.6	NA	NA
PERCENT SOLIDS	74.9	NA	82.9	83.4	84.1	84	83.1	NA	81.4	82.2	86.7	NA	NA
SIEVE 1"	100	100	100	100	100	100	100	100	100	100	100	100	NA
SIEVE 1/2"	NA	100	NA	NA	NA	NA	NA	100	NA	NA	NA	95	NA
SIEVE 1-1/2"	100	NA	100	100	100	100	100	NA	100	100	100	NA	NA
SIEVE 2"	100	NA	100	100	100	100	100	NA	100	100	100	NA	NA
SIEVE 3"	100	NA	100	100	100	100	100	NA	100	100	100	NA	NA
SIEVE 3/4"	100	100	100	91.3	100	100	100	100	100	100	89.2	100	NA
SIEVE 3/8"	96.2	99	96.7	88.5	89.8	96.8	93.8	98	99.7	98.2	64.3	91	NA
SIEVE NO. 004	90.9	88	92.3	79.8	78.1	85.7	83.5	95	91.9	92.1	42.9	70	NA
SIEVE NO. 010	84.3	84	81.2	70.7	70.8	67	69.5	88	81.2	81.2	22.2	45	NA
SIEVE NO. 020	74	67	56.7	48.7	54.6	45.3	48.6	71	55.6	56.2	17.4	24	NA
SIEVE NO. 040	60.3	28	26.8	18.6	22.3	22.1	20.7	37	22.7	24.8	12.7	11	NA
SIEVE NO. 060	51.2	11	14.2	11.4	11.5	12.9	13.8	21	11	12.6	9	7	NA
SIEVE NO. 080	45.9	NA	11.8	9.7	9.1	10.4	12.3	NA	8.9	10.4	6.1	NA	NA
SIEVE NO. 100	42.3	7	11.3	9	8.3	9.4	11.6	14	8.4	9.85	5	7	NA

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD521-0006	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5	GI-SD522-0006	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	G32-SD313F-000.5	GI-SD523-0006	GI-SD439-0006
LOCATION ID	G32-SD302	G32-SD308F	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD313F	GI-SD439
SAMPLE DATE	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	05/13/10	10/05/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	ST	ST	ST	ST	ST	SD	ST	ST	IT	SD	SD
SIEVE NO. 200	27.4	5	9.6	7.5	6.8	7.4	10.3	12	7.2	8.4	3.4	7	NA
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	5.4 J	NA	1.7 J	12.3 J	1.3 J	8.5 J	0.61 UJ	NA	1.2 J	1.45 J	0.83 J	NA	NA
CADMIUM	0.0034 UJ	NA	0.012 UJ	0.00098 UJ	0.0012 UJ	0.037 J	0.0031 UJ	NA	0.027 J	0.0165 J	0.002 UJ	NA	NA
COPPER	0.14 J	NA	0.13 J	0.2 J	0.069 UJ	0.49 J	0.21 J	NA	0.2 J	0.165 J	0.28 J	NA	NA
LEAD	0.062 J	NA	0.037 J	0.075 J	0.028 UJ	0.19 J	0.13 J	NA	0.054 J	0.0455 J	0.11 J	NA	NA
MERCURY	0.00065	NA	0.00008 UJ	0.00009 UJ	0.00011 UJ	0.0001 UJ	0.0001 UJ	NA	0.00008 UJ	0.00008 UJ	0.00004 UJ	NA	NA
NICKEL	0.058 J	NA	0.039 J	0.034 J	0.051 J	0.075 J	0.053 J	NA	0.026 J	0.0325 J	0.061 UJ	NA	NA
ZINC	0.45 J	NA	0.34 J	0.74 J	0.23 J	0.62 J	0.5 J	NA	0.24 J	0.29 J	0.28 J	NA	NA
AVS/SEM (RATIO)													
SEM/AVS	0.13	NA	0.32	0.085	0.22	0.17	1.5	NA	0.46	0.39	0.81	NA	NA
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
1,1,2,2-TETRACHLOROETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
1,1,2-TRICHLOROETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
1,1-DICHLOROETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
1,1-DICHLOROETHENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
1,2,4-TRICHLOROBENZENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

SAMPLE ID	G32-SD302A-000.5	GI-SD521-0006	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5	GI-SD522-0006	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	G32-SD313F-000.5	GI-SD523-0006	GI-SD439-0006
LOCATION ID	G32-SD302	G32-SD308F	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD313F	GI-SD439
SAMPLE DATE	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	05/13/10	10/05/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	ST	ST	ST	ST	ST	SD	ST	ST	IT	SD	SD
1,2-DIBROMO-3-CHLOROPROPANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
1,2-DIBROMOETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
1,2-DICHLOROBENZENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
1,2-DICHLOROETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
1,2-DICHLOROPROPANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
1,3-DICHLOROBENZENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
1,4-DICHLOROBENZENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
2-BUTANONE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
2-HEXANONE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
4-METHYL-2-PENTANONE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
ACETONE	59 JEB	NA	35 JEB	99 JEB	38 JEB	96 JEB	99 JEB	NA	67 JEB	51 JEB	50 UJ	NA	NA
BENZENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
BROMODICHLOROMETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
BROMOFORM	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
BROMOMETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
BTEX	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
CARBON DISULFIDE	6	NA	2 J	3 U	1 J	1 J	3 J	NA	1 J	1.5 J	1 J	NA	NA
CARBON TETRACHLORIDE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
CHLOROBENZENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
CHLORODIBROMOMETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
CHLOROETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
CHLOROFORM	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD521-0006	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5	GI-SD522-0006	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	G32-SD313F-000.5	GI-SD523-0006	GI-SD439-0006
LOCATION ID	G32-SD302	G32-SD308F	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD313F	GI-SD439
SAMPLE DATE	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	05/13/10	10/05/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	ST	ST	ST	ST	ST	SD	ST	ST	IT	SD	SD
CHLOROMETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
CIS-1,2-DICHLOROETHENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
CIS-1,3-DICHLOROPROPENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
CYCLOHEXANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
DICHLORODIFLUOROMETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
ETHYLBENZENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
ISOPROPYLBENZENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA	NA
METHYL ACETATE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
METHYL CYCLOHEXANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
METHYL TERT-BUTYL ETHER	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
METHYLENE CHLORIDE	67 U	NA	31 UJ	29 U	87 U	82 U	92 U	NA	86 UJ	58.5 UJ	23 U	NA	NA
O-XYLENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
P-XYLENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	NA	NA	NA
STYRENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
TETRACHLOROETHENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
TOLUENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
TOTAL 1,2-DICHLOROETHENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
TOTAL CHLORINATED ETHENES	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
TOTAL CHLORINATED VOCS	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD521-0006	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5	GI-SD522-0006	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	G32-SD313F-000.5	GI-SD523-0006	GI-SD439-0006
LOCATION ID	G32-SD302	G32-SD308F	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD313F	GI-SD439
SAMPLE DATE	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	05/13/10	08/25/05	08/25/05	08/25/05	05/13/10	10/05/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	ST	ST	ST	ST	ST	SD	ST	ST	IT	SD	SD
TOTAL XYLENES	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
TRANS-1,2-DICHLOROETHENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
TRANS-1,3-DICHLOROPROPENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
TRICHLOROETHENE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
TRICHLOROFLUOROMETHANE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
VINYL CHLORIDE	6 U	NA	3 U	3 U	5 U	5 U	6 U	NA	5 U	4 U	5 U	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	28 J	NA	33	36	20	35	34	NA	30	31.5	68	NA	NA
GASOLINE RANGE ORGANICS	9.9 U	NA	4.7 U	5.6 U	8 U	5.6 U	6.9 U	NA	5.9 U	5.3 U	11 U	NA	NA

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID	G32-SD302	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445
SAMPLE DATE	08/25/05	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM
SEMIVOLATILES (UG/KG)									
1,1-BIPHENYL	330 U	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	670 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	670 U	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	6.1	3.3 U	3.3 U	17	3.3 U	3.3 U	5.1	3.38	4.9
2-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	670 U	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	670 U	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	670 U	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID	G32-SD302	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445
SAMPLE DATE	08/25/05	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	670 U	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	670 U	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	23	3.3 U	16	84	24	14	38	26	24
ACENAPHTHYLENE	4.5	3.3 U	3.3 U	5.6	3.3 U	3.3 U	4.4	3.02	8.3
ACETOPHENONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	59	3.6	25	130	58	34	80	57	57
ATRAZINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	120	7.6	63	190	96	120	180	150	120
BENZO(A)PYRENE	98	8.6	49	150	77	110	140	125	120
BENZO(B)FLUORANTHENE	110 J	11	57	170	100	140	180	160	160
BENZO(G,H,I)PERYLENE	62	5.1	25	77	50	67	84	75.5	72
BENZO(K)FLUORANTHENE	44	6.5	40	130	45	56	90	73	66
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID	G32-SD302	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445
SAMPLE DATE	08/25/05	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	330 U	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	35 J	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	79	8.8	50	150	99	110	180	145	120
DIBENZO(A,H)ANTHRACENE	18	3.3 U	9.1	29	17	26	29	27.5	28
DIBENZOFURAN	330 U	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	220	11	92	300	220	240	460 D	350 D	260
FLUORENE	24	3.3 U	19	75	21	9.8	26	17.9	18
HEXACHLOROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	958 J	73.3	494	1530	925	1120	1810	1460	1240
INDENO(1,2,3-CD)PYRENE	57	4.7	23	75	41	60	75	67.5	64
ISOPHORONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID	G32-SD302	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445
SAMPLE DATE	08/25/05	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD
LOW MOLECULAR WEIGHT PAHS	313	10.9	188	787	287	181	436	308	291
NAPHTHALENE	6.6	3.3 U	8.3	55	4.4	3.6	13	8.3	8.4
NITROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	670 U	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	190	7.3	120	420 D	180	120	270	195	170
PHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	150	10	86	260	180	190	390 D	290 D	230
TOTAL CHLORINATED VOCS	330 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	1270 J	84.2	682	2320	1210	1300	2240	1770	1530
PESTICIDES/PCBS (UG/KG)									
4,4'-DDD	3.3 U	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	3.3 U	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	3.3 U	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1221	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U

LIGHT SHADING - DETECTED;
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TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID	G32-SD302	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445
SAMPLE DATE	08/25/05	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD
AROCLOR-1232	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1242	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1248	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1254	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1260	46	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
BETA-BHC	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	3.3 U	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	3.3 U	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	3.3 U	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	3.3 U	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	3.3 U	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	3.3 U	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	17 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	46	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
TOTAL CHLORDANE	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	3.3 U	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	170 U	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)									

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID	G32-SD302	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445
SAMPLE DATE	08/25/05	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)									
ALUMINUM	9100	5630 *E	5090 *E	5710 *E	4540 E	4020 E	4000 E	4010 E	5770 E
ANTIMONY	0.72 U	0.21 BN	0.3 BN	0.55 N	0.081 UN	0.085 UN	0.11 BN	0.0762 BN	0.18 BN
ARSENIC	7.1 J	1.7	2.7	4.6	1.9 *	2 *	1.9 *	1.95 *	4.3 *
BARIUM	24.9 J	11 E	10.7 E	12.4 E	14.5 E	7.1 E	11.6 E	9.35 E	13.2 E
BERYLLIUM	0.45	0.35 E	0.31 E	0.35 E	0.061 BE	0.086 BE	0.083 BE	0.0845 BE	0.25 E
CADMIUM	0.83 J	0.25	0.42	0.61	0.052 B*	0.069 B*	0.076 B*	0.0725 B*	0.1 B*

LIGHT SHADING - DETECTED;
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TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID	G32-SD302	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445
SAMPLE DATE	08/25/05	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD
CALCIUM	16700 J	9000 *	31200 *	57800 *	42100 *	29700 *	22900 *	26300 *	45800 *
CHROMIUM	28.4	12.8 E	19.3 E	21.5 E	9.7 E	9.5 E	20 E	14.8 E	19.2 E
COBALT	4.5 J	3.4 *E	3.3 *E	3.7 *E	2.5 E	2.3 E	2.1 E	2.2 E	3.2 E
COPPER	26.5 J	8.1 N	9.9 N	42 N	6.9 E	7.3 E	7.2 E	7.25 E	18.2 E
CYANIDE	0.12 U	NA	NA	NA	NA	NA	NA	NA	NA
IRON	15200 J	14700 *	21800 *	25300 *	11300 *	10300 *	10300 *	10300 *	15500 *
LEAD	33.6 J	9.2 N*E	11.5 N*E	23.1 N*E	8.6 NE	9.2 NE	34.5 NE	21.8 NE	21.3 NE
MAGNESIUM	4760	3150 *E	3120 *E	3270 *E	2610 E	2320 E	2300 E	2310 E	3230 E
MANGANESE	158	112 *E	147 *E	177 *E	102 *E	110 *E	87.5 *E	98.8 *E	123 *E
MERCURY	0.13	0.024	0.026	0.031	0.029	0.035	0.03	0.0325	0.084
NICKEL	13.1 J	7.3 *E	11.2 *E	12.3 *E	6 E	5.4 E	5.3 E	5.35 E	8.4 E
POTASSIUM	2400 J	1050 *	1080 *	1070 *	1550 *	829 *	1120 *	974 *	1860 *
SELENIUM	0.068 U	0.97	0.58 B	0.36 U	0.35 U	0.37 U	0.35 U	0.36 U	0.44 U
SILVER	0.019 U	0.033 U	0.035 U	0.045 B	0.036 U	0.037 U	0.036 U	0.0365 U	0.14 B
SODIUM	9580	2840	3960	4570	3790 E	4610 E	4340 E	4480 E	8830 E
THALLIUM	0.33 UJ	0.13 B	0.24 B	0.46 B	0.12 B	0.11 U	0.11 U	0.11 U	0.14 U
VANADIUM	28.4 J	15.4 *E	18 *E	16.7 *E	13.8 E	11.2 E	11.4 E	11.3 E	19 E
ZINC	72.3	32.2 E	33.5 E	48.5 E	24.8 E	26.4 E	32.7 E	29.6 E	47.4 E
MISCELLANEOUS PARAMETERS (MG/KG)									
TOTAL ORGANIC CARBON	15000 J	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID	G32-SD302	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445
SAMPLE DATE	08/25/05	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD
MISCELLANEOUS PARAMETERS (%)									
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT CLAY	6.9	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	6.5	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	33	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	9.1	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	24	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SILT	20.5	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	74.9	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1-1/2"	100	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	100	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	100	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/8"	96.2	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 004	90.9	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 010	84.3	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 020	74	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 040	60.3	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 060	51.2	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 080	45.9	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	42.3	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID	G32-SD302	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445
SAMPLE DATE	08/25/05	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD
SIEVE NO. 200	27.4	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (UMO/G)									
ACID VOLATILE SULFIDE	5.4 J	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	0.0034 UJ	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	0.14 J	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.062 J	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.00065	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	0.058 J	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	0.45 J	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)									
SEM/AVS	0.13	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)									
1,1,1-TRICHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
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TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID	G32-SD302	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445
SAMPLE DATE	08/25/05	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD
1,2-DIBROMO-3-CHLOROPROPANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	59 JEB	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	6 U	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	6 U	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	6	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	6 U	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID	G32-SD302	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445
SAMPLE DATE	08/25/05	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD
CHLOROMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	6 U	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	67 U	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	6 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	6 U	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D8
ANALYTICAL RESULTS - SEDIMENT
GI_SD_NW
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302A-000.5	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006
LOCATION ID	G32-SD302	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445
SAMPLE DATE	08/25/05	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD
TOTAL XYLENES	6 U	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	6 U	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)									
EXTRACTABLE PETROLEUM HYDROCARBONS	28 J	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	9.9 U	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD316-000.5	G32-SD316-0.51.0	GI-SD401-0006	GI-SD532-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006	GI-SD502-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612
LOCATION ID	G32-SD312	G32-SD312	G32-SD316	G32-SD316	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402
SAMPLE DATE	08/31/05	08/31/05	08/31/05	08/31/05	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	1.33 FT	0.5 FT	2.67 FT	4 FT	2 FT	0.5 FT	2 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 UJ	330 U	320 U	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	660 U	670 U	660 U	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	330 U	330 UJ	320 UJ	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	660 UJ	670 UJ	660 UJ	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	31	59	10	6.8	4.1	290 U	5.4	6.7	7.1	320 U	5.1	6.1	12
2-METHYLPHENOL	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	660 U	670 U	660 U	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	660 U	670 U	660 U	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	660 U	670 U	660 U	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD316-000.5	G32-SD316-0.51.0	GI-SD401-0006	GI-SD532-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006	GI-SD502-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612
LOCATION ID	G32-SD312	G32-SD312	G32-SD316	G32-SD316	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402
SAMPLE DATE	08/31/05	08/31/05	08/31/05	08/31/05	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	1.33 FT	0.5 FT	2.67 FT	4 FT	2 FT	0.5 FT	2 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	330 U	35 J	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	660 UJ	670 U	660 U	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	660 UJ	670 U	660 U	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	210	400	54	20	17	230 J	23	26	27	200 J	22	24.5	75
ACENAPHTHYLENE	300	810	74	52	88	87 J	30	57	77	110 J	100	88.5	310 D
ACETOPHENONE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	900	3000	270	140	130	2400	63	88	150	2300	170	160	510 D
ATRAZINE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	330 UJ	330 UJ	320 UJ	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	2000	4900	590	200	680 D	2900	180	180	310 D	2200	350 D	330 D	1400 D
BENZO(A)PYRENE	1200 J	2300	490	300	240	2100	90	160	260	1500	310	285	1000 D
BENZO(B)FLUORANTHENE	2400 J	4900	630	490	450 D	2600	130	210	540 D	1700	500 D	520 D	2700 D
BENZO(G,H,I)PERYLENE	380 J	1100	120	99	84	970	35	70	130	620	150	140	510 D
BENZO(K)FLUORANTHENE	1500 J	2300	600	210	200	2000	100	180	160	1400	240	200	990 D
BIS(2-CHLOROETHOXY)METHANE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD316-000.5	G32-SD316-0.51.0	GI-SD401-0006	GI-SD532-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006	GI-SD502-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612
LOCATION ID	G32-SD312	G32-SD312	G32-SD316	G32-SD316	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402
SAMPLE DATE	08/31/05	08/31/05	08/31/05	08/31/05	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	1.33 FT	0.5 FT	2.67 FT	4 FT	2 FT	0.5 FT	2 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	530	1400	130 J	64 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	4400	8700	960	300	660 D	4900	160	180	600 D	3800	560 D	580 D	3100 D
DIBENZO(A,H)ANTHRACENE	120	250	43	35	36	360	14	27	44	250 J	56	50	240
DIBENZOFURAN	130 J	260 J	37 J	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	330 UJ	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	10000	28000	2000 J	700	2800 D	8900	570 D	320	2200 D	8800	1900 D	2050 D	14000 D
FLUORENE	260	800	72	31	31	330	28	31	36	440	35	35.5	130
HEXACHLOROBENZENE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 U	330 UJ	320 R	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	31000 J	75800	7770 J	4040	7440	32000	1850	2020	6770	27000 J	6320	6540	36500
INDENO(1,2,3-CD)PYRENE	410 J	1300	140	110	90	980	37	73	130	690	150	140	540 D
ISOPHORONE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD316-000.5	G32-SD316-0.51.0	GI-SD401-0006	GI-SD532-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006	GI-SD502-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612
LOCATION ID	G32-SD312	G32-SD312	G32-SD316	G32-SD316	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402
SAMPLE DATE	08/31/05	08/31/05	08/31/05	08/31/05	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	1.33 FT	0.5 FT	2.67 FT	4 FT	2 FT	0.5 FT	2 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD
LOW MOLECULAR WEIGHT PAHS	5360	12400	1460 J	540	463	6650 J	305	415	696	7750 J	650	673	1590
NAPHTHALENE	55	100	22	10	13	290 U	16	16	8.9	320 U	8.4	8.65	16
NITROBENZENE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	660 U	670 U	660 U	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	3600	7200	960 J	280	180	3600	140	190	390 D	4700	310 D	350 D	540 D
PHENOL	330 U	35 J	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	8600	22000	2200 J	1600	2200 D	6300	530 D	620 D	2400 D	6000	2100 D	2250 D	12000 D
TOTAL CHLORINATED VOCS	330 U	330 U	320 U	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	36400 J	88100	9240 J	4580	7900	38700 J	2150	2430	7470	34700 J	6970	7220	38100
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	50 U	100 U	4.9 U	97 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	53 R	230 J	69	220 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	220 R	660 R	360 R	420 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	26 U	54 U	2.5 U	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	26 U	54 U	2.5 U	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	26 U	54 U	2.5 U	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	500 U	1000 U	990 U	970 U	170 U	NA	66 U	330 U	4900 U	NA	3300 U	4100 U	9900 U
AROCLOR-1221	500 U	1000 U	990 U	970 U	170 U	NA	66 U	330 U	4900 U	NA	3300 U	4100 U	9900 U

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD316-000.5	G32-SD316-0.51.0	GI-SD401-0006	GI-SD532-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006	GI-SD502-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612
LOCATION ID	G32-SD312	G32-SD312	G32-SD316	G32-SD316	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402
SAMPLE DATE	08/31/05	08/31/05	08/31/05	08/31/05	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	1.33 FT	0.5 FT	2.67 FT	4 FT	2 FT	0.5 FT	2 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD
AROCLOR-1232	500 U	1000 U	990 U	970 U	170 U	NA	66 U	330 U	4900 U	NA	3300 U	4100 U	9900 U
AROCLOR-1242	500 U	1000 U	990 U	970 U	170 U	NA	66 U	330 U	4900 U	NA	3300 U	4100 U	9900 U
AROCLOR-1248	500 U	1000 U	990 U	970 U	170 U	NA	66 U	330 U	4900 U	NA	3300 U	4100 U	9900 U
AROCLOR-1254	500 U	1000 U	990 U	970 U	170 U	NA	66 U	330 U	4900 U	NA	3300 U	4100 U	9900 U
AROCLOR-1260	8900	41000	22000	22000	980	NA	600	2200	25000	NA	16000	20500	55000
BETA-BHC	26 U	57 J	4.6 J	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	26 U	54 U	2.5 U	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	50 U	100 U	4.9 U	97 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	26 U	54 U	2.5 U	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	50 U	100 U	48 R	97 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	50 U	640 J	340 J	380 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	50 U	100 U	4.9 U	97 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	79 R	190 R	130 R	120 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	50 U	100 U	4.9 U	97 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	26 U	54 U	2.5 U	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	26 U	570	250	600	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	26 U	54 U	2.5 U	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	26 U	54 U	2.5 U	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	260 U	540 U	25 U	500 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	8900	41000	22000	22000	980	NA	600	2200	25000	NA	16000	20500	55000
TOTAL CHLORDANE	26 U	570	250	600	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	50 U	230 J	69	640 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	2600 U	5400 U	250 U	5000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)													

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD316-000.5	G32-SD316-0.51.0	GI-SD401-0006	GI-SD532-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006	GI-SD502-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612
LOCATION ID	G32-SD312	G32-SD312	G32-SD316	G32-SD316	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402
SAMPLE DATE	08/31/05	08/31/05	08/31/05	08/31/05	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	1.33 FT	0.5 FT	2.67 FT	4 FT	2 FT	0.5 FT	2 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	6 U	NA	NA	NA	6.8 U	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	1.2 U	NA	NA	NA	1.4 U	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	540	NA	NA	NA	360 J	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	640	NA	NA	NA	440 J	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	1.2 U	NA	NA	NA	1.4 U	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	6 U	NA	NA	NA	6.8 U	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	48 U	NA	NA	NA	51 UJ	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	2.4 U	NA	NA	NA	22 J	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	61	NA	NA	NA	40 J	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	1240	NA	NA	NA	862 J	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	1270	NA	NA	NA	896 J	NA	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	1.2 U	NA	NA	NA	1.4 U	NA	NA	NA
METALS (MG/KG)													
ALUMINUM	5080	5880	6090	7780	5230 *E	4500	7300 *E	6300 *E	4930 E	5190	4760 E	4840 E	5340 E
ANTIMONY	0.35 UJ	0.058 UJ	0.055 UJ	0.056 UJ	0.36 BN	0.71 UJ	0.53 N	0.51 N	0.35 BN	0.81 J	0.2 BN	0.275 BN	0.55 N
ARSENIC	3.9 J	3.8 J	4.9 J	6.1 J	2.6	0.876 J	3.6	3.7	3.3 E	2.7 J	3.5 E	3.4 E	4.5 E
BARIUM	22.2 J	19.7 J	17 J	25.3 J	13 E	24.7 J	10.6 E	18.5 E	13 NE	26.7 J	10.4 NE	11.7 NE	11.6 NE
BERYLLIUM	0.35	0.43	0.46	0.59	0.34 E	0.206 J	0.43 E	0.42 E	0.17 NE	0.271 J	0.18 NE	0.175 NE	0.26 NE
CADMIUM	0.18 UJ	0.32 UJ	0.29 UJ	0.48 UJ	0.34	0.324 J	0.65	0.57	0.22	0.507 J	0.2	0.21	0.22

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD316-000.5	G32-SD316-0.51.0	GI-SD401-0006	GI-SD532-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006	GI-SD502-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612
LOCATION ID	G32-SD312	G32-SD312	G32-SD316	G32-SD316	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402
SAMPLE DATE	08/31/05	08/31/05	08/31/05	08/31/05	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	1.33 FT	0.5 FT	2.67 FT	4 FT	2 FT	0.5 FT	2 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD
CALCIUM	59700 J	70800 J	28900 J	10200 J	25400 *	77100 J	8000 *	19200 *	45900	122000 J	64500	55200	90500
CHROMIUM	17.1	14.8	20.8	31.5	10.1 E	10 J	14.9 E	16.8 E	10.7 NE	12.4 J	9.4 NE	10 NE	14.2 NE
COBALT	2.4 J	2.9 J	3 J	3.8 J	3.9 *E	3.2 J	5.8 *E	4.8 *E	4.3 NE	3.7 J	3.2 NE	3.75 NE	3.4 NE
COPPER	25.3	25.2	42.5	92.5	13.9 N	10.4 J	21.4 N	22.1 N	19.9 NE	21.2 J	20.2 NE	20 NE	22.9 NE
CYANIDE	0.12 UJ	0.13 UJ	0.12 UJ	0.12 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	12100 J	12900 J	12500 J	17200 J	17000 *	13600	29400 *	25500 *	22500	20100	23400	23000	22500
LEAD	18.3 J	23.4 J	90.6 J	90.6 J	10.3 N*E	7.1 J	12.8 N*E	18 N*E	8.4 NE	11.3 J	11.4 NE	9.9 NE	38.4 NE
MAGNESIUM	3260	3290	3160	3760	2710 *E	3160 J	3360 *E	3430 *E	2950 E	3990 J	2620 E	2780 E	3110 E
MANGANESE	118 J	130 J	115 J	155 J	119 *E	148 J	200 *E	143 *E	131 E	203 J	137 E	134 E	144 E
MERCURY	0.042 J	0.052 J	0.19 J	0.22 J	0.016 B	0.023 J	0.01 B	0.027	0.03	0.02 J	0.025	0.0275	0.059
NICKEL	9.1 J	7.7 J	10.2 J	12.5 J	8.6 *E	8.4 J	14.1 *E	11.9 *E	10.5 NE	10 J	8.1 NE	9.3 NE	9.1 NE
POTASSIUM	1140 J	1350 J	1450 J	1690 J	857 *	1160	834 *	1450 *	1940	835 J	707	1320	1230
SELENIUM	0.067 UJ	0.069 UJ	0.065 UJ	0.067 UJ	0.42 B	0.71 U	0.72	0.66	0.35 UN	2.42 U	0.36 UN	0.355 UN	0.37 UN
SILVER	0.019 UJ	0.02 UJ	0.019 UJ	0.019 UJ	0.034 U	0.24 U	0.032 U	0.033 U	0.035 UN	0.27 U	0.036 UN	0.0355 UN	0.037 UN
SODIUM	6640 J	6700 J	6480	5410 J	3250	4530	2520	3680	2880	6710	3700	3290	8270
THALLIUM	0.15 UJ	1.7 UJ	0.077 U	0.079 U	0.29 B	1.3 J	0.098 U	0.15 B	0.29 BN	2.4 J	0.42 BN	0.355 BN	0.58 N
VANADIUM	15.1 J	17.6 J	20.4 J	25.6 J	12.8 *E	10.8 J	14 *E	15.6 *E	10.9 NE	11.5 J	11.1 NE	11 NE	15.5 NE
ZINC	55.6 J	67.4 J	95.9 J	144 J	32.9 E	31 J	36.2 E	43 E	52.1 NE	43.8 J	49.1 NE	50.6 NE	46.9 NE
MISCELLANEOUS PARAMETERS (%)													

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD316-000.5	G32-SD316-0.51.0	GI-SD401-0006	GI-SD532-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006	GI-SD502-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612
LOCATION ID	G32-SD312	G32-SD312	G32-SD316	G32-SD316	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402
SAMPLE DATE	08/31/05	08/31/05	08/31/05	08/31/05	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	1.33 FT	0.5 FT	2.67 FT	4 FT	2 FT	0.5 FT	2 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	1	NA	NA	NA	NA	NA	NA	NA
PERCENT CLAY	4.2	5.6	10.4	14.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	8.9	7.3	2.2	1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	46.4	52.1	50.2	41.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	9.6	8.3	4.5	3.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	10.5	5.5	3.1	2.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SILT	20.6	21.1	29.6	37.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	70.6	64	72.8	68.7	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	100	100	100	NA	100	NA	NA	NA	100	NA	NA	NA
SIEVE 1/2"	NA	NA	NA	NA	NA	94	NA	NA	NA	96	NA	NA	NA
SIEVE 1-1/2"	100	100	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	100	100	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	100	100	100	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	100	100	100	NA	100	NA	NA	NA	100	NA	NA	NA
SIEVE 3/8"	94.1	96.8	97.6	98	NA	89	NA	NA	NA	89	NA	NA	NA
SIEVE NO. 004	90.4	91.7	95.5	96.8	NA	79	NA	NA	NA	88	NA	NA	NA
SIEVE NO. 010	81.6	84.4	93.3	95.1	NA	67	NA	NA	NA	74	NA	NA	NA
SIEVE NO. 020	74.4	80.2	91.4	93.5	NA	55	NA	NA	NA	49	NA	NA	NA
SIEVE NO. 040	71.1	78.9	90.2	92.8	NA	43	NA	NA	NA	26	NA	NA	NA
SIEVE NO. 060	63.2	72.4	82.6	85.3	NA	28	NA	NA	NA	12	NA	NA	NA
SIEVE NO. 080	53.5	61.6	72.3	77.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	47.7	54.6	66.3	72.8	NA	14	NA	NA	NA	4	NA	NA	NA
SIEVE NO. 200	24.7	26.7	40	51.4	NA	8	NA	NA	NA	0	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD316-000.5	G32-SD316-0.51.0	GI-SD401-0006	GI-SD532-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006	GI-SD502-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612
LOCATION ID	G32-SD312	G32-SD312	G32-SD316	G32-SD316	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402
SAMPLE DATE	08/31/05	08/31/05	08/31/05	08/31/05	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	1.33 FT	0.5 FT	2.67 FT	4 FT	2 FT	0.5 FT	2 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	16000 J	17000 J	20000 J	14000 J	NA	4420	NA	NA	NA	9460	NA	NA	NA
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	33.7 J	19.8 J	22.1 J	13.3 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	0.0018 UJ	0.0015 UJ	0.0072 UJ	0.0045 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	0.33 J	0.13 J	0.2 J	1.2 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.075 J	0.068 J	0.12 J	0.54 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.00021 J	0.00026 J	0.00095 J	0.0011 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	0.099 J	0.034 J	0.066 J	0.12 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	0.62 J	0.56 J	0.73 J	4.2 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)													
SEM/AVS	0.033	0.04	0.051	0.46	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	5 U	8 UJ	8 UJ	8 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD316-000.5	G32-SD316-0.51.0	GI-SD401-0006	GI-SD532-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006	GI-SD502-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612
LOCATION ID	G32-SD312	G32-SD312	G32-SD316	G32-SD316	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402
SAMPLE DATE	08/31/05	08/31/05	08/31/05	08/31/05	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	1.33 FT	0.5 FT	2.67 FT	4 FT	2 FT	0.5 FT	2 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD
1,1-DICHLOROETHENE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	5 U	8 UJ	8 UJ	8 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	5 U	8 UJ	8 UJ	8 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	5 U	8 UJ	8 UJ	8 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	5 U	3 J	8 UJ	8 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	5 U	11 J	8 UJ	8 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	45 JEB	120 JEB	71 JEB	42 JEB	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	8	16	10 J	12	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	5 U	8 U	8 UJ	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD316-000.5	G32-SD316-0.51.0	GI-SD401-0006	GI-SD532-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006	GI-SD502-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612
LOCATION ID	G32-SD312	G32-SD312	G32-SD316	G32-SD316	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402
SAMPLE DATE	08/31/05	08/31/05	08/31/05	08/31/05	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	1.33 FT	0.5 FT	2.67 FT	4 FT	2 FT	0.5 FT	2 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD
CHLOROETHANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	5 U	8 U	8 UJ	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	5 U	18 U	11 U	39 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD316-000.5	G32-SD316-0.51.0	GI-SD401-0006	GI-SD532-0006	GI-SD401-0612	GI-SD401-1218	GI-SD402-0006	GI-SD502-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612
LOCATION ID	G32-SD312	G32-SD312	G32-SD316	G32-SD316	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402
SAMPLE DATE	08/31/05	08/31/05	08/31/05	08/31/05	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	1.33 FT	0.5 FT	2.67 FT	4 FT	2 FT	0.5 FT	2 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD
TOTAL CHLORINATED VOCS	5 U	14 J	8 UJ	8 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	5 U	8 U	8 UJ	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	5 U	8 U	8 U	8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	200 J	220 J	76	230	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	10 U	11 U	10 U	9 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD403-0006	GI-SD404-0006	GI-SD505-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006
LOCATION ID	G32-SD312	GI-SD403	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406
SAMPLE DATE	08/31/05	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	0.71 FT	0.5 FT	1.42 FT	2.83 FT	4 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	31	4	5.2	110 U	7.4	17	18	12	17	14.5	4.6	3.3 U	22
2-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD403-0006	GI-SD404-0006	GI-SD505-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006
LOCATION ID	G32-SD312	GI-SD403	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406
SAMPLE DATE	08/31/05	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	0.71 FT	0.5 FT	1.42 FT	2.83 FT	4 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	210	3.5	13	38 J	14	23	60	74	44	59	4.3	3.3 U	130
ACENAPHTHYLENE	300	22	31	54 J	47	67	89	50	55	52.5	22	3.3 U	590 E
ACETOPHENONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	900	36	120	270	100	150	310 D	140	110	125	29	3.3 U	3400 D
ATRAZINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	2000	80	170	580	150	270	560 D	410 D	280	345 D	34	3.3 U	5400 D
BENZO(A)PYRENE	1200 J	110	140	600	250	430 D	470 D	350 D	280	315 D	49	3.3 U	2700 D
BENZO(B)FLUORANTHENE	2400 J	220	240	590	420 D	700 D	690 D	520 D	490 D	505 D	93	3.3 U	4800 D
BENZO(G,H,I)PERYLENE	380 J	54	74	320	130	240	220	180	150	165	20	3.3 U	1100 D
BENZO(K)FLUORANTHENE	1500 J	70	97	520	160	270	270	230	220	225	31	3.3 U	2500 D
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD403-0006	GI-SD404-0006	GI-SD505-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006
LOCATION ID	G32-SD312	GI-SD403	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406
SAMPLE DATE	08/31/05	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	0.71 FT	0.5 FT	1.42 FT	2.83 FT	4 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	530	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	4400	110	230	840	230	450 D	920 D	500 D	460 D	480 D	37	3.3 U	7600 D
DIBENZO(A,H)ANTHRACENE	120	17	22	110	40	69	69	62	55	58.5	9.7	3.3 U	480 E
DIBENZOFURAN	130 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	10000	120	210	830	210	320 D	3100 D	1200 D	1100 D	1150 D	50	3.3 U	27000 D
FLUORENE	260	6.5	17	49 J	19	31	53	86	57	71.5	7.1	3.3 U	240
HEXACHLOROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	31000 J	1100	1560	5510	2410	5170	9820	4720	4280	4500	544	19	73700
INDENO(1,2,3-CD)PYRENE	410 J	55	71	280	130	220	220	170	150	160	20	3.3 U	1100 D
ISOPHORONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD403-0006	GI-SD404-0006	GI-SD505-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006
LOCATION ID	G32-SD312	GI-SD403	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406
SAMPLE DATE	08/31/05	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	0.71 FT	0.5 FT	1.42 FT	2.83 FT	4 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
LOW MOLECULAR WEIGHT PAHS	5360	107	288	801 J	295	473	788	1150	1020	1080	95.5	3.3 U	6620
NAPHTHALENE	55	4.6	9.2	110 U	9.3	15	38	30	38	34	4.5	3.3 U	39
NITROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	3600	30	93	390	98	170	220	760 D	700 D	730 D	24	3.3 U	2200 D
PHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	8600	260	310 D	840	690 D	2200 D	3300 D	1100 D	1100 D	1100 D	200	19	21000 D
TOTAL CHLORINATED VOCS	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	36400 J	1200	1850	6310 J	2700	5640	10600	5870	5310	5590	639	19	80300
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	53 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	220 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	500 U	830 U	660 U	NA	660 U	660 U	33 U	330 U	330 U	330 U	33 U	33 U	660 U
AROCLOR-1221	500 U	830 U	660 U	NA	660 U	660 U	33 U	330 U	330 U	330 U	33 U	33 U	660 U

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD403-0006	GI-SD404-0006	GI-SD505-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006
LOCATION ID	G32-SD312	GI-SD403	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406
SAMPLE DATE	08/31/05	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	0.71 FT	0.5 FT	1.42 FT	2.83 FT	4 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
AROCLOR-1232	500 U	830 U	660 U	NA	660 U	660 U	33 U	330 U	330 U	330 U	33 U	33 U	660 U
AROCLOR-1242	500 U	830 U	660 U	NA	660 U	660 U	33 U	330 U	330 U	330 U	33 U	33 U	660 U
AROCLOR-1248	500 U	830 U	660 U	NA	660 U	660 U	33 U	330 U	330 U	330 U	33 U	33 U	660 U
AROCLOR-1254	500 U	830 U	660 U	NA	660 U	660 U	45	330 U	330 U	330 U	33 U	33 U	660 U
AROCLOR-1260	8900	4800	2000	NA	2500	1200	33 U	2100	2300	2200	250	33 U	5100
BETA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	79 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	260 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	8900	4800	2000	NA	2500	1200	45	2100	2300	2200	250	33 U	5100
TOTAL CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	2600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)													

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD403-0006	GI-SD404-0006	GI-SD505-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006
LOCATION ID	G32-SD312	GI-SD403	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406
SAMPLE DATE	08/31/05	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	0.71 FT	0.5 FT	1.42 FT	2.83 FT	4 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
DECACHLOROBIPHENYL	NA	NA	NA	6.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	16 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	360	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	470	NA	NA	NA	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	1.4 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	6.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	78	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	2.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	42	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	950	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	968	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	1.4 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)													
ALUMINUM	5080	5660 E	3940 E	4690	5040 E	5510 E	6100 E	4290 *E	7570 E	5930 *E	6950 *E	5860 *E	4550 E
ANTIMONY	0.35 UJ	0.39 BN	0.18 BN	0.208 J	0.1 UN	6.5 N	0.46 BN	0.28 BN	0.85 N	0.565 BN	0.56 N	0.081 BN	0.85 N
ARSENIC	3.9 J	5.3 E	4.1 E	0.543 UJ	4.6 E	7.2 E	5.1 E	3.4	3.7 E	3.55 E	3.5	1.7	3.8 E
BARIUM	22.2 J	13 NE	9.4 NE	14.7	13.9 NE	26.6 NE	19.5 NE	10.7 E	12.1 NE	11.4 E	13 E	14.5 E	17.3 NE
BERYLLIUM	0.35	0.22 NE	0.19 NE	0.359 J	0.27 NE	0.29 NE	0.32 NE	0.31 E	0.33 NE	0.32 E	0.46 E	0.33 E	0.2 NE
CADMIUM	0.18 UJ	0.34	0.16	0.288 J	0.22	2.1	0.44	0.56	0.39	0.475	0.36	0.23	0.14

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD403-0006	GI-SD404-0006	GI-SD505-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006
LOCATION ID	G32-SD312	GI-SD403	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406
SAMPLE DATE	08/31/05	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	0.71 FT	0.5 FT	1.42 FT	2.83 FT	4 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CALCIUM	59700 J	45900	133000	165000 J	135000	121000	132000	59100 *	45300	52200 *	4640 *	14400 *	63000
CHROMIUM	17.1	13.3 NE	12.9 NE	13.9	16.3 NE	53.2 NE	30.1 NE	11.2 E	20.3 NE	15.8 E	11.9 E	9.7 E	11.2 NE
COBALT	2.4 J	4.6 NE	2.4 NE	2.7 J	2.9 NE	4.8 NE	3.5 NE	3 *E	3.4 NE	3.2 *E	4.7 *E	3.8 *E	2.9 NE
COPPER	25.3	35.1 NE	19.1 NE	25 J	22.6 NE	497 NE	139 NE	27.7 N	46 NE	36.8 N	18.1 N	9.7 N	20 NE
CYANIDE	0.12 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	12100 J	34800	15500	8860	16400	20900	19600	24300 *	31700	28000 *	16300 *	15100 *	13900
LEAD	18.3 J	14.6 NE	21.4 NE	20.4	21.7 NE	407 NE	51.9 NE	21.2 N*E	21.8 NE	21.5 N*E	19.6 N*E	5.3 N*E	19.7 NE
MAGNESIUM	3260	2990 E	2440 E	3070	3320 E	3600 E	3320 E	2250 *E	3570 E	2910 *E	2600 *E	2730 *E	2280 E
MANGANESE	118 J	195 E	108 E	109	144 E	154 E	151 E	142 *E	163 E	152 *E	104 *E	123 *E	91.9 E
MERCURY	0.042 J	0.011 B	0.057	0.079	0.1	0.41	0.3	0.038	0.06	0.049	0.065	0.0075 B	0.059
NICKEL	9.1 J	11.5 NE	6.3 NE	6.7	8.1 NE	12 NE	9.5 NE	7.7 *E	9.8 NE	8.75 *E	9.5 *E	7.1 *E	6.5 NE
POTASSIUM	1140 J	1030	1050	1220 J	1520	1650	1820	801 *	981	891 *	880 *	865 *	976
SELENIUM	0.067 UJ	0.32 UN	0.39 UN	2.4 U	0.43 UN	0.47 UN	0.49 UN	0.34 U	0.36 UN	0.35 U	0.94	0.87	0.36 UN
SILVER	0.019 UJ	0.033 UN	0.039 UN	0.271 U	0.16 BN	0.56 BN	0.32 BN	0.034 U	1.2 N	0.608 N	0.035 U	0.033 U	0.036 UN
SODIUM	6640 J	3870	8860	7690	10700	11200	11400	4270	4610	4440	3300	2040	4970
THALLIUM	0.15 UJ	0.13 BN	0.84 N	4.5 J	0.87 N	0.92 N	0.86 N	0.55	0.11 UN	0.302	0.11 U	0.2 B	0.45 BN
VANADIUM	15.1 J	12.4 NE	12.5 NE	16.5	18 NE	21.9 NE	18.8 NE	11.3 *E	17.6 NE	14.4 *E	13.9 *E	12.9 *E	12.3 NE
ZINC	55.6 J	38.5 NE	39.9 NE	48.2 J	54.8 NE	616 NE	121 NE	42.2 E	123 NE	82.6 E	65.7 E	20.6 E	54.6 NE
MISCELLANEOUS PARAMETERS (%)													

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD403-0006	GI-SD404-0006	GI-SD505-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006
LOCATION ID	G32-SD312	GI-SD403	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406
SAMPLE DATE	08/31/05	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	0.71 FT	0.5 FT	1.42 FT	2.83 FT	4 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
HYDROMETER-0.002MM	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT CLAY	4.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	8.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	46.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	9.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	10.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SILT	20.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	70.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1/2"	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1-1/2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/8"	94.1	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 004	90.4	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 010	81.6	NA	NA	88	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 020	74.4	NA	NA	77	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 040	71.1	NA	NA	71	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 060	63.2	NA	NA	65	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 080	53.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	47.7	NA	NA	55	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 200	24.7	NA	NA	38	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD403-0006	GI-SD404-0006	GI-SD505-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006
LOCATION ID	G32-SD312	GI-SD403	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406
SAMPLE DATE	08/31/05	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	0.71 FT	0.5 FT	1.42 FT	2.83 FT	4 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	16000 J	NA	NA	13800	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	33.7 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	0.0018 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	0.33 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.075 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.00021 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	0.099 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	0.62 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)													
SEM/AVS	0.033	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD403-0006	GI-SD404-0006	GI-SD505-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006
LOCATION ID	G32-SD312	GI-SD403	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406
SAMPLE DATE	08/31/05	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	0.71 FT	0.5 FT	1.42 FT	2.83 FT	4 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
1,1-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	45 JEB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD403-0006	GI-SD404-0006	GI-SD505-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006
LOCATION ID	G32-SD312	GI-SD403	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406
SAMPLE DATE	08/31/05	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	0.71 FT	0.5 FT	1.42 FT	2.83 FT	4 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD403-0006	GI-SD404-0006	GI-SD505-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006
LOCATION ID	G32-SD312	GI-SD403	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406
SAMPLE DATE	08/31/05	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	0.71 FT	0.5 FT	1.42 FT	2.83 FT	4 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
TOTAL CHLORINATED VOCS	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	200 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD501-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006	GI-SD506-0006	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248
LOCATION ID	G32-SD312	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409
SAMPLE DATE	08/31/05	04/30/10	10/09/09	10/09/09	10/09/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	2 FT	0 FT	2 FT	0 FT	0 FT	1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	4 FT	2 FT	4 FT	1.27 FT	0.5 FT	2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	31	520 U	5.3	3.3 U	6.1	3.3 U	46 U	3.3 U	3.3 U	3.3 U	17	5.5	3.3 U
2-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD501-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006	GI-SD506-0006	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248
LOCATION ID	G32-SD312	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409
SAMPLE DATE	08/31/05	04/30/10	10/09/09	10/09/09	10/09/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	2 FT	0 FT	2 FT	0 FT	0 FT	1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	4 FT	2 FT	4 FT	1.27 FT	0.5 FT	2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	210	130 J	24	3.4	38	3.4	19 J	3.3 U	3.3 U	3.3 U	7.6	9.5	3.3 U
ACENAPHTHYLENE	300	210 J	36	8.2	140	9.2	35 J	5.8	3.3 U	3.3 U	4.1	23	3.3 U
ACETOPHENONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	900	4400	1200 D	33	280 D	10	97	9.3	3.3 U	3.3 U	5.4	44	3.3 U
ATRAZINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	2000	5200	750 D	73	510 D	21	290	32	3.3 U	3.3 U	4.2	110	3.3 U
BENZO(A)PYRENE	1200 J	3800	260	50	740 D	23	260	23	3.3 U	3.3 U	3.3 U	87	3.3 U
BENZO(B)FLUORANTHENE	2400 J	4100	410 D	87	1100 D	35	280	40	3.3 U	3.3 U	3.5	150	4
BENZO(G,H,I)PERYLENE	380 J	1600	73	17	330	15	150	14	3.3 U	3.3 U	3.3 U	49	3.3 U
BENZO(K)FLUORANTHENE	1500 J	3900	140	29	320	17	240	18	3.3 U	3.3 U	3.3 U	64	3.3 U
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD501-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006	GI-SD506-0006	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248
LOCATION ID	G32-SD312	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409
SAMPLE DATE	08/31/05	04/30/10	10/09/09	10/09/09	10/09/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	2 FT	0 FT	2 FT	0 FT	0 FT	1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	4 FT	2 FT	4 FT	1.27 FT	0.5 FT	2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	530	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	4400	6900	890 D	67	790 D	28	480	44	3.3 U	3.3 U	3.3 U	170	3.3 U
DIBENZO(A,H)ANTHRACENE	120	580	27	5.5	100	5	49	5	3.3 U	3.3 U	3.3 U	18	3.3 U
DIBENZOFURAN	130 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	10000	12000	4100 D	120	780 D	78	940	76	3.3 U	3.3 U	7.4	250	3.3 U
FLUORENE	260	210 J	41	5.7	54	5.9	26 J	3.3	3.3 U	3.3 U	6.2	11	3.3 U
HEXACHLOROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	31000 J	48600	9230	816	7690	304	3570	335	3.3 U	3.3 U	24.4	1220	4
INDENO(1,2,3-CD)PYRENE	410 J	1600	77	17	320 D	15	140	13	3.3 U	3.3 U	3.3 U	49	3.3 U
ISOPHORONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD501-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006	GI-SD506-0006	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248
LOCATION ID	G32-SD312	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409
SAMPLE DATE	08/31/05	04/30/10	10/09/09	10/09/09	10/09/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	2 FT	0 FT	2 FT	0 FT	0 FT	1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	4 FT	2 FT	4 FT	1.27 FT	0.5 FT	2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
LOW MOLECULAR WEIGHT PAHS	5360	6550 J	1650	68.3	801	92.5	494 J	45.4	3.3 U	3.3 U	71.3	192	3.3 U
NAPHTHALENE	55	520 U	3.3 U	3.3 U	13	3.3 U	7 J	3.3 U	3.3 U	3.3 U	15	9.1	3.3 U
NITROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	3600	1600	340 D	18	270	64	310	27	3.3 U	3.3 U	16	90	3.3 U
PHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	8600	8900	2500 D	350 D	2700 D	67	740	70	3.3 U	3.3 U	9.3	270	3.3 U
TOTAL CHLORINATED VOCS	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	36400 J	55100 J	10900	884	8490	396	4060 J	380	3.3 U	3.3 U	95.7	1410	4
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	53 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	220 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	500 U	NA	33 U	33 U	660 U	33 U	NA	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1221	500 U	NA	33 U	33 U	660 U	33 U	NA	33 U	33 U	33 U	33 U	33 U	33 U

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ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD501-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006	GI-SD506-0006	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248
LOCATION ID	G32-SD312	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409
SAMPLE DATE	08/31/05	04/30/10	10/09/09	10/09/09	10/09/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	2 FT	0 FT	2 FT	0 FT	0 FT	1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	4 FT	2 FT	4 FT	1.27 FT	0.5 FT	2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
AROCLOR-1232	500 U	NA	33 U	33 U	660 U	33 U	NA	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1242	500 U	NA	33 U	33 U	660 U	33 U	NA	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1248	500 U	NA	33 U	33 U	660 U	33 U	NA	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1254	500 U	NA	33 U	33 U	660 U	33 U	NA	33 U	33 U	33 U	40	33 U	320
AROCLOR-1260	8900	NA	300	190	6000	160	NA	96	33 U	33 U	33 U	310	33 U
BETA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	79 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	260 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	8900	NA	300	190	6000	160	NA	96	33 U	33 U	40	310	320
TOTAL CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	2600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)													

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD501-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006	GI-SD506-0006	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248
LOCATION ID	G32-SD312	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409
SAMPLE DATE	08/31/05	04/30/10	10/09/09	10/09/09	10/09/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	2 FT	0 FT	2 FT	0 FT	0 FT	1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	4 FT	2 FT	4 FT	1.27 FT	0.5 FT	2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
DECACHLOROBIPHENYL	NA	13 U	NA	NA	NA	NA	5.8 U	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	2.7 U	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	890 J	NA	NA	NA	NA	210	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	1400 J	NA	NA	NA	NA	270	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	2.7 U	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	13 U	NA	NA	NA	NA	5.8 U	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	300 J	NA	NA	NA	NA	41	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	5.2 U	NA	NA	NA	NA	2.3 U	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	130 J	NA	NA	NA	NA	26	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	2720 J	NA	NA	NA	NA	547	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	2740 J	NA	NA	NA	NA	556	NA	NA	NA	NA	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	2.7 U	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	NA	NA
METALS (MG/KG)													
ALUMINUM	5080	5070	6450 E	5780 E	5700 E	2680 *E	3930	3610 *E	3510 *E	2990 E	3060 E	5140 E	5790 E
ANTIMONY	0.35 UJ	0.79 UJ	0.15 BN	0.21 BN	0.19 BN	0.12 BN	0.692 UJ	0.075 UN	0.13 BN	0.08 UN	0.15 BN	0.083 UN	0.084 BN
ARSENIC	3.9 J	1.6 J	2.2 E	2.3 E	3.9 E	1.5 E	0.999 J	1.7 E	1.7 E	1.6 E	1.8 E	2.2 E	2.5 E
BARIUM	22.2 J	32.5 J	25.6 NE	16.9 NE	15.1 NE	9 E	9.2	9.2 E	9.8 E	10.3 *E	7.3 *E	23.6 *E	20.2 *E
BERYLLIUM	0.35	0.336	0.23 NE	0.23 NE	0.25 NE	0.23 E	0.257 J	0.25 E	0.37 E	0.27 E	0.31 E	0.39 E	0.41 E
CADMIUM	0.18 UJ	0.307 J	0.05 B	0.033 B	0.11	0.0087 B	0.103 J	0.018 B	0.0083 B	0.058 B	0.079 B	0.14	0.12

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ANALYTICAL RESULTS - SEDIMENT
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GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD501-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006	GI-SD506-0006	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248
LOCATION ID	G32-SD312	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409
SAMPLE DATE	08/31/05	04/30/10	10/09/09	10/09/09	10/09/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	2 FT	0 FT	2 FT	0 FT	0 FT	1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	4 FT	2 FT	4 FT	1.27 FT	0.5 FT	2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CALCIUM	59700 J	47000 J	3110	2120	4170	2240 *	7790 J	5450 *	2820 *	1060 *	1000 *	2170 *	1800 *
CHROMIUM	17.1	18.8 J	13.5 NE	9.6 NE	62.3 NE	6 E	10.1	7 E	8.5 E	7 E	6.9 E	12.8 E	9.5 E
COBALT	2.4 J	3.2 J	4.7 NE	4 NE	4.2 NE	2.4 E	3.2	2.8 E	3.8 E	2.3 E	2.8 E	3.4 E	4.5 E
COPPER	25.3	28.7 J	13.6 NE	47.4 NE	28.4 NE	7.3 E	11.1 J	8.6 E	7.8 E	8.3 NE	9.7 NE	18.9 NE	14.9 NE
CYANIDE	0.12 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	12100 J	11200	16900	16000	16700	6220 *	9110	9400 *	9110 *	8280	10300	13500	14700
LEAD	18.3 J	35.2 J	6.3 NE	6.9 NE	18.9 NE	5 E	11.4	5.4 E	4.8 E	3.7 NE	4.5 NE	8.7 NE	6 NE
MAGNESIUM	3260	2950 J	2870 E	2450 E	2820 E	1360 *E	2150	1650 *E	1830 *E	1340 E	1420 E	2310 E	2460 E
MANGANESE	118 J	107 J	122 E	103 E	111 E	51.3 *E	75	64.8 *E	82.6 *E	61 E	63.7 E	78.2 E	109 E
MERCURY	0.042 J	0.107	0.004 B	0.012 B	0.6	0.0087 B	0.035	0.015 B	0.006 B	0.0042 U	0.004 U	0.033	0.009 B
NICKEL	9.1 J	7.7 J	10.6 NE	9.5 NE	30.1 NE	5.6 E	6.5	6.1 E	11.2 E	6 E	6.1 E	7.8 E	9.7 E
POTASSIUM	1140 J	1290	1370	762	1130	452	818	507	977	452	448	1510	883
SELENIUM	0.067 UJ	0.79 U	0.48 BN	0.61 N	0.7 N	0.81	0.692 U	0.8	0.85	0.58 B	1	1.3	1.2
SILVER	0.019 UJ	0.145 J	0.031 UN	0.031 UN	0.035 UN	0.033 U	0.231 UJ	0.033 U	0.031 U	0.035 U	0.035 U	0.036 U	0.035 U
SODIUM	6640 J	6130	2180	2720	5050	2240	3830	2200	1130	1670	1590	2310	2090
THALLIUM	0.15 UJ	0.417 J	0.093 UN	0.094 UN	0.11 UN	0.1 UN	0.461 UJ	0.1 UN	0.095 UN	0.12 BN	0.22 BN	0.24 BN	0.14 BN
VANADIUM	15.1 J	17.3 J	15.5 NE	12 NE	18 NE	7.5 *E	12.2	8.5 *E	8.7 *E	7 E	9.1 E	14.5 E	11.8 E
ZINC	55.6 J	51.9 J	23.7 NE	27.3 NE	48.3 NE	16 E	40 J	17.4 E	21.4 E	13.6 *E	14.1 *E	27.3 *E	24.9 *E
MISCELLANEOUS PARAMETERS (%)													

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD501-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006	GI-SD506-0006	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248
LOCATION ID	G32-SD312	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409
SAMPLE DATE	08/31/05	04/30/10	10/09/09	10/09/09	10/09/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	2 FT	0 FT	2 FT	0 FT	0 FT	1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	4 FT	2 FT	4 FT	1.27 FT	0.5 FT	2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
HYDROMETER-0.002MM	NA	4	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA
PERCENT CLAY	4.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	8.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	46.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	9.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	10.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SILT	20.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	70.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	100	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA
SIEVE 1/2"	NA	100	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA
SIEVE 1-1/2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	100	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA
SIEVE 3/8"	94.1	100	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA
SIEVE NO. 004	90.4	98	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA
SIEVE NO. 010	81.6	95	NA	NA	NA	NA	98	NA	NA	NA	NA	NA	NA
SIEVE NO. 020	74.4	92	NA	NA	NA	NA	96	NA	NA	NA	NA	NA	NA
SIEVE NO. 040	71.1	90	NA	NA	NA	NA	92	NA	NA	NA	NA	NA	NA
SIEVE NO. 060	63.2	86	NA	NA	NA	NA	82	NA	NA	NA	NA	NA	NA
SIEVE NO. 080	53.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	47.7	72	NA	NA	NA	NA	60	NA	NA	NA	NA	NA	NA
SIEVE NO. 200	24.7	44	NA	NA	NA	NA	29	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD501-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006	GI-SD506-0006	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248
LOCATION ID	G32-SD312	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409
SAMPLE DATE	08/31/05	04/30/10	10/09/09	10/09/09	10/09/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	2 FT	0 FT	2 FT	0 FT	0 FT	1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	4 FT	2 FT	4 FT	1.27 FT	0.5 FT	2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	16000 J	11700	NA	NA	NA	NA	7200	NA	NA	NA	NA	NA	NA
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	33.7 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	0.0018 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	0.33 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.075 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.00021 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	0.099 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	0.62 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)													
SEM/AVS	0.033	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD501-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006	GI-SD506-0006	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248
LOCATION ID	G32-SD312	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409
SAMPLE DATE	08/31/05	04/30/10	10/09/09	10/09/09	10/09/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	2 FT	0 FT	2 FT	0 FT	0 FT	1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	4 FT	2 FT	4 FT	1.27 FT	0.5 FT	2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
1,1-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	45 JEB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD501-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006	GI-SD506-0006	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248
LOCATION ID	G32-SD312	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409
SAMPLE DATE	08/31/05	04/30/10	10/09/09	10/09/09	10/09/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	2 FT	0 FT	2 FT	0 FT	0 FT	1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	4 FT	2 FT	4 FT	1.27 FT	0.5 FT	2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD501-0006	GI-SD406-0612	GI-SD407-0006	GI-SD407-0612	GI-SD408-0006	GI-SD506-0006	GI-SD408-0612	GI-SD408-1218	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248
LOCATION ID	G32-SD312	GI-SD406	GI-SD406	GI-SD407	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409
SAMPLE DATE	08/31/05	04/30/10	10/09/09	10/09/09	10/09/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	2 FT	0 FT	2 FT	0 FT	0 FT	1.27 FT	2.53 FT	0 FT	0.5 FT	1.5 FT	3.5 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	4 FT	2 FT	4 FT	1.27 FT	0.5 FT	2.53 FT	3.79 FT	0.5 FT	1 FT	2 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
TOTAL CHLORINATED VOCS	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	200 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD410-0006	GI-SD507-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD509-0006	GI-SD411-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824
LOCATION ID	G32-SD312	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411
SAMPLE DATE	08/31/05	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	04/30/10	04/30/10	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	0 FT	0 FT	0 FT	0.86 FT	1.72 FT	2.58 FT
BOTTOM DEPTH	0.5 FT	0.75 FT	0.5 FT	1.5 FT	3 FT	4 FT	0.5 FT	0.86 FT	0.5 FT	0.5 FT	1.72 FT	2.58 FT	3.43 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	31	3.3 U	46 UJ	3.3 U	3.3 U	6.1	45 U	14	13 J	17.8 J	3.3 U	3.3 U	3.3 U
2-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD410-0006	GI-SD507-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD509-0006	GI-SD411-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824
LOCATION ID	G32-SD312	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411
SAMPLE DATE	08/31/05	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	04/30/10	04/30/10	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	0 FT	0 FT	0 FT	0.86 FT	1.72 FT	2.58 FT
BOTTOM DEPTH	0.5 FT	0.75 FT	0.5 FT	1.5 FT	3 FT	4 FT	0.5 FT	0.86 FT	0.5 FT	0.5 FT	1.72 FT	2.58 FT	3.43 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	210	7.1	62 J	3.3 U	3.3 U	8.5	29 J	52	59 J	44 J	3.3 U	3.3 U	3.3 U
ACENAPHTHYLENE	300	18	51 J	6.5	3.3 U	14	14 J	13	20 J	17 J	3.3 U	3.3 U	3.3 U
ACETOPHENONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	900	28	230 J	5.8	3.3 U	13	93 J	270	180 J	136 J	3.3 U	3.3 U	3.3 U
ATRAZINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	2000	74	750 J	13	3.4	16	240	240	360 J	300 J	3.5	3.3 U	4.4
BENZO(A)PYRENE	1200 J	59	740 J	14	3.3 U	15	220	130	350 J	285 J	4.9	3.3 U	4.3
BENZO(B)FLUORANTHENE	2400 J	110	770 J	21	6.4	17	220	170	300 J	260 J	7.3	3.3 U	7
BENZO(G,H,I)PERYLENE	380 J	32	330 J	8.2	3.3 U	15	120	48	190 J	155 J	3.3	3.3 U	3.3 U
BENZO(K)FLUORANTHENE	1500 J	34	590 J	15	3.3 U	15	180	130	270 J	225 J	4.4	3.3 U	4.3
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD410-0006	GI-SD507-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD509-0006	GI-SD411-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824
LOCATION ID	G32-SD312	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411
SAMPLE DATE	08/31/05	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	04/30/10	04/30/10	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	0 FT	0 FT	0 FT	0.86 FT	1.72 FT	2.58 FT
BOTTOM DEPTH	0.5 FT	0.75 FT	0.5 FT	1.5 FT	3 FT	4 FT	0.5 FT	0.86 FT	0.5 FT	0.5 FT	1.72 FT	2.58 FT	3.43 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	530	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	4400	110	1100 J	21	6.5	16	370	230	480 J	425 J	4.3	3.3 U	5.2
DIBENZO(A,H)ANTHRACENE	120	12	120 J	3.3 U	3.3 U	14	43 J	18	67 J	55 J	3.3 U	3.3 U	3.3 U
DIBENZOFURAN	130 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	10000	180	1500 J	30	4.1	17	570	1000 D	680 J	625 J	4.9	3.3 U	5.3
FLUORENE	260	9.8	72 J	3.3 U	3.3 U	14	32 J	110	56 J	44 J	3.3 U	3.3 U	3.3 U
HEXACHLOROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	31000 J	813	7430 J	165	25.7	158	2540 J	2840	3470 J	3000 J	47.6	4	37.3
INDENO(1,2,3-CD)PYRENE	410 J	32	330 J	8.1	3.3 U	15	120	52	190 J	155 J	3.3 U	3.3 U	3.3 U
ISOPHORONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD410-0006	GI-SD507-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD509-0006	GI-SD411-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824
LOCATION ID	G32-SD312	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411
SAMPLE DATE	08/31/05	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	04/30/10	04/30/10	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	0 FT	0 FT	0 FT	0.86 FT	1.72 FT	2.58 FT
BOTTOM DEPTH	0.5 FT	0.75 FT	0.5 FT	1.5 FT	3 FT	4 FT	0.5 FT	0.86 FT	0.5 FT	0.5 FT	1.72 FT	2.58 FT	3.43 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
LOW MOLECULAR WEIGHT PAHS	5360	132	1090 J	25.3	3.3 U	70.6	448 J	1950	738 J	593 J	3.3 U	3.3 U	8.5
NAPHTHALENE	55	3.3 U	67 J	3.3 U	3.3 U	3.3 U	45 U	190	28 UJ	36.5 UJ	3.3 U	3.3 U	3.3 U
NITROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	3600	69	610 J	13	3.3 U	15	280	1300 D	410 J	345 J	3.3 U	3.3 U	8.5
PHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	8600	170	1200 J	35	5.3	18	460	820 D	580 J	520 J	15	4	6.8
TOTAL CHLORINATED VOCS	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	36400 J	945	8520 J	191	25.7	229	2990 J	4790	4200 J	3600 J	47.6	4	45.8
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	53 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	220 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	500 U	990 U	NA	33 U	33 U	33 U	NA	170 U	NA	NA	33 U	33 U	33 U
AROCLOR-1221	500 U	990 U	NA	33 U	33 U	33 U	NA	170 U	NA	NA	33 U	33 U	33 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD410-0006	GI-SD507-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD509-0006	GI-SD411-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824
LOCATION ID	G32-SD312	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411
SAMPLE DATE	08/31/05	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	04/30/10	04/30/10	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	0 FT	0 FT	0 FT	0.86 FT	1.72 FT	2.58 FT
BOTTOM DEPTH	0.5 FT	0.75 FT	0.5 FT	1.5 FT	3 FT	4 FT	0.5 FT	0.86 FT	0.5 FT	0.5 FT	1.72 FT	2.58 FT	3.43 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
AROCLOR-1232	500 U	990 U	NA	33 U	33 U	33 U	NA	170 U	NA	NA	33 U	33 U	33 U
AROCLOR-1242	500 U	990 U	NA	33 U	33 U	33 U	NA	170 U	NA	NA	33 U	33 U	33 U
AROCLOR-1248	500 U	990 U	NA	33 U	33 U	33 U	NA	170 U	NA	NA	33 U	33 U	33 U
AROCLOR-1254	500 U	990 U	NA	33 U	33 U	88	NA	170 U	NA	NA	46 P	33 U	33 U
AROCLOR-1260	8900	4100	NA	410	54	33 U	NA	570	NA	NA	55 P	33 U	33 U
BETA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	79 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	260 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	8900	4100	NA	410	54	88	NA	570	NA	NA	101	33 U	33 U
TOTAL CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	2600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)													

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD410-0006	GI-SD507-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD509-0006	GI-SD411-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824
LOCATION ID	G32-SD312	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411
SAMPLE DATE	08/31/05	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	04/30/10	04/30/10	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	0 FT	0 FT	0 FT	0.86 FT	1.72 FT	2.58 FT
BOTTOM DEPTH	0.5 FT	0.75 FT	0.5 FT	1.5 FT	3 FT	4 FT	0.5 FT	0.86 FT	0.5 FT	0.5 FT	1.72 FT	2.58 FT	3.43 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
DECACHLOROBIPHENYL	NA	NA	12 U	NA	NA	NA	5.6 U	NA	2.3 U	3.95 U	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	2.4 U	NA	NA	NA	1.2 U	NA	0.48 U	0.84 U	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	970	NA	NA	NA	170	NA	190	180	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	1300	NA	NA	NA	220	NA	230	225	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	2.4 U	NA	NA	NA	1.2 U	NA	0.48 U	0.84 U	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	12 U	NA	NA	NA	5.6 U	NA	2.3 U	3.95 U	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	220	NA	NA	NA	30 UJ	NA	55 J	35 J	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	4.6 U	NA	NA	NA	2.9 J	NA	9.5	6.2 J	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	100	NA	NA	NA	20	NA	23	21.5	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	2590	NA	NA	NA	413 J	NA	508 J	460 J	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	2610	NA	NA	NA	435 J	NA	511 J	473 J	NA	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	2.4 U	NA	NA	NA	1.2 U	NA	0.48 U	0.84 U	NA	NA	NA
METALS (MG/KG)													
ALUMINUM	5080	3440 E	4230	5540 E	4940 E	4900 E	4150	2980 E	3390	3770	4730 E	4040 E	4700 E
ANTIMONY	0.35 UJ	0.13 BN	0.69 UJ	0.084 UN	0.1 BN	0.17 BN	0.67 UJ	0.12 BN	0.69 UJ	0.68 UJ	0.13 BN	0.096 BN	0.082 UN
ARSENIC	3.9 J	1.7 E	1.3 J	2.2 E	2.5 E	2.3 E	1.3 J	1.6 E	0.29 J	0.795 J	2.4 E	1.9 E	2.4 E
BARIUM	22.2 J	9.4 *E	8.8 J	15 *E	13.8 *E	15.6 *E	9.8 J	6.6 *E	8.4 J	9.1 J	15.2 *E	12.2 *E	14.6 *E
BERYLLIUM	0.35	0.29 E	0.237	0.34 E	0.32 E	0.31 E	0.254	0.23 E	0.209 J	0.232 J	0.32 E	0.29 E	0.31 E
CADMIUM	0.18 UJ	0.081 B	0.145 J	0.12 B	0.11	0.11 B	0.156 J	0.1 B	0.143 J	0.15 J	0.12	0.093 B	0.11 B

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD410-0006	GI-SD507-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD509-0006	GI-SD411-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824
LOCATION ID	G32-SD312	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411
SAMPLE DATE	08/31/05	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	04/30/10	04/30/10	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	0 FT	0 FT	0 FT	0.86 FT	1.72 FT	2.58 FT
BOTTOM DEPTH	0.5 FT	0.75 FT	0.5 FT	1.5 FT	3 FT	4 FT	0.5 FT	0.86 FT	0.5 FT	0.5 FT	1.72 FT	2.58 FT	3.43 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CALCIUM	59700 J	2170 *	3810 J	2270 *	2240 *	3180 *	5260 J	3750 *	15000 J	10100 J	2740 *	2370 *	3560 *
CHROMIUM	17.1	7.6 E	11.2 J	8.5 E	8.2 E	8.2 E	10.5 J	6.2 E	9.1 J	9.8 J	7.8 E	6.7 E	7.9 E
COBALT	2.4 J	2.6 E	3 J	3.6 E	3.5 E	3.6 E	3.1 J	2.2 E	2.5 J	2.8 J	3.3 E	3 E	3.2 E
COPPER	25.3	9.5 NE	12.5 J	12.7 NE	11.1 NE	10.6 NE	13.3 J	8.9 NE	10.3 J	11.8 J	11.1 NE	10 NE	9.4 NE
CYANIDE	0.12 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	12100 J	9710	10200	13200	12400	11800	10600	8410	8500	9550	12400	10800	11900
LEAD	18.3 J	7.4 NE	12.4 J	7.3 NE	6.8 NE	6.7 NE	11.8 J	6 NE	9.4 J	10.6 J	6.6 NE	5.5 NE	6.7 NE
MAGNESIUM	3260	1710 E	2250 J	2250 E	2090 E	2200 E	2150 J	1460 E	1860 J	2000 J	2020 E	1740 E	2020 E
MANGANESE	118 J	69.2 E	83.5 J	92.4 E	91.3 E	99.6 E	82.9 J	63 E	72.6 J	77.8 J	86 E	78.5 E	96.6 E
MERCURY	0.042 J	0.032 B	0.045	0.014 B	0.011 B	0.012 B	0.028	0.0099 B	0.029	0.0285	0.017 B	0.018 B	0.021 B
NICKEL	9.1 J	5.5 E	6.5 J	7.7 E	7.1 E	7.1 E	6.4 J	4.6 E	5.3 J	5.85 J	6.6 E	5.7 E	6.4 E
POTASSIUM	1140 J	586	868	690	665	669	897	459	715	806	632	554	658
SELENIUM	0.067 UJ	0.98	0.69 U	1.2	0.79	1.1	0.67 U	0.98	0.69 U	0.68 U	1.1	0.91	0.92
SILVER	0.019 UJ	0.039 U	0.143 J	0.037 U	0.036 U	0.036 U	0.098 J	0.036 U	0.23 UJ	0.106 J	0.035 U	0.035 U	0.036 U
SODIUM	6640 J	2920	3440	2010	2510	2710	3750	2160	3870	3810	2010	1740	2360
THALLIUM	0.15 UJ	0.12 UN	0.46 UJ	0.15 BN	0.11 UN	0.14 BN	0.45 UJ	0.15 BN	0.46 UJ	0.455 UJ	0.15 BN	0.11 BN	0.18 BN
VANADIUM	15.1 J	9.6 E	12.7 J	10.4 E	9.6 E	9.6 E	13.1 J	7.5 E	10.9 J	12 J	10.1 E	9 E	9.5 E
ZINC	55.6 J	20.1 *E	42 J	23.1 *E	20.9 *E	20.7 *E	34.5 J	16.7 *E	26.6 J	30.6 J	19.6 *E	16.5 *E	19.8 *E
MISCELLANEOUS PARAMETERS (%)													

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD410-0006	GI-SD507-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD509-0006	GI-SD411-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824
LOCATION ID	G32-SD312	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411
SAMPLE DATE	08/31/05	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	04/30/10	04/30/10	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	0 FT	0 FT	0 FT	0.86 FT	1.72 FT	2.58 FT
BOTTOM DEPTH	0.5 FT	0.75 FT	0.5 FT	1.5 FT	3 FT	4 FT	0.5 FT	0.86 FT	0.5 FT	0.5 FT	1.72 FT	2.58 FT	3.43 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
HYDROMETER-0.002MM	NA	NA	3	NA	NA	NA	3	NA	2	2.5	NA	NA	NA
PERCENT CLAY	4.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	8.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	46.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	9.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	10.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SILT	20.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	70.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	NA	100	NA	NA	NA	100	NA	100	100	NA	NA	NA
SIEVE 1/2"	NA	NA	100	NA	NA	NA	100	NA	100	100	NA	NA	NA
SIEVE 1-1/2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	NA	100	NA	NA	NA	100	NA	100	100	NA	NA	NA
SIEVE 3/8"	94.1	NA	100	NA	NA	NA	100	NA	100	100	NA	NA	NA
SIEVE NO. 004	90.4	NA	100	NA	NA	NA	98	NA	99	98.5	NA	NA	NA
SIEVE NO. 010	81.6	NA	98	NA	NA	NA	97	NA	98	97.5	NA	NA	NA
SIEVE NO. 020	74.4	NA	96	NA	NA	NA	96	NA	97	96.5	NA	NA	NA
SIEVE NO. 040	71.1	NA	90	NA	NA	NA	93	NA	94	93.5	NA	NA	NA
SIEVE NO. 060	63.2	NA	83	NA	NA	NA	84	NA	85	84.5	NA	NA	NA
SIEVE NO. 080	53.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	47.7	NA	70	NA	NA	NA	64	NA	65	64.5	NA	NA	NA
SIEVE NO. 200	24.7	NA	41	NA	NA	NA	26	NA	25	25.5	NA	NA	NA

LIGHT SHADING - DETECTED;
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TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD410-0006	GI-SD507-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD509-0006	GI-SD411-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824
LOCATION ID	G32-SD312	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411
SAMPLE DATE	08/31/05	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	04/30/10	04/30/10	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	0 FT	0 FT	0 FT	0.86 FT	1.72 FT	2.58 FT
BOTTOM DEPTH	0.5 FT	0.75 FT	0.5 FT	1.5 FT	3 FT	4 FT	0.5 FT	0.86 FT	0.5 FT	0.5 FT	1.72 FT	2.58 FT	3.43 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	16000 J	NA	7240	NA	NA	NA	5700	NA	6100	5900	NA	NA	NA
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	33.7 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	0.0018 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	0.33 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.075 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.00021 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	0.099 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	0.62 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)													
SEM/AVS	0.033	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD410-0006	GI-SD507-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD509-0006	GI-SD411-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824
LOCATION ID	G32-SD312	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411
SAMPLE DATE	08/31/05	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	04/30/10	04/30/10	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	0 FT	0 FT	0 FT	0.86 FT	1.72 FT	2.58 FT
BOTTOM DEPTH	0.5 FT	0.75 FT	0.5 FT	1.5 FT	3 FT	4 FT	0.5 FT	0.86 FT	0.5 FT	0.5 FT	1.72 FT	2.58 FT	3.43 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
1,1-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	45 JEB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD410-0006	GI-SD507-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD509-0006	GI-SD411-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824
LOCATION ID	G32-SD312	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411
SAMPLE DATE	08/31/05	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	04/30/10	04/30/10	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	0 FT	0 FT	0 FT	0.86 FT	1.72 FT	2.58 FT
BOTTOM DEPTH	0.5 FT	0.75 FT	0.5 FT	1.5 FT	3 FT	4 FT	0.5 FT	0.86 FT	0.5 FT	0.5 FT	1.72 FT	2.58 FT	3.43 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD410-0006	GI-SD507-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD509-0006	GI-SD411-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824
LOCATION ID	G32-SD312	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411
SAMPLE DATE	08/31/05	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	04/30/10	04/30/10	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT	0 FT	0 FT	0 FT	0.86 FT	1.72 FT	2.58 FT
BOTTOM DEPTH	0.5 FT	0.75 FT	0.5 FT	1.5 FT	3 FT	4 FT	0.5 FT	0.86 FT	0.5 FT	0.5 FT	1.72 FT	2.58 FT	3.43 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
TOTAL CHLORINATED VOCS	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	200 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
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TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD504-0006	GI-SD413-0612	GI-SD414-0006	GI-SD527-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612
LOCATION ID	G32-SD312	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414
SAMPLE DATE	08/31/05	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	04/30/10	10/06/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	0 FT	2 FT	0 FT	0 FT	0 FT	0 FT	0.93 FT
BOTTOM DEPTH	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	0.5 FT	4 FT	0.93 FT	0.5 FT	0.93 FT	0.93 FT	1.85 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	31	41	26	31	30	20	96 U	7.3	3.9	18 U	3.3 U	2.78	3.3 U
2-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD504-0006	GI-SD413-0612	GI-SD414-0006	GI-SD527-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612
LOCATION ID	G32-SD312	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414
SAMPLE DATE	08/31/05	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	04/30/10	10/06/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	0 FT	2 FT	0 FT	0 FT	0 FT	0 FT	0.93 FT
BOTTOM DEPTH	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	0.5 FT	4 FT	0.93 FT	0.5 FT	0.93 FT	0.93 FT	1.85 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	210	200	66	34	18	64	110	11	13	13 J	16	14.5	3.3 U
ACENAPHTHYLENE	300	62	160	49	37	63	29 J	81	36	17 J	26	31	3.3 U
ACETOPHENONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	900	550 D	200	110	88	200	240	170	84	57	62	73	4.6
ATRAZINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	2000	930 D	460 D	290	93	470 D	650	310	210	160	140	175	11
BENZO(A)PYRENE	1200 J	960 D	570 D	320	200	230	590	260	190	160	150	170	22
BENZO(B)FLUORANTHENE	2400 J	1200 D	950 D	610 D	350 D	410 D	490	490 D	290	160	260	275	32
BENZO(G,H,I)PERYLENE	380 J	530 D	340 D	210	120	70	340	97	100	98	86	93	13
BENZO(K)FLUORANTHENE	1500 J	310	300	230	100	140	530	190	150	140	92	121	11
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD504-0006	GI-SD413-0612	GI-SD414-0006	GI-SD527-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612
LOCATION ID	G32-SD312	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414
SAMPLE DATE	08/31/05	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	04/30/10	10/06/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	0 FT	2 FT	0 FT	0 FT	0 FT	0 FT	0.93 FT
BOTTOM DEPTH	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	0.5 FT	4 FT	0.93 FT	0.5 FT	0.93 FT	0.93 FT	1.85 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	530	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	4400	810 D	590 D	330	170	520 D	730	420 D	190	240	210	200	14
DIBENZO(A,H)ANTHRACENE	120	130	130	74	38	33	110	38	39	33	35	37	5.6
DIBENZOFURAN	130 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	10000	2400 D	870 D	700 D	200	1100 D	1200	320	270	260	240	255	16
FLUORENE	260	220	84	39	28	72	87 J	35	20	16 J	20	20	3.3 U
HEXACHLOROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	31000 J	10200	6530	4560	2480	4550	5960	3320	2090	1570	1800	1940	170
INDENO(1,2,3-CD)PYRENE	410 J	480 D	320 D	200	110	77	320	100	100	91	82	91	12
ISOPHORONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
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TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD504-0006	GI-SD413-0612	GI-SD414-0006	GI-SD527-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612
LOCATION ID	G32-SD312	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414
SAMPLE DATE	08/31/05	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	04/30/10	10/06/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	0 FT	2 FT	0 FT	0 FT	0 FT	0 FT	0.93 FT
BOTTOM DEPTH	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	0.5 FT	4 FT	0.93 FT	0.5 FT	0.93 FT	0.93 FT	1.85 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
LOW MOLECULAR WEIGHT PAHS	5360	2450	959	585	319	1040	1240 J	472	295	233 J	261	278	13.8
NAPHTHALENE	55	75	33	32	27	29	96 U	18	7.9	18 U	7.4	7.65	3.3 U
NITROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	3600	1300 D	390 D	290	91	590 D	770	150	130	130	130	130	9.2
PHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	8600	2400 D	2000 D	1600 D	1100 D	1500 D	1000	1100 D	550 D	230	500 D	525 D	33
TOTAL CHLORINATED VOCS	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	36400 J	12600	7490	5150	2800	5590	7200 J	3800	2380	1800 J	2060	2220	183
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	53 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	220 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	500 U	160 U	1700 U	160 U	33 U	330 U	NA	330 U	33 U	NA	33 U	33 U	33 U
AROCLOR-1221	500 U	160 U	1700 U	160 U	33 U	330 U	NA	330 U	33 U	NA	33 U	33 U	33 U

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ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD504-0006	GI-SD413-0612	GI-SD414-0006	GI-SD527-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612
LOCATION ID	G32-SD312	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414
SAMPLE DATE	08/31/05	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	04/30/10	10/06/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	0 FT	2 FT	0 FT	0 FT	0 FT	0 FT	0.93 FT
BOTTOM DEPTH	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	0.5 FT	4 FT	0.93 FT	0.5 FT	0.93 FT	0.93 FT	1.85 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
AROCLOR-1232	500 U	160 U	1700 U	160 U	33 U	330 U	NA	330 U	33 U	NA	33 U	33 U	33 U
AROCLOR-1242	500 U	160 U	1700 U	160 U	33 U	330 U	NA	330 U	33 U	NA	33 U	33 U	33 U
AROCLOR-1248	500 U	160 U	1700 U	1400	33 U	330 U	NA	330 U	33 U	NA	33 U	33 U	33 U
AROCLOR-1254	500 U	160 U	1700 U	160 U	64	330 U	NA	330 U	33 U	NA	33 U	33 U	33 U
AROCLOR-1260	8900	5300 D	7200	320	65	2800	NA	2400	300	NA	480	390	33 U
BETA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	79 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	260 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	8900	5300	7200	1720	129	2800	NA	2400	300	NA	480	390	33 U
TOTAL CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	2600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)													

LIGHT SHADING - DETECTED;
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TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD504-0006	GI-SD413-0612	GI-SD414-0006	GI-SD527-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612
LOCATION ID	G32-SD312	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414
SAMPLE DATE	08/31/05	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	04/30/10	10/06/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	0 FT	2 FT	0 FT	0 FT	0 FT	0 FT	0.93 FT
BOTTOM DEPTH	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	0.5 FT	4 FT	0.93 FT	0.5 FT	0.93 FT	0.93 FT	1.85 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	12 U	NA	NA	1.1 U	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	2.5 U	NA	NA	0.23 U	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	180	NA	NA	8.3	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	200	NA	NA	17	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	2.5 U	NA	NA	0.23 U	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	12 U	NA	NA	1.1 U	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	43 U	NA	NA	5.2 U	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	4.8 U	NA	NA	0.45 U	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	14 J	NA	NA	0.58 U	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	394 J	NA	NA	25.3	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	434 J	NA	NA	29.9	NA	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	2.5 U	NA	NA	0.23 U	NA	NA	NA
METALS (MG/KG)													
ALUMINUM	5080	5380 E	6020 E	7400 E	7810 E	5120 *E	4380	5470 *E	5460 *E	5510	4480 *E	4970 *E	5920 *E
ANTIMONY	0.35 UJ	0.61 N	1.9 N	8.9 N	3.2 N	0.48 BN	0.72 UJ	0.41 BN	0.24 BN	0.71 UJ	0.22 BN	0.23 BN	0.084 BN
ARSENIC	3.9 J	4.8 E	9.6 E	11.3 E	10 E	6	1.9 J	5.2	3.9 E	0.975 J	3.6 E	3.75 E	2.6 E
BARIUM	22.2 J	13.6 NE	24.1 NE	24.2 NE	29.8 NE	13.9 E	13.8 J	16.4 E	15.2 E	11.4 J	12.2 E	13.7 E	17 E
BERYLLIUM	0.35	0.29 NE	0.35 NE	0.44 NE	0.38 NE	0.41 E	0.304	0.46 E	0.39 E	0.321	0.31 E	0.35 E	0.32 E
CADMIUM	0.18 UJ	0.26	1.3	1.3	1.1	0.77	0.305 J	0.89	0.2	0.222 J	0.19	0.195	0.071 B

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GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD504-0006	GI-SD413-0612	GI-SD414-0006	GI-SD527-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612
LOCATION ID	G32-SD312	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414
SAMPLE DATE	08/31/05	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	04/30/10	10/06/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	0 FT	2 FT	0 FT	0 FT	0 FT	0 FT	0.93 FT
BOTTOM DEPTH	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	0.5 FT	4 FT	0.93 FT	0.5 FT	0.93 FT	0.93 FT	1.85 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CALCIUM	59700 J	65600	92200	14600	15600	106000 *	18700 J	118000 *	10300 *	27000 J	11700 *	11000 *	2450 *
CHROMIUM	17.1	17.3 NE	33.7 NE	34.4 NE	41.9 NE	23.1 E	14.1 J	25.9 E	17.4 E	14.2 J	15.4 E	16.4 E	9.5 E
COBALT	2.4 J	3.3 NE	4.9 NE	5.9 NE	6.4 NE	3.7 *E	3.2 J	3.4 *E	3.8 E	3.5 J	3.4 E	3.6 E	4 E
COPPER	25.3	26.6 NE	162 NE	109 NE	130 NE	37.4 N	17.8 J	41.9 N	25 E	14.9 J	25 E	25 E	11.9 E
CYANIDE	0.12 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	12100 J	21400	31200	33300	41600	29700 *	15400	33100 *	14900 *	12100	12000 *	13400 *	14700 *
LEAD	18.3 J	25.7 NE	345 NE	202 NE	111 NE	27 N*E	21 J	31.9 N*E	22.4 E	15 J	20.9 E	21.6 E	7.8 E
MAGNESIUM	3260	3080 E	3470 E	4940 E	4670 E	3370 *E	2320 J	4980 *E	2780 *E	2760 J	2450 *E	2620 *E	2540 *E
MANGANESE	118 J	114 E	161 E	225 E	246 E	142 *E	94.3 J	188 *E	107 *E	105 J	90.7 *E	98.8 *E	102 *E
MERCURY	0.042 J	0.044	0.36	0.94	0.29	0.075	0.083	0.13	0.1	0.054	0.091	0.0955	0.01 B
NICKEL	9.1 J	9.2 NE	13.8 NE	13.6 NE	20.9 NE	13.3 *E	7 J	12.5 *E	8.7 E	7.7 J	7.5 E	8.1 E	8.3 E
POTASSIUM	1140 J	1510	1870	2250	1980	1630 *	1120	1960 *	1180	1270	1050	1120	810
SELENIUM	0.067 UJ	0.4 UN	0.43 UN	0.4 UN	0.43 UN	0.39 U	0.321 U	0.43 U	1.1	0.322 J	0.77	0.935	0.93
SILVER	0.019 UJ	0.04 UN	0.39 BN	0.058 BN	0.081 BN	0.2 B	0.223 J	0.37 B	0.19 B	0.23 UJ	0.17 B	0.18 B	0.033 U
SODIUM	6640 J	9190	9430	8170	10900	10800	4700	13500	4550	5060	4580	4560	2690
THALLIUM	0.15 UJ	0.48 BN	0.64 N	0.12 UN	0.13 UN	0.79	0.48 UJ	0.8	0.2 BN	0.45 UJ	0.11 UN	0.128 BN	0.15 BN
VANADIUM	15.1 J	18.4 NE	27.2 NE	24.1 NE	23.8 NE	19 *E	14 J	22.4 *E	16.5 *E	15.8 J	13.7 *E	15.1 *E	11 *E
ZINC	55.6 J	68.2 NE	1160 NE	599 NE	207 NE	237 E	76.9 J	326 E	84.6 E	38.3 J	75.7 E	80.2 E	26.2 E
MISCELLANEOUS PARAMETERS (%)													

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD504-0006	GI-SD413-0612	GI-SD414-0006	GI-SD527-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612
LOCATION ID	G32-SD312	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414
SAMPLE DATE	08/31/05	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	04/30/10	10/06/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	0 FT	2 FT	0 FT	0 FT	0 FT	0 FT	0.93 FT
BOTTOM DEPTH	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	0.5 FT	4 FT	0.93 FT	0.5 FT	0.93 FT	0.93 FT	1.85 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	3	NA	NA	5	NA	NA	NA
PERCENT CLAY	4.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	8.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	46.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	9.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	10.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SILT	20.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	70.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	NA	NA	NA	NA	NA	100	NA	NA	100	NA	NA	NA
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	100	NA	NA	100	NA	NA	NA
SIEVE 1-1/2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	NA	NA	NA	NA	NA	100	NA	NA	100	NA	NA	NA
SIEVE 3/8"	94.1	NA	NA	NA	NA	NA	83	NA	NA	94	NA	NA	NA
SIEVE NO. 004	90.4	NA	NA	NA	NA	NA	73	NA	NA	87	NA	NA	NA
SIEVE NO. 010	81.6	NA	NA	NA	NA	NA	66	NA	NA	77	NA	NA	NA
SIEVE NO. 020	74.4	NA	NA	NA	NA	NA	62	NA	NA	71	NA	NA	NA
SIEVE NO. 040	71.1	NA	NA	NA	NA	NA	57	NA	NA	64	NA	NA	NA
SIEVE NO. 060	63.2	NA	NA	NA	NA	NA	49	NA	NA	56	NA	NA	NA
SIEVE NO. 080	53.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	47.7	NA	NA	NA	NA	NA	38	NA	NA	46	NA	NA	NA
SIEVE NO. 200	24.7	NA	NA	NA	NA	NA	21	NA	NA	30	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD504-0006	GI-SD413-0612	GI-SD414-0006	GI-SD527-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612
LOCATION ID	G32-SD312	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414
SAMPLE DATE	08/31/05	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	04/30/10	10/06/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	0 FT	2 FT	0 FT	0 FT	0 FT	0 FT	0.93 FT
BOTTOM DEPTH	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	0.5 FT	4 FT	0.93 FT	0.5 FT	0.93 FT	0.93 FT	1.85 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	16000 J	NA	NA	NA	NA	NA	11300	NA	NA	11400	NA	NA	NA
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	33.7 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	0.0018 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	0.33 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.075 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.00021 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	0.099 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	0.62 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)													
SEM/AVS	0.033	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD504-0006	GI-SD413-0612	GI-SD414-0006	GI-SD527-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612
LOCATION ID	G32-SD312	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414
SAMPLE DATE	08/31/05	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	04/30/10	10/06/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	0 FT	2 FT	0 FT	0 FT	0 FT	0 FT	0.93 FT
BOTTOM DEPTH	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	0.5 FT	4 FT	0.93 FT	0.5 FT	0.93 FT	0.93 FT	1.85 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
1,1-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	45 JEB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD504-0006	GI-SD413-0612	GI-SD414-0006	GI-SD527-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612
LOCATION ID	G32-SD312	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414
SAMPLE DATE	08/31/05	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	04/30/10	10/06/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	0 FT	2 FT	0 FT	0 FT	0 FT	0 FT	0.93 FT
BOTTOM DEPTH	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	0.5 FT	4 FT	0.93 FT	0.5 FT	0.93 FT	0.93 FT	1.85 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD504-0006	GI-SD413-0612	GI-SD414-0006	GI-SD527-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612
LOCATION ID	G32-SD312	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414
SAMPLE DATE	08/31/05	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	04/30/10	10/06/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	0 FT	2 FT	0 FT	0 FT	0 FT	0 FT	0.93 FT
BOTTOM DEPTH	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	0.5 FT	4 FT	0.93 FT	0.5 FT	0.93 FT	0.93 FT	1.85 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
TOTAL CHLORINATED VOCS	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	200 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612
LOCATION ID	G32-SD312	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD416	GI-SD416
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT	3.5 FT	0 FT	1.5 FT
BOTTOM DEPTH	0.5 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	1.5 FT	3 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	NM	NM	FD	NM	NM	NM	NM	NM	FD	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	31	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	15	34
2-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612
LOCATION ID	G32-SD312	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD416	GI-SD416
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT	3.5 FT	0 FT	1.5 FT
BOTTOM DEPTH	0.5 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	1.5 FT	3 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	210	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5	3.3 U	3.3 U	3.3 U	3.3 U	21	210
ACENAPHTHYLENE	300	3.3 U	3.3 U	3.3 U	3.3 U	3.6	18	3.3 U	3.3 U	3.3 U	3.3 U	170	40
ACETOPHENONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	900	3.3 U	3.3 U	3.3 U	3.3 U	4.3	39	5.9	3.3 U	3.3 U	3.3 U	250	320
ATRAZINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	2000	5.3	3.3 U	3.5	2.58	12	110	16	3.3 U	3.3 U	3.3 U	700 D	590 D
BENZO(A)PYRENE	1200 J	3.3 U	3.3 U	6.2	3.92	13	110	15	3.3 U	3.3 U	3.3 U	780 D	590 D
BENZO(B)FLUORANTHENE	2400 J	5.2	3.3 U	5.1	3.38	22	200	27	3.3 U	3.3 U	3.3 U	1500 D	920 D
BENZO(G,H,I)PERYLENE	380 J	3.3 U	3.3 U	3.3 U	3.3 U	8.4	62	11	3.3 U	3.3 U	3.3 U	320	270
BENZO(K)FLUORANTHENE	1500 J	3.3 U	3.3 U	3.3 U	3.3 U	6.3	60	7.9	3.3 U	3.3 U	3.3 U	470 D	280 D
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612
LOCATION ID	G32-SD312	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD416	GI-SD416
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT	3.5 FT	0 FT	1.5 FT
BOTTOM DEPTH	0.5 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	1.5 FT	3 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	530	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	4400	4.8	3.3 U	4.3	2.98	13	170	21	3.3 U	3.3 U	3.3 U	1200 D	690 D
DIBENZO(A,H)ANTHRACENE	120	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	21	4.7	3.3 U	3.3 U	3.3 U	150	100
DIBENZOFURAN	130 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	10000	6.7	3.3 U	4.2	2.92	15	170	19	3.3 U	3.3 U	3.3 U	1000 D	1300 D
FLUORENE	260	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	6.1	3.3 U	3.3 U	3.3 U	3.3 U	85	180
HEXACHLOROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	31000 J	30.1	3.3 U	30.7	16.2	115	1120	150	3.3 U	3.3 U	3.3 U	8640	6210
INDENO(1,2,3-CD)PYRENE	410 J	3.3 U	3.3 U	3.3 U	3.3 U	8.2	58	9.9	3.3 U	3.3 U	3.3 U	320	270
ISOPHORONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612
LOCATION ID	G32-SD312	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD416	GI-SD416
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT	3.5 FT	0 FT	1.5 FT
BOTTOM DEPTH	0.5 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	1.5 FT	3 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
LOW MOLECULAR WEIGHT PAHS	5360	3.3 U	3.3 U	3.3 U	3.3 U	14.2	121	15.7	4.4	3.3 U	3.02	879	2130
NAPHTHALENE	55	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	18	150
NITROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	3600	3.3 U	3.3 U	3.3 U	3.3 U	6.3	54	9.8	4.4	3.3 U	3.02	320	1200 D
PHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	8600	8.1	3.3 U	7.4	4.52	17	160	18	3.3 U	3.3 U	3.3 U	2200 D	1200 D
TOTAL CHLORINATED VOCS	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	36400 J	30.1	3.3 U	30.7	16.2	129	1240	165	4.4	3.3 U	3.02	9520	8340
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	53 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	220 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	500 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1221	500 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612
LOCATION ID	G32-SD312	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD416	GI-SD416
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT	3.5 FT	0 FT	1.5 FT
BOTTOM DEPTH	0.5 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	1.5 FT	3 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
AROCLOR-1232	500 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1242	500 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1248	500 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1254	500 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1260	8900	33 U	33 U	33 U	33 U	33 U	35	33 U	33 U	33 U	33 U	33 U	33 U
BETA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	79 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	260 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	8900	33 U	33 U	33 U	33 U	33 U	35	33 U	33 U	33 U	33 U	33 U	33 U
TOTAL CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	2600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)													

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612
LOCATION ID	G32-SD312	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD416	GI-SD416
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT	3.5 FT	0 FT	1.5 FT
BOTTOM DEPTH	0.5 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	1.5 FT	3 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)													
ALUMINUM	5080	5380 *E	5710 *E	6090 *E	5900 *E	3910 *E	4800 *E	6190 *E	6000 *E	5840 *E	5920 *E	6950 E	4410 *E
ANTIMONY	0.35 UJ	0.074 UN	0.078 BN	0.16 BN	0.119 BN	0.099 BN	0.081 UN	0.11 BN	0.073 BN	0.15 BN	0.112 BN	0.37 BN	0.084 UN
ARSENIC	3.9 J	2.3 E	2.6 E	2.4 E	2.5 E	4.9 E	5 E	9.8 E	3.8 E	3.2 E	3.5 E	6.5 E	6.5 E
BARIUM	22.2 J	16.1 E	13.6 E	11.7 E	12.6 E	7.2 E	7.5 E	8.1 E	15.8 E	15.3 E	15.6 E	24.4 *E	15.1 E
BERYLLIUM	0.35	0.27 E	0.27 E	0.28 E	0.275 E	0.27 E	0.36 E	0.32 E	0.3 E	0.27 E	0.285 E	0.61 E	0.33 E
CADMIUM	0.18 UJ	0.036 B	0.051 B	0.053 B	0.052 B	0.052 B	0.083 B	0.11	0.049 B	0.036 B	0.0425 B	0.53	0.091 B

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612
LOCATION ID	G32-SD312	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD416	GI-SD416
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT	3.5 FT	0 FT	1.5 FT
BOTTOM DEPTH	0.5 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	1.5 FT	3 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CALCIUM	59700 J	1550 *	1950 *	1670 *	1810 *	27400 *	9520 *	12800 *	3600 *	2100 *	2850 *	20000 *	52500 *
CHROMIUM	17.1	8.5 E	11.8 E	11.5 E	11.6 E	10.5 E	12.9 E	30.3 E	9.4 E	9 E	9.2 E	30.7 E	15.3 E
COBALT	2.4 J	4.8 E	4.5 E	4.7 E	4.6 E	3.5 E	3.7 E	5.4 E	4.7 E	4.7 E	4.7 E	5.1 E	3.8 E
COPPER	25.3	14.2 E	14.6 E	15.4 E	15 E	7.3 E	9.6 E	7.9 E	8.2 E	7.1 E	7.65 E	39 NE	14.6 E
CYANIDE	0.12 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	12100 J	12900 *	14100 *	15900 *	15000 *	13000 *	15600 *	21000 *	16000 *	14800 *	15400 *	21300	14900 *
LEAD	18.3 J	5.6 E	4.7 E	4.9 E	4.8 E	8.5 E	12 E	9 E	4.9 E	3.9 E	4.4 E	38.6 NE	19.1 E
MAGNESIUM	3260	2230 *E	2540 *E	2760 *E	2650 *E	2080 *E	2500 *E	3230 *E	2760 *E	2660 *E	2710 *E	3770 E	2340 *E
MANGANESE	118 J	89.2 *E	106 *E	111 *E	108 *E	165 *E	137 *E	248 *E	135 *E	130 *E	132 *E	184 E	125 *E
MERCURY	0.042 J	0.004 U	0.0043 B	0.014 B	0.00915 B	0.038	0.059	0.036	0.0066 B	0.0046 B	0.0056 B	0.17	0.13
NICKEL	9.1 J	9 E	9.5 E	9.7 E	9.6 E	6.8 E	7.4 E	16.6 E	7.7 E	8.2 E	7.95 E	11.5 E	7.2 E
POTASSIUM	1140 J	669	757	690	724	819	925	939	920	1110	1020	1920	1120
SELENIUM	0.067 UJ	1.2	1.2	1.2	1.2	0.33 B	1.1	0.82	1.1	1.1	1.1	1.5	0.36 U
SILVER	0.019 UJ	0.032 U	0.031 U	0.031 U	0.031 U	0.033 U	0.062 B	0.034 U	0.031 U	0.031 U	0.031 U	0.41 B	0.085 B
SODIUM	6640 J	2160	2060	2000	2030	2660	2620	2350	1940	1290	1620	7910	3730
THALLIUM	0.15 UJ	0.1 BN	0.096 UN	0.096 BN	0.072 BN	0.3 BN	0.24 BN	0.18 BN	0.12 BN	0.17 BN	0.145 BN	0.32 BN	0.54 N
VANADIUM	15.1 J	9.6 *E	11.5 *E	12 *E	11.8 *E	14.2 *E	16.1 *E	24.2 *E	13.5 *E	12.3 *E	12.9 *E	23 E	14.9 *E
ZINC	55.6 J	20.2 E	20.7 E	21.9 E	21.3 E	26.3 E	33.3 E	32.9 E	20.2 E	20.6 E	20.4 E	82.8 *E	38.6 E
MISCELLANEOUS PARAMETERS (%)													

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612
LOCATION ID	G32-SD312	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD416	GI-SD416
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT	3.5 FT	0 FT	1.5 FT
BOTTOM DEPTH	0.5 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	1.5 FT	3 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT CLAY	4.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	8.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	46.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	9.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	10.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SILT	20.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	70.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1-1/2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/8"	94.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 004	90.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 010	81.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 020	74.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 040	71.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 060	63.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 080	53.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	47.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 200	24.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612
LOCATION ID	G32-SD312	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD416	GI-SD416
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT	3.5 FT	0 FT	1.5 FT
BOTTOM DEPTH	0.5 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	1.5 FT	3 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	16000 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	33.7 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	0.0018 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	0.33 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.075 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.00021 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	0.099 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	0.62 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)													
SEM/AVS	0.033	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612
LOCATION ID	G32-SD312	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD416	GI-SD416
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT	3.5 FT	0 FT	1.5 FT
BOTTOM DEPTH	0.5 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	1.5 FT	3 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
1,1-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	45 JEB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612
LOCATION ID	G32-SD312	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD416	GI-SD416
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT	3.5 FT	0 FT	1.5 FT
BOTTOM DEPTH	0.5 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	1.5 FT	3 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612
LOCATION ID	G32-SD312	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD416	GI-SD416
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT	3.5 FT	0 FT	1.5 FT
BOTTOM DEPTH	0.5 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	1.5 FT	3 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
TOTAL CHLORINATED VOCS	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	200 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD503-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006
LOCATION ID	G32-SD312	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	0.5 FT	1.58 FT	3 FT	4 FT	1.6 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	31	3.3 U	4.3	3.3 U	3.3 U	14	13	17	93 U	3.7	12	3.3 U	3.3 U
2-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD503-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006
LOCATION ID	G32-SD312	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	0.5 FT	1.58 FT	3 FT	4 FT	1.6 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	210	3.3 U	27	3.3 U	3.3 U	12	3.3 U	32	42 J	4	24	3.3 U	6.9
ACENAPHTHYLENE	300	11	18	3.3 U	3.3 U	47	8.3	240	24 J	20	69	8.9	6.8
ACETOPHENONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	900	14	80	5	3.3 U	65	6.5	300	300	41	160	11	19
ATRAZINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	2000	46	200	8	3.3 U	100	15	1200 D	1000	110	650 D	22	40
BENZO(A)PYRENE	1200 J	44	150	7.4	3.3 U	170	16	960 D	760	99	320	22	32
BENZO(B)FLUORANTHENE	2400 J	82	240	14	3.3 U	270	25	1500 D	770	170	910 D	33	46
BENZO(G,H,I)PERYLENE	380 J	27	77	4.8	3.3 U	110	11	500 D	330	48	220	15	20
BENZO(K)FLUORANTHENE	1500 J	26	94	4.2	3.3 U	150	14	330	580	56	320 D	19	25
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
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TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD503-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006
LOCATION ID	G32-SD312	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	0.5 FT	1.58 FT	3 FT	4 FT	1.6 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	530	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	4400	67	240	9.3	3.3 U	160	18	1400 D	1100	160	830 D	28	36
DIBENZO(A,H)ANTHRACENE	120	9.4	28	3.3 U	3.3 U	54	4.2	140	130	23	87	6	7.1
DIBENZOFURAN	130 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	330 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	10000	93	430 D	10	3.3 U	180	19	1800 D	2100	140	580 D	21	69
FLUORENE	260	5.4	28	3.3 U	3.3 U	18	5	100	38 J	9.2	52	3.3 U	11
HEXACHLOROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	31000 J	540	1920	76.3	3.3 U	1710	174	9850	8900	1010	4830	202	356
INDENO(1,2,3-CD)PYRENE	410 J	26	77	4.6	3.3 U	110	11	520 D	330	55	210	14	19
ISOPHORONE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD503-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006
LOCATION ID	G32-SD312	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	0.5 FT	1.58 FT	3 FT	4 FT	1.6 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
LOW MOLECULAR WEIGHT PAHS	5360	70.2	358	12.4	3.3 U	266	61.1	1350	944 J	131	560	29	95.9
NAPHTHALENE	55	3.8	11	3.3 U	3.3 U	19	5.3	19	93 U	3.3 U	13	3.3 U	5.2
NITROBENZENE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	3600	36	190	7.4	3.3 U	91	23	640 D	540	53	230	9.1	47
PHENOL	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	8600	120	380 D	14	3.3 U	410 D	41	1500 D	1800	150	700 D	22	62
TOTAL CHLORINATED VOCS	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	36400 J	611	2270	88.7	3.3 U	1980	235	11200	9840 J	1140	5390	231	452
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	53 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	220 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	500 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U
AROCLOR-1221	500 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U

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GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD503-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006
LOCATION ID	G32-SD312	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	0.5 FT	1.58 FT	3 FT	4 FT	1.6 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
AROCLOR-1232	500 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U
AROCLOR-1242	500 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U
AROCLOR-1248	500 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U
AROCLOR-1254	500 U	33 U	33 U	33 U	33 U	35 P	33 U	33 U	NA	120	33 U	33 U	33 U
AROCLOR-1260	8900	33 U	33 U	33 U	33 U	100	33 U	61	NA	33 U	34 P	33 U	65
BETA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	79 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	260 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	8900	33 U	33 U	33 U	33 U	135	33 U	61	NA	120	34	33 U	65
TOTAL CHLORDANE	26 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	2600 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)													

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ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD503-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006
LOCATION ID	G32-SD312	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	0.5 FT	1.58 FT	3 FT	4 FT	1.6 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	12 U	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	2.4 U	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	5.9 U	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	4.7 U	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	2.4 U	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	12 U	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	4.7 U	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	4.7 U	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	5.9 U	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	NA	5.71 U	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	5.71 U	NA	NA	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	2.4 U	NA	NA	NA	NA
METALS (MG/KG)													
ALUMINUM	5080	4120 *E	4550 *E	4050 *E	4500 *E	7360 E	5190 E	6370 E	4790	3980 E	4890 E	6100 E	3580 E
ANTIMONY	0.35 UJ	0.092 BN	0.21 BN	0.083 BN	0.19 BN	0.45 BN	0.086 BN	0.38 BN	0.7 UJ	0.083 UN	0.21 BN	0.19 BN	0.16 BN
ARSENIC	3.9 J	3.9 E	4.1 E	2.3 E	2.1 E	6.7 E	3.1 E	7.1 E	2 J	3.7 E	4.3 E	8.6 E	1.6 E
BARIUM	22.2 J	6.9 E	18.4 E	17.2 E	22.2 E	22.3 *E	19.1 *E	15.6 *E	7.4 J	17.3 *E	7.7 *E	4.6 *E	7.7 *E
BERYLLIUM	0.35	0.29 E	0.37 E	0.3 E	0.27 E	0.63 E	0.42 E	0.58 E	0.27	0.3 E	0.35 E	0.3 E	0.3 E
CADMIUM	0.18 UJ	0.055 B	1.1	0.042 B	0.019 B	0.46	0.15	0.3	0.211 J	0.13	0.2	0.2	0.086 B

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LOCATION ID	G32-SD312	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	0.5 FT	1.58 FT	3 FT	4 FT	1.6 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CALCIUM	59700 J	8740 *	4400 *	3140 *	722 *	3220 *	2400 *	45600 *	36600 J	18400 *	15300 *	9900 *	1240 *
CHROMIUM	17.1	13 E	20.1 E	7.5 E	7.9 E	29.5 E	10.8 E	25.7 E	13.7 J	11.4 E	13 E	12.6 E	6.8 E
COBALT	2.4 J	4.1 E	3.4 E	3.4 E	3.9 E	5.2 E	4.7 E	5.6 E	3.4 J	3.2 E	3.7 E	5.1 E	3.1 E
COPPER	25.3	10.5 E	31.3 E	7.6 E	8.2 E	41 NE	16.1 NE	25.5 NE	9.6 J	8.7 NE	11 NE	7.8 NE	10.5 NE
CYANIDE	0.12 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	12100 J	14500 *	13400 *	12400 *	12900 *	19700	13900	19500	12700	13000	14500	19800	8930
LEAD	18.3 J	14.1 E	30.6 E	5.8 E	5.2 E	38.7 NE	10 NE	28 NE	13.9 J	39.9 NE	14 NE	9.4 NE	5.9 NE
MAGNESIUM	3260	2390 *E	2530 *E	1960 *E	2090 *E	3830 E	2390 E	3800 E	2700 J	2230 E	2670 E	3280 E	1760 E
MANGANESE	118 J	112 *E	97.1 *E	81 *E	89.8 *E	143 E	106 E	365 E	106 J	122 E	129 E	314 E	69.8 E
MERCURY	0.042 J	0.076	0.1	0.036	0.024 B	0.14	0.06	0.13	0.059	0.048	0.065	0.037	0.024 B
NICKEL	9.1 J	6.8 E	8.5 E	6.2 E	7.2 E	12.3 E	8.8 E	12.9 E	6.7 J	6.2 E	7.1 E	9.3 E	8 E
POTASSIUM	1140 J	887	1130	757	737	1740	883	1820	1100	776	918	600	483
SELENIUM	0.067 UJ	1.1	1.3	1.1	1.1	1.5	1	0.64 B	0.7 U	0.73	0.81	1.1	0.79
SILVER	0.019 UJ	0.055 B	0.26 B	0.032 U	0.032 U	0.31 B	0.036 U	0.11 B	0.23 UJ	0.036 U	0.036 U	0.037 U	0.037 U
SODIUM	6640 J	2260	4580	1830	1550	7660	2830	10300	4390	2750	2590	2200	2030
THALLIUM	0.15 UJ	0.18 BN	0.18 BN	0.15 BN	0.13 BN	0.22 BN	0.11 BN	0.16 BN	0.136 J	0.27 BN	0.22 BN	0.11 BN	0.13 BN
VANADIUM	15.1 J	15.3 *E	14.6 *E	10.8 *E	10.5 *E	21.2 E	11.6 E	25 E	17 J	15.2 E	17 E	24.6 E	7.2 E
ZINC	55.6 J	32.8 E	77.8 E	18.1 E	16.4 E	78.2 *E	29.6 *E	72.2 *E	43.8 J	37.6 *E	38.1 *E	31.8 *E	22 *E
MISCELLANEOUS PARAMETERS (%)													

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD503-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006
LOCATION ID	G32-SD312	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	0.5 FT	1.58 FT	3 FT	4 FT	1.6 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	1	NA	NA	NA	NA
PERCENT CLAY	4.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	8.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	46.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	9.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	10.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SILT	20.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	70.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA
SIEVE 1-1/2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA
SIEVE 3/8"	94.1	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA
SIEVE NO. 004	90.4	NA	NA	NA	NA	NA	NA	NA	87	NA	NA	NA	NA
SIEVE NO. 010	81.6	NA	NA	NA	NA	NA	NA	NA	78	NA	NA	NA	NA
SIEVE NO. 020	74.4	NA	NA	NA	NA	NA	NA	NA	61	NA	NA	NA	NA
SIEVE NO. 040	71.1	NA	NA	NA	NA	NA	NA	NA	40	NA	NA	NA	NA
SIEVE NO. 060	63.2	NA	NA	NA	NA	NA	NA	NA	24	NA	NA	NA	NA
SIEVE NO. 080	53.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	47.7	NA	NA	NA	NA	NA	NA	NA	16	NA	NA	NA	NA
SIEVE NO. 200	24.7	NA	NA	NA	NA	NA	NA	NA	12	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD503-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006
LOCATION ID	G32-SD312	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	0.5 FT	1.58 FT	3 FT	4 FT	1.6 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
MISCELLANEOUS PARAMETERS (MG/KG)													
TOTAL ORGANIC CARBON	16000 J	NA	NA	NA	NA	NA	NA	NA	8000	NA	NA	NA	NA
AVS/SEM (UMO/G)													
ACID VOLATILE SULFIDE	33.7 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	0.0018 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	0.33 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.075 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.00021 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	0.099 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	0.62 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)													
SEM/AVS	0.033	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD503-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006
LOCATION ID	G32-SD312	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	0.5 FT	1.58 FT	3 FT	4 FT	1.6 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
1,1-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	45 JEB	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD503-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006
LOCATION ID	G32-SD312	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	0.5 FT	1.58 FT	3 FT	4 FT	1.6 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
CHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD503-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD420-0006
LOCATION ID	G32-SD312	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD420
SAMPLE DATE	08/31/05	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	04/30/10	10/13/09	10/13/09	10/13/09	10/13/09
TOP DEPTH	0 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	0.5 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	0.5 FT	1.58 FT	3 FT	4 FT	1.6 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
TOTAL CHLORINATED VOCS	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	200 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG
LOCATION ID	G32-SD312	GI-SD420	GI-SD420	GI-SD420	GI-SD508	GI-SD508	GI-SD508
SAMPLE DATE	08/31/05	10/13/09	10/13/09	10/13/09	05/03/10	05/03/10	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	ORIG	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD
QC TYPE	NM	FD	NM	NM	NM	FD	NM
SEMIVOLATILES (UG/KG)							
1,1-BIPHENYL	330 U	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 UJ	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	330 U	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	330 U	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	330 U	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	31	4.3	2.98	3.3 U	17 U	26 U	21.5 U
2-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA
2-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	330 U	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	330 U	NA	NA	NA	NA	NA	NA
3-NITROANILINE	660 U	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	660 U	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG
LOCATION ID	G32-SD312	GI-SD420	GI-SD420	GI-SD420	GI-SD508	GI-SD508	GI-SD508
SAMPLE DATE	08/31/05	10/13/09	10/13/09	10/13/09	05/03/10	05/03/10	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	ORIG	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD
4-CHLORO-3-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	330 U	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	330 U	NA	NA	NA	NA	NA	NA
4-NITROANILINE	660 UJ	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	660 UJ	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	210	12	9.45	3.3 U	21	15 J	18 J
ACENAPHTHYLENE	300	6.2	6.5	3.3 U	12 J	12 J	12 J
ACETOPHENONE	330 U	NA	NA	NA	NA	NA	NA
ANTHRACENE	900	30	24.5	3.3 U	150 J	39 J	94.5 J
ATRAZINE	330 U	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	330 UJ	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	2000	54	47	4.5	180	190 J	185 J
BENZO(A)PYRENE	1200 J	43	37.5	4	140	97 J	118 J
BENZO(B)FLUORANTHENE	2400 J	56	51	5.5	160	130 J	145 J
BENZO(G,H,I)PERYLENE	380 J	28	24	3.8	67	56	61.5
BENZO(K)FLUORANTHENE	1500 J	36	30.5	3.4	120	130 J	125 J
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	330 U	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG
LOCATION ID	G32-SD312	GI-SD420	GI-SD420	GI-SD420	GI-SD508	GI-SD508	GI-SD508
SAMPLE DATE	08/31/05	10/13/09	10/13/09	10/13/09	05/03/10	05/03/10	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	ORIG	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA
CAPROLACTAM	330 U	NA	NA	NA	NA	NA	NA
CARBAZOLE	530	NA	NA	NA	NA	NA	NA
CHRYSENE	4400	49	42.5	4.6	270	270 J	270 J
DIBENZO(A,H)ANTHRACENE	120	9.7	8.4	3.3 U	24	17 J	20.5 J
DIBENZOFURAN	130 J	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	330 U	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	330 UJ	NA	NA	NA	NA	NA	NA
FLUORANTHENE	10000	110	89.5	5.9	550	760	655
FLUORENE	260	22	16.5	3.3 U	26	17 J	21.5 J
HEXACHLOROBENZENE	330 U	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	330 U	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	330 U	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	330 U	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	31000 J	508	432	42	1990	2310 J	2150 J
INDENO(1,2,3-CD)PYRENE	410 J	27	23	3.8	62	51	56.5
ISOPHORONE	330 U	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG
LOCATION ID	G32-SD312	GI-SD420	GI-SD420	GI-SD420	GI-SD508	GI-SD508	GI-SD508
SAMPLE DATE	08/31/05	10/13/09	10/13/09	10/13/09	05/03/10	05/03/10	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	ORIG	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD
LOW MOLECULAR WEIGHT PAHS	5360	176	136	3.3 U	389 J	263 J	326 J
NAPHTHALENE	55	11	8.1	3.3 U	17 U	26 U	21.5 U
NITROBENZENE	330 U	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	330 U	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	660 U	NA	NA	NA	NA	NA	NA
PHENANTHRENE	3600	91	69	3.3 U	180	180 J	180 J
PHENOL	330 U	NA	NA	NA	NA	NA	NA
PYRENE	8600	95	78.5	6.5	420	610	515
TOTAL CHLORINATED VOCS	330 U	NA	NA	NA	NA	NA	NA
TOTAL PAHS	36400 J	684	568	42	2380 J	2570 J	2480 J
PESTICIDES/PCBS (UG/KG)							
4,4'-DDD	50 U	NA	NA	NA	NA	NA	NA
4,4'-DDE	53 R	NA	NA	NA	NA	NA	NA
4,4'-DDT	220 R	NA	NA	NA	NA	NA	NA
ALDRIN	26 U	NA	NA	NA	NA	NA	NA
ALPHA-BHC	26 U	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA
AROCLOR-1016	500 U	33 U	33 U	33 U	NA	NA	NA
AROCLOR-1221	500 U	33 U	33 U	33 U	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG
LOCATION ID	G32-SD312	GI-SD420	GI-SD420	GI-SD420	GI-SD508	GI-SD508	GI-SD508
SAMPLE DATE	08/31/05	10/13/09	10/13/09	10/13/09	05/03/10	05/03/10	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	ORIG	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD
AROCLOR-1232	500 U	33 U	33 U	33 U	NA	NA	NA
AROCLOR-1242	500 U	33 U	33 U	33 U	NA	NA	NA
AROCLOR-1248	500 U	33 U	33 U	33 U	NA	NA	NA
AROCLOR-1254	500 U	33 U	33 U	56	NA	NA	NA
AROCLOR-1260	8900	33 U	40.8	33 U	NA	NA	NA
BETA-BHC	26 U	NA	NA	NA	NA	NA	NA
DELTA-BHC	26 U	NA	NA	NA	NA	NA	NA
DIELDRIN	50 U	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	26 U	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	50 U	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	50 U	NA	NA	NA	NA	NA	NA
ENDRIN	50 U	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	79 R	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	50 U	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	26 U	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	26 U	NA	NA	NA	NA	NA	NA
HEPTACHLOR	26 U	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	26 U	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	260 U	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	8900	33 U	40.8	56	NA	NA	NA
TOTAL CHLORDANE	26 U	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	50 U	NA	NA	NA	NA	NA	NA
TOXAPHENE	2600 U	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)							

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG
LOCATION ID	G32-SD312	GI-SD420	GI-SD420	GI-SD420	GI-SD508	GI-SD508	GI-SD508
SAMPLE DATE	08/31/05	10/13/09	10/13/09	10/13/09	05/03/10	05/03/10	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	ORIG	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD
DECACHLOROBIPHENYL	NA	NA	NA	NA	3.3 U	5.5 U	4.4 U
DICHLOROBIPHENYLS	NA	NA	NA	NA	0.67 U	1.1 U	0.885 U
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	260 J	470 J	365 J
HEXACHLOROBIPHENYL	NA	NA	NA	NA	300 J	560 J	430 J
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	0.67 U	1.1 U	0.885 U
NONACHLOROBIPHENYLS	NA	NA	NA	NA	3.3 U	5.5 U	4.4 U
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	40 J	77 J	58.5 J
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	1.3 U	3.3 J	1.98 J
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	30 J	51 J	40.5 J
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	630 J	1160 J	895 J
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	635 J	1170 J	902 J
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	0.67 U	1.1 U	0.885 U
METALS (MG/KG)							
ALUMINUM	5080	3370 *E	3480 E	4550	4650	4020	4340
ANTIMONY	0.35 UJ	0.076 UN	0.099 BN	0.1 BN	0.65 UJ	0.65 UJ	0.65 UJ
ARSENIC	3.9 J	1.8 E	1.7 E	2.1	0.854 J	1.2 J	1.03 J
BARIUM	22.2 J	8.4 E	8.05 *E	13.5 E	12.6 J	9.8 J	11.2 J
BERYLLIUM	0.35	0.25 E	0.275 E	0.37 E	0.221	0.209 J	0.215 J
CADMIUM	0.18 UJ	0.029 B	0.0575 B	0.11 B	0.328 J	0.531 J	0.43 J

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG
LOCATION ID	G32-SD312	GI-SD420	GI-SD420	GI-SD420	GI-SD508	GI-SD508	GI-SD508
SAMPLE DATE	08/31/05	10/13/09	10/13/09	10/13/09	05/03/10	05/03/10	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	ORIG	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD
CALCIUM	59700 J	1900 *	1570 *	1490	25900	34000	30000
CHROMIUM	17.1	7.2 E	7 E	8	9.4 J	10.3 J	9.85 J
COBALT	2.4 J	3 E	3.05 E	4 E	3.8 J	3.1 J	3.45 J
COPPER	25.3	9.7 E	10.1 NE	15.6	13.5 J	16 J	14.8 J
CYANIDE	0.12 UJ	NA	NA	NA	NA	NA	NA
IRON	12100 J	8930 *	8930 *	12300	16800	18100	17400
LEAD	18.3 J	6.6 E	6.25 NE	5.4 E	9.5 J	11.7 J	10.6 J
MAGNESIUM	3260	1750 *E	1760 E	1970 E	2580 J	2370 J	2480 J
MANGANESE	118 J	67.2 *E	68.5 E	85.3 E	133 J	136 J	134 J
MERCURY	0.042 J	0.81	0.417 B	0.0067 B	0.019 J	0.02 J	0.0195 J
NICKEL	9.1 J	6.6 E	7.3 E	8 E	8.4 J	9.4 J	8.9 J
POTASSIUM	1140 J	589	536	626	880	659	770
SELENIUM	0.067 UJ	1.1	0.945	1	0.65 U	0.65 U	0.65 U
SILVER	0.019 UJ	0.033 U	0.035 U	0.035 U	0.063 J	0.024 J	0.0435 J
SODIUM	6640 J	2850	2440	2120	3270	3720	3500
THALLIUM	0.15 UJ	0.1 BN	0.115 BN	0.18 B	0.43 UJ	0.44 UJ	0.435 UJ
VANADIUM	15.1 J	8.5 *E	7.85 E	10.9	10.8 J	10.7 J	10.8 J
ZINC	55.6 J	21.5 E	21.8 *E	19.9 E	36.8 J	57.5 J	47.2 J
MISCELLANEOUS PARAMETERS (%)							

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG
LOCATION ID	G32-SD312	GI-SD420	GI-SD420	GI-SD420	GI-SD508	GI-SD508	GI-SD508
SAMPLE DATE	08/31/05	10/13/09	10/13/09	10/13/09	05/03/10	05/03/10	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	ORIG	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD
HYDROMETER-0.002MM	NA	NA	NA	NA	0	NA	0
PERCENT CLAY	4.2	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	8.9	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	46.4	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	9.6	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	10.5	NA	NA	NA	NA	NA	NA
PERCENT SILT	20.6	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	70.6	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	NA	NA	NA	100	100	100
SIEVE 1/2"	NA	NA	NA	NA	100	92	96
SIEVE 1-1/2"	100	NA	NA	NA	NA	NA	NA
SIEVE 2"	100	NA	NA	NA	NA	NA	NA
SIEVE 3"	100	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	NA	NA	NA	100	100	100
SIEVE 3/8"	94.1	NA	NA	NA	99	88	93.5
SIEVE NO. 004	90.4	NA	NA	NA	93	83	88
SIEVE NO. 010	81.6	NA	NA	NA	89	80	84.5
SIEVE NO. 020	74.4	NA	NA	NA	82	73	77.5
SIEVE NO. 040	71.1	NA	NA	NA	59	52	55.5
SIEVE NO. 060	63.2	NA	NA	NA	24	21	22.5
SIEVE NO. 080	53.5	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	47.7	NA	NA	NA	10	8	9
SIEVE NO. 200	24.7	NA	NA	NA	5	3	4

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG
LOCATION ID	G32-SD312	GI-SD420	GI-SD420	GI-SD420	GI-SD508	GI-SD508	GI-SD508
SAMPLE DATE	08/31/05	10/13/09	10/13/09	10/13/09	05/03/10	05/03/10	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	ORIG	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD
MISCELLANEOUS PARAMETERS (MG/KG)							
TOTAL ORGANIC CARBON	16000 J	NA	NA	NA	2770	2980	2880
AVS/SEM (UMO/G)							
ACID VOLATILE SULFIDE	33.7 J	NA	NA	NA	NA	NA	NA
CADMIUM	0.0018 UJ	NA	NA	NA	NA	NA	NA
COPPER	0.33 J	NA	NA	NA	NA	NA	NA
LEAD	0.075 J	NA	NA	NA	NA	NA	NA
MERCURY	0.00021 J	NA	NA	NA	NA	NA	NA
NICKEL	0.099 J	NA	NA	NA	NA	NA	NA
ZINC	0.62 J	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)							
SEM/AVS	0.033	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)							
1,1,1-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG
LOCATION ID	G32-SD312	GI-SD420	GI-SD420	GI-SD420	GI-SD508	GI-SD508	GI-SD508
SAMPLE DATE	08/31/05	10/13/09	10/13/09	10/13/09	05/03/10	05/03/10	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	ORIG	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD
1,1-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	5 U	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	5 U	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA
2-BUTANONE	5 U	NA	NA	NA	NA	NA	NA
2-HEXANONE	5 U	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	5 U	NA	NA	NA	NA	NA	NA
ACETONE	45 JEB	NA	NA	NA	NA	NA	NA
BENZENE	5 U	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA
BROMOFORM	5 U	NA	NA	NA	NA	NA	NA
BROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA
BTEX	5 U	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	8	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	5 U	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	5 U	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	5 U	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG
LOCATION ID	G32-SD312	GI-SD420	GI-SD420	GI-SD420	GI-SD508	GI-SD508	GI-SD508
SAMPLE DATE	08/31/05	10/13/09	10/13/09	10/13/09	05/03/10	05/03/10	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	ORIG	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD
CHLOROETHANE	5 U	NA	NA	NA	NA	NA	NA
CHLOROFORM	5 U	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	5 U	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	5 U	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	5 U	NA	NA	NA	NA	NA	NA
M+P-XYLENES	5 U	NA	NA	NA	NA	NA	NA
METHYL ACETATE	5 U	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	5 U	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	5 U	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	5 U	NA	NA	NA	NA	NA	NA
O-XYLENE	5 U	NA	NA	NA	NA	NA	NA
STYRENE	5 U	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA
TOLUENE	5 U	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	5 U	NA	NA	NA	NA	NA	NA

TABLE - D9
ANALYTICAL RESULTS - SEDIMENT
GI_SD_STILLWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-000.5	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG
LOCATION ID	G32-SD312	GI-SD420	GI-SD420	GI-SD420	GI-SD508	GI-SD508	GI-SD508
SAMPLE DATE	08/31/05	10/13/09	10/13/09	10/13/09	05/03/10	05/03/10	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	ORIG	DUP	AVG
SUBMATRIX	ST	SD	SD	SD	SD	SD	SD
TOTAL CHLORINATED VOCS	5 U	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	5 U	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	5 U	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	5 U	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	5 U	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	5 U	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)							
EXTRACTABLE PETROLEUM HYDROCARBONS	200 J	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	10 U	NA	NA	NA	NA	NA	NA

TABLE - D10
ANALYTICAL RESULTS - SEDIMENT
GI_SD_S
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD311-000.5	GI-SD311-0006	G32-SD311-0.51.0	G32-SD314-000.5	GI-SD529-0006	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0
LOCATION ID	G32-SD301	G32-SD301	G32-SD303	G32-SD303	G32-SD311	G32-SD311	G32-SD311	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314
SAMPLE DATE	09/02/05	09/02/05	09/01/05	09/01/05	09/02/05	05/13/10	09/02/05	09/01/05	05/04/10	09/01/05	09/01/05	09/01/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	SD	ST	ST	SD	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
SEMIVOLATILES (UG/KG)												
1,1-BIPHENYL	330 U	330 U	44 J	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
2,4,5-TRICHLOROPHENOL	670 U	670 U	670 U	660 U	670 U	NA	670 U	670 U	NA	670 UJ	670 UJ	670 U
2,4,6-TRICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
2,4-DICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
2,4-DIMETHYLPHENOL	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
2,4-DINITROPHENOL	670 U	670 U	670 U	660 U	670 U	NA	670 U	670 U	NA	670 UJ	670 UJ	670 U
2,4-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
2,6-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
2-CHLORONAPHTHALENE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
2-CHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
2-METHYLNAPHTHALENE	9.6	10	130	3.3 U	3.3 U	6 J	3.3 U	17 J	13	5 J	11 J	7.7
2-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
2-NITROANILINE	670 U	670 U	670 U	660 U	670 U	NA	670 U	670 U	NA	670 UJ	670 UJ	670 U
2-NITROPHENOL	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
3,3'-DICHLOROBENZIDINE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
3-NITROANILINE	670 U	670 U	670 U	660 U	670 U	NA	670 U	670 U	NA	670 UJ	670 UJ	670 U
4,6-DINITRO-2-METHYLPHENOL	670 U	670 U	670 U	660 U	670 U	NA	670 U	670 U	NA	670 UJ	670 UJ	670 U
4-BROMOPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U

TABLE - D10
ANALYTICAL RESULTS - SEDIMENT
GI_SD_S
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD311-000.5	GI-SD311-0006	G32-SD311-0.51.0	G32-SD314-000.5	GI-SD529-0006	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0
LOCATION ID	G32-SD301	G32-SD301	G32-SD303	G32-SD303	G32-SD311	G32-SD311	G32-SD311	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314
SAMPLE DATE	09/02/05	09/02/05	09/01/05	09/01/05	09/02/05	05/13/10	09/02/05	09/01/05	05/04/10	09/01/05	09/01/05	09/01/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	SD	ST	ST	SD	ST	ST	ST
4-CHLORO-3-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
4-CHLOROANILINE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
4-CHLOROPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
4-METHYLPHENOL	2100 J	330 U	330 U	330 U	330 U	NA	330 U	710 J	NA	330 UJ	438 J	330 U
4-NITROANILINE	670 U	670 U	670 U	660 U	670 U	NA	670 U	670 U	NA	670 UJ	670 UJ	670 U
4-NITROPHENOL	670 U	670 U	670 U	660 U	670 U	NA	670 U	670 U	NA	670 UJ	670 UJ	670 U
ACENAPHTHENE	68 J	81	1000	13	16	32 J	6.6	93	57	32 J	62.5 J	43
ACENAPHTHYLENE	8.9	7.5	11	5.6	3.3 U	40 UJ	3.3	7.3 J	2.4 J	5.2 J	6.25 J	3.9
ACETOPHENONE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
ANTHRACENE	170	170	1200	29	57	54 UJ	14	170 J	98	70 J	120 J	95
ATRAZINE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
BENZALDEHYDE	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	330 UJ	330 UJ	NA	330 UJ	330 UJ	330 UJ
BENZO(A)ANTHRACENE	430	320	1700	64	200	77 J	34	300 J	180	130 J	215 J	170
BENZO(A)PYRENE	300 J	320	1400	66	130	62 J	36	260 J	180	110 J	185 J	150
BENZO(B)FLUORANTHENE	330	310 J	1200	86	210	58 J	50	330 J	140	140 J	235 J	180
BENZO(G,H,I)PERYLENE	160 J	140	850	38	36	18 J	24	150 J	110	67 J	108 J	83
BENZO(K)FLUORANTHENE	140 J	170	1200	29	79	56 J	18	140 J	150	56 J	98 J	79
BIS(2-CHLOROETHOXY)METHANE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
BIS(2-CHLOROETHYL)ETHER	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U

TABLE - D10
ANALYTICAL RESULTS - SEDIMENT
GI_SD_S
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD311-000.5	GI-SD311-0006	G32-SD311-0.51.0	G32-SD314-000.5	GI-SD529-0006	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0
LOCATION ID	G32-SD301	G32-SD301	G32-SD303	G32-SD303	G32-SD311	G32-SD311	G32-SD311	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314
SAMPLE DATE	09/02/05	09/02/05	09/01/05	09/01/05	09/02/05	05/13/10	09/02/05	09/01/05	05/04/10	09/01/05	09/01/05	09/01/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	SD	ST	ST	SD	ST	ST	ST
BIS(2-ETHYLHEXYL)PHTHALATE	50 J	46 J	49 J	100 J	48 J	NA	56 J	46 J	NA	33 J	39.5 J	330 U
BUTYL BENZYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
CAPROLACTAM	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
CARBAZOLE	82 J	89 J	600	330 U	330 U	NA	330 U	81 J	NA	330 UJ	123 J	43 J
CHRYSENE	320 EBJ	320 EB	1600	80 EB	160 EB	81 J	34 EB	310 EBJ	180	120 EBJ	215 EBJ	160 EB
DIBENZO(A,H)ANTHRACENE	46	42	190	10	14	20 J	5.9	41 J	36	17 J	29 J	22
DIBENZOFURAN	39 J	37 J	350	330 U	330 U	NA	330 U	48 J	NA	330 UJ	106 J	330 U
DIETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
DIMETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
DI-N-BUTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
DI-N-OCTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
FLUORANTHENE	890	890	3100	140	700	240 J	80	700 J	400	280 J	490 J	460
FLUORENE	70 J	77	690	13	16	24 J	5.4	88 J	47	31 J	59.5 J	40
HEXACHLOROBENZENE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
HEXACHLOROBUTADIENE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
HEXACHLOROCYCLOPENTADIENE	330 R	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
HEXACHLOROETHANE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
HIGH MOLECULAR WEIGHT PAHS	3470 J	3360 J	14900	687	2080	812 J	370	2970 J	1780	1220 J	2100 J	1700
INDENO(1,2,3-CD)PYRENE	150 J	140	850	34	42	40 J	20	140 J	98	58 J	99 J	74
ISOPHORONE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D10
ANALYTICAL RESULTS - SEDIMENT
GI_SD_S
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD311-000.5	GI-SD311-0006	G32-SD311-0.51.0	G32-SD314-000.5	GI-SD529-0006	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0
LOCATION ID	G32-SD301	G32-SD301	G32-SD303	G32-SD303	G32-SD311	G32-SD311	G32-SD311	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314
SAMPLE DATE	09/02/05	09/02/05	09/01/05	09/01/05	09/02/05	05/13/10	09/02/05	09/01/05	05/04/10	09/01/05	09/01/05	09/01/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	SD	ST	ST	SD	ST	ST	ST
LOW MOLECULAR WEIGHT PAHS	988 J	1060	6380	174	299	242 J	72.3	1030 J	567 J	383 J	706 J	498
NAPHTHALENE	12	20	350	3.6	3.3 U	40 UJ	3.3 U	26 J	30	9.4 J	17.7 J	18
NITROBENZENE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
N-NITROSO-DI-N-PROPYLAMINE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
N-NITROSODIPHENYLAMINE	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
PENTACHLOROPHENOL	670 U	670 U	670 U	660 U	670 U	NA	670 U	670 U	NA	670 UJ	670 UJ	670 U
PHENANTHRENE	650	690	3000	110	210	180 J	43	630	320	230 J	430 J	290
PHENOL	83 J	330 U	330 U	330 U	38 J	NA	330 U	56 J	NA	330 UJ	110 J	330 U
PYRENE	700	710	2800	140	510	160 J	68	600	310	240 J	420 J	320
TOTAL CHLORINATED VOCS	330 U	330 U	330 U	330 U	330 U	NA	330 U	330 U	NA	330 UJ	330 UJ	330 U
TOTAL PAHS	4450 J	4420 J	21300	861	2380	1050 J	442	4000 J	2350 J	1600 J	2800 J	2200
PESTICIDES/PCBS (UG/KG)												
4,4'-DDD	3.3 U	32 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U
4,4'-DDE	3.3 U	32 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U
4,4'-DDT	3.3 U	32 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	7.6 R	NA	4.4 R	6 R	3.3 U
ALDRIN	1.7 U	17 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U
ALPHA-BHC	1.7 U	17 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U
ALPHA-CHLORDANE	1.7 U	17 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U
AROCLOR-1016	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	NA	33 U	33 U	33 U
AROCLOR-1221	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	NA	33 U	33 U	33 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D10
ANALYTICAL RESULTS - SEDIMENT
GI_SD_S
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD311-000.5	GI-SD311-0006	G32-SD311-0.51.0	G32-SD314-000.5	GI-SD529-0006	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0
LOCATION ID	G32-SD301	G32-SD301	G32-SD303	G32-SD303	G32-SD311	G32-SD311	G32-SD311	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314
SAMPLE DATE	09/02/05	09/02/05	09/01/05	09/01/05	09/02/05	05/13/10	09/02/05	09/01/05	05/04/10	09/01/05	09/01/05	09/01/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	SD	ST	ST	SD	ST	ST	ST
AROCLOR-1232	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	NA	33 U	33 U	33 U
AROCLOR-1242	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	NA	33 U	33 U	33 U
AROCLOR-1248	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	NA	33 U	33 U	33 U
AROCLOR-1254	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	NA	33 U	33 U	33 U
AROCLOR-1260	33 U	33 U	120	85	33 U	NA	33 U	270	NA	190	230	33 U
BETA-BHC	7.4 J	17 U	1.7 U	2.1 R	1.7 U	NA	3	1.7 U	NA	1.7 U	1.7 U	1.8
DELTA-BHC	1.7 U	17 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U
DIELDRIN	3.3 U	32 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U
ENDOSULFAN I	1.7 U	17 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U
ENDOSULFAN II	3.3 U	32 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U
ENDOSULFAN SULFATE	3.3 U	32 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	NA	4 J	2.82 J	3.3 U
ENDRIN	3.3 U	32 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U
ENDRIN ALDEHYDE	3.3 U	32 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.4 R	NA	3.3 U	3.3 U	3.3 U
ENDRIN KETONE	3.3 U	32 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	6.8 J	NA	4.6 J	5.7 J	3.3 U
GAMMA-BHC (LINDANE)	1.7 U	17 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U
GAMMA-CHLORDANE	1.7 U	17 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	4 J	NA	2.3 J	3.15 J	1.7 U
HEPTACHLOR	1.7 U	17 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U
HEPTACHLOR EPOXIDE	1.7 U	17 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	NA	1.7 U	1.7 U	1.7 U
METHOXYCHLOR	17 U	170 U	17 U	17 U	17 U	NA	17 U	17 U	NA	17 U	17 U	17 U
TOTAL AROCLOR	33 U	33 U	120	85	33 U	NA	33 U	270	NA	190	230	33 U
TOTAL CHLORDANE	1.7 U	17 U	1.7 U	1.7 U	1.7 U	NA	1.7 U	4 J	NA	2.3 J	3.15 J	1.7 U
TOTAL DDD/DDE/DDT	3.3 U	32 U	3.3 U	3.3 U	3.3 U	NA	3.3 U	3.3 U	NA	3.3 U	3.3 U	3.3 U
TOXAPHENE	170 U	1700 U	170 U	170 U	170 U	NA	170 U	170 U	NA	170 U	170 U	170 U
PCB HOMOLOGS (UG/KG)												

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D10
ANALYTICAL RESULTS - SEDIMENT
GI_SD_S
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD311-000.5	GI-SD311-0006	G32-SD311-0.51.0	G32-SD314-000.5	GI-SD529-0006	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0
LOCATION ID	G32-SD301	G32-SD301	G32-SD303	G32-SD303	G32-SD311	G32-SD311	G32-SD311	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314
SAMPLE DATE	09/02/05	09/02/05	09/01/05	09/01/05	09/02/05	05/13/10	09/02/05	09/01/05	05/04/10	09/01/05	09/01/05	09/01/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	SD	ST	ST	SD	ST	ST	ST
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	2 U	NA	NA	6 U	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	0.41 U	NA	NA	1.2 U	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	1 U	NA	NA	3 U	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	0.8 U	NA	NA	16	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	0.41 U	NA	NA	1.2 U	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	2 U	NA	NA	6 U	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	0.8 U	NA	NA	2.4 U	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	0.8 U	NA	NA	2.4 U	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	1 U	NA	NA	3 U	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	0.963 U	NA	NA	16	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	0.963 U	NA	NA	29.2	NA	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	0.41 U	NA	NA	1.2 U	NA	NA	NA
METALS (MG/KG)												
ALUMINUM	4750	5230	8520	7740	4970	4280	4710	6040	6250	7110	6580	6980
ANTIMONY	0.056 UJ	0.39 UJ	0.055 UJ	0.056 UJ	0.057 UJ	0.59 UJ	33.8 J	0.057 UJ	0.718 UJ	0.056 UJ	0.0565 UJ	0.057 UJ
ARSENIC	1.3 J	1.2 J	2.6 J	1.7 J	2.5 J	0.293 J	2.6 J	1.4 J	0.49 J	1.2 J	1.3 J	1.2 J
BARIUM	5.5 J	6.8 J	10.9 J	18 J	13.2 J	7.4	11.8 J	5.6 J	10.1	7.7 J	6.65 J	6.1 J
BERYLLIUM	0.23	0.23	0.34	0.3	0.4	0.203	0.34	0.25	0.213 J	0.26	0.255	0.3
CADMIUM	0.04 UJ	0.049 UJ	0.18 UJ	0.16 UJ	0.13 UJ	0.22	0.22 UJ	0.061 UJ	0.205 J	0.088 UJ	0.0745 UJ	0.048 UJ
CALCIUM	1740 J	1410 J	31600 J	35000 J	8220 J	14700	6620 J	23500 J	31100	21100 J	22300 J	12000 J

LIGHT SHADING - DETECTED;
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TABLE - D10
ANALYTICAL RESULTS - SEDIMENT
GI_SD_S
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD311-000.5	GI-SD311-0006	G32-SD311-0.51.0	G32-SD314-000.5	GI-SD529-0006	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0
LOCATION ID	G32-SD301	G32-SD301	G32-SD303	G32-SD303	G32-SD311	G32-SD311	G32-SD311	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314
SAMPLE DATE	09/02/05	09/02/05	09/01/05	09/01/05	09/02/05	05/13/10	09/02/05	09/01/05	05/04/10	09/01/05	09/01/05	09/01/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	SD	ST	ST	SD	ST	ST	ST
CHROMIUM	10.2 J	10.1 J	18.2 J	17.3 J	12 J	8.3 J	11.2 J	11.9 J	11.3	15.3 J	13.6 J	13.8 J
COBALT	2.2 J	2.2 J	3.2 J	3.2 J	2.7 J	2.8	2.5 J	2.7 J	3.6	3 J	2.85 J	3.1 J
COPPER	9.3	11	16.1	14.3	18	17 J	20.7	14.1	8.1 J	12.6	13.4	13.6
CYANIDE	0.3 J	0.12 U	0.12 UJ	0.12 UJ	0.12 U	NA	0.31 J	0.12 UJ	NA	0.12 UJ	0.12 UJ	0.12 UJ
IRON	9520	10200	18700	16200	11800	10200	11800	12400	13200	14600	13500	15200
LEAD	10.5 J	9.5 J	23.4 J	20.5 J	19.6 J	14.1 J	27.2	12.1 J	12.7	14.4 J	13.2 J	12.8 J
MAGNESIUM	2830	2860	4430	4240	2840	2450	2570	3040	3230	3490	3260	3340
MANGANESE	114 J	113 J	177 J	157 J	105 J	102	101 J	118 J	129	141 J	130 J	143 J
MERCURY	0.01 UJ	0.0067 U	0.055 U	0.066 U	0.024 U	0.011 J	0.019 U	0.03 U	0.027 J	0.031 U	0.0305 U	0.035 U
NICKEL	6.2 J	6.8 J	9.7 J	9.6 J	8 J	6.4	8.5 J	9 J	8.4	10.6 J	9.8 J	10.9 J
POTASSIUM	658	655	1220	1080	942	809 J	768	736	867	783	760	644
SELENIUM	0.067 UJ	0.066 UJ	0.066 UJ	0.067 UJ	0.068 UJ	1.78 U	0.068 UJ	0.068 UJ	0.718 U	0.068 UJ	0.068 UJ	0.068 UJ
SILVER	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.331 J	0.019 UJ	0.019 UJ	0.252 UJ	0.019 UJ	0.019 UJ	0.019 UJ
SODIUM	2940	2250	3480	3670	3070	3020	2370	3480	4830	3310	3400	2470
THALLIUM	0.079 UJ	0.078 UJ	0.17 J	0.079 UJ	0.08 UJ	0.4 UJ	0.08 UJ	0.08 UJ	0.479 UJ	0.08 UJ	0.08 UJ	0.08 UJ
VANADIUM	13.8 J	13.9 J	24.1 J	22.4 J	18 J	13.2	16.5 J	13.8 J	13.4	15 J	14.4 J	17.1 J
ZINC	29.5 J	28.2 J	57.9 J	49.2 J	38.9 J	29.8 J	42.1 J	37.3 J	35.2 J	44.1 J	40.7 J	42.3 J
MISCELLANEOUS PARAMETERS (MG/KG)												
TOTAL ORGANIC CARBON	5200 J	9300 J	10000 J	10000 J	7200 J	5570	5000 J	7000 J	8300	9200 J	8100 J	7500 J
MISCELLANEOUS PARAMETERS (%)												
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	2	NA	NA	NA
PERCENT CLAY	3.8	3.2	7	7	4.4	NA	3.2	2.9	NA	5	3.95	3.2

TABLE - D10
ANALYTICAL RESULTS - SEDIMENT
GI_SD_S
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD311-000.5	GI-SD311-0006	G32-SD311-0.51.0	G32-SD314-000.5	GI-SD529-0006	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0
LOCATION ID	G32-SD301	G32-SD301	G32-SD303	G32-SD303	G32-SD311	G32-SD311	G32-SD311	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314
SAMPLE DATE	09/02/05	09/02/05	09/01/05	09/01/05	09/02/05	05/13/10	09/02/05	09/01/05	05/04/10	09/01/05	09/01/05	09/01/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	SD	ST	ST	SD	ST	ST	ST
PERCENT COARSE SAND	9.7	14.3	11.3	13.9	4.2	NA	5.9	5.5	NA	7.2	6.35	6.9
PERCENT FINE SAND	52.5	46.3	23.5	24	42.9	NA	48.4	25.9	NA	42.9	34.4	38.5
PERCENT GRAVEL	15.6	15.8	3.4	3.9	12.8	NA	5	57.9	NA	32.8	45.4	39.2
PERCENT MEDIUM SAND	15.9	16.6	42.4	42.5	33	NA	34.1	5.6	NA	8.9	7.25	8.3
PERCENT SILT	2.4	3.9	12.3	8.7	2.6	NA	3.3	2.1	NA	3.1	2.6	3.9
PERCENT SOLIDS	80.1	84.7	76.5	75.1	77.6	NA	80.6	75	NA	71.9	73.4	82.9
SIEVE 1"	100	100	100	100	100	NA	100	78.5	100	100	89.2	100
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA
SIEVE 1-1/2"	100	100	100	100	100	NA	100	100	NA	100	100	100
SIEVE 2"	100	100	100	100	100	NA	100	100	NA	100	100	100
SIEVE 3"	100	100	100	100	100	NA	100	100	NA	100	100	100
SIEVE 3/4"	93.1	100	100	100	93.4	NA	100	78.5	100	100	89.2	94.6
SIEVE 3/8"	89.3	97	99.8	100	88.9	NA	98.8	50.4	100	84.2	67.3	71.5
SIEVE NO. 004	84.4	84.2	96.6	96.1	87.2	NA	95	42.1	95	67.2	54.6	60.8
SIEVE NO. 010	74.6	70	85.3	82.2	83	NA	89.1	36.6	91	60.1	48.4	53.9
SIEVE NO. 020	67.3	61.5	67.3	64.8	75.3	NA	80.6	34.8	85	57.3	46	51.6
SIEVE NO. 040	58.7	53.4	42.8	39.7	49.9	NA	55	30.9	77	51.1	41	45.6
SIEVE NO. 060	35.6	33.8	30	26.2	25.5	NA	30.6	18.4	47	30.8	24.6	26.4
SIEVE NO. 080	20	19.9	26.4	22.3	16.8	NA	19.9	10.4	NA	17.4	13.9	14.7
SIEVE NO. 100	15.2	15.5	24.7	20.6	13.7	NA	15.9	8.1	17	13.5	10.8	11.3
SIEVE NO. 200	6.2	7.1	19.3	15.7	7	NA	6.6	5.1	9	8.2	6.65	7.1
AVS/SEM (UMO/G)												
ACID VOLATILE SULFIDE	0.88 J	0.88 J	1.3 J	1.9 J	0.97 J	NA	1.1 J	2.4 J	NA	6.5 J	4.45 J	1.3 J

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TABLE - D10
ANALYTICAL RESULTS - SEDIMENT
GI_SD_S
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD311-000.5	GI-SD311-0006	G32-SD311-0.51.0	G32-SD314-000.5	GI-SD529-0006	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0
LOCATION ID	G32-SD301	G32-SD301	G32-SD303	G32-SD303	G32-SD311	G32-SD311	G32-SD311	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314
SAMPLE DATE	09/02/05	09/02/05	09/01/05	09/01/05	09/02/05	05/13/10	09/02/05	09/01/05	05/04/10	09/01/05	09/01/05	09/01/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	SD	ST	ST	SD	ST	ST	ST
CADMIUM	0.002 UJ	0.002 UJ	0.0022 UJ	0.0024 UJ	0.0023 UJ	NA	0.0021 UJ	0.0024 UJ	NA	0.0021 UJ	0.00225 UJ	0.002 UJ
COPPER	0.069 UJ	0.039 UJ	0.066 UJ	0.1 UJ	0.14 J	NA	0.076 UJ	0.041 UJ	NA	0.12 J	0.0702 J	0.042 UJ
LEAD	0.031 J	0.019 UJ	0.074 J	0.078 J	0.057 J	NA	0.055 J	0.052 J	NA	0.038 J	0.045 J	0.033 J
MERCURY	0.00005 UJ	0.00003 U	0.00027 U	0.00033 U	0.00012 U	NA	0.00009 U	0.00015 U	NA	0.00015 U	0.00015 U	0.00017 U
NICKEL	0.17 UJ	0.034 UJ	0.026 UJ	0.39 UJ	0.043 UJ	NA	0.022 UJ	0.073 UJ	NA	0.41 UJ	0.242 UJ	0.022 UJ
ZINC	0.19 J	0.11 J	0.35 J	0.4 J	0.24 J	NA	0.29 J	0.31 J	NA	0.28 J	0.295 J	0.16 J
AVS/SEM (RATIO)												
SEM/AVS	0.25	0.12	0.33	0.25	0.45	NA	0.31	0.15	NA	0.067	0.108	0.15
LOW LEVEL VOLATILES (UG/KG)												
1,1,1-TRICHLOROETHANE	5 U	4 UJ	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
1,1,2,2-TETRACHLOROETHANE	5 UJ	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
1,1,2-TRICHLOROETHANE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	4 UJ	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
1,1-DICHLOROETHANE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
1,1-DICHLOROETHENE	5 U	4 UJ	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
1,2,4-TRICHLOROBENZENE	5 UJ	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
1,2-DIBROMO-3-CHLOROPROPANE	5 UJ	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
1,2-DIBROMOETHANE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U

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TABLE - D10
ANALYTICAL RESULTS - SEDIMENT
GI_SD_S
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD311-000.5	GI-SD311-0006	G32-SD311-0.51.0	G32-SD314-000.5	GI-SD529-0006	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0
LOCATION ID	G32-SD301	G32-SD301	G32-SD303	G32-SD303	G32-SD311	G32-SD311	G32-SD311	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314
SAMPLE DATE	09/02/05	09/02/05	09/01/05	09/01/05	09/02/05	05/13/10	09/02/05	09/01/05	05/04/10	09/01/05	09/01/05	09/01/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	SD	ST	ST	SD	ST	ST	ST
1,2-DICHLOROBENZENE	5 UJ	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
1,2-DICHLOROETHANE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
1,2-DICHLOROPROPANE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
1,3-DICHLOROBENZENE	5 UJ	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
1,4-DICHLOROBENZENE	5 UJ	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
2-BUTANONE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
2-HEXANONE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
4-METHYL-2-PENTANONE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
ACETONE	120 J	18 UJ	140 J	340 U	230 J	NA	11 UJ	250 J	NA	150 J	200 J	71 UJ
BENZENE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
BROMODICHLOROMETHANE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
BROMOFORM	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
BROMOMETHANE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
BTEX	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
CARBON DISULFIDE	1 J	4 U	6 U	5 U	3 J	NA	1 J	7 U	NA	5 U	6 U	6 U
CARBON TETRACHLORIDE	5 U	4 UJ	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
CHLOROBENZENE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
CHLORODIBROMOMETHANE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
CHLOROETHANE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
CHLOROFORM	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
CHLOROMETHANE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
CIS-1,2-DICHLOROETHENE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U

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TABLE - D10
ANALYTICAL RESULTS - SEDIMENT
GI_SD_S
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD311-000.5	GI-SD311-0006	G32-SD311-0.51.0	G32-SD314-000.5	GI-SD529-0006	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0
LOCATION ID	G32-SD301	G32-SD301	G32-SD303	G32-SD303	G32-SD311	G32-SD311	G32-SD311	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314
SAMPLE DATE	09/02/05	09/02/05	09/01/05	09/01/05	09/02/05	05/13/10	09/02/05	09/01/05	05/04/10	09/01/05	09/01/05	09/01/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	SD	ST	ST	SD	ST	ST	ST
CIS-1,3-DICHLOROPROPENE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
CYCLOHEXANE	5 U	4 UJ	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
DICHLORODIFLUOROMETHANE	5 U	4 UJ	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
ETHYLBENZENE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
ISOPROPYLBENZENE	5 U	4 UJ	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
M+P-XYLENES	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
METHYL ACETATE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
METHYL CYCLOHEXANE	5 U	4 UJ	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
METHYL TERT-BUTYL ETHER	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
METHYLENE CHLORIDE	24 U	9 UJ	20 U	27 U	60 U	NA	57 U	28 U	NA	18 U	23 U	29 U
O-XYLENE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
STYRENE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
TETRACHLOROETHENE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
TOLUENE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
TOTAL 1,2-DICHLOROETHENE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
TOTAL CHLORINATED ETHENES	5 U	4 UJ	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
TOTAL CHLORINATED VOCS	5 UJ	4 UJ	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
TOTAL XYLENES	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
TRANS-1,2-DICHLOROETHENE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D10
ANALYTICAL RESULTS - SEDIMENT
GI_SD_S
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD311-000.5	GI-SD311-0006	G32-SD311-0.51.0	G32-SD314-000.5	GI-SD529-0006	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0
LOCATION ID	G32-SD301	G32-SD301	G32-SD303	G32-SD303	G32-SD311	G32-SD311	G32-SD311	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314
SAMPLE DATE	09/02/05	09/02/05	09/01/05	09/01/05	09/02/05	05/13/10	09/02/05	09/01/05	05/04/10	09/01/05	09/01/05	09/01/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	SD	ST	ST	SD	ST	ST	ST
TRANS-1,3-DICHLOROPROPENE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
TRICHLOROETHENE	5 U	4 U	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
TRICHLOROFLUOROMETHANE	5 U	4 UJ	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
VINYL CHLORIDE	5 U	4 UJ	6 U	5 U	6 U	NA	5 U	7 U	NA	5 U	6 U	6 U
PETROLEUM HYDROCARBONS (MG/KG)												
EXTRACTABLE PETROLEUM HYDROCARBONS	33 J	20 J	32 J	29	26	NA	32	18	NA	16	17	14 J
GASOLINE RANGE ORGANICS	5.6 U	4.1 U	9.3 U	6.1 U	9.3 U	NA	7.4 U	12 U	NA	9.3 U	10.6 U	10 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D11
ANALYTICAL RESULTS - SEDIMENT
GI_SD_REF
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-JPC01-0006	GI-SD524-0006	GI-JPC01-0006-D	GI-JPC01-0006-AVG	GI-JPC02-0006	GI-SD525-0006	GI-JCC04-0006	GI-SD526-0006
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	09/23/09	05/03/10	09/23/09	09/23/09	09/23/09	05/03/10	09/23/09	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	NM	FD	NM	NM	NM	NM	NM
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)								
2-METHYLNAPHTHALENE	3.3 U	9.1 U	3.3 U	3.3 U	3.3 U	11 UJ	3.3 U	8.9 U
ACENAPHTHENE	3.3 U	9.1 U	3.3 U	3.3 U	3.3 U	3.9 J	3.3 U	8.9 U
ACENAPHTHYLENE	5.1	4.6 J	6.2	5.65	5	13 J	3.3 U	3.6 J
ANTHRACENE	5.3	4.1 J	7.5	6.4	7.9	15 J	4.4	5 J
BENZO(A)ANTHRACENE	20	22	20	20	19	61 J	9.8	15
BENZO(A)PYRENE	18	24	18	18	19	73 J	9.8	18
BENZO(B)FLUORANTHENE	22	19	22	22	24	58 J	11	15
BENZO(G,H,I)PERYLENE	13	20	13	13	13	48 J	7.1	14
BENZO(K)FLUORANTHENE	13	18	14	13.5	13	52 J	6.8	13
CHRYSENE	18	27	18	18	23	71 J	12	17
DIBENZO(A,H)ANTHRACENE	3.8	4.1 J	4	3.9	4.5	15 J	3.3 U	3.2 J
FLUORANTHENE	41	40	40	40.5	48	130 J	19	36
FLUORENE	3.3 U	2.3 J	3.3 U	3.3 U	3.8	6.7 J	3.3 U	1.8 J
HIGH MOLECULAR WEIGHT PAHS	195.8	229 J	199	197.4	217.5	673 J	101.5	173 J
INDENO(1,2,3-CD)PYRENE	11	15	11	11	12	45 J	6	12
LOW MOLECULAR WEIGHT PAHS	29.4	31 J	33.7	31.55	45.7	96.6 J	11.8	10.4 J
NAPHTHALENE	3.3 U	9.1 U	3.3 U	3.3 U	3.3 U	11 UJ	3.3 U	8.9 U
PHENANTHRENE	19	20	20	19.5	29	58 J	7.4	17 U
PYRENE	36	40	39	37.5	42	120 J	20	30
TOTAL PAHS	225.2	260 J	232.7	228.95	263.2	770 J	113.3	184 J

LIGHT SHADING - DETECTED;
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TABLE - D11
ANALYTICAL RESULTS - SEDIMENT
GI_SD_REF
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-JPC01-0006	GI-SD524-0006	GI-JPC01-0006-D	GI-JPC01-0006-AVG	GI-JPC02-0006	GI-SD525-0006	GI-JCC04-0006	GI-SD526-0006
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	09/23/09	05/03/10	09/23/09	09/23/09	09/23/09	05/03/10	09/23/09	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SD	SD	SD	SD	SD	SD	SD	SD
PESTICIDES/PCBS (UG/KG)								
AROCLOR-1016	33 U	NA	33 U	33 U	33 U	NA	33 U	NA
AROCLOR-1221	33 U	NA	33 U	33 U	33 U	NA	33 U	NA
AROCLOR-1232	33 U	NA	33 U	33 U	33 U	NA	33 U	NA
AROCLOR-1242	33 U	NA	33 U	33 U	33 U	NA	33 U	NA
AROCLOR-1248	33 U	NA	33 U	33 U	33 U	NA	33 U	NA
AROCLOR-1254	33 U	NA	33 U	33 U	33 U	NA	33 U	NA
AROCLOR-1260	33 U	NA	33 U	33 U	33 U	NA	33 U	NA
TOTAL AROCLOR	33 U	NA	33 U	33 U	33 U	NA	33 U	NA
PCB HOMOLOGS (UG/KG)								
DECACHLOROBIPHENYL	NA	1.1 U	NA	NA	NA	1.4 U	NA	1.1 U
DICHLOROBIPHENYLS	NA	0.23 U	NA	NA	NA	0.28 U	NA	0.23 U
HEPTACHLOROBIPHENYLS	NA	0.58 U	NA	NA	NA	0.7 U	NA	0.57 U
HEXACHLOROBIPHENYL	NA	0.46 U	NA	NA	NA	0.55 U	NA	0.45 U
MONOCHLOROBIPHENYLS	NA	0.23 U	NA	NA	NA	0.28 U	NA	0.23 U
NONACHLOROBIPHENYLS	NA	1.1 U	NA	NA	NA	1.4 U	NA	1.1 U
PENTACHLOROBIPHENYLS	NA	0.46 U	NA	NA	NA	0.55 U	NA	0.45 U
TETRACHLOROBIPHENYLS	NA	0.46 U	NA	NA	NA	0.55 U	NA	0.45 U
TOTAL OCTACHLOROBIPHENYLS	NA	0.58 U	NA	NA	NA	0.7 U	NA	0.57 U
TOTAL TRICHLOROBIPHENYLS	NA	0.23 U	NA	NA	NA	0.28 U	NA	0.23 U
METALS (MG/KG)								
ALUMINUM	3860 E	4550	3690 E	3775 E	4890 E	6850	5290 E	7460
ANTIMONY	0.13 BN	0.68 UJ	0.086 UN	0.108 BNN	0.2 BN	0.83 UJ	0.082 UN	0.68 UJ

LIGHT SHADING - DETECTED;
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TABLE - D11
ANALYTICAL RESULTS - SEDIMENT
GI_SD_REF
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-JPC01-0006	GI-SD524-0006	GI-JPC01-0006-D	GI-JPC01-0006-AVG	GI-JPC02-0006	GI-SD525-0006	GI-JCC04-0006	GI-SD526-0006
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	09/23/09	05/03/10	09/23/09	09/23/09	09/23/09	05/03/10	09/23/09	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SD	SD	SD	SD	SD	SD	SD	SD
ARSENIC	1.7	0.273 J	1.6	1.65	2.7	1.6 J	1.5	0.423 J
BARIUM	8.7 E	9.7 J	8.4 E	8.55 E	11 E	15.7 J	6 E	7.7 J
BERYLLIUM	0.16 E	0.216 J	0.14 E	0.15 E	0.24 E	0.405	0.16 E	0.395
CADMIUM	0.059 B	0.132 J	0.059 B	0.059 B	0.18	0.367 J	0.063 B	0.27 J
CALCIUM	1250 *	2490 J	3800 *	2525 *	12500 *	32500 J	1420 *	4490 J
CHROMIUM	9.7 E	11.1 J	9.6 E	9.65 E	13.5 E	19.8 J	11.2 E	16.5 J
COBALT	2.5 E	3.2 J	2.4 E	2.45 E	3.1 E	4.4 J	4.1 E	6 J
COPPER	6.4 E	6.2 J	6.5 E	6.45 E	11.3 E	15 J	7.2 E	9.9 J
IRON	8890	9200	6840	7865	12000	13500	12500	16700
LEAD	8.3 E	9.2 J	7.9 E	8.1 E	13.7 E	20.6 J	8.7 E	10.6 J
MAGNESIUM	2230 E	2560 J	2110 E	2170 E	2820 E	3810 J	2760 E	3610 J
MANGANESE	98.5 E	112 J	116 E	107.25 E	98.2 E	139 J	102 E	128 J
MERCURY	0.021 B	0.028	0.023 B	0.022 B	0.058	0.083	0.022 B	0.039
NICKEL	5.8 E	7 J	5.6 E	5.7 E	7.4 E	10.2 J	8.2 E	11.7 J
POTASSIUM	724	802	719	721.5	1150	1590	690	990
SELENIUM	0.58 B	0.341 J	0.5 B	0.54 B	0.73 B	0.83 U	0.55 B	0.68 U
SILVER	0.037 U	0.097 J	0.038 U	0.0375 U	0.042 U	0.19 J	0.036 U	0.144 J
SODIUM	3680 E	3500	3600 E	3640 E	5440 E	6310	3080 E	2880
THALLIUM	0.11 U	0.45 UJ	0.11 U	0.11 U	0.13 U	0.56 UJ	0.11 U	1.4 UJ
VANADIUM	8.8 E	10.3 J	8.5 E	8.65 E	13.3 E	20 J	11.3 E	17.8 J
ZINC	30.4 E	30.7 J	28.2 E	29.3 E	46 E	61.8 J	30.5 E	42.9 J
MISCELLANEOUS PARAMETERS (%)								
HYDROMETER-0.001MM	0 U	NA	0 U	0 U	0 U	NA	0 U	NA
HYDROMETER-0.002MM	NA	4	NA	NA	NA	10	NA	0
HYDROMETER-0.005MM	0 U	NA	1.93	0.965	0 U	NA	0 U	NA

LIGHT SHADING - DETECTED;
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TABLE - D11
ANALYTICAL RESULTS - SEDIMENT
GI_SD_REF
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-JPC01-0006	GI-SD524-0006	GI-JPC01-0006-D	GI-JPC01-0006-AVG	GI-JPC02-0006	GI-SD525-0006	GI-JCC04-0006	GI-SD526-0006
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	09/23/09	05/03/10	09/23/09	09/23/09	09/23/09	05/03/10	09/23/09	05/03/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SD	SD	SD	SD	SD	SD	SD	SD
HYDROMETER-0.074MM	16	NA	15.8	15.9	31.7	NA	13.4	NA
SIEVE 1"	NA	100	NA	NA	NA	100	NA	100
SIEVE 1/2"	NA	100	NA	NA	NA	100	NA	100
SIEVE 3/4"	100	100	100	100	87.9	100	100	100
SIEVE 3/8"	100	100	100	100	80.9	100	100	98
SIEVE NO. 004	100	99	99	99.5	79.4	96	100	97
SIEVE NO. 010	100	98	98.3	99.15	78.3	93	100	89
SIEVE NO. 020	99.5	97	97.7	98.6	76.6	90	90.7	78
SIEVE NO. 040	95.5	93	94.3	94.9	75.3	88	72.8	61
SIEVE NO. 060	78.3	76	78.5	78.4	72.2	85	40.4	39
SIEVE NO. 100	NA	60	NA	NA	NA	78	NA	26
SIEVE NO. 140	33.8	NA	33.2	33.5	42.3	NA	14.9	NA
SIEVE NO. 200	17	20	17.4	17.2	32.6	41	11.8	13
MISCELLANEOUS PARAMETERS (MG/KG)								
TOTAL ORGANIC CARBON	NA	5900	NA	NA	NA	11600	NA	8490

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

D-3 BIOTA ANALYTICAL DATA

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET524-0610_2010604	GI-ET525-0610	GI-ET525-0610_20100604	GI-ET523-0610	GI-ET529-0610	GI-ET530-0510	GI-ET502-0510	GI-ET505-0510	GI-ET505-0510-D	GI-ET505-0510-AVG	GI-ET507-0610
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	G32-SD313F	G32-SD314	G32-SD317	GI-SD402	GI-SD404	GI-SD404	GI-SD404	GI-SD410
SAMPLE DATE	06/02/10	06/04/10	06/02/10	06/04/10	06/04/10	06/02/10	05/26/10	05/26/10	05/26/10	05/26/10	05/26/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	CL	SC	CL	GC	GC	CL	MU	MU	MU	MU	MU	SC
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
SEMIVOLATILES (UG/KG)												
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET524-0610_2010604	GI-ET525-0610	GI-ET525-0610_20100604	GI-ET523-0610	GI-ET529-0610	GI-ET530-0510	GI-ET502-0510	GI-ET505-0510	GI-ET505-0510-D	GI-ET505-0510-AVG	GI-ET507-0610
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	G32-SD313F	G32-SD314	G32-SD317	GI-SD402	GI-SD404	GI-SD404	GI-SD404	GI-SD410
SAMPLE DATE	06/02/10	06/04/10	06/02/10	06/04/10	06/04/10	06/02/10	05/26/10	05/26/10	05/26/10	05/26/10	05/26/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	CL	SC	CL	GC	GC	CL	MU	MU	MU	MU	MU	SC
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(B)FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(G,H,I)PERYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(K)FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET524-0610_2010604	GI-ET525-0610	GI-ET525-0610_20100604	GI-ET523-0610	GI-ET529-0610	GI-ET530-0510	GI-ET502-0510	GI-ET505-0510	GI-ET505-0510-D	GI-ET505-0510-AVG	GI-ET507-0610
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	G32-SD313F	G32-SD314	G32-SD317	GI-SD402	GI-SD404	GI-SD404	GI-SD404	GI-SD410
SAMPLE DATE	06/02/10	06/04/10	06/02/10	06/04/10	06/04/10	06/02/10	05/26/10	05/26/10	05/26/10	05/26/10	05/26/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	CL	SC	CL	GC	GC	CL	MU	MU	MU	MU	MU	SC
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIBENZO(A,H)ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET524-0610_2010604	GI-ET525-0610	GI-ET525-0610_20100604	GI-ET523-0610	GI-ET529-0610	GI-ET530-0510	GI-ET502-0510	GI-ET505-0510	GI-ET505-0510-D	GI-ET505-0510-AVG	GI-ET507-0610
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	G32-SD313F	G32-SD314	G32-SD317	GI-SD402	GI-SD404	GI-SD404	GI-SD404	GI-SD410
SAMPLE DATE	06/02/10	06/04/10	06/02/10	06/04/10	06/04/10	06/02/10	05/26/10	05/26/10	05/26/10	05/26/10	05/26/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	CL	SC	CL	GC	GC	CL	MU	MU	MU	MU	MU	SC
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PESTICIDES/PCBS (UG/KG)												
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET524-0610_2010604	GI-ET525-0610	GI-ET525-0610_20100604	GI-ET523-0610	GI-ET529-0610	GI-ET530-0510	GI-ET502-0510	GI-ET505-0510	GI-ET505-0510-D	GI-ET505-0510-AVG	GI-ET507-0610
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	G32-SD313F	G32-SD314	G32-SD317	GI-SD402	GI-SD404	GI-SD404	GI-SD404	GI-SD410
SAMPLE DATE	06/02/10	06/04/10	06/02/10	06/04/10	06/04/10	06/02/10	05/26/10	05/26/10	05/26/10	05/26/10	05/26/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	CL	SC	CL	GC	GC	CL	MU	MU	MU	MU	MU	SC
AROCLOR-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)												

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET524-0610_20100604	GI-ET525-0610	GI-ET525-0610_20100604	GI-ET523-0610	GI-ET529-0610	GI-ET530-0510	GI-ET502-0510	GI-ET505-0510	GI-ET505-0510-D	GI-ET505-0510-AVG	GI-ET507-0610
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	G32-SD313F	G32-SD314	G32-SD317	GI-SD402	GI-SD404	GI-SD404	GI-SD404	GI-SD410
SAMPLE DATE	06/02/10	06/04/10	06/02/10	06/04/10	06/04/10	06/02/10	05/26/10	05/26/10	05/26/10	05/26/10	05/26/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	CL	SC	CL	GC	GC	CL	MU	MU	MU	MU	MU	SC
DECACHLOROBIPHENYL	2.5 U	2.4 U	2.5 UJ	4.6 U	4.9 U	2.5 UJ	7.5 U	25 U	7.5 U	10 U	8.75 U	7.4 U
DICHLOROBIPHENYLS	0.51 U	0.5 U	0.51 UJ	0.95 U	1 U	0.51 UJ	2.1 J	5.1 UJ	1.5 U	2 U	1.75 U	1.5 U
HEPTACHLOROBIPHENYLS	1.3 U	2.9 J	1.3 UJ	2.3 U	9.5 J	4.7 J	3.8 U	13 U	11 J	5 U	6.75 J	18
HEXACHLOROBIPHENYL	2.2 J	15	5.2 J	14	61	7.1 J	21	81	35	43	39	35
MONOCHLOROBIPHENYLS	0.51 U	0.5 U	0.51 UJ	0.95 U	1 U	0.51 UJ	1.5 U	5.1 UJ	1.5 U	2 U	1.75 U	1.5 U
NONACHLOROBIPHENYLS	2.5 U	2.4 U	2.5 UJ	4.6 U	4.9 U	2.5 UJ	7.5 UJ	25 U	7.5 UJ	10 UJ	8.75 UJ	7.4 U
PENTACHLOROBIPHENYLS	1 U	14	1 UJ	15	50	4 J	14 J	9.9 U	17 J	16 J	16.5 J	20
TETRACHLOROBIPHENYLS	1 U	1 U	1 UJ	1.8 U	2 U	1.1 J	5.7 J	9.9 U	3 U	4 U	3.5 U	2.9 U
TOTAL OCTACHLOROBIPHENYLS	1.3 U	1.2 U	1.3 UJ	2.3 U	2.5 U	1.3 UJ	3.8 U	13 U	3.8 U	5 U	4.4 U	3.7 U
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	120 J	16.9 J	42.8 J	81 J	63 J	59 J	61 J	73
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	129 J	20.8 J	55.6 J	137 J	76.2 J	79 J	77.6 J	86
TOTAL TRICHLOROBIPHENYLS	0.51 U	0.5 U	0.51 UJ	0.95 U	1 U	0.51 UJ	1.5 U	5.1 U	1.5 U	2 U	1.75 U	1.5 U
METALS (MG/KG)												
ALUMINUM	34.1 J	697	20.9 J	85.7	91.6	15.9 J	18.7 J	26.9 J	27.8	17.3	22.6	386
ANTIMONY	0.97 U	2 UJ	1.1 U	1.6 UJ	1.7 UJ	1 U	0.98 U	0.962 U	1 U	1.1 U	1.05 U	1.9 UJ
ARSENIC	7.2	7.1 J	6	8 J	7.8 J	3.5	2.4	2.1	2.6	2.4	2.5	8.9 J
BARIUM	1.5	5.5	0.783	4.3	3.8	0.535	0.086 UJ	0.255 J	0.166 UJ	0.493 UJ	0.33 UJ	5.8
BERYLLIUM	0.097 UJ	0.063 J	0.106 UJ	0.159 UJ	0.026 UJ	0.1 UJ	0.098 U	0.096 U	0.101 U	0.049 U	0.075 U	0.195 UJ
CADMIUM	0.23	0.128 J	0.157	0.155 J	0.289	0.156	0.171	0.153	0.191	0.146	0.168	0.052 J
CALCIUM	1360 J	61100 J	2890 J	75600 J	78400 J	2510 J	751 J	2060 J	1350	1550	1450	42900 J
CHROMIUM	0.546	6	0.367	0.508 U	0.49 U	0.181 J	0.174 J	0.215	0.193 J	0.175 J	0.184 J	1.5

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET524-0610_2010604	GI-ET525-0610	GI-ET525-0610_20100604	GI-ET523-0610	GI-ET529-0610	GI-ET530-0510	GI-ET502-0510	GI-ET505-0510	GI-ET505-0510-D	GI-ET505-0510-AVG	GI-ET507-0610
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	G32-SD313F	G32-SD314	G32-SD317	GI-SD402	GI-SD404	GI-SD404	GI-SD404	GI-SD410
SAMPLE DATE	06/02/10	06/04/10	06/02/10	06/04/10	06/04/10	06/02/10	05/26/10	05/26/10	05/26/10	05/26/10	05/26/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	CL	SC	CL	GC	GC	CL	MU	MU	MU	MU	MU	SC
COBALT	0.225 J	0.471 J	0.235 J	0.362 J	0.168 J	0.1 J	0.091 J	0.087 J	0.104 J	0.099 J	0.102 J	0.365 J
COPPER	4	56.6	3.4	28.4	31.6	2.7	1.4	1.4	1.8	1.6	1.7	31.2
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	62.9 J	992	41.5 J	290	197	36.4 J	99.6 J	58.3 J	54.1 J	41.6 J	47.8 J	812
LEAD	0.574	6.1 J	0.265	1.2 J	0.763 J	0.245	0.291	0.287	0.333	0.315	0.324	2 J
MAGNESIUM	828	5560	726	3530	3280	609	614	680	654	627	640	5050
MANGANESE	5.9	65.9	7	53.1	32.3	12.1	3	3	3.2	3.4	3.3	112
MERCURY	0.042	0.049 J	0.026	0.082	0.043	0.012 J	0.015 J	0.014 J	0.014 J	0.018 J	0.016 J	0.066 J
NICKEL	0.86	7.1	0.559 J	0.637 J	0.978 J	0.291 J	0.269 J	0.272 J	0.298 J	0.323 J	0.31 J	1.8
POTASSIUM	3050	2280 J	3110	1370 J	2120 J	2710	2530	2160	2620	2530	2580	2100 J
SELENIUM	1.2	1.1 J	0.937	1.1 J	1.2 J	0.69	0.806	0.863	0.938	0.947	0.942	1.3 J
SILVER	0.358	0.216 J	0.817	0.145 J	0.296 J	0.48	0.012 J	0.022 J	0.018 J	0.018 J	0.018 J	0.224 J
SODIUM	4860	5710 J	4070	4530 J	5620 J	3510	3790	4210	4210	3900	4060	4660 J
THALLIUM	3 U	0.005 J	3.7 U	5.2 U	5.9 U	3.4 U	3.4 U	3.3 U	3.5 U	3.3 U	3.4 U	6.8 U
VANADIUM	0.58 J	2.1 J	0.408 J	0.841 J	0.598 J	0.195 J	0.235 J	0.199 J	0.257 J	0.208 J	0.232 J	1.7 J
ZINC	17	50.5	16.7	32	37.4	15.2	15.8	16.2	20.8	16.1	18.4	34.8
MISCELLANEOUS PARAMETERS (%)												
LIPIDS	4.23	0.687	2.99	0.5 U	0.5 U	4.02	0.884	1.06	0.641	0.757	0.699	0.5 U

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET509-0610	GI-ET509-0610-D	GI-ET509-0610-AVG	GI-ET504-0510	GI-ET527-0610	GI-ET514-0610	GI-ET515-0610	GI-ET566-0510-A	GI-ET566-0510-B	GI-ET517-0510	GI-ET518-0510	GI-ET518-0510-D
LOCATION ID	DSY-JPC-01	GI-SD411	GI-SD411	GI-SD411	GI-SD413	GI-SD414	GI-SD432	GI-SD434	GI-SD435	GI-SD435	GI-SD437	GI-SD447	GI-SD447
SAMPLE DATE	06/02/10	06/04/10	06/04/10	06/04/10	05/26/10	06/04/10	06/04/10	06/04/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10
SACODE	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	CL	SC	SC	SC	CL	SC	SC	SC	CL	CL	MU	MU	MU
QC TYPE	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

LIGHT SHADING - DETECTED;
U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET509-0610	GI-ET509-0610-D	GI-ET509-0610-AVG	GI-ET504-0510	GI-ET527-0610	GI-ET514-0610	GI-ET515-0610	GI-ET566-0510-A	GI-ET566-0510-B	GI-ET517-0510	GI-ET518-0510	GI-ET518-0510-D
LOCATION ID	DSY-JPC-01	GI-SD411	GI-SD411	GI-SD411	GI-SD413	GI-SD414	GI-SD432	GI-SD434	GI-SD435	GI-SD435	GI-SD437	GI-SD447	GI-SD447
SAMPLE DATE	06/02/10	06/04/10	06/04/10	06/04/10	05/26/10	06/04/10	06/04/10	06/04/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10
SACODE	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	CL	SC	SC	SC	CL	SC	SC	SC	CL	CL	MU	MU	MU
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(B)FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(G,H,I)PERYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(K)FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET509-0610	GI-ET509-0610-D	GI-ET509-0610-AVG	GI-ET504-0510	GI-ET527-0610	GI-ET514-0610	GI-ET515-0610	GI-ET566-0510-A	GI-ET566-0510-B	GI-ET517-0510	GI-ET518-0510	GI-ET518-0510-D
LOCATION ID	DSY-JPC-01	GI-SD411	GI-SD411	GI-SD411	GI-SD413	GI-SD414	GI-SD432	GI-SD434	GI-SD435	GI-SD435	GI-SD437	GI-SD447	GI-SD447
SAMPLE DATE	06/02/10	06/04/10	06/04/10	06/04/10	05/26/10	06/04/10	06/04/10	06/04/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10
SACODE	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	CL	SC	SC	SC	CL	SC	SC	SC	CL	CL	MU	MU	MU
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIBENZO(A,H)ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET509-0610	GI-ET509-0610-D	GI-ET509-0610-AVG	GI-ET504-0510	GI-ET527-0610	GI-ET514-0610	GI-ET515-0610	GI-ET566-0510-A	GI-ET566-0510-B	GI-ET517-0510	GI-ET518-0510	GI-ET518-0510-D
LOCATION ID	DSY-JPC-01	GI-SD411	GI-SD411	GI-SD411	GI-SD413	GI-SD414	GI-SD432	GI-SD434	GI-SD435	GI-SD435	GI-SD437	GI-SD447	GI-SD447
SAMPLE DATE	06/02/10	06/04/10	06/04/10	06/04/10	05/26/10	06/04/10	06/04/10	06/04/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10
SACODE	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	CL	SC	SC	SC	CL	SC	SC	SC	CL	CL	MU	MU	MU
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET509-0610	GI-ET509-0610-D	GI-ET509-0610-AVG	GI-ET504-0510	GI-ET527-0610	GI-ET514-0610	GI-ET515-0610	GI-ET566-0510-A	GI-ET566-0510-B	GI-ET517-0510	GI-ET518-0510	GI-ET518-0510-D
LOCATION ID	DSY-JPC-01	GI-SD411	GI-SD411	GI-SD411	GI-SD413	GI-SD414	GI-SD432	GI-SD434	GI-SD435	GI-SD435	GI-SD437	GI-SD447	GI-SD447
SAMPLE DATE	06/02/10	06/04/10	06/04/10	06/04/10	05/26/10	06/04/10	06/04/10	06/04/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10
SACODE	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	CL	SC	SC	SC	CL	SC	SC	SC	CL	CL	MU	MU	MU
AROCLOR-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)													

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET509-0610	GI-ET509-0610-D	GI-ET509-0610-AVG	GI-ET504-0510	GI-ET527-0610	GI-ET514-0610	GI-ET515-0610	GI-ET566-0510-A	GI-ET566-0510-B	GI-ET517-0510	GI-ET518-0510	GI-ET518-0510-D
LOCATION ID	DSY-JPC-01	GI-SD411	GI-SD411	GI-SD411	GI-SD413	GI-SD414	GI-SD432	GI-SD434	GI-SD435	GI-SD435	GI-SD437	GI-SD447	GI-SD447
SAMPLE DATE	06/02/10	06/04/10	06/04/10	06/04/10	05/26/10	06/04/10	06/04/10	06/04/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10
SACODE	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	CL	SC	SC	SC	CL	SC	SC	SC	CL	CL	MU	MU	MU
DECACHLOROBIPHENYL	2.5 U	7.3 U	7.4 U	7.35 U	7.5 U	7.4 U	7.3 U	7.4 U	5 UJ	2.5 U	7.5 U	5 U	7.5 U
DICHLOROBIPHENYLS	0.51 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	2.4 J	1.5 U	1 UJ	0.51 UJ	1.5 U	1 UJ	1.5 U
HEPTACHLOROBIPHENYLS	1.3 U	23	18	20.5	15 J	18	8 J	13 J	21 J	8.8	9.3 J	9.8 J	3.8 U
HEXACHLOROBIPHENYL	2.2 J	80 J	46 J	63 J	25	45	24	31	19 J	16	34	36	32
MONOCHLOROBIPHENYLS	0.51 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1 UJ	0.51 UJ	1.5 UJ	1 UJ	1.5 U
NONACHLOROBIPHENYLS	2.5 U	7.3 U	7.4 U	7.35 U	7.5 UJ	7.4 U	7.3 U	7.4 U	5 UJ	2.5 U	7.5 UJ	5 U	7.5 U
PENTACHLOROBIPHENYLS	1 U	32	22	27	3 U	11 J	16 J	3 U	2 UJ	5 J	14 J	29 J	11 J
TETRACHLOROBIPHENYLS	1 U	2.9 U	2.9 U	2.9 U	3 U	2.9 U	2.9 U	3 U	2 UJ	1 U	3 U	2.8 J	3.3 J
TOTAL OCTACHLOROBIPHENYLS	1.3 U	3.7 U	3.8 U	3.75 U	3.8 U	3.7 U	3.7 U	3.8 U	2.5 UJ	1.3 U	3.8 U	2.5 U	3.8 U
TOTAL PCB HOMOLOGS	NA	135 J	86 J	110 J	40 J	74 J	50.4 J	44 J	40 J	29.8 J	57.3 J	77.6 J	46.3 J
TOTAL PCB HOMOLOGS-HALFND	NA	148 J	99 J	124 J	54.6 J	87 J	62.5 J	58.6 J	49.8 J	34.2 J	70.4 J	85.4 J	59.8 J
TOTAL TRICHLOROBIPHENYLS	0.51 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1 UJ	0.51 U	1.5 U	1 U	1.5 U
METALS (MG/KG)													
ALUMINUM	34.1 J	435	502	468	32.2 J	411	345	429	35.5 J	13.1 J	38.8 J	25.2 J	59.9 J
ANTIMONY	0.97 U	2 UJ	1.9 UJ	1.95 UJ	0.743 U	1.9 UJ	1.7 UJ	1.8 UJ	0.974 U	1.2 U	1.1 U	1.2 U	1.1 U
ARSENIC	7.2	7.6 J	9 J	8.3 J	3.2	8.5 J	7.3 J	6.3 J	3.5	3.7	2.5	2.5	2.8
BARIUM	1.5	6.3	6	6.15	0.754	5.9	6.2	5.2	0.754	0.44 J	0.181 UJ	0.547 UJ	0.307 J
BERYLLIUM	0.097 UJ	0.2 UJ	0.044 J	0.072 J	0.074 UJ	0.04 UJ	0.168 UJ	0.179 UJ	0.097 UJ	0.097 UJ	0.106 U	0.117 U	0.109 UJ
CADMIUM	0.23	0.047 J	0.054 J	0.0505 J	0.18	0.052 J	0.052 J	0.082 J	0.195	0.123	0.198	0.174	0.226
CALCIUM	1360 J	59300 J	56300 J	57800 J	1460 J	68200 J	56300 J	87500 J	3580 J	3240 J	1240 J	801 J	1900 J
CHROMIUM	0.546	2.1	2.6	2.35	0.275	1.8	2.3	3.4	0.457	0.533	0.321	0.229 J	0.626

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET509-0610	GI-ET509-0610-D	GI-ET509-0610-AVG	GI-ET504-0510	GI-ET527-0610	GI-ET514-0610	GI-ET515-0610	GI-ET566-0510-A	GI-ET566-0510-B	GI-ET517-0510	GI-ET518-0510	GI-ET518-0510-D
LOCATION ID	DSY-JPC-01	GI-SD411	GI-SD411	GI-SD411	GI-SD413	GI-SD414	GI-SD432	GI-SD434	GI-SD435	GI-SD435	GI-SD437	GI-SD447	GI-SD447
SAMPLE DATE	06/02/10	06/04/10	06/04/10	06/04/10	05/26/10	06/04/10	06/04/10	06/04/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10
SACODE	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	CL	SC	SC	SC	CL	SC	SC	SC	CL	CL	MU	MU	MU
COBALT	0.225 J	0.341 J	0.425 J	0.383 J	0.147 J	0.337 J	0.347 J	0.325 J	0.176 J	0.163 J	0.124 J	0.088 J	0.128 J
COPPER	4	37.2	35.9	36.6	1.9	31.2	26.6	30.6	2.3	2.1	1.7	1.7	1.8
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	62.9 J	846	915	880	81.1 J	790	800	762	84.7 J	38.8 J	92.2 J	60.5 J	143 J
LEAD	0.574	2.4 J	2.3 J	2.35 J	1.4	1.8 J	1.7 J	1.9 J	0.549	0.251	0.705	0.322	0.474
MAGNESIUM	828	5610	4970	5290	838	4990	5340	4170	694	784	668	656	737
MANGANESE	5.9	101	103	102	6.7	108	133	97.3	6.9	9.3	3.7	2.8	4.9
MERCURY	0.042	0.049 J	0.047 J	0.048 J	0.016	0.032 J	0.027	0.037	0.006 J	0.012 J	0.013 J	0.015 J	0.017 J
NICKEL	0.86	3	2.6	2.8	0.546 J	2.2	2.4	4.5	0.59 J	0.544 J	0.329 J	0.3 J	0.465 J
POTASSIUM	3050	1860 J	1980 J	1920 J	2250	2040 J	1540 J	1200 J	2650	3120	2610	2670	2830
SELENIUM	1.2	0.958 J	1.4 J	1.18 J	0.713	1.2 J	0.859 J	1.1 J	0.748	0.782	0.876	0.78	0.987
SILVER	0.358	0.127 J	0.34 J	0.234 J	0.213	0.246 J	0.246 J	0.169 J	0.407	0.247	0.014 J	0.016 J	0.011 J
SODIUM	4860	4620 J	5020 J	4820 J	5560	5000 J	3690 J	3620 J	3990	4450	4190	3980	4600
THALLIUM	3 U	6.1 U	6.4 U	6.25 U	2.5 U	5.7 U	0.004 J	6 U	3.5 U	4.1 U	3.7 U	3.7 U	0.002 J
VANADIUM	0.58 J	1.8 J	2 J	1.9 J	0.208 J	1.7 J	1.5 J	1.6 J	0.294 J	0.19 J	0.234 J	0.17 J	0.263 J
ZINC	17	36.4	38.6	37.5	15.2	35	26.8	32.4	15.1	18.4	19.5	16.6	20.7
MISCELLANEOUS PARAMETERS (%)													
LIPIDS	4.23	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.702	1.2	0.582

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET518-0510-AVG	GI-ET526-0610	GI-ET526-0610_20100604
LOCATION ID	DSY-JPC-01	GI-SD447	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	06/02/10	05/27/10	06/02/10	06/04/10
SACODE	NORMAL	AVG	NORMAL	NORMAL
SUBMATRIX	CL	MU	CL	SC
QC TYPE	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)				
1,1-BIPHENYL	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA
2-METHYLNAPHTHALENE	NA	NA	NA	NA
2-METHYLPHENOL	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET518-0510-AVG	GI-ET526-0610	GI-ET526-0610_20100604
LOCATION ID	DSY-JPC-01	GI-SD447	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	06/02/10	05/27/10	06/02/10	06/04/10
SACODE	NORMAL	AVG	NORMAL	NORMAL
SUBMATRIX	CL	MU	CL	SC
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA
ACENAPHTHENE	NA	NA	NA	NA
ACENAPHTHYLENE	NA	NA	NA	NA
ACETOPHENONE	NA	NA	NA	NA
ANTHRACENE	NA	NA	NA	NA
ATRAZINE	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA
BENZO(A)ANTHRACENE	NA	NA	NA	NA
BENZO(A)PYRENE	NA	NA	NA	NA
BENZO(B)FLUORANTHENE	NA	NA	NA	NA
BENZO(G,H,I)PERYLENE	NA	NA	NA	NA
BENZO(K)FLUORANTHENE	NA	NA	NA	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET518-0510-AVG	GI-ET526-0610	GI-ET526-0610_20100604
LOCATION ID	DSY-JPC-01	GI-SD447	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	06/02/10	05/27/10	06/02/10	06/04/10
SACODE	NORMAL	AVG	NORMAL	NORMAL
SUBMATRIX	CL	MU	CL	SC
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA
CHRYSENE	NA	NA	NA	NA
DIBENZO(A,H)ANTHRACENE	NA	NA	NA	NA
DIBENZOFURAN	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA
FLUORANTHENE	NA	NA	NA	NA
FLUORENE	NA	NA	NA	NA
HEXACHLOROBENZENE	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	NA	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	NA

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET518-0510-AVG	GI-ET526-0610	GI-ET526-0610_20100604
LOCATION ID	DSY-JPC-01	GI-SD447	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	06/02/10	05/27/10	06/02/10	06/04/10
SACODE	NORMAL	AVG	NORMAL	NORMAL
SUBMATRIX	CL	MU	CL	SC
ISOPHORONE	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	NA	NA	NA	NA
NAPHTHALENE	NA	NA	NA	NA
NITROBENZENE	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA
PHENANTHRENE	NA	NA	NA	NA
PHENOL	NA	NA	NA	NA
PYRENE	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA
TOTAL PAHS	NA	NA	NA	NA
PESTICIDES/PCBS (UG/KG)				
4,4'-DDD	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA
AROCLOR-1016	NA	NA	NA	NA
AROCLOR-1221	NA	NA	NA	NA

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET518-0510-AVG	GI-ET526-0610	GI-ET526-0610_20100604
LOCATION ID	DSY-JPC-01	GI-SD447	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	06/02/10	05/27/10	06/02/10	06/04/10
SACODE	NORMAL	AVG	NORMAL	NORMAL
SUBMATRIX	CL	MU	CL	SC
AROCLOR-1232	NA	NA	NA	NA
AROCLOR-1242	NA	NA	NA	NA
AROCLOR-1248	NA	NA	NA	NA
AROCLOR-1254	NA	NA	NA	NA
AROCLOR-1260	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA
TOTAL AROCLOR	NA	NA	NA	NA
TOTAL CHLORDANE	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)				

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET518-0510-AVG	GI-ET526-0610	GI-ET526-0610_20100604
LOCATION ID	DSY-JPC-01	GI-SD447	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	06/02/10	05/27/10	06/02/10	06/04/10
SACODE	NORMAL	AVG	NORMAL	NORMAL
SUBMATRIX	CL	MU	CL	SC
DECACHLOROBIPHENYL	2.5 U	6.25 U	5 U	7.3 U
DICHLOROBIPHENYLS	0.51 U	1.25 UJ	1 U	1.5 U
HEPTACHLOROBIPHENYLS	1.3 U	5.85 J	2.5 U	3.7 U
HEXACHLOROBIPHENYL	2.2 J	34	6.2 J	22
MONOCHLOROBIPHENYLS	0.51 U	1.25 UJ	1 U	1.5 U
NONACHLOROBIPHENYLS	2.5 U	6.25 U	5 U	7.3 U
PENTACHLOROBIPHENYLS	1 U	20 J	2 U	2.9 U
TETRACHLOROBIPHENYLS	1 U	3.05 J	2 U	2.9 U
TOTAL OCTACHLOROBIPHENYLS	1.3 U	3.15 U	2.5 U	3.7 U
TOTAL PCB HOMOLOGS	NA	62 J	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	72.6 J	NA	NA
TOTAL TRICHLOROBIPHENYLS	0.51 U	1.25 U	1 U	1.5 U
METALS (MG/KG)				
ALUMINUM	34.1 J	42.6 J	46.7 J	601
ANTIMONY	0.97 U	1.15 U	0.968 U	2 UJ
ARSENIC	7.2	2.65	3.6	9.9 J
BARIUM	1.5	0.29 J	0.982	6.5
BERYLLIUM	0.097 UJ	0.113 UJ	0.097 UJ	0.05 J
CADMIUM	0.23	0.2	0.183	0.064 J
CALCIUM	1360 J	1350 J	3690 J	44400 J
CHROMIUM	0.546	0.428 J	0.303	8.2

TABLE - D12
ANALYTICAL RESULTS -
GI_ET
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET518-0510-AVG	GI-ET526-0610	GI-ET526-0610_20100604
LOCATION ID	DSY-JPC-01	GI-SD447	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	06/02/10	05/27/10	06/02/10	06/04/10
SACODE	NORMAL	AVG	NORMAL	NORMAL
SUBMATRIX	CL	MU	CL	SC
COBALT	0.225 J	0.108 J	0.202 J	0.566 J
COPPER	4	1.75	2.5	47.5
CYANIDE	NA	NA	NA	NA
IRON	62.9 J	102 J	107 J	1030
LEAD	0.574	0.398	1.1	2.5 J
MAGNESIUM	828	696	705	5340
MANGANESE	5.9	3.85	20.6	143
MERCURY	0.042	0.016 J	0.016 J	0.05 J
NICKEL	0.86	0.382 J	0.464 J	10.4
POTASSIUM	3050	2750	2510	2470 J
SELENIUM	1.2	0.884	0.764	1.4 J
SILVER	0.358	0.0135 J	0.58	0.194 J
SODIUM	4860	4290	4100	5680 J
THALLIUM	3 U	0.926 J	3.2 U	0.004 J
VANADIUM	0.58 J	0.216 J	0.315 J	2.2
ZINC	17	18.6	18.5	47.1
MISCELLANEOUS PARAMETERS (%)				
LIPIDS	4.23	0.891	3.32	0.5 U

D-4 COMPULATION OF DATA FOR 2005-2010

TABLE D-4.1
ANALYTICAL RESULTS - GROUNDWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-GWMW300B-5767	G32-GWMW300B-6777	G32-GWMW300B-7784	G32-MW300B	G32-MW300S	G32-MW300S-D	G32-MW300S-AVG	G32-MW301B	G32-MW301S	G32-MW302B	G32-MW302S	G32-MW302S-D	G32-MW302S-AVG
LOCATION ID	G32-MW300B	G32-MW300B	G32-MW300B	G32-MW300B	G32-MW300S	G32-MW300S	G32-MW300S	G32-MW301B	G32-MW301S	G32-MW302B	G32-MW302S	G32-MW302S	G32-MW302S
SAMPLE DATE	06/17/05	06/17/05	06/20/05	07/25/05	07/20/05	07/20/05	07/20/05	07/21/05	07/21/05	07/25/05	07/26/05	07/26/05	07/26/05
TOP DEPTH	57 FT	67 FT	77 FT	53 FT	4 FT	4 FT	4 FT	37 FT	19.5 FT	54 FT	14 FT	14 FT	14 FT
BOTTOM DEPTH	67 FT	77 FT	84 FT	83 FT	14 FT	14 FT	14 FT	67 FT	29.5 FT	84 FT	24 FT	24 FT	24 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	PT	PT	PT	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	FD	NM
VOLATILES (UG/L)													
1,1,1-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-TRICHLOROBENZENE	1 U	1 U	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 UJ	5 UJ	5 U	5 UJ
1,2-DIBROMOETHANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROPROPANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
1,3-DICHLOROBENZENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
2-BUTANONE	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
2-HEXANONE	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
4-METHYL-2-PENTANONE	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
ACETONE	2 J	1 J	2 J	5 UJ	9 UJ	8 UJ	8.5 UJ	5 UJ	5 UJ	51 U	5 U	5 UJ	5 UJ
BENZENE	1 U	1 U	1 U	1 U	3 J	3 J	3 J	1 U	1 U	1 U	1 U	1 U	1 U
BROMODICHLOROMETHANE	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 U	1 U	1 UJ	1 UJ
BROMOFORM	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
BTEX	1 U	1 U	1 U	1 U	4 J	4 J	4 J	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
CARBON TETRACHLORIDE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBENZENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
CHLORODIBROMOMETHANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 UJ	2 J	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
CHLOROMETHANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
CIS-1,2-DICHLOROETHENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
CIS-1,3-DICHLOROPROPENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 UJ	1 UJ	1 U	1 UJ
DICHLORODIFLUOROMETHANE	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 U	1 U	1 UJ	1 UJ
ETHYLBENZENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
ISOPROPYLBENZENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
M+P-XYLENES	1 U	1 U	1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.1
ANALYTICAL RESULTS - GROUNDWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-GWMW300B-5767	G32-GWMW300B-6777	G32-GWMW300B-7784	G32-MW300B	G32-MW300S	G32-MW300S-D	G32-MW300S-AVG	G32-MW301B	G32-MW301S	G32-MW302B	G32-MW302S	G32-MW302S-D	G32-MW302S-AVG
LOCATION ID	G32-MW300B	G32-MW300B	G32-MW300B	G32-MW300B	G32-MW300S	G32-MW300S	G32-MW300S	G32-MW301B	G32-MW301S	G32-MW302B	G32-MW302S	G32-MW302S	G32-MW302S
SAMPLE DATE	06/17/05	06/17/05	06/20/05	07/25/05	07/20/05	07/20/05	07/20/05	07/21/05	07/21/05	07/25/05	07/26/05	07/26/05	07/26/05
TOP DEPTH	57 FT	67 FT	77 FT	53 FT	4 FT	4 FT	4 FT	37 FT	19.5 FT	54 FT	14 FT	14 FT	14 FT
BOTTOM DEPTH	67 FT	77 FT	84 FT	83 FT	14 FT	14 FT	14 FT	67 FT	29.5 FT	84 FT	24 FT	24 FT	24 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	PT	PT	PT	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	FD	NM
METHYL CYCLOHEXANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 UJ	1 UJ	1 U	1 UJ
METHYL TERT-BUTYL ETHER	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
METHYLENE CHLORIDE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	2 U	1 U	1 U	1 U	1 U
O-XYLENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
P-XYLENE	NA	NA	NA	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
STYRENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	1 U	1 U	1 U	1 U	6 J	6 J	6 J	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	1 U	1 U	1 U	1 U	1 J	1 J	1 J	1 U	1 U	1 U	1 U	1 U	1 U
TOTAL 1,2-DICHLOROETHENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
TOTAL CHLORINATED ETHENES	1 U	1 U	1 U	1 U	6 J	6 J	6 J	1 U	1 U	1 U	1 U	1 U	1 U
TOTAL CHLORINATED VOCS	1.16 U	1.16 U	1.16 U	1.16 UJ	6 J	6 J	6 J	1.16 UJ	1.16 UJ	1.16 UJ	1.16 UJ	1.16 UJ	1.16 UJ
TOTAL XYLENES	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
TRANS-1,2-DICHLOROETHENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
TRANS-1,3-DICHLOROPROPENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHENE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROFLUOROMETHANE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
VINYL CHLORIDE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
SEMIVOLATILES (UG/L)													
1,1-BIPHENYL	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4,5-TRICHLOROPHENOL	NA	NA	NA	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
2,4,6-TRICHLOROPHENOL	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DICHLOROPHENOL	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DIMETHYLPHENOL	NA	NA	NA	10 R	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DINITROPHENOL	NA	NA	NA	20 U	20 R	20 R	20 R	20 R	20 R	20 UJ	20 UJ	20 R	20 UJ
2,4-DINITROTOLUENE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,6-DINITROTOLUENE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLORONAPHTHALENE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROPHENOL	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-METHYLNAPHTHALENE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2-METHYLPHENOL	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-NITROANILINE	NA	NA	NA	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
2-NITROPHENOL	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3,3'-DICHLOROBENZIDINE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3-NITROANILINE	NA	NA	NA	20 UJ	20 U	20 U	20 U	20 U	20 U	20 UJ	20 UJ	20 U	20 UJ
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	20 U	20 U	20 U	20 U	20 U	20 U	20 UJ	20 UJ	20 U	20 UJ
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROANILINE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.1
ANALYTICAL RESULTS - GROUNDWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-GWMW300B-5767	G32-GWMW300B-6777	G32-GWMW300B-7784	G32-MW300B	G32-MW300S	G32-MW300S-D	G32-MW300S-AVG	G32-MW301B	G32-MW301S	G32-MW302B	G32-MW302S	G32-MW302S-D	G32-MW302S-AVG
LOCATION ID	G32-MW300B	G32-MW300B	G32-MW300B	G32-MW300B	G32-MW300S	G32-MW300S	G32-MW300S	G32-MW301B	G32-MW301S	G32-MW302B	G32-MW302S	G32-MW302S	G32-MW302S
SAMPLE DATE	06/17/05	06/17/05	06/20/05	07/25/05	07/20/05	07/20/05	07/20/05	07/21/05	07/21/05	07/25/05	07/26/05	07/26/05	07/26/05
TOP DEPTH	57 FT	67 FT	77 FT	53 FT	4 FT	4 FT	4 FT	37 FT	19.5 FT	54 FT	14 FT	14 FT	14 FT
BOTTOM DEPTH	67 FT	77 FT	84 FT	83 FT	14 FT	14 FT	14 FT	67 FT	29.5 FT	84 FT	24 FT	24 FT	24 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	PT	PT	PT	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	FD	NM
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-METHYLPHENOL	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-NITROANILINE	NA	NA	NA	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
4-NITROPHENOL	NA	NA	NA	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
ACENAPHTHENE	NA	NA	NA	0.1 U	0.13	0.13	0.13	0.1 U	0.15	0.1 U	0.1 U	0.1 U	0.1 U
ACENAPHTHYLENE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ACETOPHENONE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ANTHRACENE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ATRAZINE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZALDEHYDE	NA	NA	NA	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
BENZO(A)ANTHRACENE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.27	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(A)PYRENE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.14	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(B)FLUORANTHENE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.29	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(G,H,I)PERYLENE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1	0.16	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(K)FLUORANTHENE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11	0.1 U	0.1 U	0.1 U	0.1 U
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	2 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BUTYL BENZYL PHTHALATE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
CAPROLACTAM	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
CARBAZOLE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
CHRYSENE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.27	0.1 U	0.1 U	0.1 U	0.1 U
DIBENZO(A,H)ANTHRACENE	NA	NA	NA	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 U	0.1 U	0.1 UJ	0.1 UJ
DIBENZOFURAN	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIETHYL PHTHALATE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIMETHYL PHTHALATE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DI-N-BUTYL PHTHALATE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DI-N-OCTYL PHTHALATE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
FLUORANTHENE	NA	NA	NA	0.1 U	0.12 J	0.15 J	0.135 J	0.1 U	0.65 J	0.1 U	0.1 U	0.1 U	0.1 U
FLUORENE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
HEXACHLOROBENZENE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROBUTADIENE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROETHANE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HIGH MOLECULAR WEIGHT PAHS	NA	NA	NA	0.1 UJ	0.22 J	0.27 J	0.245 J	0.1 J	2.52 J	0.1 U	0.1 U	0.1 UJ	0.1 UJ
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.14	0.1 U	0.1 U	0.1 U	0.1 U
ISOPHORONE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
LOW MOLECULAR WEIGHT PAHS	NA	NA	NA	0.1 U	0.47	0.49	0.48	0.26	0.5	0.1 U	0.1 U	0.1 U	0.1 U
NAPHTHALENE	NA	NA	NA	0.1 U	0.18	0.16	0.17	0.11	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

TABLE D-4.1
ANALYTICAL RESULTS - GROUNDWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-GWMW300B-5767	G32-GWMW300B-6777	G32-GWMW300B-7784	G32-MW300B	G32-MW300S	G32-MW300S-D	G32-MW300S-AVG	G32-MW301B	G32-MW301S	G32-MW302B	G32-MW302S	G32-MW302S-D	G32-MW302S-AVG
LOCATION ID	G32-MW300B	G32-MW300B	G32-MW300B	G32-MW300B	G32-MW300S	G32-MW300S	G32-MW300S	G32-MW301B	G32-MW301S	G32-MW302B	G32-MW302S	G32-MW302S	G32-MW302S
SAMPLE DATE	06/17/05	06/17/05	06/20/05	07/25/05	07/20/05	07/20/05	07/20/05	07/21/05	07/21/05	07/25/05	07/26/05	07/26/05	07/26/05
TOP DEPTH	57 FT	67 FT	77 FT	53 FT	4 FT	4 FT	4 FT	37 FT	19.5 FT	54 FT	14 FT	14 FT	14 FT
BOTTOM DEPTH	67 FT	77 FT	84 FT	83 FT	14 FT	14 FT	14 FT	67 FT	29.5 FT	84 FT	24 FT	24 FT	24 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	PT	PT	PT	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	FD	NM
NITROBENZENE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-NITROSODIPHENYLAMINE	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PENTACHLOROPHENOL	NA	NA	NA	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
PHENANTHRENE	NA	NA	NA	0.1 U	0.16	0.2	0.18	0.15	0.35	0.1 U	0.1 U	0.1 U	0.1 U
PHENOL	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PYRENE	NA	NA	NA	0.1 U	0.1	0.12	0.11	0.1 U	0.49	0.1 U	0.1 U	0.1 U	0.1 U
TOTAL CARCINOGENIC PAHS-HALFND	NA	NA	NA	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	1.27 J	0.1 U	0.1 U	0.1 UJ	0.1 UJ
TOTAL CARCINOGENIC PAHS-POS	NA	NA	NA	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	1.22 J	0.1 U	0.1 U	0.1 UJ	0.1 UJ
TOTAL CHLORINATED VOCS	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
TOTAL PAHS	NA	NA	NA	0.1 UJ	0.69 J	0.76 J	0.725 J	0.36 J	3.02 J	0.1 U	0.1 U	0.1 UJ	0.1 UJ
PESTICIDES/PCBS (UG/L)													
4,4'-DDD	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ALDRIN	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ALPHA-BHC	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ALPHA-CHLORDANE	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
AROCLOR-1016	NA	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1221	NA	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1232	NA	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1242	NA	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1248	NA	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1254	NA	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1260	NA	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BETA-BHC	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DELTA-BHC	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DIELDRIN	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDOSULFAN I	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDOSULFAN II	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDOSULFAN SULFATE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDRIN	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDRIN ALDEHYDE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDRIN KETONE	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
GAMMA-BHC (LINDANE)	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
GAMMA-CHLORDANE	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
HEPTACHLOR	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
HEPTACHLOR EPOXIDE	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
METHOXYCHLOR	NA	NA	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.1
ANALYTICAL RESULTS - GROUNDWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-GWMW300B-5767	G32-GWMW300B-6777	G32-GWMW300B-7784	G32-MW300B	G32-MW300S	G32-MW300S-D	G32-MW300S-AVG	G32-MW301B	G32-MW301S	G32-MW302B	G32-MW302S	G32-MW302S-D	G32-MW302S-AVG
LOCATION ID	G32-MW300B	G32-MW300B	G32-MW300B	G32-MW300B	G32-MW300S	G32-MW300S	G32-MW300S	G32-MW301B	G32-MW301S	G32-MW302B	G32-MW302S	G32-MW302S	G32-MW302S
SAMPLE DATE	06/17/05	06/17/05	06/20/05	07/25/05	07/20/05	07/20/05	07/20/05	07/21/05	07/21/05	07/25/05	07/26/05	07/26/05	07/26/05
TOP DEPTH	57 FT	67 FT	77 FT	53 FT	4 FT	4 FT	4 FT	37 FT	19.5 FT	54 FT	14 FT	14 FT	14 FT
BOTTOM DEPTH	67 FT	77 FT	84 FT	83 FT	14 FT	14 FT	14 FT	67 FT	29.5 FT	84 FT	24 FT	24 FT	24 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	PT	PT	PT	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	FD	NM
TOTAL AROCLOR	NA	NA	NA	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOTAL CHLORDANE	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TOTAL DDD/DDE/DDT	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
TOXAPHENE	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
METALS (UG/L)													
ALUMINUM	NA	NA	NA	197 J	508 J	172 J	340 J	516 J	275 J	450 J	38.2 J	90.9 UJ	41.8 J
ANTIMONY	NA	NA	NA	1.8 UJ	2.6 U	2.1 UJ	2.35 UJ	1.2 U	1.2 U	1.2 U	1.2 U	4 U	2.6 U
ARSENIC	NA	NA	NA	5.4	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	5.8 U	2 UJ	1.6 U	1.8 UJ
BARIUM	NA	NA	NA	34.5	49.9	49.2	49.6	29.7	13.5 U	25.6 J	49.3 J	50.5	49.9 J
BERYLLIUM	NA	NA	NA	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
CADMIUM	NA	NA	NA	0.19 UJ	0.39 U	0.32 U	0.355 U	0.36 U	0.11 UJ	0.1 UJ	0.17 J	0.21 U	0.138 J
CALCIUM	NA	NA	NA	26000	64800	63500	64200	18400	25800	17500	27400	29900	28600
CHROMIUM	NA	NA	NA	0.38 U	0.68 UJ	0.38 U	0.53 UJ	2 U	0.81 U	0.76 U	0.38 U	0.38 U	0.38 U
COBALT	NA	NA	NA	26.7	14	14.5	14.2	38.1	98.5	13 J	14.7 J	16.2	15.4 J
COPPER	NA	NA	NA	6.3 U	11.8 J	8.6 J	10.2 J	6.3 U	6.3 U	6.8 J	6.3 UJ	6.3 U	6.3 UJ
CYANIDE	NA	NA	NA	9.1 U	9.1 U	9.1 U	9.1 U	9.1 U	9.1 U	9.1 UJ	9.1 UJ	9.1 U	9.1 UJ
IRON	NA	NA	NA	18900	2700	2490	2600	2280	473	7020 J	3090 J	3390	3240 J
LEAD	NA	NA	NA	2.3 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 UJ	0.46 UJ	0.46 U	0.46 UJ
MAGNESIUM	NA	NA	NA	6130	26700	26600	26600	7330	2470	3570	12800	13600	13200
MANGANESE	NA	NA	NA	1900	743	767	755	291	168	1030 J	319 J	340	330 J
MERCURY	NA	NA	NA	0.062 UJ	0.092 UJ	0.12 UJ	0.106 UJ	0.062 UJ	0.11 UJ	0.062 U	0.068 UJ	0.068 UJ	0.068 UJ
NICKEL	NA	NA	NA	60	23.5	22.5	23	27.7	25.3	18.1	22.3	23.8	23
POTASSIUM	NA	NA	NA	2810	11900	11400	11600	7090	4540	3240	5300	5120	5210
SELENIUM	NA	NA	NA	0.98 U	0.98 U	0.98 U	0.98 U	1.7 UJ	1.9 UJ	2.1 U	0.98 U	0.98 U	0.98 U
SILVER	NA	NA	NA	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
SODIUM	NA	NA	NA	55300	134000	126000	130000	19100	8490	22300	51500	51100	51300
THALLIUM	NA	NA	NA	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	2 UJ	1.6 UJ
VANADIUM	NA	NA	NA	0.47 U	0.86 UJ	0.47 U	0.665 UJ	0.79 UJ	0.74 UJ	0.74 J	0.47 U	0.47 U	0.47 U
ZINC	NA	NA	NA	86.1	172	161	166	48.4 U	63.4 U	38.3 UJ	28.5 UJ	26.5 U	27.5 UJ
MISCELLANEOUS PARAMETERS (MG/L)													
ALKALINITY	NA	NA	NA	42	120	110	115	42	55	35	20 U	25	17.5
SULFIDE	NA	NA	NA	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
TOTAL ORGANIC CARBON	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PETROLEUM HYDROCARBONS (MG/L)													
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
GASOLINE RANGE ORGANICS	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.1
ANALYTICAL RESULTS - GROUNDWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-MW303B	G32-MW303S	G32-GWMW304B-061005	G32-GWMW304B-103113	G32-GWMW304B-113120	G32-MW304B	G32-MW304S	G32-GWMW305B-6474	G32-GWMW305B-7282	G32-GWMW305B-8495	G32-MW305B	G32-MW305S	G32-MW305S-D
LOCATION ID	G32-MW303B	G32-MW303S	G32-MW304B	G32-MW304B	G32-MW304B	G32-MW304B	G32-MW304S	G32-MW305B	G32-MW305B	G32-MW305B	G32-MW305B	G32-MW305S	G32-MW305S
SAMPLE DATE	07/19/05	07/25/05	06/10/05	06/13/05	06/13/05	07/27/05	07/27/05	06/24/05	06/24/05	06/24/05	07/19/05	07/26/05	07/26/05
TOP DEPTH	14 FT		89 FT	103 FT	113 FT	89 FT	4 FT	64 FT	72 FT	84 FT	65 FT		
BOTTOM DEPTH	49 FT		119 FT	113 FT	120 FT	119 FT	14 FT	74 FT	82 FT	95 FT	95 FT		
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	GW	GW	PT	PT	PT	GW	GW	PT	PT	PT	GW	GW	GW
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
VOLATILES (UG/L)													
1,1,1-TRICHLOROETHANE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
1,1,2-TRICHLOROETHANE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
1,1-DICHLOROETHANE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
1,1-DICHLOROETHENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
1,2,4-TRICHLOROBENZENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE	5 UJ	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ
1,2-DIBROMOETHANE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
1,2-DICHLOROBENZENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
1,2-DICHLOROETHANE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
1,2-DICHLOROPROPANE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
1,3-DICHLOROBENZENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
1,4-DICHLOROBENZENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
2-BUTANONE	5 UJ	5 U	2 J	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 UJ	5 U	2 U
2-HEXANONE	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U
4-METHYL-2-PENTANONE	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U
ACETONE	5 UJ	5 UJ	110	170	150	21 U	6 UJ	3 J	5 U	5 U	5 UJ	10 U	8 U
BENZENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
BROMODICHLOROMETHANE	1 UJ	1 UJ	8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
BROMOFORM	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
BROMOMETHANE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
BTEX	1 UJ	1 U	1	1 U	3	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
CARBON DISULFIDE	1 UJ	1 U	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
CARBON TETRACHLORIDE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
CHLOROBENZENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
CHLORODIBROMOMETHANE	1 UJ	1 U	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
CHLOROETHANE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
CHLOROFORM	1 UJ	1 UJ	17	1	2	1 UJ	1 UJ	1	1	1 U	1 UJ	1 UJ	1 UJ
CHLOROMETHANE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
CIS-1,2-DICHLOROETHENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
CIS-1,3-DICHLOROPROPENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
CYCLOHEXANE	1 UJ	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ
DICHLORODIFLUOROMETHANE	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
ETHYLBENZENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
ISOPROPYLBENZENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	1 U	1 U	1 U	NA	NA	NA
METHYL ACETATE	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U

TABLE D-4.1
ANALYTICAL RESULTS - GROUNDWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-MW303B	G32-MW303S	G32-GWMW304B-061005	G32-GWMW304B-103113	G32-GWMW304B-113120	G32-MW304B	G32-MW304S	G32-GWMW305B-6474	G32-GWMW305B-7282	G32-GWMW305B-8495	G32-MW305B	G32-MW305S	G32-MW305S-D
LOCATION ID	G32-MW303B	G32-MW303S	G32-MW304B	G32-MW304B	G32-MW304B	G32-MW304B	G32-MW304S	G32-MW305B	G32-MW305B	G32-MW305B	G32-MW305B	G32-MW305S	G32-MW305S
SAMPLE DATE	07/19/05	07/25/05	06/10/05	06/13/05	06/13/05	07/27/05	07/27/05	06/24/05	06/24/05	06/24/05	07/19/05	07/26/05	07/26/05
TOP DEPTH	14 FT		89 FT	103 FT	113 FT	89 FT	4 FT	64 FT	72 FT	84 FT	65 FT		
BOTTOM DEPTH	49 FT		119 FT	113 FT	120 FT	119 FT	14 FT	74 FT	82 FT	95 FT	95 FT		
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	GW	GW	PT	PT	PT	GW	GW	PT	PT	PT	GW	GW	GW
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
METHYL CYCLOHEXANE	1 UJ	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 UJ
METHYL TERT-BUTYL ETHER	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
METHYLENE CHLORIDE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 UJ	1 U	1 U
O-XYLENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
P-XYLENE	1 UJ	1 U	1 U	1 U	1	1 U	1 U	NA	NA	NA	1 UJ	1 U	1 U
STYRENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
TETRACHLOROETHENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
TOLUENE	1 UJ	1 U	1	1 U	2	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
TOTAL 1,2-DICHLOROETHENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
TOTAL CHLORINATED ETHENES	1 UJ	1 U	1 U	1 U	1 U	1 U	1	1 U	1 U	1 U	1 UJ	1 U	1 U
TOTAL CHLORINATED VOCS	1.16 UJ	1.16 UJ	12	1.16 U	1.16 U	1.16 UJ	1	1.16 U	1.16 U	1.16 U	1.16 UJ	1.16 UJ	1.16 UJ
TOTAL XYLENES	1 UJ	1 U	1 U	1 U	1	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
TRANS-1,2-DICHLOROETHENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
TRANS-1,3-DICHLOROPROPENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
TRICHLOROETHENE	1 UJ	1 U	1 U	1 U	1 U	1 U	1	1 U	1 U	1 U	1 UJ	1 U	1 U
TRICHLOROFLUOROMETHANE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
VINYL CHLORIDE	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
SEMIVOLATILES (UG/L)													
1,1-BIPHENYL	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
2,4,5-TRICHLOROPHENOL	20 U	20 U	NA	NA	NA	20 U	20 U	NA	NA	NA	20 U	20 U	20 U
2,4,6-TRICHLOROPHENOL	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
2,4-DICHLOROPHENOL	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
2,4-DIMETHYLPHENOL	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
2,4-DINITROPHENOL	20 R	20 R	NA	NA	NA	20 UJ	20 UJ	NA	NA	NA	20 R	20 UJ	20 UJ
2,4-DINITROTOLUENE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
2,6-DINITROTOLUENE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
2-CHLORONAPHTHALENE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
2-CHLOROPHENOL	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
2-METHYLNAPHTHALENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
2-METHYLPHENOL	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
2-NITROANILINE	20 U	20 U	NA	NA	NA	20 U	20 U	NA	NA	NA	20 U	20 U	20 U
2-NITROPHENOL	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
3,3'-DICHLOROBENZIDINE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
3-NITROANILINE	20 U	20 UJ	NA	NA	NA	20 UJ	20 UJ	NA	NA	NA	20 U	20 UJ	20 UJ
4,6-DINITRO-2-METHYLPHENOL	20 U	20 U	NA	NA	NA	20 UJ	20 UJ	NA	NA	NA	20 U	20 UJ	20 UJ
4-BROMOPHENYL PHENYL ETHER	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
4-CHLORO-3-METHYLPHENOL	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
4-CHLOROANILINE	10 U	10 U	NA	NA	NA	10 U	10 R	NA	NA	NA	10 U	10 U	10 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.1
ANALYTICAL RESULTS - GROUNDWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-MW303B	G32-MW303S	G32-GWMW304B-061005	G32-GWMW304B-103113	G32-GWMW304B-113120	G32-MW304B	G32-MW304S	G32-GWMW305B-6474	G32-GWMW305B-7282	G32-GWMW305B-8495	G32-MW305B	G32-MW305S	G32-MW305S-D
LOCATION ID	G32-MW303B	G32-MW303S	G32-MW304B	G32-MW304B	G32-MW304B	G32-MW304B	G32-MW304S	G32-MW305B	G32-MW305B	G32-MW305B	G32-MW305B	G32-MW305S	G32-MW305S
SAMPLE DATE	07/19/05	07/25/05	06/10/05	06/13/05	06/13/05	07/27/05	07/27/05	06/24/05	06/24/05	06/24/05	07/19/05	07/26/05	07/26/05
TOP DEPTH	14 FT		89 FT	103 FT	113 FT	89 FT	4 FT	64 FT	72 FT	84 FT	65 FT		
BOTTOM DEPTH	49 FT		119 FT	113 FT	120 FT	119 FT	14 FT	74 FT	82 FT	95 FT	95 FT		
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	GW	GW	PT	PT	PT	GW	GW	PT	PT	PT	GW	GW	GW
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
4-CHLOROPHENYL PHENYL ETHER	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
4-METHYLPHENOL	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
4-NITROANILINE	20 UJ	20 UJ	NA	NA	NA	20 UJ	20 UJ	NA	NA	NA	20 UJ	20 UJ	20 UJ
4-NITROPHENOL	20 U	20 U	NA	NA	NA	20 U	20 U	NA	NA	NA	20 U	20 U	20 U
ACENAPHTHENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
ACENAPHTHYLENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
ACETOPHENONE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
ANTHRACENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
ATRAZINE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
BENZALDEHYDE	10 UJ	10 UJ	NA	NA	NA	10 UJ	10 UJ	NA	NA	NA	10 UJ	10 UJ	10 UJ
BENZO(A)ANTHRACENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
BENZO(A)PYRENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
BENZO(B)FLUORANTHENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
BENZO(G,H,I)PERYLENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
BENZO(K)FLUORANTHENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
BIS(2-CHLOROETHOXY)METHANE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
BIS(2-CHLOROETHYL)ETHER	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
BUTYL BENZYL PHTHALATE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
CAPROLACTAM	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
CARBAZOLE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
CHRYSENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
DIBENZO(A,H)ANTHRACENE	0.1 UJ	0.1 UJ	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 UJ	0.1 U	0.1 U
DIBENZOFURAN	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
DIETHYL PHTHALATE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
DIMETHYL PHTHALATE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
DI-N-BUTYL PHTHALATE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
DI-N-OCTYL PHTHALATE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
FLUORANTHENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
FLUORENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
HEXACHLOROBENZENE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
HEXACHLOROBUTADIENE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
HEXACHLOROCYCLOPENTADIENE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
HEXACHLOROETHANE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
HIGH MOLECULAR WEIGHT PAHS	0.1 UJ	0.1 UJ	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 UJ	0.1 U	0.1 U
INDENO(1,2,3-CD)PYRENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
ISOPHORONE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
LOW MOLECULAR WEIGHT PAHS	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
NAPHTHALENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U

TABLE D-4.1
ANALYTICAL RESULTS - GROUNDWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-MW303B	G32-MW303S	G32-GWMW304B-061005	G32-GWMW304B-103113	G32-GWMW304B-113120	G32-MW304B	G32-MW304S	G32-GWMW305B-6474	G32-GWMW305B-7282	G32-GWMW305B-8495	G32-MW305B	G32-MW305S	G32-MW305S-D
LOCATION ID	G32-MW303B	G32-MW303S	G32-MW304B	G32-MW304B	G32-MW304B	G32-MW304B	G32-MW304S	G32-MW305B	G32-MW305B	G32-MW305B	G32-MW305B	G32-MW305S	G32-MW305S
SAMPLE DATE	07/19/05	07/25/05	06/10/05	06/13/05	06/13/05	07/27/05	07/27/05	06/24/05	06/24/05	06/24/05	07/19/05	07/26/05	07/26/05
TOP DEPTH	14 FT		89 FT	103 FT	113 FT	89 FT	4 FT	64 FT	72 FT	84 FT	65 FT		
BOTTOM DEPTH	49 FT		119 FT	113 FT	120 FT	119 FT	14 FT	74 FT	82 FT	95 FT	95 FT		
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	GW	GW	PT	PT	PT	GW	GW	PT	PT	PT	GW	GW	GW
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
NITROBENZENE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
N-NITROSODIPHENYLAMINE	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
PENTACHLOROPHENOL	20 U	20 U	NA	NA	NA	20 U	20 U	NA	NA	NA	20 U	20 U	20 U
PHENANTHRENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
PHENOL	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
PYRENE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
TOTAL CARCINOGENIC PAHS-HALFND	0.1 UJ	0.1 UJ	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 UJ	0.1 U	0.1 U
TOTAL CARCINOGENIC PAHS-POS	0.1 UJ	0.1 UJ	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 UJ	0.1 U	0.1 U
TOTAL CHLORINATED VOCS	10 U	10 U	NA	NA	NA	10 U	10 U	NA	NA	NA	10 U	10 U	10 U
TOTAL PAHS	0.1 UJ	0.1 UJ	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 UJ	0.1 U	0.1 U
PESTICIDES/PCBS (UG/L)													
4,4'-DDD	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
4,4'-DDE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
4,4'-DDT	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
ALDRIN	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	0.05 U
ALPHA-BHC	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	0.05 U
ALPHA-CHLORDANE	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	0.05 U
AROCLOR-1016	1 U	1 U	NA	NA	NA	1 U	1 U	NA	NA	NA	1 U	1 U	1 U
AROCLOR-1221	1 U	1 U	NA	NA	NA	1 U	1 U	NA	NA	NA	1 U	1 U	1 U
AROCLOR-1232	1 U	1 U	NA	NA	NA	1 U	1 U	NA	NA	NA	1 U	1 U	1 U
AROCLOR-1242	1 U	1 U	NA	NA	NA	1 U	1 U	NA	NA	NA	1 U	1 U	1 U
AROCLOR-1248	1 U	1 U	NA	NA	NA	1 U	1 U	NA	NA	NA	1 U	1 U	1 U
AROCLOR-1254	1 U	1 U	NA	NA	NA	1 U	1 U	NA	NA	NA	1 U	1 U	1 U
AROCLOR-1260	1 U	1 U	NA	NA	NA	1 U	1 U	NA	NA	NA	1 U	1 U	1 U
BETA-BHC	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	0.05 U
DELTA-BHC	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	0.05 U
DIELDRIN	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
ENDOSULFAN I	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	0.05 U
ENDOSULFAN II	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
ENDOSULFAN SULFATE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
ENDRIN	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
ENDRIN ALDEHYDE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
ENDRIN KETONE	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
GAMMA-BHC (LINDANE)	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	0.05 U
GAMMA-CHLORDANE	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	0.05 U
HEPTACHLOR	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	0.05 U
HEPTACHLOR EPOXIDE	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	0.05 U
METHOXYCHLOR	0.5 U	0.5 U	NA	NA	NA	0.5 U	0.5 U	NA	NA	NA	0.5 U	0.5 U	0.5 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.1
ANALYTICAL RESULTS - GROUNDWATER
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-MW303B	G32-MW303S	G32-GWMW304B-061005	G32-GWMW304B-103113	G32-GWMW304B-113120	G32-MW304B	G32-MW304S	G32-GWMW305B-6474	G32-GWMW305B-7282	G32-GWMW305B-8495	G32-MW305B	G32-MW305S	G32-MW305S-D
LOCATION ID	G32-MW303B	G32-MW303S	G32-MW304B	G32-MW304B	G32-MW304B	G32-MW304B	G32-MW304S	G32-MW305B	G32-MW305B	G32-MW305B	G32-MW305B	G32-MW305S	G32-MW305S
SAMPLE DATE	07/19/05	07/25/05	06/10/05	06/13/05	06/13/05	07/27/05	07/27/05	06/24/05	06/24/05	06/24/05	07/19/05	07/26/05	07/26/05
TOP DEPTH	14 FT		89 FT	103 FT	113 FT	89 FT	4 FT	64 FT	72 FT	84 FT	65 FT		
BOTTOM DEPTH	49 FT		119 FT	113 FT	120 FT	119 FT	14 FT	74 FT	82 FT	95 FT	95 FT		
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	GW	GW	PT	PT	PT	GW	GW	PT	PT	PT	GW	GW	GW
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
TOTAL AROCLOR	1 U	1 U	NA	NA	NA	1 U	1 U	NA	NA	NA	1 U	1 U	1 U
TOTAL CHLORDANE	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	0.05 U	0.05 U	0.05 U
TOTAL DDD/DDE/DDT	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	0.1 U	0.1 U	0.1 U
TOXAPHENE	5 U	5 U	NA	NA	NA	5 U	5 U	NA	NA	NA	5 U	5 U	5 U
METALS (UG/L)													
ALUMINUM	243 J	25.7 UJ	NA	NA	NA	1180 J	151 J	NA	NA	NA	158 J	265 J	225 J
ANTIMONY	2.1 UJ	1.2 U	NA	NA	NA	1.2 U	1.2 UJ	NA	NA	NA	1.2 U	1.2 U	1.2 U
ARSENIC	4.2	1.7 J	NA	NA	NA	1.6 U	1.6 U	NA	NA	NA	1.6 U	8.2 U	9.2 U
BARIUM	39.6	34.7	NA	NA	NA	36.5 J	119 J	NA	NA	NA	30.2	30.2 J	29.5 J
BERYLLIUM	0.15 U	0.15 U	NA	NA	NA	0.15 U	0.15 U	NA	NA	NA	0.15 U	0.15 U	0.15 U
CADMIUM	0.62	0.37 U	NA	NA	NA	0.1 UJ	1.6 UJ	NA	NA	NA	0.13 UJ	0.1 UJ	0.1 UJ
CALCIUM	21100	50900	NA	NA	NA	27200	381000	NA	NA	NA	12300	55600	55300
CHROMIUM	0.44 UJ	0.38 U	NA	NA	NA	2.5 U	0.38 U	NA	NA	NA	1 U	0.81 U	0.38 U
COBALT	33.1	36.9	NA	NA	NA	1.6 J	13.8 J	NA	NA	NA	24.7	2.4 J	2.3 J
COPPER	6.3 U	6.3 U	NA	NA	NA	6.3 UJ	9.7 J	NA	NA	NA	6.3 U	7.9 J	6.3 UJ
CYANIDE	9.1 U	9.1 U	NA	NA	NA	9.1 UJ	9.1 UJ	NA	NA	NA	9.1 U	9.1 UJ	9.1 UJ
IRON	16500	7500	NA	NA	NA	2950 J	660 J	NA	NA	NA	9180	2610 J	1270 J
LEAD	0.49 UJ	0.46 U	NA	NA	NA	0.97 UJ	3.8 UJ	NA	NA	NA	1.6 U	0.8 UJ	0.46 UJ
MAGNESIUM	4460	26900	NA	NA	NA	3840	842000	NA	NA	NA	3750	10700	10600
MANGANESE	877	469	NA	NA	NA	210 J	4210 J	NA	NA	NA	2180	321 J	307 J
MERCURY	0.063 UJ	0.067 UJ	NA	NA	NA	0.075 UJ	0.094 UJ	NA	NA	NA	0.063 UJ	0.068 UJ	0.061 UJ
NICKEL	55.9	60.2	NA	NA	NA	3.8	18 J	NA	NA	NA	29.1	2.8	2.1
POTASSIUM	339000	4540	NA	NA	NA	2450 U	63700 J	NA	NA	NA	3110	19600	19900
SELENIUM	0.98 U	0.98 U	NA	NA	NA	1.9 UJ	11 UJ	NA	NA	NA	0.98 U	1.1 UJ	2.7 U
SILVER	0.91 U	0.91 U	NA	NA	NA	0.91 U	0.91 U	NA	NA	NA	0.91 U	0.91 U	0.91 U
SODIUM	7700000	55900	NA	NA	NA	17500	8550000	NA	NA	NA	23400	145000	147000
THALLIUM	1.2 UJ	1.2 UJ	NA	NA	NA	2.5 UJ	1.2 UJ	NA	NA	NA	1.2 UJ	1.2 UJ	1.4 UJ
VANADIUM	0.47 U	0.47 U	NA	NA	NA	3	1.1 J	NA	NA	NA	0.47 U	0.47 U	0.47 U
ZINC	98.8	80.8 U	NA	NA	NA	14.3 UJ	45.6 UJ	NA	NA	NA	46.2 U	16.1 UJ	12.5 UJ
MISCELLANEOUS PARAMETERS (MG/L)													
ALKALINITY	25	23	NA	NA	NA	53	91	NA	NA	NA	43	320	330
SULFIDE	0.03 U	0.03 U	NA	NA	NA	0.03 U	0.03 U	NA	NA	NA	0.03 U	0.03 U	0.03 U
TOTAL ORGANIC CARBON	10 U	10 U	NA	NA	NA	15	10 U	NA	NA	NA	10 U	14	15
PETROLEUM HYDROCARBONS (MG/L)													
EXTRACTABLE PETROLEUM HYDROCARBONS	0.35 U	0.35 U	NA	NA	NA	0.35 U	0.35 U	NA	NA	NA	0.35 U	0.35 U	0.35 U
GASOLINE RANGE ORGANICS	0.05 U	0.05 UJ	NA	NA	NA	0.05 U	0.051	NA	NA	NA	0.05 U	0.05 U	0.05 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

SAMPLE ID	G32-MW305S-AVG	G32-MW306B	G32-MW306S
LOCATION ID	G32-MW305S	G32-MW306B	G32-MW306S
SAMPLE DATE	07/26/05	07/27/05	07/27/05
TOP DEPTH		64 FT	
BOTTOM DEPTH		94 FT	
SACODE	AVG	NORMAL	NORMAL
SUBMATRIX	GW	GW	GW
QC TYPE	NM	NM	NM
VOLATILES (UG/L)			
1,1,1-TRICHLOROETHANE	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	1 U	1 U	1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	1 U	1 U	1 U
1,1-DICHLOROETHANE	1 U	1 U	1 U
1,1-DICHLOROETHENE	1 U	1 U	1 U
1,2,4-TRICHLOROBENZENE	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE	5 UJ	5 UJ	5 UJ
1,2-DIBROMOETHANE	1 U	1 U	1 U
1,2-DICHLOROBENZENE	1 U	1 U	1 U
1,2-DICHLOROETHANE	1 U	1 U	1 U
1,2-DICHLOROPROPANE	1 U	1 U	1 U
1,3-DICHLOROBENZENE	1 U	1 U	1 U
1,4-DICHLOROBENZENE	1 U	1 U	1 U
2-BUTANONE	3.5 U	5 U	5 U
2-HEXANONE	5 U	5 U	5 U
4-METHYL-2-PENTANONE	5 U	5 U	5 U
ACETONE	9 U	5 U	5 U
BENZENE	1 U	1 U	1 U
BROMODICHLOROMETHANE	1 U	1 U	1 U
BROMOFORM	1 U	1 U	1 U
BROMOMETHANE	1 U	1 U	1 U
BTEX	1 U	1 U	1 U
CARBON DISULFIDE	1 U	1 U	1 U
CARBON TETRACHLORIDE	1 U	1 U	1 U
CHLOROBENZENE	1 U	1 U	1 U
CHLORODIBROMOMETHANE	1 U	1 U	1 U
CHLOROETHANE	1 U	1 U	1 U
CHLOROFORM	1 UJ	1 UJ	1 UJ
CHLOROMETHANE	1 U	1 U	1 U
CIS-1,2-DICHLOROETHENE	1 U	1 U	1 U
CIS-1,3-DICHLOROPROPENE	1 U	1 U	1 U
CYCLOHEXANE	1 UJ	1 UJ	1 UJ
DICHLORODIFLUOROMETHANE	1 U	1 U	1 U
ETHYLBENZENE	1 U	1 U	1 U
ISOPROPYLBENZENE	1 U	1 U	1 U
M+P-XYLENES	NA	NA	NA
METHYL ACETATE	5 U	5 U	5 U

SAMPLE ID	G32-MW305S-AVG	G32-MW306B	G32-MW306S
LOCATION ID	G32-MW305S	G32-MW306B	G32-MW306S
SAMPLE DATE	07/26/05	07/27/05	07/27/05
TOP DEPTH		64 FT	
BOTTOM DEPTH		94 FT	
SACODE	AVG	NORMAL	NORMAL
SUBMATRIX	GW	GW	GW
QC TYPE	NM	NM	NM
METHYL CYCLOHEXANE	1 UJ	1 UJ	1 UJ
METHYL TERT-BUTYL ETHER	1 U	1 U	1 U
METHYLENE CHLORIDE	1 U	1 U	1 U
O-XYLENE	1 U	1 U	1 U
P-XYLENE	1 U	1 U	1 U
STYRENE	1 U	1 U	1 U
TETRACHLOROETHENE	1 U	1 U	1 U
TOLUENE	1 U	1 U	1 U
TOTAL 1,2-DICHLOROETHENE	1 U	1 U	1 U
TOTAL CHLORINATED ETHENES	1 U	1 U	1 U
TOTAL CHLORINATED VOCS	1.16 UJ	1.16 UJ	1.16 UJ
TOTAL XYLENES	1 U	1 U	1 U
TRANS-1,2-DICHLOROETHENE	1 U	1 U	1 U
TRANS-1,3-DICHLOROPROPENE	1 U	1 U	1 U
TRICHLOROETHENE	1 U	1 U	1 U
TRICHLOROFLUOROMETHANE	1 U	1 U	1 U
VINYL CHLORIDE	1 U	1 U	1 U
SEMIVOLATILES (UG/L)			
1,1-BIPHENYL	10 U	10 U	10 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U	10 U	10 U
2,4,5-TRICHLOROPHENOL	20 U	20 U	20 U
2,4,6-TRICHLOROPHENOL	10 U	10 U	10 U
2,4-DICHLOROPHENOL	10 U	10 U	1 J
2,4-DIMETHYLPHENOL	10 U	10 U	10 U
2,4-DINITROPHENOL	20 UJ	20 UJ	20 UJ
2,4-DINITROTOLUENE	10 U	10 U	10 U
2,6-DINITROTOLUENE	10 U	10 U	10 U
2-CHLORONAPHTHALENE	10 U	10 U	10 U
2-CHLOROPHENOL	10 U	10 U	10 U
2-METHYLNAPHTHALENE	0.1 U	0.1 U	1.4
2-METHYLPHENOL	10 U	10 U	10 U
2-NITROANILINE	20 U	20 U	20 U
2-NITROPHENOL	10 U	10 U	10 U
3,3'-DICHLOROBENZIDINE	10 U	10 U	10 U
3-NITROANILINE	20 UJ	20 UJ	20 UJ
4,6-DINITRO-2-METHYLPHENOL	20 UJ	20 UJ	20 U
4-BROMOPHENYL PHENYL ETHER	10 U	10 U	10 U
4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U
4-CHLOROANILINE	10 U	10 U	10 U

SAMPLE ID	G32-MW305S-AVG	G32-MW306B	G32-MW306S
LOCATION ID	G32-MW305S	G32-MW306B	G32-MW306S
SAMPLE DATE	07/26/05	07/27/05	07/27/05
TOP DEPTH		64 FT	
BOTTOM DEPTH		94 FT	
SACODE	AVG	NORMAL	NORMAL
SUBMATRIX	GW	GW	GW
QC TYPE	NM	NM	NM
4-CHLOROPHENYL PHENYL ETHER	10 U	10 U	10 U
4-METHYLPHENOL	10 U	10 U	2 J
4-NITROANILINE	20 UJ	20 UJ	20 UJ
4-NITROPHENOL	20 U	20 U	20 U
ACENAPHTHENE	0.1 U	0.1 U	3.9
ACENAPHTHYLENE	0.1 U	0.1 U	0.1 U
ACETOPHENONE	10 U	10 U	10 U
ANTHRACENE	0.1 U	0.1 U	0.98
ATRAZINE	10 U	10 U	10 U
BENZALDEHYDE	10 UJ	10 UJ	10 UJ
BENZO(A)ANTHRACENE	0.1 U	0.1 U	0.1 U
BENZO(A)PYRENE	0.1 U	0.1 U	0.1 U
BENZO(B)FLUORANTHENE	0.1 U	0.1 U	0.1 U
BENZO(G,H,I)PERYLENE	0.1 U	0.1 U	0.1 U
BENZO(K)FLUORANTHENE	0.1 U	0.1 U	0.1 U
BIS(2-CHLOROETHOXY)METHANE	10 U	10 U	10 U
BIS(2-CHLOROETHYL)ETHER	10 U	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	10 U	10 U	10 U
BUTYL BENZYL PHTHALATE	10 U	10 U	10 U
CAPROLACTAM	10 U	10 U	10 U
CARBAZOLE	10 U	10 U	5 J
CHRYSENE	0.1 U	0.1 U	0.1 U
DIBENZO(A,H)ANTHRACENE	0.1 U	0.1 U	0.1 U
DIBENZOFURAN	10 U	10 U	2 J
DIETHYL PHTHALATE	10 U	10 U	10 U
DIMETHYL PHTHALATE	10 U	10 U	10 U
DI-N-BUTYL PHTHALATE	10 U	10 U	10 U
DI-N-OCTYL PHTHALATE	10 U	10 U	10 U
FLUORANTHENE	0.1 U	0.1 U	0.69
FLUORENE	0.1 U	0.1 U	2
HEXACHLOROBENZENE	10 U	10 U	10 U
HEXACHLOROBUTADIENE	10 U	10 U	10 U
HEXACHLOROCYCLOPENTADIENE	10 U	10 U	10 U
HEXACHLOROETHANE	10 U	10 U	10 U
HIGH MOLECULAR WEIGHT PAHS	0.1 U	0.1 U	1.02
INDENO(1,2,3-CD)PYRENE	0.1 U	0.1 U	0.1 U
ISOPHORONE	10 U	10 U	10 U
LOW MOLECULAR WEIGHT PAHS	0.1 U	0.28	21.1
NAPHTHALENE	0.1 U	0.14	9.4

SAMPLE ID	G32-MW305S-AVG	G32-MW306B	G32-MW306S
LOCATION ID	G32-MW305S	G32-MW306B	G32-MW306S
SAMPLE DATE	07/26/05	07/27/05	07/27/05
TOP DEPTH		64 FT	
BOTTOM DEPTH		94 FT	
SACODE	AVG	NORMAL	NORMAL
SUBMATRIX	GW	GW	GW
QC TYPE	NM	NM	NM
NITROBENZENE	10 U	10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U	10 U
N-NITROSODIPHENYLAMINE	10 U	10 U	10 U
PENTACHLOROPHENOL	20 U	20 U	7 J
PHENANTHRENE	0.1 U	0.14	3.4
PHENOL	10 U	10 U	16
PYRENE	0.1 U	0.1 U	0.33
TOTAL CARCINOGENIC PAHS-HALFND	0.1 U	0.1 U	0.1 U
TOTAL CARCINOGENIC PAHS-POS	0.1 U	0.1 U	0.1 U
TOTAL CHLORINATED VOCS	10 U	10 U	10 U
TOTAL PAHS	0.1 U	0.28	22.1
PESTICIDES/PCBS (UG/L)			
4,4'-DDD	0.1 U	0.1 UJ	0.1 U
4,4'-DDE	0.1 U	0.1 UJ	0.1 U
4,4'-DDT	0.1 U	0.1 UJ	0.1 U
ALDRIN	0.05 U	0.05 UJ	0.05 U
ALPHA-BHC	0.05 U	0.05 UJ	0.05 U
ALPHA-CHLORDANE	0.05 U	0.05 UJ	0.05 U
AROCLOR-1016	1 U	1 U	1 U
AROCLOR-1221	1 U	1 U	1 U
AROCLOR-1232	1 U	1 U	1 U
AROCLOR-1242	1 U	1 U	1 U
AROCLOR-1248	1 U	1 U	1 U
AROCLOR-1254	1 U	1 U	1 U
AROCLOR-1260	1 U	1 U	1 U
BETA-BHC	0.05 U	0.05 UJ	0.05 U
DELTA-BHC	0.05 U	0.05 UJ	0.05 U
DIELDRIN	0.1 U	0.1 UJ	0.1 U
ENDOSULFAN I	0.05 U	0.05 UJ	0.05 U
ENDOSULFAN II	0.1 U	0.1 UJ	0.1 U
ENDOSULFAN SULFATE	0.1 U	0.1 UJ	0.1 U
ENDRIN	0.1 U	0.1 UJ	0.1 U
ENDRIN ALDEHYDE	0.1 U	0.1 UJ	0.1 U
ENDRIN KETONE	0.1 U	0.1 UJ	0.1 U
GAMMA-BHC (LINDANE)	0.05 U	0.05 UJ	0.05 U
GAMMA-CHLORDANE	0.05 U	0.05 UJ	0.05 U
HEPTACHLOR	0.05 U	0.05 UJ	0.05 U
HEPTACHLOR EPOXIDE	0.05 U	0.05 UJ	0.05 U
METHOXYCHLOR	0.5 U	0.5 UJ	0.5 U

SAMPLE ID	G32-MW305S-AVG	G32-MW306B	G32-MW306S
LOCATION ID	G32-MW305S	G32-MW306B	G32-MW306S
SAMPLE DATE	07/26/05	07/27/05	07/27/05
TOP DEPTH		64 FT	
BOTTOM DEPTH		94 FT	
SACODE	AVG	NORMAL	NORMAL
SUBMATRIX	GW	GW	GW
QC TYPE	NM	NM	NM
TOTAL AROCLOR	1 U	1 U	1 U
TOTAL CHLORDANE	0.05 U	0.05 UJ	0.05 U
TOTAL DDD/DDE/DDT	0.1 U	0.1 UJ	0.1 U
TOXAPHENE	5 U	5 UJ	5 U
METALS (UG/L)			
ALUMINUM	245 J	316 J	14 U
ANTIMONY	1.2 U	1.2 U	1.2 UJ
ARSENIC	8.7 U	3.7 U	7.1 UJ
BARIUM	29.8 J	177 J	121 J
BERYLLIUM	0.15 U	0.15 U	0.15 U
CADMIUM	0.1 UJ	0.12 J	0.22 UJ
CALCIUM	55400	151000	528000
CHROMIUM	0.595 U	0.38 U	0.38 U
COBALT	2.35 J	23 J	0.15 UJ
COPPER	5.52 J	6.3 UJ	6.3 UJ
CYANIDE	9.1 UJ	9.1 UJ	9.1 UJ
IRON	1940 J	6970 J	19 U
LEAD	0.63 UJ	0.75 UJ	5 UJ
MAGNESIUM	10600	28000	286000
MANGANESE	314 J	1080 J	1.8 UJ
MERCURY	0.0645 UJ	0.078 UJ	0.078 UJ
NICKEL	2.45	17.2	2.3 J
POTASSIUM	19800	6590	267000
SELENIUM	1.9 UJ	2.2 U	5.3 UJ
SILVER	0.91 U	0.91 U	0.91 U
SODIUM	146000	44100	5130000
THALLIUM	1.3 UJ	1.2 UJ	12.1 UJ
VANADIUM	0.47 U	0.47 U	1.1 J
ZINC	14.3 UJ	20.9 UJ	2.3 UJ
MISCELLANEOUS PARAMETERS (MG/L)			
ALKALINITY	325	44	84
SULFIDE	0.03 U	0.03 U	0.03 U
TOTAL ORGANIC CARBON	14.5	10 U	14
PETROLEUM HYDROCARBONS (MG/L)			
EXTRACTABLE PETROLEUM HYDROCARBONS	0.35 U	0.35 U	0.49
GASOLINE RANGE ORGANICS	0.05 U	0.05 U	0.05 U

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB300B-0002	G32-SB301B-0002	G32-SB302B-0002	G32-SB303B-0002	G32-SB304B-0002	G32-SB309-0002	G32-SB310-0002	G32-SB311-0103	G32-SB312-0103	G32-SB313-0002	G32-SB317-0002	G32-SB318-0002	G32-SB327-0103
LOCATION ID	G32-SB300B	G32-SB301B	G32-SB302B	G32-SB303B	G32-SB304B	G32-SB309	G32-SB310	G32-SB311	G32-SB312	G32-SB313	G32-SB317	G32-SB318	G32-SB327
SAMPLE DATE	06/01/05	07/13/05	07/05/05	07/11/05	06/01/05	07/12/05	07/12/05	06/29/05	06/29/05	07/05/05	06/22/05	06/21/05	06/16/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	1 FT	1 FT	0 FT	0 FT	0 FT	1 FT
BOTTOM DEPTH	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	3 FT	3 FT	2 FT	2 FT	2 FT	3 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
1,1,2,2-TETRACHLOROETHANE	3 UJ	4 UJ	3 U	3 U	3 U	3 U	5 U	3 UJ	3 U	5 UJ	4 U	4 U	3 U
1,1,2-TRICHLOROETHANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
1,1,2-TRICHLOROTRIFLUOROETHANE	3 U	4 U	3 U	3 U	3 U	3 UJ	5 U	3 U	3 U	5 UJ	4 U	4 U	3 UJ
1,1-DICHLOROETHANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
1,1-DICHLOROETHENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
1,2,4-TRICHLOROBENZENE	3 UJ	4 UJ	3 U	3 U	3 U	3 U	5 U	3 UJ	3 U	5 UJ	4 U	4 U	3 U
1,2-DIBROMO-3-CHLOROPROPANE	3 UJ	4 UJ	3 U	3 UJ	3 U	3 UJ	5 UJ	3 UJ	3 U	5 UJ	4 U	4 U	3 U
1,2-DIBROMOETHANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
1,2-DICHLOROBENZENE	3 UJ	4 UJ	3 U	3 U	3 U	3 U	5 U	3 UJ	3 U	5 UJ	4 U	4 U	3 U
1,2-DICHLOROETHANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
1,2-DICHLOROPROPANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
1,3-DICHLOROBENZENE	3 UJ	4 UJ	3 U	3 U	3 U	3 U	5 U	3 UJ	3 U	5 UJ	4 U	4 U	3 U
1,4-DICHLOROBENZENE	3 UJ	4 UJ	3 U	3 U	3 U	3 U	5 U	3 UJ	3 U	5 UJ	4 U	4 U	3 U
2-BUTANONE	5 U	4 U	3 U	3 U	3 U	3 U	5 U	3 UJ	3 UJ	5 U	4 U	4 UJ	3 U
2-HEXANONE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 UJ	3 U
4-METHYL-2-PENTANONE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
ACETONE	16 UJ	4 UJ	10 UJ	3 UJ	3 UJ	3 UJ	9 UJ	32 UJ	20 UJ	5 UJ	7 UJ	4 UJ	3 UJ
BENZENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
BROMODICHLOROMETHANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
BROMOFORM	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
BROMOMETHANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
BTEX	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
CARBON DISULFIDE	3 U	4 U	3 U	3 U	3 U	3 UJ	5 U	3 U	3 U	5 U	4 U	4 U	3 U
CARBON TETRACHLORIDE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
CHLOROBENZENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
CHLORODIBROMOMETHANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
CHLOROETHANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
CHLOROFORM	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
CHLOROMETHANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
CIS-1,2-DICHLOROETHENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
CIS-1,3-DICHLOROPROPENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
CYCLOHEXANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
DICHLORODIFLUOROMETHANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 UJ	3 U
ETHYLBENZENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
ISOPROPYLBENZENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3 U
METHYL ACETATE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
METHYL CYCLOHEXANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB300B-0002	G32-SB301B-0002	G32-SB302B-0002	G32-SB303B-0002	G32-SB304B-0002	G32-SB309-0002	G32-SB310-0002	G32-SB311-0103	G32-SB312-0103	G32-SB313-0002	G32-SB317-0002	G32-SB318-0002	G32-SB327-0103
LOCATION ID	G32-SB300B	G32-SB301B	G32-SB302B	G32-SB303B	G32-SB304B	G32-SB309	G32-SB310	G32-SB311	G32-SB312	G32-SB313	G32-SB317	G32-SB318	G32-SB327
SAMPLE DATE	06/01/05	07/13/05	07/05/05	07/11/05	06/01/05	07/12/05	07/12/05	06/29/05	06/29/05	07/05/05	06/22/05	06/21/05	06/16/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	1 FT	1 FT	0 FT	0 FT	0 FT	1 FT
BOTTOM DEPTH	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	3 FT	3 FT	2 FT	2 FT	2 FT	3 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
METHYL TERT-BUTYL ETHER	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
METHYLENE CHLORIDE	6 U	21 UJ	22 U	18 UJ	5 U	27 UJ	28 UJ	27 U	22 U	25 UJ	18 U	10 U	6 U
O-XYLENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
P-XYLENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	NA
STYRENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
TETRACHLOROETHENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
TOLUENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
TOTAL 1,2-DICHLOROETHENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
TOTAL CHLORINATED ETHENES	3 U	4 U	3 J	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	2 J	3 U
TOTAL CHLORINATED VOCS	3 UJ	4 UJ	3 J	3 UJ	3 U	3 UJ	5 UJ	3 UJ	3 U	5 UJ	4 U	2 J	3 UJ
TOTAL XYLENES	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
TRANS-1,2-DICHLOROETHENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
TRANS-1,3-DICHLOROPROPENE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
TRICHLOROETHENE	3 U	4 U	3 J	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	2 J	3 U
TRICHLOROFLUOROMETHANE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
VINYL CHLORIDE	3 U	4 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	4 U	4 U	3 U
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	5500 J	NA	710 J	350 U
2,2'-OXYBIS(1-CHLOROPROPANE)	360 U	390 U	360 U	350 U	370 UJ	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
2,4,5-TRICHLOROPHENOL	730 U	800 U	730 U	710 U	750 U	740 U	710 U	740 U	710 U	15000 U	NA	3400 U	720 U
2,4,6-TRICHLOROPHENOL	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
2,4-DICHLOROPHENOL	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
2,4-DIMETHYLPHENOL	360 U	390 UJ	360 UJ	350 UJ	370 U	360 UJ	350 UJ	360 U	350 U	7600 UJ	NA	1700 U	350 UJ
2,4-DINITROPHENOL	730 U	800 UJ	730 U	710 UJ	750 UJ	740 UJ	710 UJ	740 U	710 U	15000 UJ	NA	3400 U	720 U
2,4-DINITROTOLUENE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
2,6-DINITROTOLUENE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
2-CHLORONAPHTHALENE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
2-CHLOROPHENOL	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
2-METHYLNAPHTHALENE	19	9.6	11 J	3.8	51	7	3.5 U	3.6 UJ	3.5 U	19000	NA	2100	4.8
2-METHYLPHENOL	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
2-NITROANILINE	730 U	800 U	730 U	710 U	750 U	740 U	710 U	740 U	710 U	15000 U	NA	3400 U	720 U
2-NITROPHENOL	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
3,3'-DICHLOROBENZIDINE	360 U	390 U	360 U	350 U	370 UJ	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 UJ
3-NITROANILINE	730 U	800 U	730 UJ	710 U	750 U	740 U	710 U	740 U	710 U	15000 UJ	NA	3400 UJ	720 U
4,6-DINITRO-2-METHYLPHENOL	730 U	800 U	730 UJ	710 U	750 UJ	740 U	710 U	740 U	710 U	15000 UJ	NA	3400 U	720 U
4-BROMOPHENYL PHENYL ETHER	360 U	390 U	360 U	350 U	370 UJ	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
4-CHLORO-3-METHYLPHENOL	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
4-CHLOROANILINE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
4-CHLOROPHENYL PHENYL ETHER	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
4-METHYLPHENOL	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB300B-0002	G32-SB301B-0002	G32-SB302B-0002	G32-SB303B-0002	G32-SB304B-0002	G32-SB309-0002	G32-SB310-0002	G32-SB311-0103	G32-SB312-0103	G32-SB313-0002	G32-SB317-0002	G32-SB318-0002	G32-SB327-0103
LOCATION ID	G32-SB300B	G32-SB301B	G32-SB302B	G32-SB303B	G32-SB304B	G32-SB309	G32-SB310	G32-SB311	G32-SB312	G32-SB313	G32-SB317	G32-SB318	G32-SB327
SAMPLE DATE	06/01/05	07/13/05	07/05/05	07/11/05	06/01/05	07/12/05	07/12/05	06/29/05	06/29/05	07/05/05	06/22/05	06/21/05	06/16/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	1 FT	1 FT	0 FT	0 FT	0 FT	1 FT
BOTTOM DEPTH	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	3 FT	3 FT	2 FT	2 FT	2 FT	3 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
4-NITROANILINE	730 UJ	800 U	730 UJ	710 U	750 U	740 UJ	710 UJ	740 UJ	710 UJ	15000 UJ	NA	3400 UJ	720 UJ
4-NITROPHENOL	730 U	800 U	730 U	710 U	750 U	740 U	710 U	740 U	710 U	15000 U	NA	3400 U	720 U
ACENAPHTHENE	11	71	76 J	43	73	49	6	3.6 UJ	3.5 U	100000	NA	9400	3.5 U
ACENAPHTHYLENE	3.6 U	9.9	19 J	8.5	19	15	3.5 U	3.6 UJ	3.5 U	7600 U	NA	260 J	3.5 U
ACETOPHENONE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
ANTHRACENE	27	160	170 J	110	140	130	18	3.6 UJ	3.5 U	140000	NA	19000	4.5
ATRAZINE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
BENZALDEHYDE	360 UJ	390 UJ	360 UJ	350 UJ	370 UJ	360 UJ	350 UJ	360 UJ	350 UJ	7600 UJ	NA	1700 UJ	350 UJ
BENZO(A)ANTHRACENE	90	530	450	310	330	400	71	3.6 UJ	3.5 U	210000	NA	42000	5.8
BENZO(A)PYRENE	91	450	440 J	300	330	380	60	3.6 UJ	3.5 U	160000	NA	24000	3.5 U
BENZO(B)FLUORANTHENE	130	640	510	320 J	340 J	470	88	3.6 UJ	3.5 U	170000	NA	50000	5.9
BENZO(G,H,I)PERYLENE	67	300	240 J	170	180	240	34	3.6 UJ	3.5 U	96000 J	NA	13000	3.5 U
BENZO(K)FLUORANTHENE	39	320	200 J	160	190	260	34	3.6 UJ	3.5 U	74000 J	NA	13000	3.5 U
BIS(2-CHLOROETHOXY)METHANE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
BIS(2-CHLOROETHYL)ETHER	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
BIS(2-ETHYLHEXYL)PHTHALATE	64 JEB	95 J	92 J	110 J	110 JEB	86 J	67 J	49 J	320 J	7600 U	NA	1700 U	76 J
BUTYL BENZYL PHTHALATE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	74 J	7600 U	NA	1700 U	350 U
CAPROLACTAM	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
CARBAZOLE	360 U	72 J	61 J	40 J	51 J	55 J	350 U	360 U	350 U	65000	NA	6800	350 U
CHRYSENE	120	630	420	300	310 J	470	63	3.6 UJ	3.5 U	190000	NA	36000	6.8
DIBENZO(A,H)ANTHRACENE	22 J	89	71 J	50	67 J	73	10	3.6 UJ	3.5 U	26000 J	NA	3400	3.5 UJ
DIBENZOFURAN	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	47000	NA	6200	350 U
DIETHYL PHTHALATE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
DIMETHYL PHTHALATE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
DI-N-BUTYL PHTHALATE	360 U	390 U	39 J	350 U	370 UJ	360 U	350 U	360 U	350 U	7600 UJ	NA	1700 U	45 J
DI-N-OCTYL PHTHALATE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 UJ	NA	1700 U	350 U
FLUORANTHENE	170	1100	980 J	560	450 J	890	120	4.4 J	3.6	530000	NA	100000	16
FLUORENE	11	59	56 J	45	50	46	3.8	3.6 UJ	3.5 U	77000	NA	10000	3.5 U
HEXACHLOROBENZENE	360 U	390 U	360 U	350 U	370 UJ	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
HEXACHLOROBUTADIENE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
HEXACHLOROCYCLOPENTADIENE	360 U	390 U	360 U	350 U	370 UJ	360 UJ	350 UJ	360 U	350 U	7600 UJ	NA	1700 U	350 UJ
HEXACHLOROETHANE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
HIGH MOLECULAR WEIGHT PAHS	937 J	5210	4430 J	2710 J	2870 J	4110	608	4.4 J	3.6	1910000 J	NA	361000	48.5 J
INDENO(1,2,3-CD)PYRENE	58	270	220 J	150	190	220	31	3.6 UJ	3.5 U	92000 J	NA	14000	3.5 U
ISOPHORONE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
LOW MOLECULAR WEIGHT PAHS	222	932	880 J	595	714 J	796	97.2	3.6 UJ	3.5 U	840000	NA	119000 J	33.9
NAPHTHALENE	14	12	28 EBJ	5.1	61	9.2	5.4	3.6 UJ	3.5 U	44000	NA	3900	3.6
NITROBENZENE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
N-NITROSO-DI-N-PROPYLAMINE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
N-NITROSODIPHENYLAMINE	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB300B-0002	G32-SB301B-0002	G32-SB302B-0002	G32-SB303B-0002	G32-SB304B-0002	G32-SB309-0002	G32-SB310-0002	G32-SB311-0103	G32-SB312-0103	G32-SB313-0002	G32-SB317-0002	G32-SB318-0002	G32-SB327-0103
LOCATION ID	G32-SB300B	G32-SB301B	G32-SB302B	G32-SB303B	G32-SB304B	G32-SB309	G32-SB310	G32-SB311	G32-SB312	G32-SB313	G32-SB317	G32-SB318	G32-SB327
SAMPLE DATE	06/01/05	07/13/05	07/05/05	07/11/05	06/01/05	07/12/05	07/12/05	06/29/05	06/29/05	07/05/05	06/22/05	06/21/05	06/16/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	1 FT	1 FT	0 FT	0 FT	0 FT	1 FT
BOTTOM DEPTH	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	3 FT	3 FT	2 FT	2 FT	2 FT	3 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
PENTACHLOROPHENOL	730 U	800 U	730 U	710 U	750 U	740 U	710 U	740 U	710 U	15000 U	NA	270 J	720 U
PHENANTHRENE	140	610	520 J	380	320 J	540	64	3.6 UJ	3.5 U	460000	NA	74000	21
PHENOL	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
PYRENE	150	880	900 J	390	480	710	97	3.6 UJ	3.5 U	360000	NA	66000	14
TOTAL CARCINOGENIC PAHS-HALFND	550 J	2930	2310 J	1590 J	1760 J	2270	357	3.6 UJ	3.5 U	922000 J	NA	182000	25.5 J
TOTAL CARCINOGENIC PAHS-POS	550 J	2930	2310 J	1590 J	1760 J	2270	357	3.6 UJ	3.5 U	922000 J	NA	182000	18.5 J
TOTAL CHLORINATED VOCS	360 U	390 U	360 U	350 U	370 U	360 U	350 U	360 U	350 U	7600 U	NA	1700 U	350 U
TOTAL PAHS	1160 J	6140	5310 J	3310 J	3580 J	4910	705	4.4 J	3.6	2750000 J	NA	480000 J	82.4 J
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	3.6 U	3.9 U	3.6 U	3.5 U	3.7 U	3.6 U	3.5 U	3.6 U	3.5 U	19 U	NA	6.6 R	3.5 U
4,4'-DDE	3.6 U	3.9 U	3.6 U	3.5 U	3.7 U	3.6 U	3.5 U	3.6 U	3.5 U	19 U	NA	23 J	3.5 U
4,4'-DDT	3.6 U	3.9 U	3.6 U	3.5 U	3.7 U	3.6 U	3.5 U	3.6 U	3.5 U	19 U	NA	27 J	3.5 U
ALDRIN	1.8 U	2 U	1.8 U	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.8 U	9.8 U	NA	1.7 U	1.8 U
ALPHA-BHC	1.8 U	2 U	1.8 UJ	1.8 U	1.9 U	1.9 U	1.8 U	1.9 UJ	1.8 UJ	9.8 UJ	NA	1.7 U	1.8 U
ALPHA-CHLORDANE	1.8 U	2 U	2.1 J	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.8 U	9.8 U	NA	1.7 U	1.8 U
AROCLOR-1016	36 U	39 U	36 U	35 U	37 U	36 U	35 U	36 U	35 U	38 R	NA	34 U	35 U
AROCLOR-1221	36 U	39 U	36 U	35 U	37 U	36 U	35 U	36 U	35 U	38 R	NA	34 U	35 U
AROCLOR-1232	36 U	39 U	36 U	35 U	37 U	36 U	35 U	36 U	35 U	38 R	NA	34 U	35 U
AROCLOR-1242	36 U	39 U	36 U	35 U	37 U	36 U	35 U	36 U	35 U	38 R	NA	34 U	35 U
AROCLOR-1248	36 U	39 U	36 U	35 U	37 U	36 U	35 U	36 U	35 U	38 R	NA	34 U	35 U
AROCLOR-1254	36 U	39 U	36 U	35 U	37 U	36 U	35 U	36 U	35 U	38 R	NA	34 U	35 U
AROCLOR-1260	36 U	39 U	36 U	100	37 U	36 U	35 U	36 U	35 U	270 J	NA	280 J	35 U
BETA-BHC	1.8 U	2 U	1.8 U	3.1 J	1.9 U	2 J	1.8 U	1.9 U	1.8 U	9.8 U	NA	24 R	1.8 U
DELTA-BHC	1.8 UJ	2 U	1.8 R	1.8 U	1.9 UJ	1.9 U	1.8 U	1.9 R	1.8 R	9.8 R	NA	1.7 UJ	1.8 UJ
DIELDRIN	3.6 U	3.9 U	3.6 U	3.5 U	3.7 U	3.6 U	3.5 U	3.6 U	3.5 U	19 U	NA	3.4 U	3.5 U
ENDOSULFAN I	1.8 U	2 U	1.8 U	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.8 U	9.8 U	NA	1.7 U	1.8 U
ENDOSULFAN II	3.6 U	3.9 U	3.6 U	3.5 U	3.7 U	3.6 U	3.5 U	3.6 U	3.5 U	19 U	NA	3.4 U	3.5 U
ENDOSULFAN SULFATE	3.6 U	3.9 U	3.6 UJ	3.5 U	3.7 U	3.6 U	3.5 U	3.6 UJ	3.5 UJ	19 UJ	NA	51 R	3.5 U
ENDRIN	3.6 U	3.9 U	3.6 U	3.5 U	3.7 U	3.6 U	3.5 U	3.6 U	3.5 U	19 U	NA	18	3.5 U
ENDRIN ALDEHYDE	3.6 U	3.9 U	3.6 U	3.5 U	3.7 U	3.6 U	3.5 U	3.6 U	3.5 U	19 U	NA	16 J	3.5 U
ENDRIN KETONE	3.6 U	3.9 U	3.6 U	3.5 U	3.7 U	3.6 U	3.5 U	3.6 U	3.5 U	19 U	NA	29	3.5 U
GAMMA-BHC (LINDANE)	1.8 U	2 U	1.8 UJ	1.8 U	1.9 U	1.9 U	1.8 U	1.9 UJ	1.8 UJ	9.8 UJ	NA	1.7 U	1.8 U
GAMMA-CHLORDANE	1.8 U	2 U	1.8 U	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.8 U	9.8 U	NA	10 R	1.8 U
HEPTACHLOR	1.8 U	2 U	1.8 U	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.8 U	9.8 U	NA	1.7 U	1.8 U
HEPTACHLOR EPOXIDE	1.8 U	2 U	1.8 U	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.8 U	9.8 U	NA	1.7 U	1.8 U
METHOXYCHLOR	18 U	20 U	18 U	18 U	19 U	19 U	18 U	67	18 U	270 R	NA	17 U	18 U
TOTAL AROCLOR	36 U	39 U	36 U	100	37 U	36 U	35 U	36 U	35 U	270 J	NA	280 J	35 U
TOTAL CHLORDANE	1.8 U	2 U	2.1 J	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.8 U	9.8 U	NA	1.7 U	1.8 U
TOTAL DDD/DDE/DDT	3.6 U	3.9 U	3.6 U	3.5 U	3.7 U	3.6 U	3.5 U	3.6 U	3.5 U	19 U	NA	50 J	3.5 U

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ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB300B-0002	G32-SB301B-0002	G32-SB302B-0002	G32-SB303B-0002	G32-SB304B-0002	G32-SB309-0002	G32-SB310-0002	G32-SB311-0103	G32-SB312-0103	G32-SB313-0002	G32-SB317-0002	G32-SB318-0002	G32-SB327-0103
LOCATION ID	G32-SB300B	G32-SB301B	G32-SB302B	G32-SB303B	G32-SB304B	G32-SB309	G32-SB310	G32-SB311	G32-SB312	G32-SB313	G32-SB317	G32-SB318	G32-SB327
SAMPLE DATE	06/01/05	07/13/05	07/05/05	07/11/05	06/01/05	07/12/05	07/12/05	06/29/05	06/29/05	07/05/05	06/22/05	06/21/05	06/16/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	1 FT	1 FT	0 FT	0 FT	0 FT	1 FT
BOTTOM DEPTH	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	3 FT	3 FT	2 FT	2 FT	2 FT	3 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TOXAPHENE	180 U	200 U	180 U	180 U	190 U	190 U	180 U	190 U	180 U	980 U	NA	170 U	180 U
METALS (MG/KG)													
ALUMINUM	4950 J	8850	7470	8990	5710 J	6440	6540	6980	6750	6680	6610 J	8390 J	6020
ANTIMONY	0.22 UJ	0.37 UJ	0.34 UJ	0.16 UJ	0.27 UJ	0.27 UJ	0.36 UJ	0.41 UJ	0.34 UJ	0.6 UJ	0.18 UJ	0.41 UJ	0.55 UJ
ARSENIC	5.1 J	3.2 J	4.5 J	3.2 J	2.1 J	2.7 J	3.2 J	2 J	2.2 J	5.6 J	4.4 J	4.3 J	2.5 J
BARIUM	25.4 J	35 J	37.9 J	75.2 J	22.7 J	29 J	29.1 J	23.9 J	21.5 J	89.4 J	73.3 J	51.4 J	22.4 J
BERYLLIUM	0.2	0.3	0.33	0.62	0.21	0.22	0.28	0.19	0.21	0.22	0.26 J	0.25 J	0.22
CADMIUM	0.19 J	0.24 J	0.0054 UJ	0.0052 UJ	1.7 J	0.66 J	0.0048 UJ	0.0049 UJ	0.0052 UJ	1.8 J	1.1 J	0.71 J	0.0048 UJ
CALCIUM	1040	731	2490	6670	581	1410	2100	1430	1090	59700	3780 J	15600 J	1650 J
CHROMIUM	10.5 J	11.1	9.6	26.5	8.5 J	12.5	8.5	10.1	9.3	15.7	12.1 J	13.3 J	8.7 J
COBALT	4 J	5.8 J	4 J	7.5 J	3.7 J	4.6 J	4.8 J	3.6 J	4.3 J	3.4 J	4.8 J	4.1 J	4.3 J
COPPER	20.1 J	21.2	21.7	11.6	31.4 J	17.1	13.5	11.4	16.9	54.5	53.6 J	34.4 J	18.9 J
CYANIDE	0.12 U	0.13 U	0.12 U	0.12 U	0.13 U	0.12 U	0.11 U	0.14 UJ	0.44 U	0.13 U	0.12 U	0.11 U	0.12 U
IRON	8700	12300	13400	19500	9320	10800	10300	11700	11600	21100	20000 J	19800 J	12700 J
LEAD	10.8 J	84.5	18.7 J	6.7 J	37.8 J	21.3 J	19.4 J	5.7 J	7.6 J	239	101 J	266 J	9.1 J
MAGNESIUM	1930 J	2620	2130	6920	1980 J	2250	2280	2780	2510	4290	2500 J	3650 J	2380 J
MANGANESE	150 J	216	259	473	92 J	169	224	133	138	244	174 J	214 J	139 J
MERCURY	0.019 J	0.033 J	0.045	0.0072 U	0.045 J	0.0086 J	0.011 J	0.0065 U	0.0065 J	0.049	0.015	0.035	0.0096 UJ
NICKEL	13.2 J	12.6 J	6.2 J	18.3 J	9.3 J	9 J	8.7 J	8.1 J	8.5 J	12.4 J	13.1 J	11.8 J	9.5 J
POTASSIUM	546	977 J	1180 J	4960 J	623	925 J	880 J	836 J	811 J	890 J	809	909	720
SELENIUM	0.059 U	0.064 U	0.066 UJ	0.063 U	0.062 U	0.062 U	0.059 U	0.06 UJ	0.063 UJ	0.062 UJ	0.06 UJ	0.062 UJ	0.059 UJ
SILVER	0.61 UJ	0.64 UJ	0.26 UJ	0.018 U	0.79 UJ	0.28 UJ	0.13 UJ	0.55 UJ	0.53 UJ	0.017 U	0.44 UJ	0.017 UJ	0.56 UJ
SODIUM	201	32.4	47.7	145	47.7	110	65	147	103	478	218	199	65.9
THALLIUM	0.19 UJ	0.075 U	0.077 U	0.074 U	0.26 UJ	0.073 U	0.069 U	0.071 U	0.074 U	0.073 U	0.33 UJ	0.44 UJ	0.23 UJ
VANADIUM	9.3 J	20.4	12.5 J	28.7	11.1 J	10.8 J	10.5 J	12 J	11.2 J	15 J	19.7 J	20.7 J	10.7 J
ZINC	56.6 J	43.7 J	48.4 J	58.8 J	69.8 J	82.8 J	28.9 J	21.4 J	21.3 J	159	106 J	103 J	22.7 J
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	22 J	53	85	99	130	49 J	15	13 U	22	14000 J	NA	1300	13 U
GASOLINE RANGE ORGANICS	3.4 U	5.2 U	5.6 U	4.4 UJ	3.8 U	4.4 U	3.8 U	3.6 U	3.6 U	18 U	5.6 U	4.6 U	4 U
TOTAL PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB327-0103-AVG	G32-SB332-0002	G32-SB334-0002	G32-SB335-0002	G32-SB336-0002	G32-SB337-0002	G32-SB338-0002	GI-SB401-0006	GI-SB402-0006	GI-SB403-0006	GI-SB404-0006	GI-SB405-0006	GI-SB406-0006
LOCATION ID	G32-SB327	G32-SB332	G32-SB334	G32-SB335	G32-SB336	G32-SB337	G32-SB338	GI-SB401	GI-SB402	GI-SB403	GI-SB404	GI-SB405	GI-SB406
SAMPLE DATE	06/16/05	07/14/05	06/22/05	07/05/05	07/06/05	07/14/05	07/14/05	06/02/10	06/02/10	06/02/10	06/03/10	06/03/10	06/01/10
TOP DEPTH	1 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	3 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
VOLATILES (UG/KG)													
1,1,1-TRICHLOROETHANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	3 U	3 U	5 UJ	3 U	6 UJ	3 U	3 U	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	3 UJ	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	3 U	3 U	5 U	3 U	6 UJ	3 U	3 U	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	3 U	3 UJ	5 U	3 U	6 UJ	3 UJ	3 UJ	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	3 U	3 U	5 U	3 U	6 UJ	3 U	3 U	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	3 U	3 U	5 U	3 U	6 UJ	3 U	3 U	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	3 U	3 U	5 U	3 U	6 UJ	3 U	3 U	NA	NA	NA	NA	NA	NA
2-BUTANONE	3 U	3 U	5 UJ	3 U	6 U	3	3 U	NA	NA	NA	NA	NA	NA
2-HEXANONE	3 U	3 U	5 UJ	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
ACETONE	3 UJ	8 UJ	24 UJ	6 UJ	6 UJ	14 UJ	12 UJ	NA	NA	NA	NA	NA	NA
BENZENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
BROMOFORM	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
BROMOMETHANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
BTEX	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
CHLOROETHANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
CHLOROFORM	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	3 U	3 U	5 UJ	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
M+P-XYLENES	3 U	NA	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	3 U	3 U	5 UJ	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB327-0103-AVG	G32-SB332-0002	G32-SB334-0002	G32-SB335-0002	G32-SB336-0002	G32-SB337-0002	G32-SB338-0002	GI-SB401-0006	GI-SB402-0006	GI-SB403-0006	GI-SB404-0006	GI-SB405-0006	GI-SB406-0006
LOCATION ID	G32-SB327	G32-SB332	G32-SB334	G32-SB335	G32-SB336	G32-SB337	G32-SB338	GI-SB401	GI-SB402	GI-SB403	GI-SB404	GI-SB405	GI-SB406
SAMPLE DATE	06/16/05	07/14/05	06/22/05	07/05/05	07/06/05	07/14/05	07/14/05	06/02/10	06/02/10	06/02/10	06/03/10	06/03/10	06/01/10
TOP DEPTH	1 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	3 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
METHYL TERT-BUTYL ETHER	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	5.5 U	14 UJ	10 UJ	21 U	45 U	32 UJ	48 UJ	NA	NA	NA	NA	NA	NA
O-XYLENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	3 U	NA	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
STYRENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
TOLUENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	3 U	0.7 J	5 UJ	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	3 UJ	0.7 J	5 UJ	3 U	6 UJ	3 UJ	3 UJ	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	3 U	0.7 J	5 UJ	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	3 U	3 U	5 U	3 U	6 U	3 U	3 U	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	350 U	370 U	3000 J	360	2300 J	370 U	350 U	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	720 U	750 U	14000 R	730 U	7400 U	740 U	720 U	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	350 U	370 U	6800 R	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	350 UJ	370 UJ	6800 U	360 UJ	3600 UJ	370 UJ	350 UJ	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	720 U	750 UJ	14000 R	730 UJ	7400 U	740 UJ	720 UJ	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	6.35	38	10000	1200	7800	4.1	3.5 U	81 U	78 U	76 U	74 U	80 U	70 U
2-METHYLPHENOL	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
2-NITROANILINE	720 U	750 U	14000 U	730 U	7400 U	740 U	720 U	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	350 UJ	370 U	6800 U	360 UJ	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
3-NITROANILINE	720 U	750 U	14000 UJ	730 UJ	7400 UJ	740 U	720 U	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	720 U	750 U	14000 R	730 UJ	7400 UJ	740 U	720 U	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	350 U	370 U	6800 U	49 J	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB327-0103-AVG	G32-SB332-0002	G32-SB334-0002	G32-SB335-0002	G32-SB336-0002	G32-SB337-0002	G32-SB338-0002	GI-SB401-0006	GI-SB402-0006	GI-SB403-0006	GI-SB404-0006	GI-SB405-0006	GI-SB406-0006
LOCATION ID	G32-SB327	G32-SB332	G32-SB334	G32-SB335	G32-SB336	G32-SB337	G32-SB338	GI-SB401	GI-SB402	GI-SB403	GI-SB404	GI-SB405	GI-SB406
SAMPLE DATE	06/16/05	07/14/05	06/22/05	07/05/05	07/06/05	07/14/05	07/14/05	06/02/10	06/02/10	06/02/10	06/03/10	06/03/10	06/01/10
TOP DEPTH	1 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	3 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
4-NITROANILINE	720 UJ	750 U	14000 R	730 UJ	7400 UJ	740 U	720 UJ	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	720 U	750 U	14000 R	730 U	7400 U	740 U	720 U	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	2.92	480	28000	4300 J	27000	46	86	81 U	78 U	76 U	74 U	80 U	70 U
ACENAPHTHYLENE	3.5 U	12	3300	71 J	520 J	5.4	3.5 U	81 U	78 U	76 U	74 U	80 U	70 U
ACETOPHENONE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
ANTHRACENE	5	1700	49000	9200	44000	210	310	81 U	61 J	46 J	74 U	89 J	70 U
ATRAZINE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	350 UJ	370 UJ	6800 UJ	360 UJ	3600 U	370 UJ	350 UJ	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	6.7	2900	91000	19000	110000	350	520	160 J	220 J	220 J	89 J	330 J	36 J
BENZO(A)PYRENE	3.02	2400	71000	15000	91000	300	370	140 J	180 J	170 J	65 J	250 J	70 U
BENZO(B)FLUORANTHENE	7.15	2900	84000	18000	120000	360	440	170 J	240 J	220 J	100 J	370 J	70 U
BENZO(G,H,I)PERYLENE	3.5 U	1400 J	33000	10000 J	56000 J	150	190	130 J	120 J	99 J	74 U	140 J	70 U
BENZO(K)FLUORANTHENE	2.78	1300	42000	8400	51000 J	170	230	120 J	170 J	130 J	44 J	120 J	70 U
BIS(2-CHLOROETHOXY)METHANE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	72 J	370 U	6800 U	360 UJ	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	350 U	370 U	6800 U	360 UJ	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
CAPROLACTAM	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
CARBAZOLE	350 U	280 J	26000	4100 J	23000	370 U	64 J	NA	NA	NA	NA	NA	NA
CHRYSENE	7.7	3000	85000	18000	100000	310	450	190 J	250 J	250 J	110 J	340 J	41 J
DIBENZO(A,H)ANTHRACENE	3.5 UJ	440 J	9200 J	2500 J	14000 J	47	62	81 U	78 U	76 U	74 U	41 J	70 U
DIBENZOFURAN	350 U	290 J	22000	3900	16000	370 U	120 J	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	45 J	370 U	6800 U	360 UJ	3600 UJ	370 U	350 U	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	350 U	370 U	6800 U	360 UJ	3600 UJ	370 U	350 U	NA	NA	NA	NA	NA	NA
FLUORANTHENE	18	6100	200000	41000	240000	700	1100	300 J	430	380	170 J	660 J	57 J
FLUORENE	3.5 U	590	28000	4200 J	26000	42	160	81 U	78 U	76 U	74 U	80 U	70 U
HEXACHLOROBENZENE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	350 UJ	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	350 UJ	370 U	6800 R	360 UJ	3600 U	370 U	350 UJ	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	62 J	26700 J	790000 J	170000 J	1010000 J	3020	4350	1620 J	2210 J	2030 J	718 J	2930 J	187 J
INDENO(1,2,3-CD)PYRENE	2.78	1500 J	35000	10000 J	58000 J	140	180	100 J	120 J	110 J	74 U	120 J	70 U
ISOPHORONE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	40.2	6770	324000	57400 J	272000 J	634	1060	190 J	431 J	296 J	86 J	499 J	40 J
NAPHTHALENE	4.35	53	26000	3400	17000	6.2	6.9	81 U	78 U	76 U	74 UJ	80 UJ	70 U
NITROBENZENE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB327-0103-AVG	G32-SB332-0002	G32-SB334-0002	G32-SB335-0002	G32-SB336-0002	G32-SB337-0002	G32-SB338-0002	GI-SB401-0006	GI-SB402-0006	GI-SB403-0006	GI-SB404-0006	GI-SB405-0006	GI-SB406-0006
LOCATION ID	G32-SB327	G32-SB332	G32-SB334	G32-SB335	G32-SB336	G32-SB337	G32-SB338	GI-SB401	GI-SB402	GI-SB403	GI-SB404	GI-SB405	GI-SB406
SAMPLE DATE	06/16/05	07/14/05	06/22/05	07/05/05	07/06/05	07/14/05	07/14/05	06/02/10	06/02/10	06/02/10	06/03/10	06/03/10	06/01/10
TOP DEPTH	1 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	3 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
PENTACHLOROPHENOL	720 U	750 U	14000 R	730 U	7400 U	740 U	720 U	NA	NA	NA	NA	NA	NA
PHENANTHRENE	22.5	3900	180000	35000	150000	320	500	190 J	370 J	250 J	86 J	410 J	40 J
PHENOL	350 U	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
PYRENE	16.5	4800	140000	28000	170000	490	810	310 J	480	450	140 J	560 J	53 J
TOTAL CARCINOGENIC PAHS-HALFND	31.8 J	14400 J	417000 J	90900 J	544000 J	1680	2250	920 J	1220 J	1140 J	482 J	1570 J	252 J
TOTAL CARCINOGENIC PAHS-POS	27.5 J	14400 J	417000 J	90900 J	544000 J	1680	2250	880 J	1180 J	1100 J	408 J	1570 J	77 J
TOTAL CHLORINATED VOCS	350 UJ	370 U	6800 U	360 U	3600 U	370 U	350 U	NA	NA	NA	NA	NA	NA
TOTAL PAHS	102 J	33500 J	1110000 J	227000 J	1280000 J	3650	5410	1810 J	2640 J	2320 J	804 J	3430 J	227 J
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	3.5 U	3.7 U	34 U	18 U	18 U	3.7 UJ	3.5 U	NA	NA	NA	NA	NA	NA
4,4'-DDE	3.5 U	3.7 U	64	18 U	18 U	3.7 UJ	3.5 U	NA	NA	NA	NA	NA	NA
4,4'-DDT	3.5 U	3.7 U	34 U	18 U	18 U	3.7 UJ	3.5 U	NA	NA	NA	NA	NA	NA
ALDRIN	1.8 U	1.9 U	18 U	9.2 U	9.3 U	1.9 UJ	1.8 U	NA	NA	NA	NA	NA	NA
ALPHA-BHC	1.8 U	1.9 U	18 U	9.2 UJ	9.3 UJ	1.9 UJ	1.8 U	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	1.8 U	1.9 U	18 U	9.2 U	9.3 U	1.9 UJ	1.8 U	NA	NA	NA	NA	NA	NA
AROCLOR-1016	35 U	37 U	34 U	36 U	36 U	37 UJ	35 U	NA	NA	NA	NA	NA	NA
AROCLOR-1221	35 U	37 U	34 U	36 U	36 U	37 UJ	35 U	NA	NA	NA	NA	NA	NA
AROCLOR-1232	35 U	37 U	34 U	36 U	36 U	37 UJ	35 U	NA	NA	NA	NA	NA	NA
AROCLOR-1242	35 U	37 U	34 U	36 U	36 U	37 UJ	35 U	NA	NA	NA	NA	NA	NA
AROCLOR-1248	35 U	37 U	34 U	36 U	36 U	37 UJ	35 U	NA	NA	NA	NA	NA	NA
AROCLOR-1254	35 U	37 U	34 U	36 U	36 U	37 UJ	35 U	NA	NA	NA	NA	NA	NA
AROCLOR-1260	35 U	37 U	440 J	59 J	700 J	37 UJ	35 U	NA	NA	NA	NA	NA	NA
BETA-BHC	1.8 U	1.9 U	18 U	9.2 U	9.3 U	1.9 UJ	1.8 U	NA	NA	NA	NA	NA	NA
DELTA-BHC	1.8 UJ	1.9 U	18 UJ	9.2 R	9.3 R	1.9 UJ	1.8 U	NA	NA	NA	NA	NA	NA
DIELDRIN	3.5 U	3.7 U	34 U	18 U	18 U	3.7 UJ	3.5 U	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	1.8 U	1.9 U	18 U	9.2 U	9.3 U	1.9 UJ	1.8 U	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	3.5 U	3.7 U	34 U	18 U	18 U	3.7 UJ	3.5 U	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	3.5 U	3.7 U	34 U	18 UJ	46 J	3.7 UJ	3.5 U	NA	NA	NA	NA	NA	NA
ENDRIN	3.5 U	3.7 U	170 J	18 U	18 U	3.7 UJ	3.5 U	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	3.5 U	3.7 U	34 U	18 U	18 U	3.7 UJ	3.8	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	3.5 U	3.7 U	270 J	58 J	18 U	3.7 UJ	4.1 J	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	1.8 U	1.9 U	18 U	9.2 UJ	9.3 UJ	1.9 UJ	1.8 U	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	1.8 U	1.9 U	18 U	9.2 U	9.3 U	1.9 UJ	1.8 U	NA	NA	NA	NA	NA	NA
HEPTACHLOR	1.8 U	1.9 U	18 U	9.2 U	9.3 U	1.9 UJ	1.8 U	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	1.8 U	1.9 U	18 U	9.2 U	9.3 U	1.9 UJ	1.8 U	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	18 U	19 U	220 J	92 U	250 J	19 UJ	18 U	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	35 U	37 U	440 J	59 J	700 J	37 UJ	35 U	NA	NA	NA	NA	NA	NA
TOTAL CHLORDANE	1.8 U	1.9 U	18 U	9.2 U	9.3 U	1.9 UJ	1.8 U	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	3.5 U	3.7 U	64	18 U	18 U	3.7 UJ	3.5 U	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB327-0103-AVG	G32-SB332-0002	G32-SB334-0002	G32-SB335-0002	G32-SB336-0002	G32-SB337-0002	G32-SB338-0002	GI-SB401-0006	GI-SB402-0006	GI-SB403-0006	GI-SB404-0006	GI-SB405-0006	GI-SB406-0006
LOCATION ID	G32-SB327	G32-SB332	G32-SB334	G32-SB335	G32-SB336	G32-SB337	G32-SB338	GI-SB401	GI-SB402	GI-SB403	GI-SB404	GI-SB405	GI-SB406
SAMPLE DATE	06/16/05	07/14/05	06/22/05	07/05/05	07/06/05	07/14/05	07/14/05	06/02/10	06/02/10	06/02/10	06/03/10	06/03/10	06/01/10
TOP DEPTH	1 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	3 FT	2 FT	2 FT	2 FT	2 FT	2 FT	2 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TOXAPHENE	180 U	190 U	1800 U	920 U	930 U	190 UJ	180 U	NA	NA	NA	NA	NA	NA
METALS (MG/KG)													
ALUMINUM	5780	4660	8830	6720	5350	7710	5570	5800	3370	6550	5650	5800	5070
ANTIMONY	0.47 UJ	0.3 UJ	0.91 UJ	0.36 UJ	0.88 UJ	0.35 UJ	0.42 UJ	0.9 UJ	0.54 UJ	1.4 UJ	0.25 UJ	0.28 UJ	0.62 UJ
ARSENIC	2.4 J	2.4 J	5.9 J	3.7 J	4.6 J	3.2 J	2.5 J	2.4	3.3	4.1	1.9 J	2.1 J	2.9
BARIUM	19 J	15.6 J	164 J	42.3 J	104 J	20.1 J	14.7 J	19.7	14.4	27.8	21.9 J	22.1 J	16.4
BERYLLIUM	0.2	0.17	0.3	0.2	0.18	0.22	0.24	0.2	0.22	0.16 J	0.21 J	0.19 J	0.17 J
CADMIUM	0.00485 UJ	0.64 J	2.5	0.56 J	7.6 J	0.0051 UJ	0.0049 UJ	0.15 J	1.4	31.5	0.63 J	2.1	0.071 J
CALCIUM	2620 J	1520	35300 J	22100	54500	1080	932	1000	1070	698	362	653	1000
CHROMIUM	8.45 J	6.2	22.1 J	9.5	18	11.3	8.3	5.8	5.1	20.4	11.4	10.7	6.1
COBALT	4.55 J	4.5 J	4.5 J	3.5 J	3.6 J	5.5 J	7 J	1.8 J	2.3 J	4.2 J	3.3 J	4.9 J	2.5 J
COPPER	16.8 J	19.2	56.6 J	29.5	71.9	16	18	5.3 J	7.8 J	34.3 J	30.7	28.5	8.1 J
CYANIDE	0.12 U	0.12 U	0.11 U	0.12 U	0.18 UJ	0.12	0.12 U	NA	NA	NA	NA	NA	NA
IRON	11500 J	8960	29600 J	12900	24700	16300	11400	10100	7440	22100	14400	15500	9790
LEAD	7.6 J	7.1 J	750 J	77.1	250	7.2 J	5.8 J	10.6 J	13 J	194 J	84.5	41.2	7 J
MAGNESIUM	2300 J	1900	3760 J	2520	2990	2840	2200	1240 J	1120 J	2630 J	2160	2190	1660 J
MANGANESE	162 J	132	290 J	174	211	156	111	146	259	197	96.1	116	203
MERCURY	0.0088 UJ	0.0073 U	0.011 UJ	0.011 J	0.06	0.012 J	0.0066 U	0.013 J	0.0091 J	0.015 J	0.023 J	0.022 J	0.026 U
NICKEL	10.2 J	10.2 J	22.4 J	11.2 J	11.4 J	13.5 J	18.1 J	3.6 J	4.6 J	12.5 J	9.1	11.5	5.2 J
POTASSIUM	618	520 J	743	1060 J	738 J	599 J	469 J	541 J	469 J	550 J	533	603	550 J
SELENIUM	0.0595 UJ	0.06 U	0.057 UJ	0.061 UJ	0.06 UJ	0.062 U	0.06 U	0.93 UJ	1 UJ	1 UJ	0.9 U	1 U	0.98 UJ
SILVER	0.4 UJ	0.098 UJ	0.016 U	0.017 U	0.017 U	0.41 UJ	0.25 UJ	0.15 UJ	0.16 UJ	0.1 J	0.14 UJ	0.16 UJ	0.16 UJ
SODIUM	62.6	34.1	638	109	275	30.7	26.7	40.3 J	60.2	53.8 J	33 J	54.7 J	22.6 J
THALLIUM	0.205 UJ	0.071 U	0.75 UJ	0.072 U	0.071 U	0.073 U	0.071 U	0.37 U	0.28 J	0.32 J	0.36 U	0.4 U	0.39 U
VANADIUM	9.85 J	7.5 J	16.6 J	11.7 J	9.8 J	15.1 J	10 J	9.2	6.7	21.9	12.6	17.2	8.6
ZINC	21.8 J	23.1 J	158 J	47.2 J	213	27.4 J	21.9 J	44	41.3	97.3	22	37.2	30.3
PETROLEUM HYDROCARBONS (MG/KG)													
EXTRACTABLE PETROLEUM HYDROCARBONS	13 U	85	11000 J	1200 J	5500 J	97	65	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	4.05 U	3.8 U	NA	3.9 U	6.7 U	4.5 U	3.6 U	2.7 U	2.8 U	2.9 U	3 U	3 U	3.3 U
TOTAL PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	60	55	54	60	88	25

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB407-0006	GI-SB408-0006	GI-SB409-0006	GI-SB410-0012	GI-SB411-0012	GI-SB412-0012	GI-SB413-0012	GI-SB413-0012-D	GI-SB413-0012-AVG
LOCATION ID	GI-SB407	GI-SB408	GI-SB409	GI-SB410	GI-SB411	GI-SB412	GI-SB413	GI-SB413	GI-SB413
SAMPLE DATE	06/01/10	06/01/10	05/28/10	05/28/10	05/28/10	05/27/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	FD	NM
VOLATILES (UG/KG)									
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB407-0006	GI-SB408-0006	GI-SB409-0006	GI-SB410-0012	GI-SB411-0012	GI-SB412-0012	GI-SB413-0012	GI-SB413-0012-D	GI-SB413-0012-AVG
LOCATION ID	GI-SB407	GI-SB408	GI-SB409	GI-SB410	GI-SB411	GI-SB412	GI-SB413	GI-SB413	GI-SB413
SAMPLE DATE	06/01/10	06/01/10	05/28/10	05/28/10	05/28/10	05/27/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	FD	NM
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (UG/KG)									
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	98 J	72 U	72 U	70 U	70 U	330 J	76 U	70 U	73 U
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB407-0006	GI-SB408-0006	GI-SB409-0006	GI-SB410-0012	GI-SB411-0012	GI-SB412-0012	GI-SB413-0012	GI-SB413-0012-D	GI-SB413-0012-AVG
LOCATION ID	GI-SB407	GI-SB408	GI-SB409	GI-SB410	GI-SB411	GI-SB412	GI-SB413	GI-SB413	GI-SB413
SAMPLE DATE	06/01/10	06/01/10	05/28/10	05/28/10	05/28/10	05/27/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	FD	NM
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	490	72 U	72 U	100 J	37 J	2500 J	76 U	70 U	73 U
ACENAPHTHYLENE	70 U	72 U	72 U	70 U	70 U	260 J	76 U	70 U	73 U
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	610	72 U	72 U	290 J	100 J	5200 J	76 U	70 U	73 U
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	1300	80 J	140 J	960 J	290 J	8400	76 UJ	70 UJ	73 UJ
BENZO(A)PYRENE	930	94 J	120 J	930	220 J	6700	76 U	70 U	73 U
BENZO(B)FLUORANTHENE	1200	120 J	150 J	980 J	330 J	8200	76 UJ	70 UJ	73 UJ
BENZO(G,H,I)PERYLENE	580	55 J	69 J	530	130 J	4700 J	76 U	70 U	73 U
BENZO(K)FLUORANTHENE	520 J	44 J	97 J	710 J	140 J	4600 J	76 UJ	70 UJ	73 UJ
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	1100	91 J	150 J	1200	300 J	8100	76 U	70 U	73 U
DIBENZO(A,H)ANTHRACENE	140 J	72 U	72 U	130 J	39 J	2000 J	76 UJ	70 UJ	73 UJ
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	3100	120 J	300 J	1700	680	17000	39 J	46 J	42.5 J
FLUORENE	260 J	72 U	72 U	81 J	41 J	2400 J	76 U	70 U	73 U
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	11900 J	816 J	1350 J	9350 J	2820 J	79300 J	101 J	95 J	98 J
INDENO(1,2,3-CD)PYRENE	520	72 J	75 J	410	120 J	4600 J	76 U	70 U	73 U
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	4530 J	87 J	130 J	1400 J	538 J	24400 J	76 U	70 U	73 U
NAPHTHALENE	270 J	72 U	72 UJ	70 U	70 UJ	730 J	76 U	70 U	73 U
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB407-0006	GI-SB408-0006	GI-SB409-0006	GI-SB410-0012	GI-SB411-0012	GI-SB412-0012	GI-SB413-0012	GI-SB413-0012-D	GI-SB413-0012-AVG
LOCATION ID	GI-SB407	GI-SB408	GI-SB409	GI-SB410	GI-SB411	GI-SB412	GI-SB413	GI-SB413	GI-SB413
SAMPLE DATE	06/01/10	06/01/10	05/28/10	05/28/10	05/28/10	05/27/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	FD	NM
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	2800	87 J	130 J	930	360	13000	76 U	70 U	73 U
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	2500	140 J	250 J	1800	570	15000	62 J	49 J	55.5 J
TOTAL CARCINOGENIC PAHS-HALFND	5710 J	537 J	768 J	5320 J	1440 J	42600 J	76 UJ	70 UJ	73 UJ
TOTAL CARCINOGENIC PAHS-POS	5710 J	501 J	732 J	5320 J	1440 J	42600 J	76 UJ	70 UJ	73 UJ
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	16400 J	903 J	1480 J	10800 J	3360 J	104000 J	101 J	95 J	98 J
PESTICIDES/PCBS (UG/KG)									
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	NA	NA	NA	8.8 U	8.7 U	8.7 U	9.5 U	8.8 U	9.15 U
AROCLOR-1221	NA	NA	NA	18 U	17 U	17 U	19 U	18 U	18.5 U
AROCLOR-1232	NA	NA	NA	8.8 U	8.7 U	8.7 U	9.5 U	8.8 U	9.15 U
AROCLOR-1242	NA	NA	NA	8.8 U	8.7 U	8.7 U	9.5 U	8.8 U	9.15 U
AROCLOR-1248	NA	NA	NA	8.8 U	8.7 U	1200 J	9.5 U	8.8 U	9.15 U
AROCLOR-1254	NA	NA	NA	8.8 U	8.7 U	640	9.5 U	8.8 U	9.15 U
AROCLOR-1260	NA	NA	NA	110	87	8.7 U	9.5 U	8.8 U	9.15 U
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	NA	NA	NA	110	87	1840 J	10.9 U	10.1 U	10.5 U
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.2
ANALYTICAL RESULTS - SURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB407-0006	GI-SB408-0006	GI-SB409-0006	GI-SB410-0012	GI-SB411-0012	GI-SB412-0012	GI-SB413-0012	GI-SB413-0012-D	GI-SB413-0012-AVG
LOCATION ID	GI-SB407	GI-SB408	GI-SB409	GI-SB410	GI-SB411	GI-SB412	GI-SB413	GI-SB413	GI-SB413
SAMPLE DATE	06/01/10	06/01/10	05/28/10	05/28/10	05/28/10	05/27/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SS	SS	SS	SS	SS	SS	SS	SS	SS
QC TYPE	NM	NM	NM	NM	NM	NM	NM	FD	NM
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)									
ALUMINUM	6820	6210	6190	6950	8070	6520	6730	8090	7410
ANTIMONY	0.7 UJ	1.7 J	2.2 UJ	0.9 UJ	1.5 UJ	2.3 UJ	0.96 UJ	0.89 UJ	0.925 UJ
ARSENIC	2	3.8	11.4	6.6 J	5.2 J	3.8 J	2.4 J	2.7 J	2.55 J
BARIUM	27.6	30.3	27.7	40.5	41.9	50.5	28.5	48.6	38.6
BERYLLIUM	0.2	0.43	0.44	0.29	0.35	0.28	0.21	0.23	0.22
CADMIUM	0.14 J	0.16 J	0.023 UJ	0.47 J	0.25 J	1.4 J	0.02 UJ	0.24 J	0.125 J
CALCIUM	1550	2150	2030 J	21500 J	1590 J	15100 J	2740 J	9290 J	6020 J
CHROMIUM	10	7.4	8.2	10.7	12	11.1	11.1	11.4	11.2
COBALT	4.2 J	3.3 J	6.1	5.1	6.1	4	3.8	4.7	4.25
COPPER	15.9 J	13.2 J	18.7	20	28.8	31.3	11.9	16.1	14
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	16900	16100	20200	18000	22500	18500	16000	18200	17100
LEAD	19 J	17.7 J	23.2 J	26.8 J	28.7 J	115 J	10.9 J	16.8 J	13.8 J
MAGNESIUM	2640 J	1480 J	1590	2900	2560	2270	2450	3470	2960
MANGANESE	152	350	440	331	341	263	204	225	214
MERCURY	0.0068 J	0.013 J	0.067 J	0.046 J	0.097 J	0.049 J	0.036 J	0.024 J	0.03 J
NICKEL	9.6 J	5.5 J	9.8 J	10.3 J	14.2 J	10.2 J	7.7 J	9.8 J	8.75 J
POTASSIUM	746 J	559 J	458	511	705	585	808	1040	924
SELENIUM	0.7 UJ	0.94 UJ	1.1 U	1 U	1.2 UJ	0.94 U	1 UJ	1.1 U	1.05 UJ
SILVER	0.11 UJ	0.15 UJ	0.15 U	0.17 U	0.2 U	0.11 U	0.12 U	0.2 U	0.16 U
SODIUM	35.5 J	33.6 J	34.6 J	158 J	168 J	376 J	199 J	344 J	272 J
THALLIUM	0.15 J	0.37 U	0.46 U	0.4 U	0.5 U	0.38 U	0.4 U	0.42 U	0.41 U
VANADIUM	12.6	11.6	10.8	10.9	15.2	11.4	11.9	15.8	13.8
ZINC	39.3	59.1	67.1 J	76.9 J	73.6 J	234 J	32.8 J	49.1 J	41 J
PETROLEUM HYDROCARBONS (MG/KG)									
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	2.4 U	3.5 U	2.3 U	NA	NA	NA	NA	NA	NA
TOTAL PETROLEUM HYDROCARBONS	34	45	52	NA	NA	NA	NA	NA	NA

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB300B-0608	G32-SB301B-1012	G32-SB302B-2527	G32-SB302B-0507	G32-SB303B-1012	G32-SB304B-0608	G32-SB305B-0305	G32-SB305B-0911	G32-SB306B-1012	G32-SB306B-5052	G32-SB309-3840	G32-SB309-3840-D	G32-SB309-3840-AVG	G32-SB310-4042
LOCATION ID	G32-SB300B	G32-SB301B	G32-SB302B	G32-SB302B	G32-SB303B	G32-SB304B	G32-SB305B	G32-SB305B	G32-SB306B	G32-SB306B	G32-SB309	G32-SB309	G32-SB309	G32-SB310
SAMPLE DATE	06/01/05	07/13/05	07/05/05	07/05/05	07/11/05	06/01/05	06/08/05	06/09/05	06/23/05	06/24/05	07/12/05	07/12/05	07/12/05	07/13/05
TOP DEPTH	6 FT	10 FT	25 FT	5 FT	10 FT	6 FT	3 FT	9 FT	10 FT	50 FT	38 FT	38 FT	38 FT	
BOTTOM DEPTH	8 FT	12 FT	27 FT	7 FT	12 FT	8 FT	5 FT	11 FT	12 FT	52 FT	40 FT	40 FT	40 FT	
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
1,1,2,2-TETRACHLOROETHANE	4 U	4 UJ	3 UJ	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
1,1,2-TRICHLOROETHANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
1,1,2-TRICHLOROTRIFLUOROETHANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
1,1-DICHLOROETHANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
1,1-DICHLOROETHENE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
1,2,4-TRICHLOROBENZENE	4 U	4 UJ	3 UJ	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
1,2-DIBROMO-3-CHLOROPROPANE	4 U	4 UJ	3 UJ	3 U	3 UJ	3 UJ	3 U	3 U	4 U	3 U	3 UJ	2 UJ	2.5 UJ	3 UJ
1,2-DIBROMOETHANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
1,2-DICHLOROBENZENE	4 U	4 UJ	3 UJ	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
1,2-DICHLOROETHANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
1,2-DICHLOROPROPANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
1,3-DICHLOROBENZENE	4 U	4 UJ	3 UJ	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
1,4-DICHLOROBENZENE	4 U	4 UJ	3 UJ	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
2-BUTANONE	4 U	4 U	3 U	3 U	3 U	3 U	3 UJ	3 UJ	4 U	3 U	3 U	2 U	2.5 U	3 U
2-HEXANONE	4 U	4 U	3 U	3 U	3 U	3 UJ	3 UJ	3 UJ	4 UJ	3 UJ	3 U	2 U	2.5 U	3 U
4-METHYL-2-PENTANONE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
ACETONE	4 UJ	10 UJ	180 U	5 UJ	6 UJ	79 UJ	3 UJ	3 UJ	33 UJ	14 UJ	4 UJ	4 UJ	4 UJ	6 UJ
BENZENE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
BROMODICHLOROMETHANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
BROMOFORM	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
BROMOMETHANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
BTEX	4 U	4 U	3 U	3 U	3 U	1 J	3 U	3 U	11	3 U	3 U	2 U	2.5 U	3 U
CARBON DISULFIDE	4 U	4 U	3 U	3 U	3 U	2 J	3 U	3 U	4	2 J	3 U	2 U	2.5 U	3 U
CARBON TETRACHLORIDE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
CHLOROBENZENE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
CHLORODIBROMOMETHANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
CHLOROETHANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
CHLOROFORM	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
CHLOROMETHANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
CIS-1,2-DICHLOROETHENE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
CIS-1,3-DICHLOROPROPENE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
CYCLOHEXANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
DICHLORODIFLUOROMETHANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 UJ	3 UJ	3 U	2 U	2.5 U	3 U
ETHYLBENZENE	4 U	4 U	3 U	3 U	3 U	1 J	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
ISOPROPYLBENZENE	4 U	4 U	3 U	3 U	3 U	68 J	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	4 U	4 U	3 U	3 U	3 U	2 J	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
METHYL CYCLOHEXANE	4 U	4 U	3 U	3 U	3 UJ	11 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
METHYL TERT-BUTYL ETHER	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
METHYLENE CHLORIDE	10 U	24 UJ	19 U	14 U	5 B	11 U	4 U	5 U	14 U	17 U	24 UJ	17 UJ	20.5 UJ	20 UJ
O-XYLENE	4 U	4 U	3 U	3 U	3 U	3 UJ	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB300B-0608	G32-SB301B-1012	G32-SB302B-2527	G32-SB302B-0507	G32-SB303B-1012	G32-SB304B-0608	G32-SB305B-0305	G32-SB305B-0911	G32-SB306B-1012	G32-SB306B-5052	G32-SB309-3840	G32-SB309-3840-D	G32-SB309-3840-AVG	G32-SB310-4042
LOCATION ID	G32-SB300B	G32-SB301B	G32-SB302B	G32-SB302B	G32-SB303B	G32-SB304B	G32-SB305B	G32-SB305B	G32-SB306B	G32-SB306B	G32-SB309	G32-SB309	G32-SB309	G32-SB310
SAMPLE DATE	06/01/05	07/13/05	07/05/05	07/05/05	07/11/05	06/01/05	06/08/05	06/09/05	06/23/05	06/24/05	07/12/05	07/12/05	07/12/05	07/13/05
TOP DEPTH	6 FT	10 FT	25 FT	5 FT	10 FT	6 FT	3 FT	9 FT	10 FT	50 FT	38 FT	38 FT	38 FT	
BOTTOM DEPTH	8 FT	12 FT	27 FT	7 FT	12 FT	8 FT	5 FT	11 FT	12 FT	52 FT	40 FT	40 FT	40 FT	
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
P-XYLENE	4 U	4 U	3 U	3 U	3 U	3 UJ	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
STYRENE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
TETRACHLOROETHENE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
TOLUENE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	11	3 U	3 U	2 U	2.5 U	3 U
TOTAL 1,2-DICHLOROETHENE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
TOTAL CHLORINATED ETHENES	4 U	4 U	3 U	3 U	3 U	2 J	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
TOTAL CHLORINATED VOCS	4 U	4 UJ	3 UJ	3 U	3 UJ	2 J	3 U	3 U	4 UJ	3 UJ	3 UJ	2 UJ	2.5 UJ	3 UJ
TOTAL XYLENES	4 U	4 U	3 U	3 U	3 U	3 UJ	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
TRANS-1,2-DICHLOROETHENE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
TRANS-1,3-DICHLOROPROPENE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
TRICHLOROETHENE	4 U	4 U	3 U	3 U	3 U	2 J	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
TRICHLOROFLUOROMETHANE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
VINYL CHLORIDE	4 U	4 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 U	3 U	2 U	2.5 U	3 U
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	390 U	360 U	360 U	380 U	360 U	210 J	360 U	370 U	520 J	380 UJ	370 U	380 U	375 U	370 U
2,2'-OXYBIS(1-CHLOROPROPANE)	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
2,4,5-TRICHLOROPHENOL	790 U	740 U	730 U	770 U	720 U	820 U	730 U	750 U	4200 U	760 UJ	750 U	760 U	755 U	750 U
2,4,6-TRICHLOROPHENOL	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
2,4-DICHLOROPHENOL	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
2,4-DIMETHYLPHENOL	390 U	360 UJ	360 UJ	380 UJ	360 UJ	410 U	360 U	370 U	2100 U	380 UJ	370 UJ	380 UJ	375 UJ	370 UJ
2,4-DINITROPHENOL	790 U	740 UJ	730 U	770 U	720 UJ	820 U	730 U	750 U	4200 U	760 UJ	750 R	760 UJ	760 UJ	750 UJ
2,4-DINITROTOLUENE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
2,6-DINITROTOLUENE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
2-CHLORONAPHTHALENE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
2-CHLOROPHENOL	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
2-METHYLNAPHTHALENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	770	3.6 U	3.7 UJ	1800 J	3.8 UJ	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
2-METHYLPHENOL	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
2-NITROANILINE	790 U	740 U	730 U	770 U	720 U	820 U	730 U	750 U	4200 U	760 UJ	750 U	760 U	755 U	750 U
2-NITROPHENOL	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
3,3'-DICHLOROBENZIDINE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
3-NITROANILINE	790 U	740 U	730 UJ	770 UJ	720 U	820 U	730 U	750 U	4200 UJ	760 UJ	750 U	760 U	755 U	750 U
4,6-DINITRO-2-METHYLPHENOL	790 U	740 U	730 UJ	770 UJ	720 U	820 U	730 U	750 U	4200 U	760 UJ	750 R	760 U	760 U	750 U
4-BROMOPHENYL PHENYL ETHER	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
4-CHLORO-3-METHYLPHENOL	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
4-CHLOROANILINE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
4-CHLOROPHENYL PHENYL ETHER	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
4-METHYLPHENOL	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
4-NITROANILINE	790 UJ	740 UJ	730 UJ	770 UJ	720 UJ	820 UJ	730 UJ	750 UJ	4200 UJ	760 UJ	750 UJ	760 UJ	755 UJ	750 UJ
4-NITROPHENOL	790 U	740 U	730 U	770 U	720 U	820 U	730 U	750 U	4200 U	760 UJ	750 U	760 U	755 U	750 U
ACENAPHTHENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	1400	3.6 U	3.7 UJ	7200	3.8 UJ	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
ACENAPHTHYLENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	94	3.6 U	3.7 UJ	2100 U	3.8 UJ	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
ACETOPHENONE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
ANTHRACENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	570	3.6 U	3.7 UJ	16000	3.8 UJ	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB300B-0608	G32-SB301B-1012	G32-SB302B-2527	G32-SB302B-0507	G32-SB303B-1012	G32-SB304B-0608	G32-SB305B-0305	G32-SB305B-0911	G32-SB306B-1012	G32-SB306B-5052	G32-SB309-3840	G32-SB309-3840-D	G32-SB309-3840-AVG	G32-SB310-4042
LOCATION ID	G32-SB300B	G32-SB301B	G32-SB302B	G32-SB302B	G32-SB303B	G32-SB304B	G32-SB305B	G32-SB305B	G32-SB306B	G32-SB306B	G32-SB309	G32-SB309	G32-SB309	G32-SB310
SAMPLE DATE	06/01/05	07/13/05	07/05/05	07/05/05	07/11/05	06/01/05	06/08/05	06/09/05	06/23/05	06/24/05	07/12/05	07/12/05	07/12/05	07/13/05
TOP DEPTH	6 FT	10 FT	25 FT	5 FT	10 FT	6 FT	3 FT	9 FT	10 FT	50 FT	38 FT	38 FT	38 FT	
BOTTOM DEPTH	8 FT	12 FT	27 FT	7 FT	12 FT	8 FT	5 FT	11 FT	12 FT	52 FT	40 FT	40 FT	40 FT	
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
ATRAZINE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
BENZALDEHYDE	390 UJ	360 UJ	360 UJ	380 UJ	360 UJ	410 UJ	360 UJ	370 UJ	2100 UJ	380 UJ	370 UJ	380 UJ	375 UJ	370 UJ
BENZO(A)ANTHRACENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	320 J	3.6 U	3.7 UJ	30000	3.8 UJ	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
BENZO(A)PYRENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	130	3.6 U	3.7 UJ	25000	3.8 UJ	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
BENZO(B)FLUORANTHENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	230	3.6 U	3.7 UJ	36000	3.8 UJ	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
BENZO(G,H,I)PERYLENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	24	3.6 U	3.7 UJ	12000	3.8 UJ	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
BENZO(K)FLUORANTHENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	87	3.6 U	3.7 UJ	11000	3.8 UJ	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
BIS(2-CHLOROETHOXY)METHANE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
BIS(2-CHLOROETHYL)ETHER	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
BIS(2-ETHYLHEXYL)PHTHALATE	230 JEB	360 U	53 J	39 J	270 J	84 JEB	200 JEB	160 JEB	2100 U	380 UJ	370 U	40 J	112 J	370 U
BUTYL BENZYL PHTHALATE	390 U	360 U	360 U	380 U	56 J	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
CAPROLACTAM	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
CARBAZOLE	390 U	360 U	360 U	380 U	360 U	1200	360 U	370 U	5500	380 UJ	370 U	380 U	375 U	370 U
CHRYSENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	290	3.6 U	3.7 UJ	25000	3.8 UJ	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
DIBENZO(A,H)ANTHRACENE	3.9 UJ	3.6 U	3.6 UJ	3.8 U	3.6 UJ	12 J	3.6 UJ	3.7 UJ	3200	3.8 UJ	370 U	3.8 UJ	187 UJ	3.7 UJ
DIBENZOFURAN	390 U	360 U	360 U	380 U	360 U	1800	360 U	370 U	4500	380 UJ	370 U	380 U	375 U	370 U
DIETHYL PHTHALATE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
DIMETHYL PHTHALATE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
DI-N-BUTYL PHTHALATE	390 U	360 U	360 UJ	380 UJ	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
DI-N-OCTYL PHTHALATE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 UJ	380 U	375 UJ	370 U
FLUORANTHENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	2100	4.6	3.7 UJ	80000	10 J	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
FLUORENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	2800	3.6 U	3.7 UJ	7600	3.8 UJ	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
HEXACHLOROBENZENE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
HEXACHLOROBUTADIENE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
HEXACHLOROCYCLOPENTADIENE	390 U	360 UJ	360 U	380 U	360 UJ	410 U	360 U	370 U	2100 U	380 UJ	370 UJ	380 UJ	375 UJ	370 UJ
HEXACHLOROETHANE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
HIGH MOLECULAR WEIGHT PAHS	3.9 UJ	3.6 U	3.6 UJ	3.8 U	3.6 UJ	4520 J	8.9 J	3.7 UJ	289000	17.8 J	77 UJ	3.8 UJ	40.4 UJ	3.7 UJ
INDENO(1,2,3-CD)PYRENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	30	3.6 U	3.7 UJ	12000	3.8 UJ	370 U	3.8 UJ	187 UJ	3.7 UJ
ISOPHORONE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
LOW MOLECULAR WEIGHT PAHS	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	12000	3.6 U	3.7 UJ	86900 J	13.8 J	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
NAPHTHALENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	1200	3.6 U	3.7 UJ	4300	5.1 J	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
NITROBENZENE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
N-NITROSO-DI-N-PROPYLAMINE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
N-NITROSODIPHENYLAMINE	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
PENTACHLOROPHENOL	790 U	740 U	730 U	770 U	720 U	820 U	730 U	750 U	4200 U	760 UJ	750 UJ	760 U	755 UJ	750 U
PHENANTHRENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	5200	3.6 U	3.7 UJ	50000	8.7 J	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
PHENOL	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	210 J	380 UJ	370 U	380 U	375 U	370 U
PYRENE	3.9 U	3.6 U	3.6 UJ	3.8 U	3.6 UJ	1300	4.3	3.7 UJ	55000	7.8 J	3.7 UJ	3.8 UJ	3.75 UJ	3.7 UJ
TOTAL CARCINOGENIC PAHS-HALFND	3.9 UJ	3.6 U	3.6 UJ	3.8 U	3.6 UJ	1100 J	3.6 UJ	3.7 UJ	142000	3.8 UJ	108 UJ	3.8 UJ	55.9 UJ	3.7 UJ
TOTAL CARCINOGENIC PAHS-POS	3.9 UJ	3.6 U	3.6 UJ	3.8 U	3.6 UJ	1100 J	3.6 UJ	3.7 UJ	142000	3.8 UJ	108 UJ	3.8 UJ	55.9 UJ	3.7 UJ
TOTAL CHLORINATED VOCS	390 U	360 U	360 U	380 U	360 U	410 U	360 U	370 U	2100 U	380 UJ	370 U	380 U	375 U	370 U
TOTAL PAHS	3.9 UJ	3.6 U	3.6 UJ	3.8 U	3.6 UJ	16600 J	8.9 J	3.7 UJ	376000 J	31.6 J	46.8 UJ	3.8 UJ	25.3 UJ	3.7 UJ

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB300B-0608	G32-SB301B-1012	G32-SB302B-2527	G32-SB302B-0507	G32-SB303B-1012	G32-SB304B-0608	G32-SB305B-0305	G32-SB305B-0911	G32-SB306B-1012	G32-SB306B-5052	G32-SB309-3840	G32-SB309-3840-D	G32-SB309-3840-AVG	G32-SB310-4042
LOCATION ID	G32-SB300B	G32-SB301B	G32-SB302B	G32-SB302B	G32-SB303B	G32-SB304B	G32-SB305B	G32-SB305B	G32-SB306B	G32-SB306B	G32-SB309	G32-SB309	G32-SB309	G32-SB310
SAMPLE DATE	06/01/05	07/13/05	07/05/05	07/05/05	07/11/05	06/01/05	06/08/05	06/09/05	06/23/05	06/24/05	07/12/05	07/12/05	07/12/05	07/13/05
TOP DEPTH	6 FT	10 FT	25 FT	5 FT	10 FT	6 FT	3 FT	9 FT	10 FT	50 FT	38 FT	38 FT	38 FT	
BOTTOM DEPTH	8 FT	12 FT	27 FT	7 FT	12 FT	8 FT	5 FT	11 FT	12 FT	52 FT	40 FT	40 FT	40 FT	
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	3.9 U	3.7 U	3.6 U	3.8 U	3.6 U	4.1 UJ	3.6 U	3.7 U	4.1 U	3.8 U	3.7 U	3.8 U	3.75 U	3.7 U
4,4'-DDE	3.9 U	3.7 U	3.6 U	3.8 U	3.6 U	4.1 UJ	3.6 U	3.7 U	9 R	3.8 U	3.7 U	3.8 U	3.75 U	3.7 U
4,4'-DDT	3.9 U	3.7 U	3.6 U	3.8 U	3.6 U	4.1 UJ	3.6 U	3.7 U	4.1 U	3.8 U	3.7 U	3.8 U	3.75 U	3.7 U
ALDRIN	2 U	1.9 U	1.9 U	2 U	1.8 U	2.1 UJ	1.8 U	1.9 U	2.1 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
ALPHA-BHC	2 U	1.9 U	1.9 UJ	2 UJ	1.8 U	2.1 UJ	1.8 U	1.9 U	2.1 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
ALPHA-CHLORDANE	2 U	1.9 U	1.9 U	2 U	1.8 U	2.1 UJ	1.8 U	1.9 U	2.2 R	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
AROCLOR-1016	39 U	37 U	36 U	38 U	36 U	41 UJ	36 U	37 U	41 U	38 U	37 U	38 U	37.5 U	37 U
AROCLOR-1221	39 U	37 U	36 U	38 U	36 U	41 UJ	36 U	37 U	41 U	38 U	37 U	38 U	37.5 U	37 U
AROCLOR-1232	39 U	37 U	36 U	38 U	36 U	41 UJ	36 U	37 U	41 U	38 U	37 U	38 U	37.5 U	37 U
AROCLOR-1242	39 U	37 U	36 U	38 U	36 U	41 UJ	36 U	37 U	41 U	38 U	37 U	38 U	37.5 U	37 U
AROCLOR-1248	39 U	37 U	36 U	38 U	36 U	41 UJ	36 U	37 U	41 U	38 U	37 U	38 U	37.5 U	37 U
AROCLOR-1254	39 U	37 U	36 U	38 U	36 U	41 UJ	36 U	37 U	460 J	38 U	37 U	38 U	37.5 U	37 U
AROCLOR-1260	39 U	37 U	36 U	38 U	36 U	41 UJ	36 U	37 U	41 U	38 U	37 U	38 U	37.5 U	37 U
BETA-BHC	2 U	1.9 U	1.9 U	2 U	1.8 U	2.1 UJ	1.8 U	1.9 U	2.1 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
DELTA-BHC	2 UJ	1.9 U	1.9 R	2 R	1.8 U	2.1 UJ	1.8 UJ	1.9 UJ	2.1 UJ	1.9 UJ	1.9 U	1.9 U	1.9 U	1.9 U
DIELDRIN	3.9 U	3.7 U	3.6 U	3.8 U	3.6 U	4.1 UJ	3.6 U	3.7 U	4.1 U	3.8 U	3.7 U	3.8 U	3.75 U	3.7 U
ENDOSULFAN I	2 U	1.9 U	1.9 U	2 U	1.8 U	2.1 UJ	1.8 U	1.9 U	2.1 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
ENDOSULFAN II	3.9 U	3.7 U	3.6 U	3.8 U	3.6 U	4.1 UJ	3.6 U	3.7 U	4.1 U	3.8 U	3.7 U	3.8 U	3.75 U	3.7 U
ENDOSULFAN SULFATE	3.9 U	3.7 U	3.6 UJ	3.8 UJ	3.6 U	4.1 UJ	3.6 U	3.7 U	140 E	3.8 U	3.7 U	3.8 U	3.75 U	3.7 U
ENDRIN	3.9 U	3.7 U	3.6 U	3.8 U	3.6 U	4.1 UJ	3.6 UJ	3.7 UJ	4.1 U	3.8 U	3.7 U	3.8 U	3.75 U	3.7 U
ENDRIN ALDEHYDE	3.9 U	3.7 U	3.6 U	3.8 U	3.6 U	4.1 UJ	3.6 U	3.7 U	16	3.8 U	3.7 U	3.8 U	3.75 U	3.7 U
ENDRIN KETONE	3.9 U	3.7 U	3.6 U	3.8 U	3.6 U	4.1 UJ	3.6 U	3.7 U	19 J	3.8 U	3.7 U	3.8 U	3.75 U	3.7 U
GAMMA-BHC (LINDANE)	2 U	1.9 U	1.9 UJ	2 UJ	1.8 U	2.1 UJ	1.8 U	1.9 U	2.1 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
GAMMA-CHLORDANE	2 U	1.9 U	1.9 U	2 U	1.8 U	2.1 UJ	1.8 U	1.9 U	2.1 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
HEPTACHLOR	2 U	1.9 U	1.9 U	2 U	1.8 U	2.1 UJ	1.8 U	1.9 U	2.1 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
HEPTACHLOR EPOXIDE	2 U	1.9 U	1.9 U	2 U	1.8 U	2.1 UJ	1.8 U	1.9 U	2.4 R	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
METHOXYCHLOR	20 U	19 U	19 U	20 U	18 U	21 UJ	18 UJ	19 UJ	21 U	19 U	19 U	19 U	19 U	22 R
TOTAL AROCLOR	39 U	37 U	36 U	38 U	36 U	41 UJ	36 U	37 U	460 J	38 U	37 U	38 U	37.5 U	37 U
TOTAL CHLORDANE	2 U	1.9 U	1.9 U	2 U	1.8 U	2.1 UJ	1.8 U	1.9 U	2.1 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
TOTAL DDD/DDE/DDT	3.9 U	3.7 U	3.6 U	3.8 U	3.6 U	4.1 UJ	3.6 U	3.7 U	4.1 U	3.8 U	3.7 U	3.8 U	3.75 U	3.7 U
TOXAPHENE	200 U	190 U	190 U	200 U	180 U	210 UJ	180 U	190 U	210 U	190 U	190 U	190 U	190 U	190 U
METALS (MG/KG)														
ALUMINUM	9040 J	5120	5340	6180	8280	6250 J	5840 J	3460 J	7230 J	3350 J	3680	5310	4500	3640
ANTIMONY	0.23 UJ	0.28 UJ	0.38 UJ	0.3 UJ	0.38 UJ	0.27 UJ	0.15 UJ	0.25 UJ	0.61 UJ	0.054 UJ	0.33 UJ	0.4 UJ	0.365 UJ	0.38 UJ
ARSENIC	2.9 J	2 J	1.9 J	2.2 J	2 J	2.4 J	1.5 J	1.6 J	4.2 J	1.4 J	1.5 J	2.5 J	2 J	1.8 J
BARIUM	15.2 J	22.7 J	19.8 J	13.4 J	17.4 J	22.7 J	34.5 J	11.8 J	82 J	12.1 J	13.9 J	15.8 J	14.8 J	14.3 J
BERYLLIUM	0.13	0.16	0.2	0.17	0.25	0.2	0.073	0.075	0.25 J	0.13 J	0.12	0.16	0.14	0.13
CADMIUM	0.24 J	0.0049 UJ	0.0053 UJ	0.0054 UJ	0.0052 UJ	0.21 J	0.0069 UJ	0.0051 U	0.7 J	0.0053 UJ	0.0054 UJ	0.0057 UJ	0.00555 UJ	0.0053 UJ
CALCIUM	1150	532	873	933	1000	513	1060	453	44200 J	700 J	716	1090	903	979
CHROMIUM	13.4 J	6.2	7.7	8.6	14.3	9.2 J	9.6 J	4.7 J	12.3 J	5.8 J	5.5	7.8	6.65	5.1
COBALT	4.8 J	2.9 J	5.2 J	3.3 J	7.8 J	4.7 J	3.6 J	2.2 J	3.1 J	4 J	6.5 J	6.4 J	6.45 J	3.9 J
COPPER	12.2 J	9.8	10	21.7	29.5	17.6 J	7.2 J	9.2 J	19 J	7.5 J	10.2	11	10.6	8.1

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB300B-0608	G32-SB301B-1012	G32-SB302B-2527	G32-SB302B-0507	G32-SB303B-1012	G32-SB304B-0608	G32-SB305B-0305	G32-SB305B-0911	G32-SB306B-1012	G32-SB306B-5052	G32-SB309-3840	G32-SB309-3840-D	G32-SB309-3840-AVG	G32-SB310-4042
LOCATION ID	G32-SB300B	G32-SB301B	G32-SB302B	G32-SB302B	G32-SB303B	G32-SB304B	G32-SB305B	G32-SB305B	G32-SB306B	G32-SB306B	G32-SB309	G32-SB309	G32-SB309	G32-SB310
SAMPLE DATE	06/01/05	07/13/05	07/05/05	07/05/05	07/11/05	06/01/05	06/08/05	06/09/05	06/23/05	06/24/05	07/12/05	07/12/05	07/12/05	07/13/05
TOP DEPTH	6 FT	10 FT	25 FT	5 FT	10 FT	6 FT	3 FT	9 FT	10 FT	50 FT	38 FT	38 FT	38 FT	
BOTTOM DEPTH	8 FT	12 FT	27 FT	7 FT	12 FT	8 FT	5 FT	11 FT	12 FT	52 FT	40 FT	40 FT	40 FT	
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
CYANIDE	0.13 U	0.12 U	0.11 U	0.12 U	0.12 U	0.15 U	0.13 U	0.13 U	0.13 U	0.13 U	0.12 U	0.14 U	0.13 U	0.11 U
IRON	18800	9260	9270	10100	17800	10100	9610	6270	16000 J	7420 J	7690	10400	9040	6910
LEAD	6.7 J	5.1 J	4 J	4.1 J	7.4 J	8.7 J	5.4 J	4 J	121 J	3.6 J	3.8 J	4.2 J	4 J	3.3 J
MAGNESIUM	4270 J	1880	2200	2180	3800	2250 J	2810 J	1360 J	4620 J	1610 J	1680	2450	2060	1560
MANGANESE	183 J	115	105	103	154	99.7 J	110 J	74.3 J	235 J	84 J	79.7	121	100	74.5
MERCURY	0.01 J	0.0073 U	0.0062 U	0.0073 U	0.0068 U	0.019 J	0.0074 UJ	0.0069 UJ	0.27	0.0076 U	0.0066 U	0.0071 U	0.00685 U	0.0068 U
NICKEL	8.7 J	6.5 J	12.3 J	13.9 J	20.2 J	10.1 J	7 J	4.5 J	8.4 J	8 J	14.3 J	11.6 J	13 J	10.1 J
POTASSIUM	767	680 J	636 J	469 J	733 J	782	2170	647	720	559	720 J	612 J	666 J	537 J
SELENIUM	0.065 U	0.06 U	0.065 UJ	0.065 UJ	0.063 U	0.066 U	0.059 U	0.062 U	0.068 UJ	0.065 UJ	0.066 U	0.069 U	0.0675 U	0.064 U
SILVER	1.3 UJ	0.32 UJ	0.38 UJ	0.42 UJ	0.51 UJ	0.79 UJ	0.71 UJ	0.45 UJ	0.019 UJ	0.35 UJ	0.15 UJ	0.23 UJ	0.19 UJ	0.079 UJ
SODIUM	97.6	22.6	148	32.5	115	48.2	168	140	1410	30.7 U	37.9	39.4	38.6	38.1
THALLIUM	0.39 UJ	0.07 U	0.077 U	0.077 U	0.075 U	0.23 UJ	0.26 UJ	0.2 UJ	1.3 UJ	0.2 UJ	0.078 U	0.082 U	0.08 U	0.076 U
VANADIUM	15.6 J	8.1 J	9.3 J	8.2 J	12.8 J	10.6 J	12.7 J	5.5 J	15.1 J	6.4 J	6.6 J	9.4 J	8 J	6.7 J
ZINC	42.7 J	18.1 J	22.5 J	19.8 J	33 J	26.4 J	17.4 J	12.1 J	135 J	17 J	16.1 J	23.8 J	20 J	16.8 J
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	18	13 U	13 U	21	13 U	220	13 U	15	1300	14 U	13 U	14 U	13.5 U	13 U
GASOLINE RANGE ORGANICS	4.9 U	4.1 U	3.4 U	3.9 U	4.1 UJ	140 J	3.9 U	3.6 U	7.6 U	4.2 U	2.8 U	3.2 U	3 U	4.1 U
TOTAL PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB311-1719	G32-SB312-3638	G32-SB313-1012	G32-SB313-1012-D	G32-SB313-1012-AVG	G32-SB314-1719	G32-SB314-0204	G32-SB315-0204	G32-SB315-0810	G32-SB316-1214	G32-SB316-1214-D	G32-SB316-1214-AVG	G32-SB316-0203	G32-SB317-1517
LOCATION ID	G32-SB311	G32-SB312	G32-SB313	G32-SB313	G32-SB313	G32-SB314	G32-SB314	G32-SB315	G32-SB315	G32-SB316	G32-SB316	G32-SB316	G32-SB316	G32-SB317
SAMPLE DATE	06/29/05	06/30/05	07/05/05	07/05/05	07/05/05	07/08/05	07/08/05	06/15/05	06/15/05	06/22/05	06/22/05	06/22/05	06/22/05	06/22/05
TOP DEPTH	17 FT	36 FT	10 FT	10 FT	10 FT	17 FT	2 FT	2 FT	8 FT	12 FT	12 FT	12 FT	2 FT	15 FT
BOTTOM DEPTH	19 FT	38 FT	12 FT	12 FT	12 FT	19 FT	4 FT	4 FT	10 FT	14 FT	14 FT	14 FT	3 FT	17 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
1,1,2,2-TETRACHLOROETHANE	3 UJ	3 U	3 UJ	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
1,1,2-TRICHLOROETHANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	3 U	3 U	3 U	3 UJ	3 UJ	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
1,1-DICHLOROETHANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
1,1-DICHLOROETHENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
1,2,4-TRICHLOROBENZENE	3 UJ	3 U	3 UJ	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
1,2-DIBROMO-3-CHLOROPROPANE	3 UJ	3 U	3 UJ	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
1,2-DIBROMOETHANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
1,2-DICHLOROBENZENE	3 UJ	3 U	3 UJ	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
1,2-DICHLOROETHANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
1,2-DICHLOROPROPANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
1,3-DICHLOROBENZENE	3 UJ	3 U	3 UJ	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
1,4-DICHLOROBENZENE	3 UJ	3 U	3 UJ	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
2-BUTANONE	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
2-HEXANONE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 UJ	3 UJ	4 U	5 U
4-METHYL-2-PENTANONE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
ACETONE	22 UJ	7 UJ	3 UJ	3 UJ	3 UJ	14 UJ	3 UJ	7 UJ	3 UJ	3 UJ	12 UJ	7.5 UJ	13 UJ	30 UJ
BENZENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
BROMODICHLOROMETHANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
BROMOFORM	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
BROMOMETHANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
BTEX	3 U	3 U	3 U	3 U	3 U	3 U	3 U	1 J	1 J	3 U	3 U	3 U	4 U	5 U
CARBON DISULFIDE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
CARBON TETRACHLORIDE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
CHLOROBENZENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
CHLORODIBROMOMETHANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
CHLOROETHANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
CHLOROFORM	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
CHLOROMETHANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
CIS-1,2-DICHLOROETHENE	3 U	3 U	3 U	3 U	3 U	3 J	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
CIS-1,3-DICHLOROPROPENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
CYCLOHEXANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
DICHLORODIFLUOROMETHANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 UJ	3 UJ	3 U	3 UJ	3 UJ	4 U	5 U
ETHYLBENZENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
ISOPROPYLBENZENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
METHYL CYCLOHEXANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
METHYL TERT-BUTYL ETHER	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
METHYLENE CHLORIDE	19 U	16 U	25 U	13 UJ	19 UJ	17 UJ	47 U	3 U	4 U	4 U	9 U	6.5 U	19 U	22 U
O-XYLENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB311-1719	G32-SB312-3638	G32-SB313-1012	G32-SB313-1012-D	G32-SB313-1012-AVG	G32-SB314-1719	G32-SB314-0204	G32-SB315-0204	G32-SB315-0810	G32-SB316-1214	G32-SB316-1214-D	G32-SB316-1214-AVG	G32-SB316-0203	G32-SB317-1517
LOCATION ID	G32-SB311	G32-SB312	G32-SB313	G32-SB313	G32-SB313	G32-SB314	G32-SB314	G32-SB315	G32-SB315	G32-SB316	G32-SB316	G32-SB316	G32-SB316	G32-SB317
SAMPLE DATE	06/29/05	06/30/05	07/05/05	07/05/05	07/05/05	07/08/05	07/08/05	06/15/05	06/15/05	06/22/05	06/22/05	06/22/05	06/22/05	06/22/05
TOP DEPTH	17 FT	36 FT	10 FT	10 FT	10 FT	17 FT	2 FT	2 FT	8 FT	12 FT	12 FT	12 FT	2 FT	15 FT
BOTTOM DEPTH	19 FT	38 FT	12 FT	12 FT	12 FT	19 FT	4 FT	4 FT	10 FT	14 FT	14 FT	14 FT	3 FT	17 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
P-XYLENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
STYRENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
TETRACHLOROETHENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
TOLUENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	1 J	1 J	3 U	3 U	3 U	4 U	5 U
TOTAL 1,2-DICHLOROETHENE	3 U	3 U	3 U	3 U	3 U	3 J	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
TOTAL CHLORINATED ETHENES	3 U	3 U	3 U	3 U	3 U	20 J	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 J
TOTAL CHLORINATED VOCS	3 UJ	3 U	3 UJ	3 UJ	3 UJ	20 J	3 U	3 UJ	3 UJ	3 U	3 UJ	3 UJ	4 U	3 J
TOTAL XYLENES	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
TRANS-1,2-DICHLOROETHENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
TRANS-1,3-DICHLOROPROPENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
TRICHLOROETHENE	3 U	3 U	3 U	3 U	3 U	17	3 U	3 U	3 U	3 U	3 U	3 U	4 U	3 J
TRICHLOROFLUOROMETHANE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
VINYL CHLORIDE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	4 U	5 U
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
2,2'-OXYBIS(1-CHLOROPROPANE)	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
2,4,5-TRICHLOROPHENOL	730 U	720 U	770 U	760 UJ	765 UJ	770 U	740 U	730 U	730 U	780 U	740 U	760 U	NA	740 U
2,4,6-TRICHLOROPHENOL	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
2,4-DICHLOROPHENOL	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
2,4-DIMETHYLPHENOL	360 U	350 UJ	380 UJ	380 UJ	380 UJ	380 UJ	370 UJ	360 U	360 U	380 U	360 U	370 U	NA	370 U
2,4-DINITROPHENOL	730 U	720 U	770 U	760 UJ	765 UJ	770 U	740 U	730 U	730 U	780 U	740 U	760 U	NA	740 U
2,4-DINITROTOLUENE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
2,6-DINITROTOLUENE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
2-CHLORONAPHTHALENE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
2-CHLOROPHENOL	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
2-METHYLNAPHTHALENE	360 U	3.5 UJ	9.5	13 J	11.2 J	3.8 UJ	3.7 U	3.6 UJ	3.6 UJ	3.8 UJ	3.6 UJ	3.7 UJ	NA	89
2-METHYLPHENOL	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
2-NITROANILINE	730 U	720 U	770 U	760 UJ	765 UJ	770 U	740 U	730 U	730 U	780 U	740 U	760 U	NA	740 U
2-NITROPHENOL	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
3,3'-DICHLOROBENZIDINE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
3-NITROANILINE	730 U	720 UJ	770 UJ	760 UJ	765 UJ	770 UJ	740 UJ	730 U	730 U	780 UJ	740 UJ	760 UJ	NA	740 UJ
4,6-DINITRO-2-METHYLPHENOL	730 U	720 UJ	770 UJ	760 UJ	765 UJ	770 UJ	740 UJ	730 U	730 U	780 U	740 U	760 U	NA	740 U
4-BROMOPHENYL PHENYL ETHER	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
4-CHLORO-3-METHYLPHENOL	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
4-CHLOROANILINE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
4-CHLOROPHENYL PHENYL ETHER	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
4-METHYLPHENOL	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
4-NITROANILINE	730 UJ	720 UJ	770 UJ	760 UJ	765 UJ	770 UJ	740 UJ	730 UJ	730 UJ	780 UJ	740 UJ	760 UJ	NA	740 UJ
4-NITROPHENOL	730 U	720 U	770 U	760 UJ	765 UJ	770 U	740 U	730 U	730 U	780 U	740 U	760 U	NA	740 U
ACENAPHTHENE	360 U	3.5 UJ	52	77 J	64.5 J	3.8 UJ	9.1	3.6 UJ	3.6 UJ	3.8 UJ	7.8 J	4.85 J	NA	320 J
ACENAPHTHYLENE	360 U	3.5 UJ	3.8 U	3.8 UJ	3.8 UJ	3.8 UJ	3.7 U	3.6 UJ	3.6 UJ	3.8 UJ	3.6 UJ	3.7 UJ	NA	10
ACETOPHENONE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
ANTHRACENE	360 U	3.5 UJ	100	130 J	115 J	3.8 UJ	22	3.6 UJ	3.6 UJ	3.8 UJ	9.9 J	5.9 J	NA	590

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB311-1719	G32-SB312-3638	G32-SB313-1012	G32-SB313-1012-D	G32-SB313-1012-AVG	G32-SB314-1719	G32-SB314-0204	G32-SB315-0204	G32-SB315-0810	G32-SB316-1214	G32-SB316-1214-D	G32-SB316-1214-AVG	G32-SB316-0203	G32-SB317-1517
LOCATION ID	G32-SB311	G32-SB312	G32-SB313	G32-SB313	G32-SB313	G32-SB314	G32-SB314	G32-SB315	G32-SB315	G32-SB316	G32-SB316	G32-SB316	G32-SB316	G32-SB317
SAMPLE DATE	06/29/05	06/30/05	07/05/05	07/05/05	07/05/05	07/08/05	07/08/05	06/15/05	06/15/05	06/22/05	06/22/05	06/22/05	06/22/05	06/22/05
TOP DEPTH	17 FT	36 FT	10 FT	10 FT	10 FT	17 FT	2 FT	2 FT	8 FT	12 FT	12 FT	12 FT	2 FT	15 FT
BOTTOM DEPTH	19 FT	38 FT	12 FT	12 FT	12 FT	19 FT	4 FT	4 FT	10 FT	14 FT	14 FT	14 FT	3 FT	17 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
ATRAZINE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
BENZALDEHYDE	360 UJ	350 UJ	380 UJ	380 UJ	380 UJ	380 UJ	370 UJ	360 UJ	360 UJ	380 UJ	360 UJ	370 UJ	NA	370 UJ
BENZO(A)ANTHRACENE	360 U	3.5 UJ	150 J	280 J	215 J	3.8 UJ	43	3.6 UJ	3.6 UJ	3.8 UJ	8.6 J	5.25 J	NA	1000
BENZO(A)PYRENE	360 U	3.5 UJ	120 J	220 J	170 J	3.8 UJ	22	3.6 UJ	3.6 UJ	3.8 UJ	4.5 J	3.2 J	NA	780
BENZO(B)FLUORANTHENE	360 U	3.5 UJ	140 J	280 J	210 J	3.8 UJ	31	3.6 UJ	3.6 UJ	3.8 UJ	5.6 J	3.75 J	NA	1000
BENZO(G,H,I)PERYLENE	360 U	3.5 UJ	45 J	87 J	66 J	3.8 UJ	4.5	3.6 UJ	3.6 UJ	3.8 UJ	3.6 UJ	3.7 UJ	NA	380
BENZO(K)FLUORANTHENE	360 U	3.5 UJ	53 J	100 J	76.5 J	3.8 UJ	13	3.6 UJ	3.6 UJ	3.8 UJ	3.6 UJ	3.7 UJ	NA	430
BIS(2-CHLOROETHOXY)METHANE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
BIS(2-CHLOROETHYL)ETHER	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
BIS(2-ETHYLHEXYL)PHTHALATE	39 J	350 U	380 U	65 J	128 J	380 U	370 U	130 JEB	85 JEB	380 U	39 J	114 J	NA	99 J
BUTYL BENZYL PHTHALATE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
CAPROLACTAM	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
CARBAZOLE	360 U	350 U	380 U	43 J	116 J	380 U	370 U	360 UJ	360 UJ	380 U	360 U	370 U	NA	300 J
CHRYSENE	360 U	3.5 UJ	150	240 J	195 J	3.8 UJ	42	3.6 UJ	3.6 UJ	3.8 UJ	9.4 J	5.65 J	NA	970
DIBENZO(A,H)ANTHRACENE	360 U	3.5 UJ	14 J	30 J	22 J	3.8 UJ	3.7 U	3.6 UJ	3.6 UJ	3.8 UJ	3.6 UJ	3.7 UJ	NA	140 J
DIBENZOFURAN	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	240 J
DIETHYL PHTHALATE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
DIMETHYL PHTHALATE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
DI-N-BUTYL PHTHALATE	360 U	350 UJ	380 UJ	110 J	150 J	380 UJ	370 UJ	360 U	360 U	380 U	360 U	370 U	NA	370 U
DI-N-OCTYL PHTHALATE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
FLUORANTHENE	3.9 J	3.5 UJ	350	490 J	420 J	4.3 J	120	6.6 J	3.6 UJ	6.8 J	35 J	20.9 J	NA	2500
FLUORENE	360 U	3.5 UJ	53	76 J	64.5 J	3.8 UJ	8.9	3.6 UJ	3.6 UJ	3.8 UJ	6.8 J	4.35 J	NA	330 J
HEXACHLOROBENZENE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
HEXACHLOROBUTADIENE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
HEXACHLOROCYCLOPENTADIENE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 UJ	360 UJ	380 U	360 U	370 U	NA	370 U
HEXACHLOROETHANE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
HIGH MOLECULAR WEIGHT PAHS	3.9 J	3.5 UJ	1370 J	2170 J	1770 J	4.3 J	369	13.5 J	3.6 UJ	11.5 J	88.1 J	49.8 J	NA	9200 J
INDENO(1,2,3-CD)PYRENE	360 U	3.5 UJ	40 J	84 J	62 J	3.8 UJ	4.4	3.6 UJ	3.6 UJ	3.8 UJ	3.6 UJ	3.7 UJ	NA	400
ISOPHORONE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
LOW MOLECULAR WEIGHT PAHS	360 U	3.5 UJ	544	790 J	667 J	3.8 UJ	129	4.2 J	3.6 UJ	6.5 J	69.1 J	37.8 J	NA	3790 J
NAPHTHALENE	360 U	3.5 UJ	380 U	24 EBJ	107 EBJ	3.8 UJ	7.4 EB	3.6 UJ	3.6 UJ	3.8 UJ	8.6 J	5.25 J	NA	250 J
NITROBENZENE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
N-NITROSO-DI-N-PROPYLAMINE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 UJ	360 UJ	380 U	360 U	370 U	NA	370 U
N-NITROSODIPHENYLAMINE	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
PENTACHLOROPHENOL	730 U	720 U	770 U	760 UJ	765 UJ	770 U	740 U	730 U	730 U	780 U	740 U	760 U	NA	740 U
PHENANTHRENE	360 U	3.5 UJ	330	470 J	400 J	3.8 UJ	82	4.2 J	3.6 UJ	6.5 J	36 J	21.2 J	NA	2200
PHENOL	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
PYRENE	360 U	3.5 UJ	310	360 J	335 J	3.8 UJ	89	6.9 J	3.6 UJ	4.7 J	25 J	14.8 J	NA	1600
TOTAL CARCINOGENIC PAHS-HALFND	360 U	3.5 UJ	667 J	1230 J	948 J	3.8 UJ	157	3.6 UJ	3.6 UJ	3.8 UJ	33.5 J	17.7 J	NA	4720 J
TOTAL CARCINOGENIC PAHS-POS	360 U	3.5 UJ	667 J	1230 J	948 J	3.8 UJ	155	3.6 UJ	3.6 UJ	3.8 UJ	28.1 J	15 J	NA	4720 J
TOTAL CHLORINATED VOCS	360 U	350 U	380 U	380 UJ	380 UJ	380 U	370 U	360 U	360 U	380 U	360 U	370 U	NA	370 U
TOTAL PAHS	3.9 J	3.5 UJ	1920 J	2960 J	2440 J	4.3 J	498	17.7 J	3.6 UJ	18 J	157 J	87.5 J	NA	13000 J

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB311-1719	G32-SB312-3638	G32-SB313-1012	G32-SB313-1012-D	G32-SB313-1012-AVG	G32-SB314-1719	G32-SB314-0204	G32-SB315-0204	G32-SB315-0810	G32-SB316-1214	G32-SB316-1214-D	G32-SB316-1214-AVG	G32-SB316-0203	G32-SB317-1517
LOCATION ID	G32-SB311	G32-SB312	G32-SB313	G32-SB313	G32-SB313	G32-SB314	G32-SB314	G32-SB315	G32-SB315	G32-SB316	G32-SB316	G32-SB316	G32-SB316	G32-SB317
SAMPLE DATE	06/29/05	06/30/05	07/05/05	07/05/05	07/05/05	07/08/05	07/08/05	06/15/05	06/15/05	06/22/05	06/22/05	06/22/05	06/22/05	06/22/05
TOP DEPTH	17 FT	36 FT	10 FT	10 FT	10 FT	17 FT	2 FT	2 FT	8 FT	12 FT	12 FT	12 FT	2 FT	15 FT
BOTTOM DEPTH	19 FT	38 FT	12 FT	12 FT	12 FT	19 FT	4 FT	4 FT	10 FT	14 FT	14 FT	14 FT	3 FT	17 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	3.6 U	3.5 U	3.8 U	3.7 U	3.75 U	3.8 U	3.7 U	3.6 U	3.6 U	3.8 U	3.6 U	3.7 U	NA	3.7 U
4,4'-DDE	3.6 U	3.5 U	3.8 U	3.7 U	3.75 U	3.8 U	3.7 U	3.6 U	3.6 U	3.8 U	3.6 U	3.7 U	NA	3.7 U
4,4'-DDT	3.6 U	3.5 U	3.8 U	3.7 U	3.75 U	3.8 U	3.7 U	3.6 U	3.6 U	3.8 U	3.6 U	3.7 U	NA	3.7 U
ALDRIN	1.9 U	1.8 U	2 U	1.9 U	1.95 U	2 U	1.9 U	1.8 U	1.8 U	2 U	1.9 U	1.95 U	NA	1.9 U
ALPHA-BHC	1.9 UJ	1.8 UJ	2 UJ	1.9 UJ	1.95 UJ	2 UJ	1.9 UJ	1.8 U	1.8 U	2 U	1.9 U	1.95 U	NA	1.9 U
ALPHA-CHLORDANE	1.9 U	1.8 U	2 U	1.9 U	1.95 U	2 U	1.9 U	1.8 U	1.8 U	2 U	1.9 U	1.95 U	NA	1.9 U
AROCLOR-1016	36 U	35 U	38 U	37 U	37.5 U	38 U	37 U	36 U	36 U	38 U	36 U	37 U	NA	37 U
AROCLOR-1221	36 U	35 U	38 U	37 U	37.5 U	38 U	37 U	36 U	36 U	38 U	36 U	37 U	NA	37 U
AROCLOR-1232	36 U	35 U	38 U	37 U	37.5 U	38 U	37 U	36 U	36 U	38 U	36 U	37 U	NA	37 U
AROCLOR-1242	36 U	35 U	38 U	37 U	37.5 U	38 U	37 U	36 U	36 U	38 U	36 U	37 U	NA	37 U
AROCLOR-1248	36 U	35 U	38 U	37 U	37.5 U	38 U	37 U	36 U	36 U	38 U	36 U	37 U	NA	37 U
AROCLOR-1254	36 U	35 U	38 U	37 U	37.5 U	38 U	37 U	36 U	36 U	38 U	36 U	37 U	NA	37 U
AROCLOR-1260	36 U	35 U	38 U	37 U	37.5 U	38 U	37 U	36 U	36 U	38 U	36 U	37 U	NA	37 U
BETA-BHC	1.9 U	1.8 U	2 U	1.9 U	1.95 U	2 U	1.9 U	1.8 U	1.8 U	2 U	1.9 U	1.95 U	NA	1.9 U
DELTA-BHC	1.9 R	1.8 R	2 R	1.9 R	1.95 R	2 R	1.9 R	1.8 UJ	1.8 UJ	2 UJ	1.9 UJ	1.95 UJ	NA	1.9 UJ
DIELDRIN	3.6 U	3.5 U	3.8 U	3.7 U	3.75 U	3.8 U	3.7 U	3.6 U	3.6 U	3.8 U	3.6 U	3.7 U	NA	3.7 U
ENDOSULFAN I	1.9 U	1.8 U	2 U	1.9 U	1.95 U	2 U	1.9 U	1.8 U	1.8 U	2 U	1.9 U	1.95 U	NA	1.9 U
ENDOSULFAN II	3.6 U	3.5 U	3.8 U	3.7 U	3.75 U	3.8 U	3.7 U	3.6 U	3.6 U	3.8 U	3.6 U	3.7 U	NA	3.7 U
ENDOSULFAN SULFATE	3.6 UJ	3.5 UJ	3.8 UJ	3.7 UJ	3.75 UJ	3.8 UJ	3.7 UJ	3.6 UJ	3.6 U	3.8 U	3.6 U	3.7 U	NA	3.7 U
ENDRIN	3.6 U	3.5 U	3.8 U	3.7 U	3.75 U	3.8 U	3.7 U	3.6 U	3.6 UJ	3.8 U	3.6 U	3.7 U	NA	3.7 U
ENDRIN ALDEHYDE	3.6 U	3.5 U	3.8 U	3.7 U	3.75 U	3.8 U	3.7 U	3.6 U	3.6 U	3.8 U	3.6 U	3.7 U	NA	3.7 U
ENDRIN KETONE	3.6 U	3.5 U	3.8 U	3.7 U	3.75 U	3.8 U	3.7 U	3.6 U	3.6 U	3.8 U	3.6 U	3.7 U	NA	3.7 U
GAMMA-BHC (LINDANE)	1.9 UJ	1.8 UJ	2 UJ	1.9 UJ	1.95 UJ	2 UJ	1.9 UJ	1.8 U	1.8 U	2 U	1.9 U	1.95 U	NA	1.9 U
GAMMA-CHLORDANE	1.9 U	1.8 U	2 U	1.9 U	1.95 U	2 U	1.9 U	1.8 U	1.8 U	2 U	1.9 U	1.95 U	NA	1.9 U
HEPTACHLOR	1.9 U	1.8 U	2 U	1.9 U	1.95 U	2 U	1.9 U	1.8 U	1.8 U	2 U	1.9 U	1.95 U	NA	1.9 U
HEPTACHLOR EPOXIDE	1.9 U	1.8 U	2 U	1.9 U	1.95 U	2 U	1.9 U	1.8 U	1.8 U	2 U	1.9 U	1.95 U	NA	1.9 U
METHOXYCHLOR	19 U	18 U	20 U	19 U	19.5 U	20 U	19 U	18 UJ	18 UJ	20 U	19 U	19.5 U	NA	19 U
TOTAL AROCLOR	36 U	35 U	38 U	37 U	37.5 U	38 U	37 U	36 U	36 U	38 U	36 U	37 U	NA	37 U
TOTAL CHLORDANE	1.9 U	1.8 U	2 U	1.9 U	1.95 U	2 U	1.9 U	1.8 U	1.8 U	2 U	1.9 U	1.95 U	NA	1.9 U
TOTAL DDD/DDE/DDT	3.6 U	3.5 U	3.8 U	3.7 U	3.75 U	3.8 U	3.7 U	3.6 U	3.6 U	3.8 U	3.6 U	3.7 U	NA	3.7 U
TOXAPHENE	190 U	180 U	200 U	190 U	195 U	200 U	190 U	180 U	180 U	200 U	190 U	195 U	NA	190 U
METALS (MG/KG)														
ALUMINUM	7250	4070	5460	5310	5380	4010	7650	4190 J	5860 J	12500 J	4660 J	8580 J	5660 J	11200 J
ANTIMONY	0.54 UJ	0.29 UJ	0.35 UJ	0.39 UJ	0.37 UJ	0.29 UJ	0.37 UJ	0.13 UJ	0.32 UJ	0.056 J	0.16 UJ	0.068 J	0.048 UJ	0.053 UJ
ARSENIC	5.9 J	1.6 J	1.8 J	2.4 J	2.1 J	1.6 J	2.7 J	1.9 J	2.4 J	2.9 J	2.3 J	2.6 J	2 J	2.7 J
BARIUM	18.4 J	17.6 J	19.5 J	17.7 J	18.6 J	11.2 J	22.1 J	13.9 J	18.2 J	23.7 J	13.5 J	18.6 J	17.3 J	20.3 J
BERYLLIUM	0.37	0.14	0.32	0.33	0.325	0.16	0.22	0.15	0.35	0.31 J	0.16 J	0.235 J	0.16 J	0.2 J
CADMIUM	0.0051 UJ	0.0055 UJ	0.0055 UJ	0.0053 UJ	0.0054 UJ	0.0052 UJ	0.0051 UJ	0.036 UJ	0.015 UJ	0.0055 UJ	0.0054 UJ	0.00545 UJ	0.0047 UJ	0.0052 UJ
CALCIUM	1120	765	1100	1090	1100	676	2080	1130	496	1070 J	1080 J	1080 J	3870 J	1400 J
CHROMIUM	10.7 J	7	8.1	8.5	8.3	5.5	10.7	6.5 J	8.6 J	20.6 J	7.3 J	14 J	8.2 J	21.1 J
COBALT	17.8 J	4.2 J	5.3 J	5.7 J	5.5 J	4.2 J	4.2 J	3 J	4.7 J	11.3 J	5.6 J	8.45 J	7.3 J	6.2 J
COPPER	17.3	9.3	11.3	11	11.2	10.4	17.1	11 J	15.7 J	36.1 J	9.2 J	22.6 J	15 J	17.4 J

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB311-1719	G32-SB312-3638	G32-SB313-1012	G32-SB313-1012-D	G32-SB313-1012-AVG	G32-SB314-1719	G32-SB314-0204	G32-SB315-0204	G32-SB315-0810	G32-SB316-1214	G32-SB316-1214-D	G32-SB316-1214-AVG	G32-SB316-0203	G32-SB317-1517
LOCATION ID	G32-SB311	G32-SB312	G32-SB313	G32-SB313	G32-SB313	G32-SB314	G32-SB314	G32-SB315	G32-SB315	G32-SB316	G32-SB316	G32-SB316	G32-SB316	G32-SB317
SAMPLE DATE	06/29/05	06/30/05	07/05/05	07/05/05	07/05/05	07/08/05	07/08/05	06/15/05	06/15/05	06/22/05	06/22/05	06/22/05	06/22/05	06/22/05
TOP DEPTH	17 FT	36 FT	10 FT	10 FT	10 FT	17 FT	2 FT	2 FT	8 FT	12 FT	12 FT	12 FT	2 FT	15 FT
BOTTOM DEPTH	19 FT	38 FT	12 FT	12 FT	12 FT	19 FT	4 FT	4 FT	10 FT	14 FT	14 FT	14 FT	3 FT	17 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
CYANIDE	0.13 U	0.11 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.14	0.12 U
IRON	21400	7930	9080	10800	9940	7230	16000	7500	10900	26800 J	8840 J	17800 J	11200 J	24500 J
LEAD	8.7 J	3.7 J	4.7 J	5.3 J	5 J	3.9 J	7.2 J	4 J	5.8 J	9.1 J	4 J	6.55 J	5.4 J	14 J
MAGNESIUM	2920	1970	2150	2110	2130	1490	2960	1580 J	2220 J	5510 J	2020 J	3760 J	2350 J	4970 J
MANGANESE	125	81.6	99.7	105	102	102	165	94.8 J	112 J	202 J	94.2 J	148 J	114 J	176 J
MERCURY	0.0074 U	0.0066 U	0.0068 U	0.016 J	0.0097 J	0.0077 U	0.0075 U	0.0063 UJ	0.0068 UJ	0.0078 U	0.0071 U	0.00745 U	0.0065 U	0.0073 U
NICKEL	21.2 J	9.7 J	15.9 J	15.9 J	15.9 J	7.1 J	8.5 J	6.4 J	10.3 J	27.8 J	11.9 J	19.8 J	16 J	13.7 J
POTASSIUM	742 J	866 J	649 J	630 J	640 J	332 J	890 J	627	4.2 U	689	501	595	597	668
SELENIUM	0.062 UJ	0.067 UJ	0.068 UJ	0.065 UJ	0.0665 UJ	0.064 UJ	0.062 UJ	0.059 U	0.062 U	0.067 UJ	0.066 UJ	0.0665 UJ	0.058 UJ	0.064 UJ
SILVER	0.41 UJ	0.38 UJ	0.42 UJ	0.37 UJ	0.395 UJ	0.22 UJ	0.3 UJ	0.41 UJ	0.73 UJ	1.3 UJ	0.52 UJ	0.91 UJ	0.23 UJ	1.1 UJ
SODIUM	45.8	27.5	151	181	166	40.9	147	212	6.9 U	62.1 U	85.6	58.3	86.7	73.9
THALLIUM	0.073 U	0.079 U	0.08 U	0.077 U	0.0785 U	0.075 U	0.073 U	0.28 UJ	0.25 UJ	0.42 UJ	0.078 UJ	0.249 UJ	0.24 UJ	0.37 UJ
VANADIUM	12.9 J	7.5 J	9.6 J	9.6 J	9.6 J	7.7 J	12.5 J	7.4 J	12.3 J	17.1 J	7.6 J	12.4 J	9 J	13.9 J
ZINC	30.9 J	19.5 J	25.2 J	24.9 J	25 J	15.5 J	23.2 J	19.9 J	25.8 J	50.1 J	20.2 J	35.2 J	24.1 J	39.7 J
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	13 U	13 U	14 U	14 U	14 U	14 U	17	13 U	13 U	14 U	13 U	13.5 U	NA	40
GASOLINE RANGE ORGANICS	3.8 U	3.4 U	3.6 U	4 U	3.8 U	3.8 U	4.3 U	4.6 U	4.4 U	4.6 U	4.2 U	4.4 U	4.1 U	4 U
TOTAL PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB318-1012	G32-SB318-1012-D	G32-SB318-1012-AVG	G32-SB319-0406	G32-SB319-0608	G32-SB319-0608-D	G32-SB319-0608-AVG	G32-SB320-0406	G32-SB320-0810	G32-SB321-1012	G32-SB321-0204	G32-SB322-0204	G32-SB322-0608	G32-SB323-1012
LOCATION ID	G32-SB318	G32-SB318	G32-SB318	G32-SB319	G32-SB319	G32-SB319	G32-SB319	G32-SB320	G32-SB320	G32-SB321	G32-SB321	G32-SB322	G32-SB322	G32-SB323
SAMPLE DATE	06/21/05	06/21/05	06/21/05	06/22/05	06/22/05	06/22/05	06/22/05	06/21/05	06/21/05	06/23/05	06/23/05	06/20/05	06/20/05	06/21/05
TOP DEPTH	10 FT	10 FT	10 FT	4 FT	6 FT	6 FT	6 FT	4 FT	8 FT	10 FT	2 FT	2 FT	6 FT	10 FT
BOTTOM DEPTH	12 FT	12 FT	12 FT	6 FT	8 FT	8 FT	8 FT	6 FT	10 FT	12 FT	4 FT	4 FT	8 FT	12 FT
SACODE	ORIG	DUP	AVG	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	FD	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
1,1,2,2-TETRACHLOROETHANE	3 U	3 UJ	3 UJ	3 U	3 UJ	4 UJ	3.5 UJ	4 UJ	2 U	3 U	3 U	4 U	3 UJ	3 U
1,1,2-TRICHLOROETHANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
1,1,2-TRICHLOROTRIFLUOROETHANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
1,1-DICHLOROETHANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
1,1-DICHLOROETHENE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
1,2,4-TRICHLOROBENZENE	3 U	3 UJ	3 UJ	3 U	3 UJ	4 UJ	3.5 UJ	4 UJ	2 U	3 U	3 U	4 U	3 UJ	3 U
1,2-DIBROMO-3-CHLOROPROPANE	3 U	3 UJ	3 UJ	3 U	3 UJ	4 UJ	3.5 UJ	4 UJ	2 U	3 U	3 U	4 U	3 UJ	3 U
1,2-DIBROMOETHANE	3 U	3 UJ	3 UJ	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
1,2-DICHLOROBENZENE	3 U	3 UJ	3 UJ	3 U	3 UJ	4 UJ	3.5 UJ	4 UJ	2 U	3 U	3 U	4 U	3 UJ	3 U
1,2-DICHLOROETHANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
1,2-DICHLOROPROPANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
1,3-DICHLOROBENZENE	3 U	3 UJ	3 UJ	3 U	3 UJ	4 UJ	3.5 UJ	4 UJ	2 U	3 U	3 U	4 U	3 UJ	3 U
1,4-DICHLOROBENZENE	3 U	3 UJ	3 UJ	3 U	3 UJ	4 UJ	3.5 UJ	4 UJ	2 U	3 U	3 U	4 U	3 UJ	3 U
2-BUTANONE	3 U	3 U	3 U	3 UJ	3 U	4 UJ	3.5 UJ	4 UJ	2 U	3 U	3 U	4 U	3 UJ	3 UJ
2-HEXANONE	3 U	3 UJ	3 UJ	3 UJ	3 U	4 UJ	3.5 UJ	4 UJ	2 U	3 U	3 U	4 U	3 UJ	3 UJ
4-METHYL-2-PENTANONE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
ACETONE	16 UJ	11 UJ	13.5 UJ	30 UJ	22 UJ	32 UJ	27 UJ	8 UJ	7 UJ	7 UJ	8 UJ	4 UJ	10 UJ	18 UJ
BENZENE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
BROMODICHLOROMETHANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
BROMOFORM	3 U	3 UJ	3 UJ	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
BROMOMETHANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
BTEX	3 U	3 UJ	3 UJ	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
CARBON DISULFIDE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
CARBON TETRACHLORIDE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
CHLOROBENZENE	3 U	3 UJ	3 UJ	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
CHLORODIBROMOMETHANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
CHLOROETHANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
CHLOROFORM	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
CHLOROMETHANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
CIS-1,2-DICHLOROETHENE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	2 J	1 J	3 U
CIS-1,3-DICHLOROPROPENE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
CYCLOHEXANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
DICHLORODIFLUOROMETHANE	3 U	3 U	3 U	3 UJ	3 U	4 UJ	3.5 UJ	4 UJ	2 U	3 U	3 U	4 U	3 UJ	3 UJ
ETHYLBENZENE	3 U	3 UJ	3 UJ	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
ISOPROPYLBENZENE	3 U	3 UJ	3 UJ	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
M+P-XYLENES	NA	3 UJ	3 UJ	NA	NA	NA	NA	4 UJ	NA	NA	NA	NA	3 U	3 U
METHYL ACETATE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
METHYL CYCLOHEXANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
METHYL TERT-BUTYL ETHER	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
METHYLENE CHLORIDE	11 U	13 U	12 U	15 U	13 U	17 U	15 U	13 UJ	8 U	15 U	16 U	5 U	4 U	10 U
O-XYLENE	3 U	3 UJ	3 UJ	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB318-1012	G32-SB318-1012-D	G32-SB318-1012-AVG	G32-SB319-0406	G32-SB319-0608	G32-SB319-0608-D	G32-SB319-0608-AVG	G32-SB320-0406	G32-SB320-0810	G32-SB321-1012	G32-SB321-0204	G32-SB322-0204	G32-SB322-0608	G32-SB323-1012
LOCATION ID	G32-SB318	G32-SB318	G32-SB318	G32-SB319	G32-SB319	G32-SB319	G32-SB319	G32-SB320	G32-SB320	G32-SB321	G32-SB321	G32-SB322	G32-SB322	G32-SB323
SAMPLE DATE	06/21/05	06/21/05	06/21/05	06/22/05	06/22/05	06/22/05	06/22/05	06/21/05	06/21/05	06/23/05	06/23/05	06/20/05	06/20/05	06/21/05
TOP DEPTH	10 FT	10 FT	10 FT	4 FT	6 FT	6 FT	6 FT	4 FT	8 FT	10 FT	2 FT	2 FT	6 FT	10 FT
BOTTOM DEPTH	12 FT	12 FT	12 FT	6 FT	8 FT	8 FT	8 FT	6 FT	10 FT	12 FT	4 FT	4 FT	8 FT	12 FT
SACODE	ORIG	DUP	AVG	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	FD	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
P-XYLENE	3 U	NA	3 U	3 U	3 U	4 U	3.5 U	NA	2 U	3 U	3 U	4 U	NA	NA
STYRENE	3 U	3 UJ	3 UJ	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
TETRACHLOROETHENE	3 U	3 UJ	3 UJ	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
TOLUENE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
TOTAL 1,2-DICHLOROETHENE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	3 J	2 J	3 U
TOTAL CHLORINATED ETHENES	3 U	3 UJ	3 UJ	3 U	3 U	4 U	3.5 U	4 UJ	2 U	2 J	6	6 J	61 J	3 U
TOTAL CHLORINATED VOCS	3 U	3 UJ	3 UJ	3 UJ	3 UJ	4 UJ	3.5 UJ	4 UJ	2 U	2 J	6	6 J	61 J	3 UJ
TOTAL XYLENES	3 U	3 UJ	3 UJ	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
TRANS-1,2-DICHLOROETHENE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	1 J	1 J	3 U
TRANS-1,3-DICHLOROPROPENE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
TRICHLOROETHENE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	2 J	6	3 J	59	3 U
TRICHLOROFLUOROMETHANE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
VINYL CHLORIDE	3 U	3 U	3 U	3 U	3 U	4 U	3.5 U	4 UJ	2 U	3 U	3 U	4 U	3 U	3 U
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
2,2'-OXYBIS(1-CHLOROPROPANE)	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
2,4,5-TRICHLOROPHENOL	740 U	750 U	745 U	730 U	710 U	720 U	715 U	NA	740 U	740 U	730 U	740 U	820 U	740 U
2,4,6-TRICHLOROPHENOL	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
2,4-DICHLOROPHENOL	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
2,4-DIMETHYLPHENOL	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
2,4-DINITROPHENOL	740 U	750 U	745 U	730 U	710 U	720 U	715 U	NA	740 U	740 U	730 U	740 U	820 U	740 U
2,4-DINITROTOLUENE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
2,6-DINITROTOLUENE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
2-CHLORONAPHTHALENE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
2-CHLOROPHENOL	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
2-METHYLNAPHTHALENE	71	93	82	20	3.5 UJ	3.5 U	3.5 UJ	NA	3.7 UJ	3.6 UJ	3.6 U	3.6 UJ	4 UJ	3.6 UJ
2-METHYLPHENOL	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
2-NITROANILINE	740 U	750 U	745 U	730 U	710 U	720 U	715 U	NA	740 U	740 U	730 U	740 U	820 U	740 U
2-NITROPHENOL	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
3,3'-DICHLOROBENZIDINE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
3-NITROANILINE	740 UJ	750 UJ	745 UJ	730 UJ	710 UJ	720 UJ	715 UJ	NA	740 UJ	740 UJ	730 UJ	740 UJ	820 UJ	740 UJ
4,6-DINITRO-2-METHYLPHENOL	740 U	750 U	745 U	730 U	710 U	720 U	715 U	NA	740 U	740 U	730 U	740 U	820 U	740 U
4-BROMOPHENYL PHENYL ETHER	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
4-CHLORO-3-METHYLPHENOL	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
4-CHLOROANILINE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
4-CHLOROPHENYL PHENYL ETHER	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
4-METHYLPHENOL	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
4-NITROANILINE	740 UJ	750 UJ	745 UJ	730 UJ	710 UJ	720 UJ	715 UJ	NA	740 UJ	740 UJ	730 UJ	740 UJ	820 UJ	740 UJ
4-NITROPHENOL	740 U	750 U	745 U	730 U	710 U	720 U	715 U	NA	740 U	740 U	730 U	740 U	820 U	740 U
ACENAPHTHENE	270	320	295	82	4.3 J	3.9	4.1 J	NA	3.7 UJ	3.6 UJ	3.6 U	3.6 UJ	4 UJ	3.6 UJ
ACENAPHTHYLENE	15	20	17.5	74	5.4 J	7.1	6.25 J	NA	3.7 UJ	3.6 UJ	3.6 U	3.6 UJ	4 UJ	3.6 UJ
ACETOPHENONE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
ANTHRACENE	410	560	485	190	18 J	20	19 J	NA	3.7 UJ	3.7 J	7.6	3.6 UJ	4 UJ	3.6 UJ

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB318-1012	G32-SB318-1012-D	G32-SB318-1012-AVG	G32-SB319-0406	G32-SB319-0608	G32-SB319-0608-D	G32-SB319-0608-AVG	G32-SB320-0406	G32-SB320-0810	G32-SB321-1012	G32-SB321-0204	G32-SB322-0204	G32-SB322-0608	G32-SB323-1012
LOCATION ID	G32-SB318	G32-SB318	G32-SB318	G32-SB319	G32-SB319	G32-SB319	G32-SB319	G32-SB320	G32-SB320	G32-SB321	G32-SB321	G32-SB322	G32-SB322	G32-SB323
SAMPLE DATE	06/21/05	06/21/05	06/21/05	06/22/05	06/22/05	06/22/05	06/22/05	06/21/05	06/21/05	06/23/05	06/23/05	06/20/05	06/20/05	06/21/05
TOP DEPTH	10 FT	10 FT	10 FT	4 FT	6 FT	6 FT	6 FT	4 FT	8 FT	10 FT	2 FT	2 FT	6 FT	10 FT
BOTTOM DEPTH	12 FT	12 FT	12 FT	6 FT	8 FT	8 FT	8 FT	6 FT	10 FT	12 FT	4 FT	4 FT	8 FT	12 FT
SACODE	ORIG	DUP	AVG	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	FD	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
ATRAZINE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
BENZALDEHYDE	360 UJ	370 UJ	365 UJ	360 UJ	350 UJ	350 UJ	350 UJ	NA	370 UJ	360 UJ	360 UJ	360 UJ	400 UJ	360 UJ
BENZO(A)ANTHRACENE	620	810	715	220	15 J	22	18.5 J	NA	4.6 J	48 J	11	4.4 J	4 UJ	3.6 UJ
BENZO(A)PYRENE	540	650	595	190	5.6 J	13 J	9.3 J	NA	3.7 UJ	78 J	3.6 U	3.6 UJ	4 UJ	3.6 UJ
BENZO(B)FLUORANTHENE	580	820	700	230	9.3 J	19 J	14.2 J	NA	3.7 UJ	95 J	6.2	3.6 UJ	4 UJ	3.6 UJ
BENZO(G,H,I)PERYLENE	320	370 J	345 J	79	3.5 UJ	3.5 U	3.5 UJ	NA	3.7 UJ	39 J	3.6 U	3.6 UJ	4 UJ	3.6 UJ
BENZO(K)FLUORANTHENE	240	320	280	83	3.5 UJ	7.7 J	4.72 J	NA	3.7 UJ	31 J	3.6 U	3.6 UJ	4 UJ	3.6 UJ
BIS(2-CHLOROETHOXY)METHANE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
BIS(2-CHLOROETHYL)ETHER	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
BIS(2-ETHYLHEXYL)PHTHALATE	360 U	370 U	365 U	39 J	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	80 J
BUTYL BENZYL PHTHALATE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
CAPROLACTAM	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
CARBAZOLE	170 J	260 J	215 J	550	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
CHRYSENE	560	800	680	210	17 J	21	19 J	NA	5.3 J	48 J	11	4.2 J	4 UJ	3.6 UJ
DIBENZO(A,H)ANTHRACENE	89 J	120 J	104 J	24 J	3.5 UJ	3.5 U	3.5 UJ	NA	3.7 UJ	11 J	3.6 U	3.6 UJ	4 UJ	3.6 UJ
DIBENZOFURAN	150 J	220 J	185 J	210 J	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
DIETHYL PHTHALATE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
DIMETHYL PHTHALATE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
DI-N-BUTYL PHTHALATE	360 U	370 U	365 U	48 J	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
DI-N-OCTYL PHTHALATE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
FLUORANTHENE	1600	2200	1900	750	68 J	77	72.5 J	NA	17 J	22 J	41	15 J	7.6 J	5.1 J
FLUORENE	260	320	290	280	22 J	21	21.5 J	NA	3.7 UJ	3.6 UJ	4	3.6 UJ	4 UJ	3.6 UJ
HEXACHLOROBENZENE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
HEXACHLOROBUTADIENE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
HEXACHLOROCYCLOPENTADIENE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
HEXACHLOROETHANE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
HIGH MOLECULAR WEIGHT PAHS	5860 J	7950 J	6900 J	2340 J	164 J	214 J	189 J	NA	39.9 J	432 J	99.2	34.6 J	13.3 J	8.9 J
INDENO(1,2,3-CD)PYRENE	310	360 J	335 J	80	3.5 UJ	3.5 U	3.5 UJ	NA	3.7 UJ	39 J	3.6 U	3.6 UJ	4 UJ	3.6 UJ
ISOPHORONE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
LOW MOLECULAR WEIGHT PAHS	2620	3540	3080	1610	137 J	149	143 J	NA	8.1 J	17.7 J	42.6	12 J	6.4 J	4.6 J
NAPHTHALENE	190	230	210	31	3.5 UJ	3.5 U	3.5 UJ	NA	3.7 UJ	3.6 UJ	3.6 U	3.6 UJ	4 UJ	3.6 UJ
NITROBENZENE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
N-NITROSO-DI-N-PROPYLAMINE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
N-NITROSODIPHENYLAMINE	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
PENTACHLOROPHENOL	740 U	750 U	745 U	730 U	710 U	720 U	715 U	NA	740 U	740 U	730 U	740 U	820 U	740 U
PHENANTHRENE	1400	2000	1700	930	87 J	97	92 J	NA	8.1 J	14 J	31	12 J	6.4 J	4.6 J
PHENOL	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
PYRENE	1000	1500	1250	470	49 J	54	51.5 J	NA	13 J	21 J	30	11 J	5.7 J	3.8 J
TOTAL CARCINOGENIC PAHS-HALFND	2940 J	3880 J	3410 J	1040 J	52.2 J	86.2 J	69.2 J	NA	19.2 J	350 J	35.4	17.6 J	4 UJ	3.6 UJ
TOTAL CARCINOGENIC PAHS-POS	2940 J	3880 J	3410 J	1040 J	46.9 J	82.7 J	64.8 J	NA	9.9 J	350 J	28.2	8.6 J	4 UJ	3.6 UJ
TOTAL CHLORINATED VOCS	360 U	370 U	365 U	360 U	350 U	350 U	350 U	NA	370 U	360 U	360 U	360 U	400 U	360 U
TOTAL PAHS	8480 J	11500 J	9990 J	3940 J	301 J	363 J	332 J	NA	48 J	450 J	142	46.6 J	19.7 J	13.5 J

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB318-1012	G32-SB318-1012-D	G32-SB318-1012-AVG	G32-SB319-0406	G32-SB319-0608	G32-SB319-0608-D	G32-SB319-0608-AVG	G32-SB320-0406	G32-SB320-0810	G32-SB321-1012	G32-SB321-0204	G32-SB322-0204	G32-SB322-0608	G32-SB323-1012
LOCATION ID	G32-SB318	G32-SB318	G32-SB318	G32-SB319	G32-SB319	G32-SB319	G32-SB319	G32-SB320	G32-SB320	G32-SB321	G32-SB321	G32-SB322	G32-SB322	G32-SB323
SAMPLE DATE	06/21/05	06/21/05	06/21/05	06/22/05	06/22/05	06/22/05	06/22/05	06/21/05	06/21/05	06/23/05	06/23/05	06/20/05	06/20/05	06/21/05
TOP DEPTH	10 FT	10 FT	10 FT	4 FT	6 FT	6 FT	6 FT	4 FT	8 FT	10 FT	2 FT	2 FT	6 FT	10 FT
BOTTOM DEPTH	12 FT	12 FT	12 FT	6 FT	8 FT	8 FT	8 FT	6 FT	10 FT	12 FT	4 FT	4 FT	8 FT	12 FT
SACODE	ORIG	DUP	AVG	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	FD	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	3.6 U	3.7 U	3.65 U	3.6 U	3.5 U	3.5 U	3.5 U	NA	3.7 U	3.6 U	3.6 U	3.6 U	4 U	3.6 U
4,4'-DDE	8.5 J	3.7 U	5.18 J	3.6 U	3.5 U	3.5 U	3.5 U	NA	3.7 U	3.6 U	3.6 U	3.6 U	4 U	3.6 U
4,4'-DDT	3.6 U	3.7 U	3.65 U	3.6 U	3.5 U	3.5 U	3.5 U	NA	3.7 U	3.6 U	3.6 U	3.6 U	4 U	3.6 U
ALDRIN	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	NA	1.9 U	1.9 U	1.8 U	1.9 U	2.1 U	1.9 U
ALPHA-BHC	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	NA	1.9 U	1.9 U	1.8 U	1.9 U	2.1 U	1.9 U
ALPHA-CHLORDANE	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	NA	1.9 U	1.9 U	1.8 U	1.9 U	2.5 J	1.9 U
AROCLOR-1016	36 U	37 U	36.5 U	36 U	35 U	35 U	35 U	NA	37 U	36 U	36 U	36 U	40 U	36 U
AROCLOR-1221	36 U	37 U	36.5 U	36 U	35 U	35 U	35 U	NA	37 U	36 U	36 U	36 U	40 U	36 U
AROCLOR-1232	36 U	37 U	36.5 U	36 U	35 U	35 U	35 U	NA	37 U	36 U	36 U	36 U	40 U	36 U
AROCLOR-1242	36 U	37 U	36.5 U	36 U	35 U	35 U	35 U	NA	37 U	36 U	36 U	36 U	40 U	36 U
AROCLOR-1248	36 U	37 U	36.5 U	36 U	35 U	35 U	35 U	NA	37 U	36 U	36 U	36 U	40 U	36 U
AROCLOR-1254	36 U	37 U	36.5 U	36 U	35 U	35 U	35 U	NA	37 U	36 U	36 U	36 U	140 J	36 U
AROCLOR-1260	36 U	37 U	36.5 U	36 U	35 U	35 U	35 U	NA	37 U	36 U	36 U	36 U	40 U	36 U
BETA-BHC	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	NA	1.9 U	1.9 U	1.8 U	1.9 U	2.1 U	1.9 U
DELTA-BHC	1.9 UJ	1.9 UJ	1.9 UJ	1.8 UJ	1.8 UJ	1.8 UJ	1.8 UJ	NA	1.9 UJ	1.9 UJ	1.8 UJ	1.9 UJ	2.1 UJ	1.9 UJ
DIELDRIN	3.6 U	3.7 U	3.65 U	3.6 U	3.5 U	3.5 U	3.5 U	NA	3.7 U	3.6 U	3.6 U	3.6 U	4 U	3.6 U
ENDOSULFAN I	4.8	1.9 U	2.88	1.8 U	1.8 U	1.8 U	1.8 U	NA	1.9 U	1.9 U	1.8 U	1.9 U	2.1 U	1.9 U
ENDOSULFAN II	3.6 U	3.7 U	3.65 U	3.6 U	3.5 U	3.5 U	3.5 U	NA	3.7 U	3.6 U	3.6 U	3.6 U	4 U	3.6 U
ENDOSULFAN SULFATE	3.6 U	3.7 U	3.65 U	3.6 U	3.5 U	3.5 U	3.5 U	NA	3.7 U	3.6 U	3.6 U	3.6 U	4 U	3.6 U
ENDRIN	14 J	3.7 U	7.92 J	3.6 U	3.5 U	3.5 U	3.5 U	NA	3.7 U	3.6 U	3.6 U	3.6 U	6.1 J	3.6 U
ENDRIN ALDEHYDE	3.6 U	3.7 U	3.65 U	3.6 U	3.5 U	3.5 U	3.5 U	NA	3.7 U	3.6 U	3.6 U	3.6 U	4 U	3.6 U
ENDRIN KETONE	3.6 U	3.7 U	3.65 U	3.6 U	3.5 U	3.5 U	3.5 U	NA	3.7 U	3.6 U	3.6 U	3.6 U	4 U	3.6 U
GAMMA-BHC (LINDANE)	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	NA	1.9 U	1.9 U	1.8 U	1.9 U	2.1 U	1.9 U
GAMMA-CHLORDANE	13 R	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	NA	1.9 U	1.9 U	1.8 U	1.9 U	2.1 U	1.9 U
HEPTACHLOR	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	NA	1.9 U	1.9 U	1.8 U	1.9 U	2.1 U	1.9 U
HEPTACHLOR EPOXIDE	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	NA	1.9 U	1.9 U	1.8 U	1.9 U	2.1 U	1.9 U
METHOXYCHLOR	19 U	19 U	19 U	18 U	30	18 U	19.5	NA	67 J	19 U	18 U	19 U	21 U	19 U
TOTAL AROCLOR	36 U	37 U	36.5 U	36 U	35 U	35 U	35 U	NA	37 U	36 U	36 U	36 U	140 J	36 U
TOTAL CHLORDANE	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	NA	1.9 U	1.9 U	1.8 U	1.9 U	2.5 J	1.9 U
TOTAL DDD/DDE/DDT	8.5 J	3.7 U	5.18 J	3.6 U	3.5 U	3.5 U	3.5 U	NA	3.7 U	3.6 U	3.6 U	3.6 U	4 U	3.6 U
TOXAPHENE	190 U	190 U	190 U	180 U	180 U	180 U	180 U	NA	190 U	190 U	180 U	190 U	210 U	190 U
METALS (MG/KG)														
ALUMINUM	9330 J	6610	7970 J	5710 J	7130 J	8120 J	7620 J	NA	15400 J	12900 J	5670 J	4440 J	5280	19900
ANTIMONY	0.052 UJ	0.63 UJ	0.341 UJ	0.05 UJ	0.05 UJ	0.049 UJ	0.0495 UJ	NA	0.053 UJ	0.054 UJ	0.051 UJ	0.054 UJ	0.61 UJ	0.92 UJ
ARSENIC	2.7 J	2.1 J	2.4 J	2 J	2.1 J	2.5 J	2.3 J	NA	5 J	4.1 J	1.8 J	1.3 J	2.2 J	23.1 J
BARIUM	27.5 J	13.7 J	20.6 J	40 J	13.7 J	15.2 J	14.4 J	NA	15.5 J	12.3 J	14.9 J	11.6 J	14.7 J	7.5 J
BERYLLIUM	0.24 J	0.17	0.205 J	0.17 J	0.21 J	0.24 J	0.225 J	NA	1 J	0.29 J	0.23 J	0.16 J	0.15	0.29
CADMIUM	0.068 J	0.03 J	0.049 J	0.0049 UJ	0.0049 UJ	0.0048 UJ	0.00485 UJ	NA	0.12 J	0.16 J	0.005 UJ	0.0053 UJ	0.0061 UJ	0.43
CALCIUM	3480 J	2100 J	2790 J	1100 J	780 J	877 J	828 J	NA	1950 J	3910 J	1020 J	762 J	931 J	2510 J
CHROMIUM	15.2 J	11.5 J	13.4 J	11.6 J	12.5 J	13.9 J	13.2 J	NA	14.5 J	10.6 J	8.2 J	7.3 J	7.9 J	13.3 J
COBALT	8.5 J	8.4 J	8.45 J	7.2 J	9.9 J	9.2 J	9.55 J	NA	11.7 J	13.2 J	7.6 J	6.5 J	7.2 J	26.1 J
COPPER	16 J	18.5 J	17.2 J	28.6 J	28.7 J	33.2 J	31 J	NA	30.9 J	20.3 J	9.4 J	25.7 J	12.2 J	53 J

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB318-1012	G32-SB318-1012-D	G32-SB318-1012-AVG	G32-SB319-0406	G32-SB319-0608	G32-SB319-0608-D	G32-SB319-0608-AVG	G32-SB320-0406	G32-SB320-0810	G32-SB321-1012	G32-SB321-0204	G32-SB322-0204	G32-SB322-0608	G32-SB323-1012
LOCATION ID	G32-SB318	G32-SB318	G32-SB318	G32-SB319	G32-SB319	G32-SB319	G32-SB319	G32-SB320	G32-SB320	G32-SB321	G32-SB321	G32-SB322	G32-SB322	G32-SB323
SAMPLE DATE	06/21/05	06/21/05	06/21/05	06/22/05	06/22/05	06/22/05	06/22/05	06/21/05	06/21/05	06/23/05	06/23/05	06/20/05	06/20/05	06/21/05
TOP DEPTH	10 FT	10 FT	10 FT	4 FT	6 FT	6 FT	6 FT	4 FT	8 FT	10 FT	2 FT	2 FT	6 FT	10 FT
BOTTOM DEPTH	12 FT	12 FT	12 FT	6 FT	8 FT	8 FT	8 FT	6 FT	10 FT	12 FT	4 FT	4 FT	8 FT	12 FT
SACODE	ORIG	DUP	AVG	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	FD	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
CYANIDE	0.11 U	0.13 U	0.12 U	0.54	0.11 U	0.12 U	0.115 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U	0.12 U
IRON	20900 J	15900 J	18400 J	10300 J	20100 J	18400 J	19200 J	NA	38000 J	31300 J	11100 J	9030 J	11100 J	35700 J
LEAD	17.6 J	12.6 J	15.1 J	6.7 J	6.9 J	7 J	6.95 J	NA	9.6 J	6.2 J	4.5 J	4.4 J	4.8 J	5.6 J
MAGNESIUM	4210 J	3180 J	3700 J	2600 J	3160 J	3590 J	3380 J	NA	7210 J	7050 J	2390 J	1830 J	2440 J	12900 J
MANGANESE	174 J	134 J	154 J	96.3 J	125 J	140 J	132 J	NA	233 J	259 J	107 J	79.5 J	106 J	254 J
MERCURY	0.0072 U	0.0073 U	0.00725 U	0.0066 U	0.007 U	0.0064 U	0.0067 U	NA	0.007 U	0.0065 U	0.0065 U	0.007 U	0.0084 U	0.0073 U
NICKEL	22.8 J	22.9 J	22.8 J	19.5 J	24.1 J	24.4 J	24.2 J	NA	31.4 J	20.1 J	19.5 J	17.1 J	20.9 J	50.2 J
POTASSIUM	914	466	690	1580	470	461	466	NA	545	473	546	491	579	281
SELENIUM	0.062 UJ	0.062 UJ	0.062 UJ	0.06 UJ	0.059 UJ	0.059 UJ	0.059 UJ	NA	0.063 UJ	0.065 UJ	0.061 UJ	0.065 UJ	0.073 UJ	0.06 UJ
SILVER	0.69 UJ	0.56 UJ	0.625 UJ	0.49 UJ	0.69 UJ	0.77 UJ	0.73 UJ	NA	1.4 UJ	0.72 UJ	0.6 UJ	0.63 UJ	0.59 UJ	2 UJ
SODIUM	142	89.5	116	104	114	106	110	NA	94.2	177	37 U	40.7 U	34.7	42.2
THALLIUM	0.39 UJ	0.24 UJ	0.315 UJ	0.24 UJ	0.3 UJ	0.49 UJ	0.395 UJ	NA	0.29 UJ	0.16 UJ	0.41 UJ	0.23 UJ	0.29 UJ	0.071 U
VANADIUM	13.7 J	8.6 J	11.2 J	14.2 J	8.3 J	9.4 J	8.85 J	NA	34.6 J	44 J	9.8 J	8.2 J	9.6 J	71.6
ZINC	48.5 J	35.1 J	41.8 J	30.5 J	29.2 J	32.9 J	31 J	NA	63 J	45.9 J	28.1 J	19.4 J	29.2 J	46 J
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	29	32 J	30.5 J	19	13 U	13 U	13 U	NA	13 U	13 U	13 U	13 U	15 UJ	13 UJ
GASOLINE RANGE ORGANICS	4.4 U	4.1 U	4.25 U	3.9 U	4.8 U	7.1 U	5.95 U	4.2 UJ	4.1 U	3.4 U	3.8 U	5.1 U	5.4 U	3.9 U
TOTAL PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB323-0204	G32-SB324-0204	G32-SB324-0810	G32-SB325-0305	G32-SB325-0305-D	G32-SB325-0305-AVG	G32-SB325-0709	G32-SB326-0406	G32-SB326-0608	G32-SB327-0103-D	G32-SB327-0709	G32-SB328-0406	G32-SB328-0810	G32-SB331-0204
LOCATION ID	G32-SB323	G32-SB324	G32-SB324	G32-SB325	G32-SB325	G32-SB325	G32-SB325	G32-SB326	G32-SB326	G32-SB327	G32-SB327	G32-SB328	G32-SB328	G32-SB331
SAMPLE DATE	06/21/05	06/20/05	06/20/05	06/17/05	06/17/05	06/17/05	06/17/05	06/15/05	06/15/05	06/16/05	06/16/05	06/21/05	06/21/05	06/24/05
TOP DEPTH	2 FT	2 FT	8 FT	3 FT	3 FT	3 FT	7 FT	4 FT	6 FT	1 FT	7 FT	4 FT	8 FT	2 FT
BOTTOM DEPTH	4 FT	4 FT	10 FT	5 FT	5 FT	5 FT	9 FT	6 FT	8 FT	3 FT	9 FT	6 FT	10 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM
VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
1,1,2,2-TETRACHLOROETHANE	3 U	3 UJ	6 UJ	4 U	4 UJ	4 UJ	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 UJ
1,1,2-TRICHLOROETHANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
1,1,2-TRICHLOROTRIFLUOROETHANE	3 U	3 UJ	6 UJ	4 UJ	4 UJ	4 UJ	3 UJ	4 U	4 U	3 UJ	3 UJ	4 U	3 UJ	3 U
1,1-DICHLOROETHANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
1,1-DICHLOROETHENE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
1,2,4-TRICHLOROBENZENE	3 U	3 UJ	6 UJ	4 U	4 UJ	4 UJ	3 U	4 UJ	4 U	3 U	3 U	4 U	3 UJ	3 UJ
1,2-DIBROMO-3-CHLOROPROPANE	3 U	3 UJ	6 UJ	4 U	4 UJ	4 UJ	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 UJ
1,2-DIBROMOETHANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
1,2-DICHLOROBENZENE	3 U	3 UJ	6 UJ	4 U	4 UJ	4 UJ	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 UJ
1,2-DICHLOROETHANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
1,2-DICHLOROPROPANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
1,3-DICHLOROBENZENE	3 U	3 UJ	6 UJ	4 U	4 UJ	4 UJ	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 UJ
1,4-DICHLOROBENZENE	3 U	3 UJ	6 UJ	4 U	4 UJ	4 UJ	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 UJ
2-BUTANONE	3 UJ	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 UJ	3 UJ	3 UJ
2-HEXANONE	3 UJ	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 UJ	3 UJ	3 U
4-METHYL-2-PENTANONE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
ACETONE	13 UJ	20 UJ	10 UJ	4 UJ	50 UJ	27 UJ	19 UJ	4 UJ	4 UJ	3 UJ	3 UJ	19 UJ	26 UJ	20 UJ
BENZENE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
BROMODICHLOROMETHANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
BROMOFORM	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
BROMOMETHANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
BTEX	3 U	9 J	27 J	4 U	4 U	4 U	3 U	1 J	4 U	3 U	3 U	4 U	3 UJ	3 U
CARBON DISULFIDE	3 U	0.7 J	6 UJ	4 U	2 J	2 J	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
CARBON TETRACHLORIDE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
CHLOROBENZENE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
CHLORODIBROMOMETHANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
CHLOROETHANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
CHLOROFORM	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
CHLOROMETHANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
CIS-1,2-DICHLOROETHENE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	1 J	3 U	3 U	4 U	3 UJ	3 U
CIS-1,3-DICHLOROPROPENE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
CYCLOHEXANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
DICHLORODIFLUOROMETHANE	3 UJ	3 U	6 UJ	4 U	4 U	4 U	3 U	4 UJ	4 U	3 U	3 U	4 UJ	3 UJ	3 U
ETHYLBENZENE	3 U	1 J	2 J	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
ISOPROPYLBENZENE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
M+P-XYLENES	3 U	5 U	9 J	4 U	4 U	4 U	3 U	NA	NA	3 U	3 U	4 U	3 UJ	NA
METHYL ACETATE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
METHYL CYCLOHEXANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
METHYL TERT-BUTYL ETHER	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
METHYLENE CHLORIDE	11 U	15 U	6 UJ	27 U	27 U	27 U	15 U	11 U	4 U	5 U	16 U	12 U	10 UJ	10 U
O-XYLENE	3 U	5 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB323-0204	G32-SB324-0204	G32-SB324-0810	G32-SB325-0305	G32-SB325-0305-D	G32-SB325-0305-AVG	G32-SB325-0709	G32-SB326-0406	G32-SB326-0608	G32-SB327-0103-D	G32-SB327-0709	G32-SB328-0406	G32-SB328-0810	G32-SB331-0204
LOCATION ID	G32-SB323	G32-SB324	G32-SB324	G32-SB325	G32-SB325	G32-SB325	G32-SB325	G32-SB326	G32-SB326	G32-SB327	G32-SB327	G32-SB328	G32-SB328	G32-SB331
SAMPLE DATE	06/21/05	06/20/05	06/20/05	06/17/05	06/17/05	06/17/05	06/17/05	06/15/05	06/15/05	06/16/05	06/16/05	06/21/05	06/21/05	06/24/05
TOP DEPTH	2 FT	2 FT	8 FT	3 FT	3 FT	3 FT	7 FT	4 FT	6 FT	1 FT	7 FT	4 FT	8 FT	2 FT
BOTTOM DEPTH	4 FT	4 FT	10 FT	5 FT	5 FT	5 FT	9 FT	6 FT	8 FT	3 FT	9 FT	6 FT	10 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	4 U	4 U	NA	NA	NA	NA	3 U
STYRENE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
TETRACHLOROETHENE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
TOLUENE	3 U	8	16 J	4 U	4 U	4 U	3 U	1 J	4 U	3 U	3 U	4 U	3 UJ	3 U
TOTAL 1,2-DICHLOROETHENE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	1 J	3 U	3 U	4 U	3 UJ	3 U
TOTAL CHLORINATED ETHENES	2 J	3 U	6 J	6 J	17 J	11.5 J	3 U	4 U	1 J	3 U	3 U	4 U	2 J	3 U
TOTAL CHLORINATED VOCS	2 J	3 UJ	6 J	6 J	17 J	11.5 J	3 UJ	4 UJ	1 J	3 UJ	3 UJ	4 UJ	2 J	3 UJ
TOTAL XYLENES	3 U	5 U	9 J	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
TRANS-1,2-DICHLOROETHENE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
TRANS-1,3-DICHLOROPROPENE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
TRICHLOROETHENE	2 J	3 U	6 J	6 J	17 J	11.5 J	3 U	4 U	4 U	3 U	3 U	4 U	2 J	3 U
TRICHLOROFLUOROMETHANE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
VINYL CHLORIDE	3 U	3 U	6 UJ	4 U	4 U	4 U	3 U	4 U	4 U	3 U	3 U	4 U	3 UJ	3 U
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
2,2'-OXYBIS(1-CHLOROPROPANE)	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
2,4,5-TRICHLOROPHENOL	730 U	730 U	NA	710 U	730 U	720 U	710 U	740 U	760 U	720 U	750 U	740 U	NA	710 U
2,4,6-TRICHLOROPHENOL	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
2,4-DICHLOROPHENOL	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
2,4-DIMETHYLPHENOL	360 U	360 UJ	NA	350 UJ	360 UJ	355 UJ	350 UJ	360 U	380 U	350 UJ	370 UJ	370 U	NA	350 U
2,4-DINITROPHENOL	730 U	730 U	NA	710 U	730 U	720 U	710 U	740 U	760 U	720 U	750 U	740 U	NA	710 U
2,4-DINITROTOLUENE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
2,6-DINITROTOLUENE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
2-CHLORONAPHTHALENE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
2-CHLOROPHENOL	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
2-METHYLNAPHTHALENE	3.6 UJ	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	3.6 UJ	3.8 UJ	7.9	3.7 UJ	3.7 UJ	NA	3.5 U
2-METHYLPHENOL	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
2-NITROANILINE	730 U	730 U	NA	710 U	730 U	720 U	710 U	740 U	760 U	720 U	750 U	740 U	NA	710 U
2-NITROPHENOL	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
3,3'-DICHLOROBENZIDINE	360 U	360 UJ	NA	350 UJ	360 UJ	355 UJ	350 UJ	360 U	380 U	350 UJ	370 UJ	370 U	NA	350 U
3-NITROANILINE	730 UJ	730 U	NA	710 U	730 U	720 U	710 U	740 U	760 U	720 U	750 U	740 UJ	NA	710 U
4,6-DINITRO-2-METHYLPHENOL	730 U	730 U	NA	710 U	730 U	720 U	710 U	740 U	760 U	720 U	750 U	740 U	NA	710 U
4-BROMOPHENYL PHENYL ETHER	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
4-CHLORO-3-METHYLPHENOL	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
4-CHLOROANILINE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
4-CHLOROPHENYL PHENYL ETHER	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
4-METHYLPHENOL	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
4-NITROANILINE	730 UJ	730 UJ	NA	710 UJ	730 UJ	720 UJ	710 UJ	740 UJ	760 UJ	720 UJ	750 UJ	740 UJ	NA	710 UJ
4-NITROPHENOL	730 U	730 U	NA	710 U	730 U	720 U	710 U	740 U	760 U	720 U	750 U	740 U	NA	710 U
ACENAPHTHENE	3.6 UJ	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	6.2 J	3.8 UJ	4.1	3.7 UJ	3.7 UJ	NA	3.5 U
ACENAPHTHYLENE	3.6 UJ	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	3.6 UJ	3.8 UJ	3.5 U	3.7 UJ	3.7 UJ	NA	3.5 U
ACETOPHENONE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
ANTHRACENE	3.6 UJ	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	6.2 J	3.8 UJ	5.5	3.7 UJ	3.7 UJ	NA	3.5 U

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB323-0204	G32-SB324-0204	G32-SB324-0810	G32-SB325-0305	G32-SB325-0305-D	G32-SB325-0305-AVG	G32-SB325-0709	G32-SB326-0406	G32-SB326-0608	G32-SB327-0103-D	G32-SB327-0709	G32-SB328-0406	G32-SB328-0810	G32-SB331-0204
LOCATION ID	G32-SB323	G32-SB324	G32-SB324	G32-SB325	G32-SB325	G32-SB325	G32-SB325	G32-SB326	G32-SB326	G32-SB327	G32-SB327	G32-SB328	G32-SB328	G32-SB331
SAMPLE DATE	06/21/05	06/20/05	06/20/05	06/17/05	06/17/05	06/17/05	06/17/05	06/15/05	06/15/05	06/16/05	06/16/05	06/21/05	06/21/05	06/24/05
TOP DEPTH	2 FT	2 FT	8 FT	3 FT	3 FT	3 FT	7 FT	4 FT	6 FT	1 FT	7 FT	4 FT	8 FT	2 FT
BOTTOM DEPTH	4 FT	4 FT	10 FT	5 FT	5 FT	5 FT	9 FT	6 FT	8 FT	3 FT	9 FT	6 FT	10 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM
ATRAZINE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
BENZALDEHYDE	360 UJ	360 UJ	NA	350 UJ	360 UJ	355 UJ	350 UJ	360 UJ	380 UJ	350 UJ	370 UJ	370 UJ	NA	350 UJ
BENZO(A)ANTHRACENE	5.2 J	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	3.6 UJ	3.8 UJ	7.6	3.7 UJ	3.7 UJ	NA	3.6
BENZO(A)PYRENE	4.2 J	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	3.6 UJ	3.8 UJ	4.3	3.7 UJ	3.7 UJ	NA	3.5 U
BENZO(B)FLUORANTHENE	6.5 J	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	3.6 UJ	3.8 UJ	8.4	3.7 UJ	3.7 UJ	NA	2.8 J
BENZO(G,H,I)PERYLENE	3.6 UJ	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	360 UJ	3.8 UJ	3.5 U	3.7 UJ	3.7 UJ	NA	3.5 U
BENZO(K)FLUORANTHENE	3.6 UJ	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	3.6 UJ	3.8 UJ	3.8	3.7 UJ	3.7 UJ	NA	3.5 U
BIS(2-CHLOROETHOXY)METHANE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
BIS(2-CHLOROETHYL)ETHER	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
BIS(2-ETHYLHEXYL)PHTHALATE	140 J	65 J	NA	80 J	75 J	77.5 J	61 J	100 JEB	150 JEB	68 J	61 J	370 U	NA	110 J
BUTYL BENZYL PHTHALATE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 UJ	380 U	350 U	370 U	370 U	NA	350 U
CAPROLACTAM	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
CARBAZOLE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 UJ	380 UJ	350 U	370 U	370 U	NA	350 U
CHRYSENE	6.6 J	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	3.6 UJ	3.8 UJ	8.6	3.7 UJ	3.7 UJ	NA	3.5 U
DIBENZO(A,H)ANTHRACENE	3.6 UJ	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	360 UJ	3.8 UJ	3.5 UJ	3.7 UJ	3.7 UJ	NA	3.5 U
DIBENZOFURAN	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
DIETHYL PHTHALATE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
DIMETHYL PHTHALATE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
DI-N-BUTYL PHTHALATE	360 U	40 J	NA	44 J	360 U	112 J	40 J	360 UJ	380 U	45 J	50 J	68 J	NA	350 U
DI-N-OCTYL PHTHALATE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 UJ	380 U	350 U	370 U	370 U	NA	350 U
FLUORANTHENE	14 J	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	17 J	4 J	20	3.7 UJ	3.7 UJ	NA	11
FLUORENE	3.6 UJ	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	3.6 UJ	3.8 UJ	3.5 U	3.7 UJ	3.7 UJ	NA	3.5 U
HEXACHLOROBENZENE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
HEXACHLOROBUTADIENE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 UJ	370 U	370 U	NA	350 U
HEXACHLOROCYCLOPENTADIENE	360 U	360 UJ	NA	350 UJ	360 UJ	355 UJ	350 UJ	360 UJ	380 UJ	350 U	370 UJ	370 U	NA	350 U
HEXACHLOROETHANE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
HIGH MOLECULAR WEIGHT PAHS	50.5 J	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	31 J	8.6 J	75.5 J	3.7 UJ	3.7 UJ	NA	24 J
INDENO(1,2,3-CD)PYRENE	3.6 UJ	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	360 UJ	3.8 UJ	3.8	3.7 UJ	3.7 UJ	NA	3.5 U
ISOPHORONE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
LOW MOLECULAR WEIGHT PAHS	8.2 J	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	4.6 J	31 J	4.2 J	46.6	3.7 UJ	3.7 UJ	NA	6.4
NAPHTHALENE	3.6 UJ	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	3.6 J	3.8 UJ	5.1	3.7 UJ	3.7 UJ	NA	3.5 U
NITROBENZENE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
N-NITROSO-DI-N-PROPYLAMINE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 UJ	380 UJ	350 U	370 U	370 U	NA	350 U
N-NITROSODIPHENYLAMINE	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
PENTACHLOROPHENOL	730 U	730 U	NA	710 U	730 U	720 U	710 U	740 U	760 U	720 U	750 U	740 U	NA	710 U
PHENANTHRENE	8.2 J	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	4.6 J	15 J	4.2 J	24	3.7 UJ	3.7 UJ	NA	6.4
PHENOL	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 U	370 U	370 U	NA	350 U
PYRENE	14 J	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	14 J	4.6 J	19	3.7 UJ	3.7 UJ	NA	6.6
TOTAL CARCINOGENIC PAHS-HALFND	27.9 J	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	105 UJ	3.8 UJ	38.2 J	3.7 UJ	3.7 UJ	NA	15.2 J
TOTAL CARCINOGENIC PAHS-POS	22.5 J	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	3.5 UJ	105 UJ	3.8 UJ	36.5 J	3.7 UJ	3.7 UJ	NA	6.4 J
TOTAL CHLORINATED VOCS	360 U	360 U	NA	350 U	360 U	355 U	350 U	360 U	380 U	350 UJ	370 U	370 U	NA	350 U
TOTAL PAHS	58.7 J	3.6 UJ	NA	3.5 UJ	3.6 UJ	3.55 UJ	4.6 J	62 J	12.8 J	122 J	3.7 UJ	3.7 UJ	NA	30.4 J

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB323-0204	G32-SB324-0204	G32-SB324-0810	G32-SB325-0305	G32-SB325-0305-D	G32-SB325-0305-AVG	G32-SB325-0709	G32-SB326-0406	G32-SB326-0608	G32-SB327-0103-D	G32-SB327-0709	G32-SB328-0406	G32-SB328-0810	G32-SB331-0204
LOCATION ID	G32-SB323	G32-SB324	G32-SB324	G32-SB325	G32-SB325	G32-SB325	G32-SB325	G32-SB326	G32-SB326	G32-SB327	G32-SB327	G32-SB328	G32-SB328	G32-SB331
SAMPLE DATE	06/21/05	06/20/05	06/20/05	06/17/05	06/17/05	06/17/05	06/17/05	06/15/05	06/15/05	06/16/05	06/16/05	06/21/05	06/21/05	06/24/05
TOP DEPTH	2 FT	2 FT	8 FT	3 FT	3 FT	3 FT	7 FT	4 FT	6 FT	1 FT	7 FT	4 FT	8 FT	2 FT
BOTTOM DEPTH	4 FT	4 FT	10 FT	5 FT	5 FT	5 FT	9 FT	6 FT	8 FT	3 FT	9 FT	6 FT	10 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	3.6 U	3.6 U	NA	3.5 U	3.6 U	3.55 U	3.5 U	3.6 U	3.8 U	3.5 U	3.7 U	3.7 U	NA	3.5 U
4,4'-DDE	3.6 U	3.6 U	NA	3.5 U	3.6 U	3.55 U	3.5 U	3.6 U	3.8 U	3.5 U	3.7 U	3.7 U	NA	3.5 U
4,4'-DDT	3.6 U	3.6 U	NA	3.5 U	3.6 U	3.55 U	3.5 U	3.6 U	3.8 U	3.5 U	3.7 U	3.7 U	NA	3.5 U
ALDRIN	1.8 U	1.8 U	NA	1.8 U	1.9 U	1.85 U	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	NA	1.8 U
ALPHA-BHC	1.8 U	1.8 U	NA	1.8 U	1.9 U	1.85 U	1.8 U	1.9 UJ	1.9 U	1.8 U	1.9 U	1.9 U	NA	1.8 UJ
ALPHA-CHLORDANE	1.8 U	1.8 U	NA	1.8 U	1.9 U	1.85 U	1.8 U	1.9 UJ	1.9 U	1.8 U	1.9 U	1.9 U	NA	1.8 U
AROCLOR-1016	36 U	36 U	NA	35 U	36 U	35.5 U	35 U	36 U	38 U	35 U	37 U	37 U	NA	35 U
AROCLOR-1221	36 U	36 U	NA	35 U	36 U	35.5 U	35 U	36 U	38 U	35 U	37 U	37 U	NA	35 U
AROCLOR-1232	36 U	36 U	NA	35 U	36 U	35.5 U	35 U	36 U	38 U	35 U	37 U	37 U	NA	35 U
AROCLOR-1242	36 U	36 U	NA	35 U	36 U	35.5 U	35 U	36 U	38 U	35 U	37 U	37 U	NA	35 U
AROCLOR-1248	36 U	36 U	NA	35 U	36 U	35.5 U	35 U	36 U	38 U	35 U	37 U	37 U	NA	35 U
AROCLOR-1254	36 U	36 U	NA	35 U	36 U	35.5 U	35 U	36 U	38 U	35 U	37 U	37 U	NA	35 U
AROCLOR-1260	36 U	36 U	NA	35 U	36 U	35.5 U	35 U	36 U	38 U	35 U	37 U	37 U	NA	35 U
BETA-BHC	1.8 U	1.8 U	NA	1.8 U	1.9 U	1.85 U	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	NA	1.8 U
DELTA-BHC	1.8 UJ	1.8 UJ	NA	1.8 UJ	1.9 UJ	1.85 UJ	1.8 UJ	1.9 UJ	1.9 UJ	1.8 UJ	1.9 UJ	1.9 UJ	NA	1.8 R
DIELDRIN	3.6 U	3.6 U	NA	3.5 U	3.6 U	3.55 U	3.5 U	3.6 UJ	3.8 U	3.5 U	3.7 U	3.7 U	NA	3.5 U
ENDOSULFAN I	1.8 U	1.8 U	NA	1.8 U	1.9 U	1.85 U	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	NA	1.8 U
ENDOSULFAN II	3.6 U	3.6 U	NA	3.5 U	3.6 U	3.55 U	3.5 U	3.6 U	3.8 U	3.5 U	3.7 U	3.7 U	NA	3.5 U
ENDOSULFAN SULFATE	3.6 U	3.6 U	NA	3.5 U	3.6 U	3.55 U	3.5 U	3.6 U	3.8 U	3.5 U	3.7 U	3.7 U	NA	3.5 UJ
ENDRIN	3.6 U	3.6 U	NA	3.5 U	3.6 U	3.55 U	3.5 U	3.6 UJ	3.8 UJ	3.5 U	3.7 U	3.7 U	NA	3.5 U
ENDRIN ALDEHYDE	3.6 U	3.6 U	NA	3.5 U	3.6 U	3.55 U	3.5 U	3.6 U	3.8 U	3.5 U	3.7 U	3.7 U	NA	3.5 U
ENDRIN KETONE	3.6 U	3.6 U	NA	3.5 U	3.6 U	3.55 U	3.5 U	3.6 U	3.8 U	3.5 U	3.7 U	3.7 U	NA	3.5 U
GAMMA-BHC (LINDANE)	1.8 U	1.8 U	NA	1.8 U	1.9 U	1.85 U	1.8 U	1.9 UJ	1.9 U	1.8 U	1.9 U	1.9 U	NA	1.8 UJ
GAMMA-CHLORDANE	1.8 U	1.8 U	NA	1.8 U	1.9 U	1.85 U	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	NA	1.8 U
HEPTACHLOR	1.8 U	1.8 U	NA	1.8 U	1.9 U	1.85 U	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	NA	1.8 U
HEPTACHLOR EPOXIDE	1.8 U	1.8 U	NA	1.8 U	1.9 U	1.85 U	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	NA	1.8 U
METHOXYCHLOR	18 U	18 U	NA	18 U	19 U	18.5 U	18 U	19 UJ	19 UJ	18 U	19 U	19 U	NA	24
TOTAL AROCLOR	36 U	36 U	NA	35 U	36 U	35.5 U	35 U	36 U	38 U	35 U	37 U	37 U	NA	35 U
TOTAL CHLORDANE	1.8 U	1.8 U	NA	1.8 U	1.9 U	1.85 U	1.8 U	1.9 UJ	1.9 U	1.8 U	1.9 U	1.9 U	NA	1.8 U
TOTAL DDD/DDE/DDT	3.6 U	3.6 U	NA	3.5 U	3.6 U	3.55 U	3.5 U	3.6 U	3.8 U	3.5 U	3.7 U	3.7 U	NA	3.5 U
TOXAPHENE	180 U	180 U	NA	180 U	190 U	185 U	180 U	190 U	190 U	180 U	190 U	190 U	NA	180 U
METALS (MG/KG)														
ALUMINUM	5850	6220	NA	6560	5690	6120	13400	7180 J	5890 J	5550	6950	6170	NA	4800
ANTIMONY	0.48 UJ	0.55 UJ	NA	0.6 UJ	0.59 UJ	0.595 UJ	0.89 UJ	0.31 UJ	0.24 UJ	0.39 UJ	0.59 UJ	0.44 UJ	NA	0.25 UJ
ARSENIC	2.2 J	1.8 J	NA	2.1 J	3.1 J	2.6 J	3.8 J	2.2 J	2.5 J	2.3 J	3.1 J	2.4 J	NA	1.8 J
BARIUM	16.1 J	12.5 J	NA	14.4 J	13.8 J	14.1 J	13.2 J	14 J	12.1 J	15.5 J	11.1 J	14.6 J	NA	15.3 J
BERYLLIUM	0.18	0.26	NA	0.27	0.26	0.265	0.21	0.2	0.13	0.18	0.22	0.26	NA	0.14
CADMIUM	0.0053 UJ	0.0048 UJ	NA	0.005 UJ	0.0048 UJ	0.0049 UJ	0.32	0.074 UJ	0.017 UJ	0.0049 UJ	0.038 J	0.0056 UJ	NA	0.0048 UJ
CALCIUM	3040 J	1040 J	NA	1240 J	886 J	1060 J	686 J	1060	1140	3580 J	1120 J	624 J	NA	957
CHROMIUM	8.9 J	9.5 J	NA	10.8 J	8.4 J	9.6 J	23.7 J	11 J	9 J	8.2 J	9.6 J	8.3 J	NA	6.5
COBALT	4.6 J	7 J	NA	10.4 J	8.5 J	9.45 J	15.8 J	9.8 J	9.2 J	4.8 J	8 J	4.1 J	NA	3.2 J
COPPER	13.7 J	10.1 J	NA	17.7 J	13.8 J	15.8 J	53.7 J	15.1 J	14.1 J	14.6 J	18.4 J	18.6 J	NA	11.5

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB323-0204	G32-SB324-0204	G32-SB324-0810	G32-SB325-0305	G32-SB325-0305-D	G32-SB325-0305-AVG	G32-SB325-0709	G32-SB326-0406	G32-SB326-0608	G32-SB327-0103-D	G32-SB327-0709	G32-SB328-0406	G32-SB328-0810	G32-SB331-0204
LOCATION ID	G32-SB323	G32-SB324	G32-SB324	G32-SB325	G32-SB325	G32-SB325	G32-SB325	G32-SB326	G32-SB326	G32-SB327	G32-SB327	G32-SB328	G32-SB328	G32-SB331
SAMPLE DATE	06/21/05	06/20/05	06/20/05	06/17/05	06/17/05	06/17/05	06/17/05	06/15/05	06/15/05	06/16/05	06/16/05	06/21/05	06/21/05	06/24/05
TOP DEPTH	2 FT	2 FT	8 FT	3 FT	3 FT	3 FT	7 FT	4 FT	6 FT	1 FT	7 FT	4 FT	8 FT	2 FT
BOTTOM DEPTH	4 FT	4 FT	10 FT	5 FT	5 FT	5 FT	9 FT	6 FT	8 FT	3 FT	9 FT	6 FT	10 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	DUP	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM
CYANIDE	0.12 U	0.12 U	NA	0.13 U	0.13 U	0.13 U	0.12 U	0.13 U	0.13 U	0.12 U	0.12 U	0.12 U	NA	0.13 UJ
IRON	10900 J	12900 J	NA	15100 J	12300 J	13700 J	30500 J	15800	12100	10300 J	15500 J	11100 J	NA	8900
LEAD	7.4 J	4.3 J	NA	6.1 J	4.9 J	5.5 J	11 J	8.9 J	6.4 J	6.1 J	11.3 J	6.3 J	NA	5.8 J
MAGNESIUM	2250 J	2630 J	NA	3060 J	2540 J	2800 J	6320 J	3250 J	2740 J	2220 J	3520 J	2220 J	NA	1870
MANGANESE	126 J	124 J	NA	125 J	106 J	116 J	220 J	139 J	112 J	185 J	135 J	111 J	NA	150
MERCURY	0.0065 U	0.0065 U	NA	0.0074 UJ	0.0076 U	0.0075 UJ	0.0062 U	0.0071 UJ	0.007 UJ	0.008 UJ	0.032 U	0.0073 UJ	NA	0.0068 U
NICKEL	10.4 J	17.7 J	NA	24.4 J	20.7 J	22.6 J	39.4 J	25.1 J	20.2 J	10.8 J	22.9 J	11 J	NA	5.5 J
POTASSIUM	610	528	NA	621	530	576	434	656	766	517	445	569	NA	640 J
SELENIUM	0.065 UJ	0.059 UJ	NA	0.061 UJ	0.059 UJ	0.06 UJ	0.061 UJ	0.066 U	0.07 U	0.06 UJ	0.061 UJ	0.067 UJ	NA	0.059 UJ
SILVER	0.31 UJ	0.66 UJ	NA	0.69 UJ	0.63 UJ	0.66 UJ	1.4 UJ	0.91 UJ	0.74 UJ	0.24 UJ	0.74 UJ	0.71 UJ	NA	0.51 UJ
SODIUM	92	58.2	NA	62.7	48.9	55.8	31.2	198	153	59.4	54.4	49	NA	31.7
THALLIUM	0.15 UJ	0.21 UJ	NA	0.24 UJ	0.2 UJ	0.22 UJ	0.32 UJ	0.45 UJ	0.45 UJ	0.18 UJ	0.36 UJ	0.15 UJ	NA	0.069 U
VANADIUM	10.4 J	10.2 J	NA	11.2 J	9.7 J	10.4 J	12.6 J	10 J	9 J	9 J	9.7 J	9.8 J	NA	7.6 J
ZINC	37.3 J	28.4 J	NA	30.2 J	26.6 J	28.4 J	73.2 J	40.7 J	34.8 J	20.9 J	40.1 J	23 J	NA	21.2 J
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	21 J	13 U	NA	13 U	13 U	13 U	13 U	22 J	14 U	13 U	13 U	13 UJ	NA	13 U
GASOLINE RANGE ORGANICS	4.7 U	3.5 U	3.2 UJ	3.6 U	4 U	3.8 U	4.2 U	4.6 U	4.2 U	4.1 U	3.7 U	3.7 U	4.1 UJ	3.4 U
TOTAL PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB331-5254	G32-SB332-0406	G32-SB333-1214	G32-SB333-0406	G32-SB334-0608	G32-SB335-1012	G32-SB336-0608	G32-SB337-1012	G32-SB338-1012	G32-SOTP01-01-0007	G32-SOTP02-0006	G32-SOTP02-02-0007	G32-SOTP03-01-0007	G32-SOTP04-01
LOCATION ID	G32-SB331	G32-SB332	G32-SB333	G32-SB333	G32-SB334	G32-SB335	G32-SB336	G32-SB337	G32-SB338	G32-TP01	G32-TP02	G32-TP02	G32-TP03	G32-TP04
SAMPLE DATE	06/27/05	07/14/05	06/23/05	06/23/05	06/22/05	07/05/05	07/06/05	07/14/05	07/14/05	06/02/05	06/02/05	06/02/05	06/02/05	07/22/05
TOP DEPTH	52 FT	4 FT	12 FT	4 FT	6 FT	10 FT	6 FT	10 FT	10 FT					
BOTTOM DEPTH	54 FT	6 FT	14 FT	6 FT	8 FT	12 FT	8 FT	12 FT	12 FT					
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
1,1,2,2-TETRACHLOROETHANE	2 U	3 U	3 U	3 U	3 R	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U	4 U
1,1,2-TRICHLOROETHANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
1,1,2-TRICHLOROTRIFLUOROETHANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
1,1-DICHLOROETHANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
1,1-DICHLOROETHENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
1,2,4-TRICHLOROBENZENE	2 UJ	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U	4 U
1,2-DIBROMO-3-CHLOROPROPANE	2 U	3 UJ	3 U	3 U	3 UJ	3 U	3 U	3 UJ	3 UJ	3 UJ	3 U	2 UJ	2 UJ	4 U
1,2-DIBROMOETHANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U	4 U
1,2-DICHLOROBENZENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U	4 U
1,2-DICHLOROETHANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 U	2 U	4 U
1,2-DICHLOROPROPANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
1,3-DICHLOROBENZENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U	4 U
1,4-DICHLOROBENZENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U	4 U
2-BUTANONE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
2-HEXANONE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
4-METHYL-2-PENTANONE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
ACETONE	7 UJ	3 UJ	9 UJ	65 UJ	7 UJ	3 UJ	130 UJ	7 UJ	6 UJ	6 UJ	3 UJ	4 J	2 UJ	4 UJ
BENZENE	2 U	3 U	3 U	3	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
BROMODICHLOROMETHANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
BROMOFORM	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U	4 U
BROMOMETHANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
BTEX	2 U	3 U	3 U	15	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	13 J	2 UJ	4 U
CARBON DISULFIDE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
CARBON TETRACHLORIDE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
CHLOROBENZENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U	4 U
CHLORODIBROMOMETHANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U	4 U
CHLOROETHANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
CHLOROFORM	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
CHLOROMETHANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
CIS-1,2-DICHLOROETHENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
CIS-1,3-DICHLOROPROPENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
CYCLOHEXANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	0.8 UJ	2 UJ	4 U
DICHLORODIFLUOROMETHANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
ETHYLBENZENE	2 U	3 U	3 U	4	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	2 J	2 U	4 U
ISOPROPYLBENZENE	2 U	3 U	3 U	0.8 J	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	0.6 J	2 U	4 U
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
METHYL CYCLOHEXANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	24 J	3 U	1 J	2 UJ	4 U
METHYL TERT-BUTYL ETHER	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	0.6 J	2 UJ	4 U
METHYLENE CHLORIDE	8 UJ	12 UJ	13 U	3 U	10 UJ	26 U	29 U	31 UJ	30 UJ	6 UJ	5 U	6 UJ	4 UJ	32 U
O-XYLENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	3	2 U	4 U

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB331-5254	G32-SB332-0406	G32-SB333-1214	G32-SB333-0406	G32-SB334-0608	G32-SB335-1012	G32-SB336-0608	G32-SB337-1012	G32-SB338-1012	G32-SOTP01-01-0007	G32-SOTP02-0006	G32-SOTP02-02-0007	G32-SOTP03-01-0007	G32-SOTP04-01
LOCATION ID	G32-SB331	G32-SB332	G32-SB333	G32-SB333	G32-SB334	G32-SB335	G32-SB336	G32-SB337	G32-SB338	G32-TP01	G32-TP02	G32-TP02	G32-TP03	G32-TP04
SAMPLE DATE	06/27/05	07/14/05	06/23/05	06/23/05	06/22/05	07/05/05	07/06/05	07/14/05	07/14/05	06/02/05	06/02/05	06/02/05	06/02/05	07/22/05
TOP DEPTH	52 FT	4 FT	12 FT	4 FT	6 FT	10 FT	6 FT	10 FT	10 FT					
BOTTOM DEPTH	54 FT	6 FT	14 FT	6 FT	8 FT	12 FT	8 FT	12 FT	12 FT					
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
P-XYLENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	6	2 U	4 U
STYRENE	2 UJ	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U	4 U
TETRACHLOROETHENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	2 U	2 U	4 U
TOLUENE	2 U	3 U	3 U	8	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 J	2 UJ	4 U
TOTAL 1,2-DICHLOROETHENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
TOTAL CHLORINATED ETHENES	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	0.8 J	2 UJ	4 U
TOTAL CHLORINATED VOCS	2 UJ	3 UJ	3 U	3 U	3 UJ	3 U	3 U	3 UJ	3 UJ	3 UJ	3 U	0.8 J	2 UJ	4 U
TOTAL XYLENES	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 U	3 U	9	2 U	4 U
TRANS-1,2-DICHLOROETHENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
TRANS-1,3-DICHLOROPROPENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
TRICHLOROETHENE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	0.8 J	2 UJ	4 U
TRICHLOROFLUOROMETHANE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
VINYL CHLORIDE	2 U	3 U	3 U	3 U	3 UJ	3 U	3 U	3 U	3 U	3 UJ	3 U	2 UJ	2 UJ	4 U
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	390 U	370 U	380 U	610 J	360 U	370 U	45 J	370 U	360 U	410 U	380 U	390 U	370 U	370 U
2,2'-OXYBIS(1-CHLOROPROPANE)	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 UJ	380 U	390 UJ	370 UJ	370 U
2,4,5-TRICHLOROPHENOL	800 U	740 U	770 U	4500 U	720 U	740 U	770 U	740 U	740 U	820 U	760 U	790 U	760 U	740 UJ
2,4,6-TRICHLOROPHENOL	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 UJ	370 U	370 U
2,4-DICHLOROPHENOL	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 UJ	380 U	390 U	370 UJ	370 U
2,4-DIMETHYLPHENOL	390 U	370 UJ	380 U	2200 U	360 U	370 UJ	380 UJ	370 UJ	360 UJ	410 U	380 U	390 U	370 U	370 UJ
2,4-DINITROPHENOL	800 UJ	740 UJ	770 U	4500 U	720 U	740 U	770 U	740 UJ	740 UJ	820 U	760 U	790 U	760 U	740 U
2,4-DINITROTOLUENE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
2,6-DINITROTOLUENE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
2-CHLORONAPHTHALENE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
2-CHLOROPHENOL	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
2-METHYLNAPHTHALENE	3.9 UJ	3.7 U	41	2200	9.7	3.7 U	210	3.7 UJ	3.6 U	22	5.9	9.4	4.7	7.5
2-METHYLPHENOL	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
2-NITROANILINE	800 U	740 U	770 U	4500 U	720 U	740 U	770 U	740 U	740 U	820 U	760 U	790 U	760 U	740 U
2-NITROPHENOL	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
3,3'-DICHLOROBENZIDINE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 UJ	380 U	390 UJ	370 UJ	370 U
3-NITROANILINE	800 U	740 U	770 UJ	4500 UJ	720 UJ	740 UJ	770 UJ	740 U	740 U	820 U	760 U	790 U	760 U	740 UJ
4,6-DINITRO-2-METHYLPHENOL	800 UJ	740 U	770 U	4500 U	720 U	740 UJ	770 UJ	740 U	740 U	820 U	760 U	790 U	760 U	740 U
4-BROMOPHENYL PHENYL ETHER	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
4-CHLORO-3-METHYLPHENOL	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
4-CHLOROANILINE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 UJ
4-CHLOROPHENYL PHENYL ETHER	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
4-METHYLPHENOL	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
4-NITROANILINE	800 UJ	740 UJ	770 UJ	4500 UJ	720 UJ	740 UJ	770 UJ	740 UJ	740 UJ	820 U	760 UJ	790 U	760 U	740 U
4-NITROPHENOL	800 U	740 U	770 U	4500 U	720 U	740 U	770 U	740 U	740 U	820 U	760 U	790 U	760 U	740 U
ACENAPHTHENE	3.9 UJ	3.7 U	180	6100	59	19	560	3.7 UJ	3.6 U	130	59	81	37	57
ACENAPHTHYLENE	3.9 UJ	3.7 U	4.4	280	4	3.7 U	47	3.7 UJ	3.6 U	27	8.9	22	7.4	3.7 U
ACETOPHENONE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
ANTHRACENE	3.9 UJ	5.7	350	12000	120	47	1400	3.7 UJ	3.6 U	320	140	180	90	130

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB331-5254	G32-SB332-0406	G32-SB333-1214	G32-SB333-0406	G32-SB334-0608	G32-SB335-1012	G32-SB336-0608	G32-SB337-1012	G32-SB338-1012	G32-SOTP01-01-0007	G32-SOTP02-0006	G32-SOTP02-02-0007	G32-SOTP03-01-0007	G32-SOTP04-01
LOCATION ID	G32-SB331	G32-SB332	G32-SB333	G32-SB333	G32-SB334	G32-SB335	G32-SB336	G32-SB337	G32-SB338	G32-TP01	G32-TP02	G32-TP02	G32-TP03	G32-TP04
SAMPLE DATE	06/27/05	07/14/05	06/23/05	06/23/05	06/22/05	07/05/05	07/06/05	07/14/05	07/14/05	06/02/05	06/02/05	06/02/05	06/02/05	07/22/05
TOP DEPTH	52 FT	4 FT	12 FT	4 FT	6 FT	10 FT	6 FT	10 FT	10 FT					
BOTTOM DEPTH	54 FT	6 FT	14 FT	6 FT	8 FT	12 FT	8 FT	12 FT	12 FT					
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
ATRAZINE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
BENZALDEHYDE	390 UJ	370 UJ	380 UJ	2200 UJ	360 UJ	370 UJ	380 UJ	370 UJ	360 UJ	410 UJ	380 UJ	390 UJ	370 UJ	370 UJ
BENZO(A)ANTHRACENE	3.9 UJ	7.3	620	23000	240	130	3600	3.7 UJ	3.6 U	660	370	300 J	260	340 J
BENZO(A)PYRENE	3.9 UJ	3.7 U	410	16000	210	87	2300	3.7 UJ	3.6 U	510	230 J	240 J	270	370
BENZO(B)FLUORANTHENE	3.9 UJ	6	520	23000	260	120	2900	3.7 UJ	3.6 U	640	270 J	280 J	320	310 J
BENZO(G,H,I)PERYLENE	3.9 UJ	3.7 U	260	7700	96	26	940	3.7 UJ	3.6 U	320 J	240	260	160	200
BENZO(K)FLUORANTHENE	3.9 UJ	3.7 U	300	8400	110	48	1300	3.7 UJ	3.6 U	360	170	200	110	210
BIS(2-CHLOROETHOXY)METHANE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
BIS(2-CHLOROETHYL)ETHER	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
BIS(2-ETHYLHEXYL)PHTHALATE	75 J	80 J	380 U	2200 U	360 U	120 J	63 J	52 J	360 U	410 U	380 U	71 JEB	370 U	48 J
BUTYL BENZYL PHTHALATE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
CAPROLACTAM	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
CARBAZOLE	390 U	370 U	150 J	6300	49 J	370 U	720	370 U	360 U	92 J	380 U	41 J	370 U	370 U
CHRYSENE	3.9 UJ	6.7	480	21000	230	130	3300	3.7 UJ	3.6 U	610	360	290 J	260	360
DIBENZO(A,H)ANTHRACENE	390 U	3.7 U	86 J	2300	28 J	9.7	220 J	3.7 UJ	3.6 U	140 J	68 J	75 J	45 J	58
DIBENZOFURAN	390 UJ	370 U	130 J	5400	360 U	370 U	440	370 U	360 U	43 J	380 U	390 U	370 U	370 U
DIETHYL PHTHALATE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
DIMETHYL PHTHALATE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
DI-N-BUTYL PHTHALATE	390 U	370 U	380 U	2200 U	360 U	370 UJ	380 UJ	370 U	360 U	410 U	380 U	390 U	370 U	39 J
DI-N-OCTYL PHTHALATE	390 UJ	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
FLUORANTHENE	5 J	18	1500	69000	600	290	6000	3.7 UJ	3.6 U	1300	520	520	310 J	580
FLUORENE	3.9 UJ	3.7 U	190	7200	53	19	540	3.7 UJ	3.6 U	110	57	70	29	47
HEXACHLOROBENZENE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
HEXACHLOROBUTADIENE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
HEXACHLOROCYCLOPENTADIENE	390 U	370 UJ	380 U	2200 U	360 U	370 U	380 U	370 UJ	360 UJ	410 UJ	380 U	390 UJ	370 UJ	370 U
HEXACHLOROETHANE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
HIGH MOLECULAR WEIGHT PAHS	5 J	52	5450 J	222000	2240 J	1110	29300 J	3.7 UJ	3.6 U	6120 J	2950 J	2980 J	2240 J	3180 J
INDENO(1,2,3-CD)PYRENE	3.9 UJ	3.7 U	270	8200	96	25	920	3.7 UJ	3.6 U	280 J	220	250	150	190
ISOPHORONE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
LOW MOLECULAR WEIGHT PAHS	4.2 J	14.5	1960	94600	669 J	262	8810	3.7 UJ	3.6 U	1510	649 J	732 J	488	560 J
NAPHTHALENE	3.9 UJ	3.7 U	96	4800	23	6.7 EB	450 EB	3.7 UJ	3.6 U	39	8.2	20	10	8.4
NITROBENZENE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
N-NITROSO-DI-N-PROPYLAMINE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
N-NITROSODIPHENYLAMINE	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
PENTACHLOROPHENOL	800 U	740 U	770 U	4500 U	720 U	740 U	770 U	740 U	740 U	820 U	760 U	790 U	760 U	740 U
PHENANTHRENE	4.2 J	8.8	1100	62000	400 J	170	5600	3.7 UJ	3.6 U	860	370 J	350 J	310	310 J
PHENOL	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
PYRENE	3.9 UJ	14	1000	43000	370 J	240	7800	3.7 UJ	3.6 U	1300	500	560	360 J	560
TOTAL CARCINOGENIC PAHS-HALFND	59.1 UJ	27.4	2690 J	102000	1170 J	550	14500 J	3.7 UJ	3.6 U	3200 J	1690 J	1640 J	1420 J	1840 J
TOTAL CARCINOGENIC PAHS-POS	59.1 UJ	20	2690 J	102000	1170 J	550	14500 J	3.7 UJ	3.6 U	3200 J	1690 J	1640 J	1420 J	1840 J
TOTAL CHLORINATED VOCS	390 U	370 U	380 U	2200 U	360 U	370 U	380 U	370 U	360 U	410 U	380 U	390 U	370 U	370 U
TOTAL PAHS	9.2 J	66.5	7410 J	316000	2910 J	1370	38100 J	3.7 UJ	3.6 U	7630 J	3600 J	3710 J	2730 J	3740 J

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB331-5254	G32-SB332-0406	G32-SB333-1214	G32-SB333-0406	G32-SB334-0608	G32-SB335-1012	G32-SB336-0608	G32-SB337-1012	G32-SB338-1012	G32-SOTP01-01-0007	G32-SOTP02-0006	G32-SOTP02-02-0007	G32-SOTP03-01-0007	G32-SOTP04-01
LOCATION ID	G32-SB331	G32-SB332	G32-SB333	G32-SB333	G32-SB334	G32-SB335	G32-SB336	G32-SB337	G32-SB338	G32-TP01	G32-TP02	G32-TP02	G32-TP03	G32-TP04
SAMPLE DATE	06/27/05	07/14/05	06/23/05	06/23/05	06/22/05	07/05/05	07/06/05	07/14/05	07/14/05	06/02/05	06/02/05	06/02/05	06/02/05	07/22/05
TOP DEPTH	52 FT	4 FT	12 FT	4 FT	6 FT	10 FT	6 FT	10 FT	10 FT					
BOTTOM DEPTH	54 FT	6 FT	14 FT	6 FT	8 FT	12 FT	8 FT	12 FT	12 FT					
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	3.9 U	3.7 U	3.8 U	4.4 U	3.6 U	3.7 U	3.8 U	3.7 U	3.6 U	4.1 U	3.8 U	3.9 U	3.8 U	3.7 U
4,4'-DDE	3.9 U	3.7 U	3.8 U	14 R	3.7 J	3.7 U	3.8 U	3.7 U	3.6 U	4.1 U	3.8 U	3.9 U	3.8 U	3.7 U
4,4'-DDT	3.9 U	3.7 U	3.8 U	30	3.6 U	3.7 U	3.8 U	3.7 U	3.6 U	4.1 U	3.8 U	3.9 U	3.8 U	3.7 U
ALDRIN	2 U	1.9 U	2 U	2.3 U	1.8 U	1.9 U	2 U	1.9 U	1.9 U	2.1 U	1.9 U	2 U	1.9 U	1.9 U
ALPHA-BHC	2 UJ	1.9 U	2 U	2.3 U	1.8 U	1.9 UJ	2 UJ	1.9 U	1.9 U	2.1 U	1.9 U	2 U	1.9 U	1.9 U
ALPHA-CHLORDANE	2 U	1.9 U	2 U	2.3 U	1.8 U	1.9 U	2 U	1.9 U	1.9 U	2.1 U	1.9 U	2 U	1.9 U	1.9 U
AROCLOR-1016	39 U	37 U	38 U	44 U	36 U	37 U	38 U	37 U	36 U	41 U	38 U	39 U	38 U	37 U
AROCLOR-1221	39 U	37 U	38 U	44 U	36 U	37 U	38 U	37 U	36 U	41 U	38 U	39 U	38 U	37 U
AROCLOR-1232	39 U	37 U	38 U	44 U	36 U	37 U	38 U	37 U	36 U	41 U	38 U	39 U	38 U	37 U
AROCLOR-1242	39 U	37 U	38 U	44 U	36 U	37 U	38 U	37 U	36 U	41 U	38 U	39 U	38 U	37 U
AROCLOR-1248	39 U	37 U	38 U	44 U	36 U	37 U	38 U	37 U	36 U	41 U	38 U	39 U	38 U	37 U
AROCLOR-1254	39 U	37 U	38 U	330 J	36 U	37 U	38 U	37 U	36 U	41 U	38 U	39 U	38 U	37 U
AROCLOR-1260	39 U	37 U	38 U	44 U	36 U	37 U	38 U	37 U	36 U	41 U	38 U	39 U	38 U	37 U
BETA-BHC	2 U	1.9 U	2 U	5.2 R	1.8 U	1.9 U	2 U	1.9 U	1.9 U	2.1 U	1.9 U	2 U	1.9 U	1.9 U
DELTA-BHC	2 R	1.9 U	2 UJ	2.3 UJ	1.8 UJ	1.9 R	2 R	1.9 U	1.9 U	2.1 UJ	1.9 UJ	2 UJ	1.9 UJ	1.9 U
DIELDRIN	3.9 U	3.7 U	3.8 U	4.4 U	3.6 U	3.7 U	3.8 U	3.7 U	3.6 U	4.1 U	3.8 U	3.9 U	3.8 U	3.7 U
ENDOSULFAN I	2 U	1.9 U	2 U	2.3 U	1.8 U	1.9 U	2 U	1.9 U	1.9 U	2.1 U	1.9 U	2 U	1.9 U	1.9 U
ENDOSULFAN II	3.9 U	3.7 U	3.8 U	4.4 U	3.6 U	3.7 U	3.8 U	3.7 U	3.6 U	4.1 U	3.8 U	3.9 U	3.8 U	3.7 U
ENDOSULFAN SULFATE	3.9 UJ	3.7 U	3.8 U	280 R	6.2 R	3.7 UJ	3.8 UJ	3.7 U	3.6 U	4.1 U	3.8 U	3.9 U	3.8 U	3.7 U
ENDRIN	3.9 U	3.7 U	3.8 U	4.4 U	3.6 U	3.7 U	3.8 U	3.7 U	3.6 U	4.1 U	3.8 U	3.9 U	3.8 U	3.7 U
ENDRIN ALDEHYDE	3.9 U	3.7 U	3.8 U	9.8 J	3.6 U	3.7 U	4.7	3.7 U	3.6 U	4.1 U	3.8 U	3.9 U	3.8 U	4.6 J
ENDRIN KETONE	3.9 U	3.7 U	3.8 U	31 J	3.6 U	3.7 U	5.1 J	3.7 U	3.6 U	4.1 U	3.8 U	3.9 U	3.8 U	3.7 U
GAMMA-BHC (LINDANE)	2 UJ	1.9 U	2 U	2.3 U	1.8 U	1.9 UJ	2 UJ	1.9 U	1.9 U	2.1 U	1.9 U	2 U	1.9 U	1.9 U
GAMMA-CHLORDANE	2 U	1.9 U	2 U	24 R	1.8 U	1.9 U	2 U	1.9 U	1.9 U	2.1 U	1.9 U	2 U	1.9 UJ	1.9 U
HEPTACHLOR	2 U	1.9 U	2 U	2.3 U	1.8 U	1.9 U	2 U	1.9 U	1.9 U	2.1 U	1.9 U	2 U	1.9 U	1.9 U
HEPTACHLOR EPOXIDE	2 U	1.9 U	2 U	2.3 U	1.8 U	1.9 U	2 U	1.9 U	1.9 U	2.1 U	1.9 U	2 U	1.9 U	1.9 U
METHOXYCHLOR	20 U	19 U	20 U	23 U	18 U	19 U	20 U	19 U	19 U	21 U	19 U	20 U	19 U	18 R
TOTAL AROCLOR	39 U	37 U	38 U	330 J	36 U	37 U	38 U	37 U	36 U	41 U	38 U	39 U	38 U	37 U
TOTAL CHLORDANE	2 U	1.9 U	2 U	2.3 U	1.8 U	1.9 U	2 U	1.9 U	1.9 U	2.1 U	1.9 U	2 U	1.9 UJ	1.9 U
TOTAL DDD/DDE/DDT	3.9 U	3.7 U	3.8 U	30	3.7 J	3.7 U	3.8 U	3.7 U	3.6 U	4.1 U	3.8 U	3.9 U	3.8 U	3.7 U
TOXAPHENE	200 U	190 U	200 U	230 U	180 U	190 U	200 U	190 U	190 U	210 U	190 U	200 U	190 U	190 U
METALS (MG/KG)														
ALUMINUM	3950	17000	13500 J	4860 J	5110 J	5430	6350	8400	3260	5400 J	5970 J	4830 J	5200 J	7300
ANTIMONY	0.37 UJ	0.62 UJ	0.051 UJ	6.3 UJ	0.092 UJ	0.28 UJ	0.24 UJ	0.45 UJ	0.33 UJ	0.41 UJ	0.64 UJ	0.27 UJ	0.18 UJ	0.64 J
ARSENIC	1.6 J	8.5 J	2.7 J	12.9 J	2.3 J	2.3 J	2.2 J	2.4 J	2.2 J	2.5 J	2.2 J	2 J	2.7 J	3.1 J
BARIUM	12.9 J	9.7 J	15.7 J	140 J	14.7 J	16.9 J	17 J	16.4 J	10.4 J	20 J	21.4 J	20.8 J	18.7 J	25.5 J
BERYLLIUM	0.14	0.24	0.24 J	0.14 J	0.26 J	0.21	0.33	0.21	0.13	0.18	0.15	0.15	0.2	0.26
CADMIUM	0.0056 UJ	0.37 J	0.76 J	234 J	0.005 UJ	0.0051 UJ	0.0054 UJ	0.0051 UJ	0.005 UJ	0.54 J	0.053 UJ	0.09 UJ	0.053 UJ	0.31 UJ
CALCIUM	844	5460	1170 J	53600 J	1430 J	1250	2550	1000	652	1460	1780	899	973	1570 J
CHROMIUM	6.2	14.5 J	20.5 J	82.5 J	8.4 J	8.1	8.3	12.1	4.7	10.1 J	7.3 J	7 J	6.8 J	10.1 J
COBALT	4.1 J	21 J	10.1 J	7.4 J	6.7 J	4.6 J	5.2 J	8.1 J	5.3 J	5.1 J	3.9 J	4.2 J	3.8 J	5 J
COPPER	11.9	43.5	25.6 J	313 J	12.4 J	11.8	13.6	18.3	14.4	19.3 J	14.8 J	12.9 J	13.8 J	21.8 J

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SB331-5254	G32-SB332-0406	G32-SB333-1214	G32-SB333-0406	G32-SB334-0608	G32-SB335-1012	G32-SB336-0608	G32-SB337-1012	G32-SB338-1012	G32-SOTP01-01-0007	G32-SOTP02-0006	G32-SOTP02-02-0007	G32-SOTP03-01-0007	G32-SOTP04-01
LOCATION ID	G32-SB331	G32-SB332	G32-SB333	G32-SB333	G32-SB334	G32-SB335	G32-SB336	G32-SB337	G32-SB338	G32-TP01	G32-TP02	G32-TP02	G32-TP03	G32-TP04
SAMPLE DATE	06/27/05	07/14/05	06/23/05	06/23/05	06/22/05	07/05/05	07/06/05	07/14/05	07/14/05	06/02/05	06/02/05	06/02/05	06/02/05	07/22/05
TOP DEPTH	52 FT	4 FT	12 FT	4 FT	6 FT	10 FT	6 FT	10 FT	10 FT					
BOTTOM DEPTH	54 FT	6 FT	14 FT	6 FT	8 FT	12 FT	8 FT	12 FT	12 FT					
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
CYANIDE	0.15 UJ	0.12 U	0.12 U	0.14 U	0.12 U	0.12 U	0.13 U	0.12 U	0.12 U	0.15 U	0.13 U	0.14 U	0.13 U	0.12 U
IRON	8210	49300	31500 J	181000 J	10300 J	8700	10700	17800	6590	9440	9680	8250	9340	14100 J
LEAD	3.6 J	13.1 J	15.8 J	242 J	8.7 J	5.8 J	9.4 J	9.8 J	3.6 J	21.9 J	13.9 J	18.5 J	10.6 J	35.8 J
MAGNESIUM	1870	8780	6100 J	3680 J	2210 J	2000	2360	3760	1390	1950 J	2260 J	1820 J	1930 J	2880
MANGANESE	91.6	372	218 J	601 J	93 J	89.8	116	149	64.1	148 J	146 J	118 J	131 J	158
MERCURY	0.0074 U	0.0066 U	0.0074 U	0.034	0.0072 U	0.0068 U	0.0068 U	0.0074 U	0.0065 U	0.026 J	0.0082 J	0.014 J	0.0085 J	0.013 UJ
NICKEL	8.6 J	34.7 J	21.3 J	56.8 J	18.4 J	13.4 J	12.4 J	20.6 J	12 J	10.5 J	7.6 J	8.3 J	8.1 J	10.6 J
POTASSIUM	631 J	249 J	472	690	538	535 J	671 J	567 J	412 J	577	805	744	775	750 J
SELENIUM	0.068 UJ	0.06 U	0.062 UJ	0.073 UJ	0.061 UJ	0.062 UJ	0.066 UJ	0.062 U	0.061 U	0.068 U	0.066 U	0.064 U	0.065 U	0.072 U
SILVER	0.54 UJ	0.2 UJ	1.3 UJ	0.021 UJ	0.37 UJ	0.36 UJ	0.16 UJ	0.53 UJ	0.092 UJ	0.6 UJ	0.84 UJ	0.57 UJ	0.62 UJ	0.42 UJ
SODIUM	35.4	27	49.6 U	956	80.7	204	149	33.1	22.1	72.5	101	64.7	103	45.6 UJ
THALLIUM	0.08 U	0.071 U	0.25 UJ	0.43 UJ	0.42 UJ	0.073 U	0.078 U	0.073 U	0.072 U	0.25 UJ	0.31 UJ	0.17 UJ	0.076 U	0.084 U
VANADIUM	6.9 J	44.2 J	17.4 J	13.2 J	8.2 J	9.7 J	9.5 J	12.3 J	6.1 J	8.6 J	10.7 J	8.8 J	8.5 J	13 J
ZINC	18.8 J	48.8 J	51.5 J	415 J	26.6 J	20.4 J	30 J	34.6 J	15.8 J	50.9 J	35 J	34.7 J	25.3 J	41.3 J
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	14 U	13 U	14 U	270	38	13 U	100	13 U	13 U	170	21	87	30	31
GASOLINE RANGE ORGANICS	3.3 U	4.2 U	3.1 U	13 U	5 U	3.4 U	3.8 U	3.9 U	4 U	8.5 U	2.9 U	20 U	3.7 U	4.9 U
TOTAL PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SOTP05-01-0000	G32-SOTP05-02-0000	G32-SOTP05-03-0002	G32-SOTP06-01-0002	G32-SOTP07	G32-SOTP08	G32-SOTP09-01-0002	G32-SOTP09-02-0002	G32-SOTP10-01-0002	G32-SOTP10-02-0002	G32-SOTP10-03-0002	G32-SOTP11-01	G32-SOTP11-01-D	G32-SOTP11-01-AVG
LOCATION ID	G32-TP05	G32-TP05	G32-TP05	G32-TP06	G32-TP07	G32-TP08	G32-TP09-01	G32-TP09-02	G32-TP10A	G32-TP10B	G32-TP10C	G32-TP11B	G32-TP11B	G32-TP11B
SAMPLE DATE	07/21/05	07/21/05	07/21/05	07/21/05	07/22/05	07/22/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05
TOP DEPTH			0 FT	0 FT			0 FT	0 FT	0 FT	0 FT	0 FT			
BOTTOM DEPTH			2 FT	2 FT			2 FT	2 FT	2 FT	2 FT	2 FT			
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM
VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
1,1,2,2-TETRACHLOROETHANE	2 U	2 U	3 U	4 U	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
1,1,2-TRICHLOROETHANE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
1,1-DICHLOROETHANE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
1,1-DICHLOROETHENE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
1,2,4-TRICHLOROBENZENE	2 U	2 U	3 U	4 U	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	4	3
1,2-DIBROMO-3-CHLOROPROPANE	2 U	2 U	3 U	4 U	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	1 J	1.5 J
1,2-DIBROMOETHANE	2 U	2 U	3 U	4 U	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
1,2-DICHLOROBENZENE	2 U	2 U	3 U	4 U	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	1 J	1.5 J
1,2-DICHLOROETHANE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
1,2-DICHLOROPROPANE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
1,3-DICHLOROBENZENE	2 U	2 U	3 U	4 U	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	1 J	1.5 J
1,4-DICHLOROBENZENE	2 U	2 U	3 U	4 U	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	2 J	2 J
2-BUTANONE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
2-HEXANONE	2 U	2 U	3 U	4 U	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
4-METHYL-2-PENTANONE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
ACETONE	15 UJ	15 UJ	10 UJ	120 J	12 UJ	24 UJ	10 UJ	590 UJ	520 UJ	420 UJ	16 UJ	16 UJ	10 UJ	13 UJ
BENZENE	2 U	2 U	3 U	2 J	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
BROMODICHLOROMETHANE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
BROMOFORM	2 U	2 U	3 U	4 U	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
BROMOMETHANE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
BTEX	2 U	2 U	3 U	17 J	3 U	4 U	4 UJ	99 J	520 U	420 U	2 U	4 U	1 J	1.5 J
CARBON DISULFIDE	2 U	2 U	4	6	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
CARBON TETRACHLORIDE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
CHLOROBENZENE	2 U	2 U	3 U	4 U	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
CHLORODIBROMOMETHANE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
CHLOROETHANE	2 UJ	2 UJ	3 UJ	4 UJ	3 U	4 U	4 UJ	590 U	520 U	420 U	2 UJ	4 U	3 U	3.5 U
CHLOROFORM	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
CHLOROMETHANE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
CIS-1,2-DICHLOROETHENE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	170 J	520 U	420 U	2 J	4 U	3 U	3.5 U
CIS-1,3-DICHLOROPROPENE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
CYCLOHEXANE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
DICHLORODIFLUOROMETHANE	2 UJ	2 UJ	3 UJ	4 UJ	3 U	4 U	4 UJ	590 U	520 U	420 U	2 UJ	4 U	3 U	3.5 U
ETHYLBENZENE	2 U	2 U	3 U	3 J	3 U	4 U	4 UJ	99 J	520 U	420 U	2 U	4 U	3 U	3.5 U
ISOPROPYLBENZENE	2 U	2 U	3 U	1 J	3 U	4 U	4 U	400 J	520 U	420 U	6	4 U	3 U	3.5 U
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	450 J	100 J	260 J	2 U	4 U	3 U	3.5 U
METHYL CYCLOHEXANE	2 J	2 J	3 U	4 U	3 U	4 U	4 U	140 J	520 U	420 U	2 J	4 U	3 U	3.5 U
METHYL TERT-BUTYL ETHER	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
METHYLENE CHLORIDE	10 U	8 U	10 U	19 U	8 U	24 U	5 U	590 U	520 U	420 U	5 U	17 U	14 U	15.5 U
O-XYLENE	2 U	2 U	3 U	2 J	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SOTP05-01-0000	G32-SOTP05-02-0000	G32-SOTP05-03-0002	G32-SOTP06-01-0002	G32-SOTP07	G32-SOTP08	G32-SOTP09-01-0002	G32-SOTP09-02-0002	G32-SOTP10-01-0002	G32-SOTP10-02-0002	G32-SOTP10-03-0002	G32-SOTP11-01	G32-SOTP11-01-D	G32-SOTP11-01-AVG
LOCATION ID	G32-TP05	G32-TP05	G32-TP05	G32-TP06	G32-TP07	G32-TP08	G32-TP09-01	G32-TP09-02	G32-TP10A	G32-TP10B	G32-TP10C	G32-TP11B	G32-TP11B	G32-TP11B
SAMPLE DATE	07/21/05	07/21/05	07/21/05	07/21/05	07/22/05	07/22/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05
TOP DEPTH			0 FT	0 FT			0 FT	0 FT	0 FT	0 FT	0 FT			
BOTTOM DEPTH			2 FT	2 FT			2 FT	2 FT	2 FT	2 FT	2 FT			
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM
P-XYLENE	2 U	2 U	3 U	3 J	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	1 J	1.5 J
STYRENE	2 U	2 U	3 U	4 U	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
TETRACHLOROETHENE	2 U	2 U	3 U	4 U	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
TOLUENE	2 U	2 U	3 U	7	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
TOTAL 1,2-DICHLOROETHENE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	170 J	520 U	420 U	2 J	4 U	3 U	3.5 U
TOTAL CHLORINATED ETHENES	2 U	2 U	3 U	4 U	3 U	4 U	4 UJ	170 J	520 U	420 U	2 J	4 U	3 U	3.5 U
TOTAL CHLORINATED VOCS	2 UJ	2 UJ	3 UJ	4 UJ	3 U	4 U	4 UJ	170 J	520 U	420 U	2 J	4 U	9 J	5.5 J
TOTAL XYLENES	2 U	2 U	3 U	5 J	3 U	4 U	4 UJ	590 U	520 U	420 U	2 U	4 U	1 J	1.5 J
TRANS-1,2-DICHLOROETHENE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
TRANS-1,3-DICHLOROPROPENE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
TRICHLOROETHENE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
TRICHLOROFLUOROMETHANE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
VINYL CHLORIDE	2 U	2 U	3 U	4 U	3 U	4 U	4 U	590 U	520 U	420 U	2 U	4 U	3 U	3.5 U
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	400 U	410 U	410 U	4300	360 U	86 J	410 U	58 J	460 U	390 U	81 J	420 U	400 U	410 U
2,2'-OXYBIS(1-CHLOROPROPANE)	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
2,4,5-TRICHLOROPHENOL	810 UJ	840 UJ	830 UJ	5200 UJ	740 UJ	790 U	830 UJ	1000 U	940 UJ	790 UJ	800 U	860 UJ	810 UJ	835 UJ
2,4,6-TRICHLOROPHENOL	400 U	410 U	410 U	2500 UJ	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
2,4-DICHLOROPHENOL	400 U	410 U	410 U	2500 UJ	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
2,4-DIMETHYLPHENOL	400 U	410 UJ	410 U	2500 UJ	360 U	390 U	410 U	520 U	460 U	390 U	390 UJ	420 U	400 UJ	410 UJ
2,4-DINITROPHENOL	810 UJ	840 U	830 UJ	5200 UJ	740 UJ	790 UJ	830 UJ	1000 UJ	940 UJ	790 UJ	800 U	860 UJ	810 U	835 UJ
2,4-DINITROTOLUENE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
2,6-DINITROTOLUENE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
2-CHLORONAPHTHALENE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
2-CHLOROPHENOL	400 U	410 U	410 U	2500 UJ	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
2-METHYLNAPHTHALENE	43	43	16	13000	7.2	340 J	98	350 J	450 J	3.9 U	35	8.2 J	15 J	11.6 J
2-METHYLPHENOL	400 U	410 U	410 U	2500 UJ	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
2-NITROANILINE	810 U	840 U	830 U	5200 U	740 U	790 U	830 U	1000 U	940 U	790 U	800 U	860 U	810 U	835 U
2-NITROPHENOL	400 U	410 U	410 U	2500 UJ	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
3,3'-DICHLOROBENZIDINE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
3-NITROANILINE	810 U	840 UJ	830 UJ	5200 UJ	740 UJ	790 UJ	830 UJ	1000 UJ	940 UJ	790 UJ	800 UJ	860 UJ	810 UJ	835 UJ
4,6-DINITRO-2-METHYLPHENOL	810 U	840 U	830 U	5200 UJ	740 U	790 UJ	830 U	1000 UJ	940 U	790 U	800 U	860 U	810 U	835 U
4-BROMOPHENYL PHENYL ETHER	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
4-CHLORO-3-METHYLPHENOL	400 U	410 U	410 U	2500 UJ	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
4-CHLOROANILINE	400 UJ	410 UJ	410 UJ	2500 U	360 UJ	390 UJ	410 UJ	520 UJ	460 UJ	390 UJ	390 U	420 UJ	400 U	410 UJ
4-CHLOROPHENYL PHENYL ETHER	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 UJ	410 UJ
4-METHYLPHENOL	400 U	410 U	410 U	660 J	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
4-NITROANILINE	810 U	840 U	830 U	5200 UJ	740 U	790 UJ	830 U	1000 UJ	940 U	790 U	800 U	860 U	810 U	835 U
4-NITROPHENOL	810 U	840 U	830 U	5200 UJ	740 U	790 U	830 U	1000 U	940 U	790 U	800 U	860 U	810 U	835 U
ACENAPHTHENE	39	27	14	52000	19	1100	370	540	180	150	120	21 J	61 J	41 J
ACENAPHTHYLENE	74	57	41	1800 J	3.6 U	97	58	140	4.6 U	3.9 U	3.9 U	4.2 U	4 U	4.1 U
ACETOPHENONE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
ANTHRACENE	26	23	22	94000	49	1800	310	1000	38	37	87	47 J	110 J	78.5 J

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SOTP05-01-0000	G32-SOTP05-02-0000	G32-SOTP05-03-0002	G32-SOTP06-01-0002	G32-SOTP07	G32-SOTP08	G32-SOTP09-01-0002	G32-SOTP09-02-0002	G32-SOTP10-01-0002	G32-SOTP10-02-0002	G32-SOTP10-03-0002	G32-SOTP11-01	G32-SOTP11-01-D	G32-SOTP11-01-AVG
LOCATION ID	G32-TP05	G32-TP05	G32-TP05	G32-TP06	G32-TP07	G32-TP08	G32-TP09-01	G32-TP09-02	G32-TP10A	G32-TP10B	G32-TP10C	G32-TP11B	G32-TP11B	G32-TP11B
SAMPLE DATE	07/21/05	07/21/05	07/21/05	07/21/05	07/22/05	07/22/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05
TOP DEPTH			0 FT	0 FT			0 FT	0 FT	0 FT	0 FT	0 FT			
BOTTOM DEPTH			2 FT	2 FT			2 FT	2 FT	2 FT	2 FT	2 FT			
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM
ATRAZINE	400 U	410 U	410 U	2500 UJ	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
BENZALDEHYDE	400 UJ	410 UJ	410 UJ	2500 UJ	360 UJ	390 UJ	410 UJ	79 J	460 UJ	390 UJ	390 U	420 UJ	400 UJ	410 UJ
BENZO(A)ANTHRACENE	60	35	47	140000	160	4400	800	3400	82	34	160	150	230	190
BENZO(A)PYRENE	55	44	48	110000	160	3700 J	790 J	2500 J	73	31	160	140	220	180
BENZO(B)FLUORANTHENE	58	50	55	100000	220	5200 J	910 J	3700 J	74	26	210	190	300	245
BENZO(G,H,I)PERYLENE	36	31	31	36000 J	91	1100 J	390	880 J	46	19	70	67	100	83.5
BENZO(K)FLUORANTHENE	53	43	42	37000 J	130	1900 J	660 J	1600 J	62	24	94	76	120	98
BIS(2-CHLOROETHOXY)METHANE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
BIS(2-CHLOROETHYL)ETHER	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
BIS(2-ETHYLHEXYL)PHTHALATE	41 J	53 J	63 J	2500 U	65 J	64 J	79 J	130 J	76 J	68 J	45 J	420 U	44 J	127 J
BUTYL BENZYL PHTHALATE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
CAPROLACTAM	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
CARBAZOLE	400 U	410 U	410 U	37000	360 U	890	91 J	530	460 U	390 U	60 J	420 U	400 U	410 U
CHRYSENE	77	50	73	130000	150	3700	740	2500	97	44	150	140	220	180
DIBENZO(A,H)ANTHRACENE	15	13	11	8000 J	26	270 J	140	200 J	20	7	23	20	31	25.5
DIBENZOFURAN	400 U	410 U	410 U	39000 J	360 U	620	96 J	280 J	460 U	390 U	75 J	420 U	400 U	410 U
DIETHYL PHTHALATE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
DIMETHYL PHTHALATE	400 U	410 U	410 U	2500 UJ	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
DI-N-BUTYL PHTHALATE	400 U	60 J	60 J	2500 U	56 J	58 J	71 J	98 J	55 J	58 J	390 U	59 J	400 U	130 J
DI-N-OCTYL PHTHALATE	400 UJ	410 UJ	410 UJ	2500 UJ	360 U	390 UJ	410 UJ	520 UJ	460 UJ	390 UJ	390 U	420 U	400 U	410 U
FLUORANTHENE	130	110	95	370000	270 J	9500	1500	6900	200	120	370	400 J	480	440 J
FLUORENE	26	22	4.1 U	61000	23	990	190	390 J	130	210	150	25 J	57 J	41 J
HEXACHLOROBENZENE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
HEXACHLOROBUTADIENE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
HEXACHLOROCYCLOPENTADIENE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
HEXACHLOROETHANE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
HIGH MOLECULAR WEIGHT PAHS	625	475	524	1220000 J	1550 J	43100 J	8410 J	30300 J	846	404	1520	1500 J	2190	1840 J
INDENO(1,2,3-CD)PYRENE	31	26	26	34000 J	84	1300 J	380	840 J	42	15	71	63	100	81.5
ISOPHORONE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
LOW MOLECULAR WEIGHT PAHS	311	265	134	626000 J	276	12700 J	1930	7740 J	1070 J	544	611	270 J	596 J	433 J
NAPHTHALENE	16	16	8.6	44000 J	7.5	860	85	320	140	100	39	9.2 J	23 J	16.1 J
NITROBENZENE	400 U	410 U	410 U	2500 UJ	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
N-NITROSO-DI-N-PROPYLAMINE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
N-NITROSODIPHENYLAMINE	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
PENTACHLOROPHENOL	810 U	840 U	830 U	5200 UJ	740 U	790 U	830 U	1000 U	940 U	790 U	800 U	860 U	810 U	835 U
PHENANTHRENE	87	77	32	360000	170	7500	820	5000	130	47	180	160 J	330 J	245 J
PHENOL	400 U	410 U	410 U	610 J	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
PYRENE	110	73	96	260000	260	12000	2100	7800	150	84	210	250	390	320
TOTAL CARCINOGENIC PAHS-HALFND	349	261	302	559000 J	930	20500 J	4420 J	14700 J	450	181	868	779	1220	1000
TOTAL CARCINOGENIC PAHS-POS	349	261	302	559000 J	930	20500 J	4420 J	14700 J	450	181	868	779	1220	1000
TOTAL CHLORINATED VOCS	400 U	410 U	410 U	2500 U	360 U	390 U	410 U	520 U	460 U	390 U	390 U	420 U	400 U	410 U
TOTAL PAHS	936	740	658	1850000 J	1830 J	55800 J	10300 J	38100 J	1910 J	948	2130	1770 J	2790 J	2280 J

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SOTP05-01-0000	G32-SOTP05-02-0000	G32-SOTP05-03-0002	G32-SOTP06-01-0002	G32-SOTP07	G32-SOTP08	G32-SOTP09-01-0002	G32-SOTP09-02-0002	G32-SOTP10-01-0002	G32-SOTP10-02-0002	G32-SOTP10-03-0002	G32-SOTP11-01	G32-SOTP11-01-D	G32-SOTP11-01-AVG
LOCATION ID	G32-TP05	G32-TP05	G32-TP05	G32-TP06	G32-TP07	G32-TP08	G32-TP09-01	G32-TP09-02	G32-TP10A	G32-TP10B	G32-TP10C	G32-TP11B	G32-TP11B	G32-TP11B
SAMPLE DATE	07/21/05	07/21/05	07/21/05	07/21/05	07/22/05	07/22/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05
TOP DEPTH			0 FT	0 FT			0 FT	0 FT	0 FT	0 FT	0 FT			
BOTTOM DEPTH			2 FT	2 FT			2 FT	2 FT	2 FT	2 FT	2 FT			
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	4 U	4.2 U	4.1 U	48 J	3.6 U	3.9 U	4.1 R	5.2 U	4.6 U	3.9 U	3.9 U	4.2 U	4 U	4.1 U
4,4'-DDE	4 U	4.2 U	4.1 U	54 R	3.6 U	6.2 R	4.1 R	8.3 R	4.6 U	3.9 U	3.9 U	4.2 U	4 U	4.1 U
4,4'-DDT	4 U	4.2 U	4.1 U	5.1 U	3.6 U	3.9 U	4.1 R	5.2 U	4.6 U	3.9 U	3.9 U	4.2 U	4 U	4.1 U
ALDRIN	2.1 U	2.1 U	2.1 U	2.6 U	1.9 U	2 U	2.6 R	2.6 U	2.4 U	2 U	2 U	2.2 U	2 U	2.1 U
ALPHA-BHC	2.1 U	2.1 U	2.1 U	2.6 U	1.9 U	2 U	2.1 R	3 J	2.4 U	2 U	2 U	2.2 U	2 U	2.1 U
ALPHA-CHLORDANE	2.1 U	2.1 U	2.1 U	2.6 U	1.9 U	2 U	2.1 R	4.9	2.4 U	2 U	2 U	2.2 U	2 U	2.1 U
AROCLOR-1016	40	42 U	41 U	51 U	36 U	39 U	41 U	52 U	46 U	39 U	39 U	42 U	40 U	41 U
AROCLOR-1221	40 U	42 U	41 U	51 U	36 U	39 U	41 U	52 U	46 U	39 U	39 U	42 U	40 U	41 U
AROCLOR-1232	40 U	42 U	41 U	51 U	36 U	39 U	41 U	52 U	46 U	39 U	39 U	42 U	40 U	41 U
AROCLOR-1242	40 U	42 U	41 U	51 U	36 U	39 U	41 U	52 U	46 U	39 U	39 U	42 U	40 U	41 U
AROCLOR-1248	40 U	42 U	41 U	51 U	36 U	39 U	41 U	52 U	46 U	39 U	39 U	42 U	40 U	41 U
AROCLOR-1254	40 U	42 U	41 U	390	36 U	220	41 U	52 U	46 U	39 U	39 U	42 U	40 U	41 U
AROCLOR-1260	40 U	42 U	41 U	51 U	51	39 U	41 U	600	46 U	39 U	39 U	42 U	40 U	41 U
BETA-BHC	2.1 U	2.1 U	2.1 U	26 U	2.6 J	2 U	2.1 R	2.6 U	2.4 U	2 U	2 U	2.2 U	2 U	2.1 U
DELTA-BHC	2.1 U	2.1 U	2.1 U	2.6 U	1.9 U	2 U	2.1 R	2.6 U	2.4 U	2 U	2 U	2.2 U	2 U	2.1 U
DIELDRIN	4 U	4.2 U	4.1 U	13 R	3.6 U	3.9 U	4.1 R	5.2 U	4.6 U	3.9 U	3.9 U	4.2 U	4 U	4.1 U
ENDOSULFAN I	2.1 U	2.1 U	2.1 U	2.6 U	1.9 U	2 U	2.1 R	2.6 U	2.4 U	2 U	2 U	2.2 U	2 U	2.1 U
ENDOSULFAN II	4 U	4.2 U	4.1 U	5.8 R	3.6 U	3.9 U	4.1 R	5.2 U	4.6 U	3.9 U	3.9 U	4.2 U	4 U	4.1 U
ENDOSULFAN SULFATE	4 U	4.2 U	4.1 U	5.1 U	3.6 U	3.9 U	4.1 R	67	4.6 U	3.9 U	3.9 U	4.2 U	4 U	4.1 U
ENDRIN	4 U	4.2 U	4.1 U	5.1 U	3.6 U	3.9 U	4.1 R	5.2 U	4.6 U	3.9 U	3.9 U	4.2 U	4 U	4.1 U
ENDRIN ALDEHYDE	4 U	4.2 U	4.1 U	68 J	3.6 U	8.8	4.1 R	28 J	4.6 U	3.9 U	3.9 U	4.2 U	4 U	4.1 U
ENDRIN KETONE	4 U	4.2 U	4.1 U	340 J	3.6 U	11 J	4.1 R	15 J	4.6 U	3.9 U	3.9 U	4.2 U	4 U	4.1 U
GAMMA-BHC (LINDANE)	2.1 U	2.1 U	2.1 U	2.6 U	1.9 U	2 U	2.1 R	2.6 U	2.4 U	2 U	2 U	2.2 U	2 U	2.1 U
GAMMA-CHLORDANE	2.1 U	2.1 U	2.1 U	26 U	1.9 U	2 U	2.1 R	2.6 U	2.4 U	2 U	2 U	2.2 U	2 U	2.1 U
HEPTACHLOR	2.1 U	2.1 U	2.1 U	2.6 U	1.9 U	2 U	2.1 R	2.6 U	2.4 U	2 U	2 U	2.2 U	2 U	2.1 U
HEPTACHLOR EPOXIDE	2.1 U	2.1 U	2.1 U	20 J	1.9 U	2 U	2.1 R	2.6 U	2.4 U	2 U	2 U	2.2 U	2 U	2.1 U
METHOXYCHLOR	21 U	21 U	21 U	480 J	19 U	20 U	21 R	26 U	24 U	20 U	20 U	22 U	20 U	21 U
TOTAL AROCLOR	40	42 U	41 U	390	51	220	41 U	600	46 U	39 U	39 U	42 U	40 U	41 U
TOTAL CHLORDANE	2.1 U	2.1 U	2.1 U	14.3 U	1.9 U	2 U	2.1 R	4.9	2.4 U	2 U	2 U	2.2 U	2 U	2.1 U
TOTAL DDD/DDE/DDT	4 U	4.2 U	4.1 U	48 J	3.6 U	3.9 U	4.1 R	5.2 U	4.6 U	3.9 U	3.9 U	4.2 U	4 U	4.1 U
TOXAPHENE	210 U	210 U	210 U	260 U	190 U	200 U	210 R	260 U	240 U	200 U	200 U	220 U	200 U	210 U
METALS (MG/KG)														
ALUMINUM	10700	8950	9230	6060	7030	5330	5230	6630	8000	9350	8460	9590	7950	8770
ANTIMONY	0.93 J	0.66 J	1.2 J	5.6 J	0.51 J	0.75 J	0.63 J	15.4 J	0.97 J	0.93 J	0.8 J	0.67 J	0.67 J	0.67 J
ARSENIC	4.2 J	3.6 J	3.4 J	10.1 J	2.7 J	4.5 J	2.5 J	11.4 J	4 J	3.2 J	3.2 J	3.6 J	3.5 J	3.55 J
BARIUM	38.5 J	33 J	19.2 J	273 J	28.1 J	37.7 J	24 J	51.5 J	45.9 J	12.4 J	25 J	25.1 J	20.9 J	23 J
BERYLLIUM	0.37	0.33	0.35	0.25	0.34	0.29	0.23	0.23	0.31	0.3	0.26	0.39	0.36	0.375
CADMIUM	0.29 UJ	0.23 UJ	0.25 UJ	201 J	0.52 UJ	0.73 J	25.4 J	5670 J	23.7 J	0.74 J	14.2 J	3.4 J	5.8 J	4.6 J
CALCIUM	789 J	647 J	738 J	68200 J	677 J	5160 J	1100 J	1420 J	1090 J	765 J	1080 J	528 J	489 J	508 J
CHROMIUM	15.7 J	13.5 J	13.1 J	51.4 J	8.5 J	8.6 J	10.9 J	340 J	14.8 J	10.4 J	18.9 J	13.1 J	16 J	14.6 J
COBALT	6.8 J	5.3 J	5.1 J	4.8 J	7.5 J	3 J	4.8 J	8.3 J	7.4 J	4.1 J	6.8 J	5.3 J	8.4 J	6.85 J
COPPER	27.9 J	24.5 J	21.5 J	116 J	20.2 J	14.3 J	25.6 J	424 J	25.7 J	17.5 J	49 J	60 J	43.7 J	51.8 J

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SOTP05-01-0000	G32-SOTP05-02-0000	G32-SOTP05-03-0002	G32-SOTP06-01-0002	G32-SOTP07	G32-SOTP08	G32-SOTP09-01-0002	G32-SOTP09-02-0002	G32-SOTP10-01-0002	G32-SOTP10-02-0002	G32-SOTP10-03-0002	G32-SOTP11-01	G32-SOTP11-01-D	G32-SOTP11-01-AVG
LOCATION ID	G32-TP05	G32-TP05	G32-TP05	G32-TP06	G32-TP07	G32-TP08	G32-TP09-01	G32-TP09-02	G32-TP10A	G32-TP10B	G32-TP10C	G32-TP11B	G32-TP11B	G32-TP11B
SAMPLE DATE	07/21/05	07/21/05	07/21/05	07/21/05	07/22/05	07/22/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05	07/21/05
TOP DEPTH			0 FT	0 FT			0 FT	0 FT	0 FT	0 FT	0 FT			
BOTTOM DEPTH			2 FT	2 FT			2 FT	2 FT	2 FT	2 FT	2 FT			
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM
CYANIDE	0.14 U	0.14 U	0.15 U	0.18 U	0.12 U	0.13 U	0.13 U	0.18 U	0.16 U	0.14 U	0.13 U	0.14 U	0.13 U	0.135 U
IRON	16800 J	14600 J	15000 J	49100 J	12600 J	11100 J	12500 J	57800 J	14700 J	24700 J	16700 J	16600 J	13700 J	15200 J
LEAD	51.2 J	38.5 J	14 J	493 J	10.3 J	141 J	83.6 J	2700 J	138 J	9 J	60.8 J	23.8 J	25.7 J	24.8 J
MAGNESIUM	3740	3270	3490	6080	2340	2110	1950	2790	3280	4270	3250	3230	2800	3020
MANGANESE	207	193	148	337	131	349	138	369	147	259	187	127	105	116
MERCURY	0.062 UJ	0.062 UJ	0.023 UJ	0.06 UJ	0.021 UJ	0.02 UJ	0.011 UJ	0.067 UJ	0.03 UJ	0.015 UJ	0.11 UJ	0.033 UJ	0.024 UJ	0.0285 UJ
NICKEL	16.1 J	13.1 J	13.7 J	29.1 J	12.5 J	7.3 J	13.6 J	45.3 J	20.5 J	10.6 J	14.6 J	14.9 J	21 J	18 J
POTASSIUM	2120 J	1070 J	1190 J	1350 J	860 J	721 J	742 J	383 UJ	3950 J	592 J	662 J	973 J	504 J	738 J
SELENIUM	0.074 U	0.075 U	0.07 U	0.094 U	0.062 U	0.069 U	0.074 U	0.095 U	0.079 U	0.066 U	0.065 U	0.081 U	0.071 U	0.076 U
SILVER	0.82 UJ	0.7 UJ	0.71 UJ	0.027 U	0.45 UJ	0.02 U	0.29 UJ	0.027 U	0.61 UJ	0.42 UJ	0.66 UJ	0.79 UJ	0.68 UJ	0.735 UJ
SODIUM	2710 J	2330 J	2120 J	1860 J	36.5 UJ	124 J	41.6 UJ	61.2 UJ	61.6 UJ	29.2 UJ	41.2 UJ	34.4 UJ	31.5 UJ	33 UJ
THALLIUM	0.087 U	0.088 U	0.083 U	0.11 U	0.073 U	0.082 U	0.087 U	0.11 U	0.094 U	0.077 U	0.076 U	0.096 U	0.083 U	0.0895 U
VANADIUM	24.2 J	20.6 J	16.6 J	20.9 J	12.8 J	8.8 J	11.2 J	24.9 J	18.5 J	13.6 J	13.6 J	21.5 J	18.8 J	20.2 J
ZINC	56.7 J	47.7 J	44.8 J	467 J	28.2 J	170 J	62.2 J	653 J	47.6 J	33.4 J	81.7 J	57.3 J	59.4 J	58.4 J
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	650	520	150	4800	140	91	1800	580	1200 J	3500	250	50	41	45.5
GASOLINE RANGE ORGANICS	55	13 U	22 U	11 U	78	6.3 U	24 U	120	180	54	30 UJ	4.1 U	3.3 U	3.7 U
TOTAL PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SOTP12-01	G32-SOTP12-01-D	G32-SOTP12-01-AVG	G32-SOTP13-01	GI-SB401-1218	GI-SB401-2430	GI-SB401-4248	GI-SB402-1218	GI-SB402-2430	GI-SB402-4248	GI-SB403-1218	GI-SB403-1218-D	GI-SB403-1218-AVG	GI-SB403-2430
LOCATION ID	G32-TP12	G32-TP12	G32-TP12	G32-TP13	GI-SB401	GI-SB401	GI-SB401	GI-SB402	GI-SB402	GI-SB402	GI-SB403	GI-SB403	GI-SB403	GI-SB403
SAMPLE DATE	07/21/05	07/21/05	07/21/05	07/21/05	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10
TOP DEPTH					1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	1 FT	1 FT	2 FT
BOTTOM DEPTH					1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	9 UJ	10 UJ	9.5 UJ	6 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	2 U	3 U	2.5 U	3 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	2 U	3 UJ	2.5 UJ	3 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	2 U	3 UJ	2.5 UJ	3 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	8 UJ	14 UJ	11 UJ	16 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SOTP12-01	G32-SOTP12-01-D	G32-SOTP12-01-AVG	G32-SOTP13-01	GI-SB401-1218	GI-SB401-2430	GI-SB401-4248	GI-SB402-1218	GI-SB402-2430	GI-SB402-4248	GI-SB403-1218	GI-SB403-1218-D	GI-SB403-1218-AVG	GI-SB403-2430
LOCATION ID	G32-TP12	G32-TP12	G32-TP12	G32-TP13	GI-SB401	GI-SB401	GI-SB401	GI-SB402	GI-SB402	GI-SB402	GI-SB403	GI-SB403	GI-SB403	GI-SB403
SAMPLE DATE	07/21/05	07/21/05	07/21/05	07/21/05	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10
TOP DEPTH					1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	1 FT	1 FT	2 FT
BOTTOM DEPTH					1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
P-XYLENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	2 U	3 UJ	2.5 UJ	3 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	2 U	3 U	2.5 U	3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	740 U	700 U	720 U	760 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	370 UJ	340 UJ	355 UJ	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	740 U	700 U	720 U	760 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	9.6 J	5.7 J	7.65 J	61	73 U	71 U	73 U	72 U	76 U	75 U	74 U	74 U	74 U	73 U
2-METHYLPHENOL	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	740 U	700 U	720 U	760 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	370 UJ	340 UJ	355 UJ	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	740 UJ	700 UJ	720 UJ	760 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	740 U	700 U	720 U	760 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	370 U	340 U	355 U	370 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	740 UJ	700 UJ	720 UJ	760 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	740 U	700 U	720 U	760 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	7.8	9.7	8.75	300 J	40 J	71 U	73 U	72 U	76 U	200 J	74 U	74 U	74 U	73 U
ACENAPHTHYLENE	3.7 U	3.4 U	3.55 U	3.7 U	73 U	71 U	73 U	72 U	76 U	75 U	74 U	74 U	74 U	73 U
ACETOPHENONE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	15	25	20	530	92 J	71 U	73 U	72 U	76 U	88 J	74 U	74 U	74 U	73 U

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SOTP12-01	G32-SOTP12-01-D	G32-SOTP12-01-AVG	G32-SOTP13-01	GI-SB401-1218	GI-SB401-2430	GI-SB401-4248	GI-SB402-1218	GI-SB402-2430	GI-SB402-4248	GI-SB403-1218	GI-SB403-1218-D	GI-SB403-1218-AVG	GI-SB403-2430
LOCATION ID	G32-TP12	G32-TP12	G32-TP12	G32-TP13	GI-SB401	GI-SB401	GI-SB401	GI-SB402	GI-SB402	GI-SB402	GI-SB403	GI-SB403	GI-SB403	GI-SB403
SAMPLE DATE	07/21/05	07/21/05	07/21/05	07/21/05	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10
TOP DEPTH					1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	1 FT	1 FT	2 FT
BOTTOM DEPTH					1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
ATRAZINE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	370 UJ	340 UJ	355 UJ	370 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	33	42	37.5	840	310 J	71 U	73 U	40 J	140 J	110 J	74 U	48 J	42.5 J	73 U
BENZO(A)PYRENE	22	35	28.5	580	190 J	71 U	73 U	72 U	110 J	75 U	74 U	74 U	74 U	73 U
BENZO(B)FLUORANTHENE	37	50	43.5	730	300 J	71 U	73 U	52 J	130 J	66 J	74 U	74 U	74 U	73 U
BENZO(G,H,I)PERYLENE	11	17	14	310	110 J	71 U	73 U	72 U	50 J	75 U	74 U	74 U	74 U	73 U
BENZO(K)FLUORANTHENE	13	20	16.5	370	110 J	71 U	73 U	72 U	57 J	71 J	74 U	74 U	74 U	73 U
BIS(2-CHLOROETHOXY)METHANE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	38 J	38 J	38 J	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	370 U	340 U	355 U	250 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	31	38	34.5	920	280 J	71 U	73 U	48 J	150 J	110 J	74 U	49 J	43 J	73 U
DIBENZO(A,H)ANTHRACENE	3.7 U	4.9	3.38	110	73 U	71 U	73 U	72 U	76 U	75 U	74 U	74 U	74 U	73 U
DIBENZOFURAN	370 U	340 U	355 U	220 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	49 J	44 J	46.5 J	47 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	82	110	96	2100	610	71 U	73 U	60 J	280 J	360 J	74 U	110 J	73.5 J	39 J
FLUORENE	11	11	11	330 J	42 J	71 U	73 U	72 U	76 U	400	74 U	74 U	74 U	73 U
HEXACHLOROBENZENE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	291 J	404 J	348 J	7970	2580 J	71 U	73 U	276 J	1220 J	967 J	74 U	301 J	169 J	39 J
INDENO(1,2,3-CD)PYRENE	8.7 J	15 J	11.8 J	310	98 J	71 U	73 U	72 U	47 J	75 U	74 U	74 U	74 U	73 U
ISOPHORONE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	97.4 J	112 J	105 J	3860 J	574 J	71 U	73 U	37 J	140 J	1430 J	74 U	78 J	57.5 J	73 UJ
NAPHTHALENE	16 J	4.9 J	10.4 J	38	73 U	71 U	73 U	72 U	76 U	250 J	74 U	74 UJ	74 UJ	73 UJ
NITROBENZENE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	740 U	700 U	720 U	760 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	38	56	47	2600	400	71 U	73 U	37 J	140 J	490	74 U	78 J	57.5 J	73 U
PHENOL	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	53	72	62.5	1700	570	71 U	73 U	76 J	260 J	250 J	74 U	94 J	65.5 J	73 U
TOTAL CARCINOGENIC PAHS-HALFND	147 J	205 J	176 J	3860	1320 J	71 U	73 U	284 J	672 J	470 J	74 U	282 J	160 J	73 U
TOTAL CARCINOGENIC PAHS-POS	145 J	205 J	175 J	3860	1290 J	71 U	73 U	140 J	634 J	357 J	74 U	97 J	67 J	73 U
TOTAL CHLORINATED VOCS	370 U	340 U	355 U	370 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	388 J	516 J	452 J	11800 J	3150 J	71 U	73 U	313 J	1360 J	2400 J	74 U	379 J	208 J	39 J

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SOTP12-01	G32-SOTP12-01-D	G32-SOTP12-01-AVG	G32-SOTP13-01	GI-SB401-1218	GI-SB401-2430	GI-SB401-4248	GI-SB402-1218	GI-SB402-2430	GI-SB402-4248	GI-SB403-1218	GI-SB403-1218-D	GI-SB403-1218-AVG	GI-SB403-2430
LOCATION ID	G32-TP12	G32-TP12	G32-TP12	G32-TP13	GI-SB401	GI-SB401	GI-SB401	GI-SB402	GI-SB402	GI-SB402	GI-SB403	GI-SB403	GI-SB403	GI-SB403
SAMPLE DATE	07/21/05	07/21/05	07/21/05	07/21/05	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10
TOP DEPTH					1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	1 FT	1 FT	2 FT
BOTTOM DEPTH					1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	3.7 U	3.5 U	3.6 U	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	3.7 U	3.5 U	3.6 U	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	3.7 U	3.5 U	3.6 U	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	1.9 U	1.8 U	1.85 U	1.9 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	1.9 U	1.8 U	1.85 U	1.9 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	1.9 U	1.8 U	1.85 U	1.9 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	37 U	35 U	36 U	38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1221	37 U	35 U	36 U	38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1232	37 U	35 U	36 U	38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1242	37 U	35 U	36 U	38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1248	37 U	35 U	36 U	38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1254	37 U	35 U	36 U	38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1260	37 U	35 U	36 U	38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	1.9 U	1.8 U	1.85 U	1.9 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	1.9 U	1.8 U	1.85 U	1.9 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	3.7 U	3.5 U	3.6 U	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	1.9 U	1.8 U	1.85 U	1.9 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	3.7 U	3.5 U	3.6 U	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	3.7 U	3.5 U	3.6 U	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	3.7 U	3.5 U	3.6 U	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	3.7 U	3.5 U	3.6 U	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	3.7 U	3.5 U	3.6 U	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	1.9 U	1.8 U	1.85 U	1.9 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	1.9 U	1.8 U	1.85 U	1.9 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	1.9 U	1.8 U	1.85 U	1.9 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	1.9 U	1.8 U	1.85 U	1.9 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	19 U	18 U	18.5 U	19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	37 U	35 U	36 U	38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORDANE	1.9 U	1.8 U	1.85 U	1.9 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	3.7 U	3.5 U	3.6 U	3.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	190 U	180 U	185 U	190 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)														
ALUMINUM	12900	13800	13400	8830	5830	6300	5040	3610	8630	8270	8280	7170	7720	6880
ANTIMONY	0.79 J	0.7 J	0.745 J	0.55 J	0.52 UJ	0.73 UJ	0.5 UJ	0.48 UJ	0.85 UJ	0.62 UJ	0.75 UJ	0.24 UJ	0.495 UJ	0.28 UJ
ARSENIC	4.4 J	4.7 J	4.55 J	2.9 J	1.6	1.7	1.2	3.7	2.4	2.5	3	1.9 J	2.45 J	0.71 J
BARIUM	25.2 J	27 J	26.1 J	20.2 J	21.6	13.6	11.6	12.9	28.2	28.1	18.4	16.8 J	17.6 J	15.1 J
BERYLLIUM	0.39	0.39	0.39	0.3	0.16 J	0.18 J	0.15 J	0.27	0.68	0.71	0.18	0.15 J	0.165 J	0.18 J
CADMIUM	1.6 J	2.4 J	2 J	2.5 J	0.33 J	0.018 UJ	0.022 UJ	0.35 J	0.47 J	0.48 J	8.8	7.2	8	2.7
CALCIUM	1480 J	410 J	945 J	813 J	1070	682	667	698	761	652	551	445	498	400
CHROMIUM	22.9 J	20.6 J	21.8 J	13.4 J	10.9	10.7	8.4	3.9	10.5	9.6	12.7	10.6	11.6	9.6
COBALT	13.9 J	7.3 J	10.6 J	9.4 J	3.8 J	4.4 J	3.3 J	5.3 J	12.3 J	8.1 J	3.8 J	4.3 J	4.05 J	3.9 J
COPPER	32.1 J	26.7 J	29.4 J	28.6 J	11.9 J	15.6 J	9.7 J	5.8 J	23.6 J	21.8 J	19.3 J	18.3	18.8 J	19.7

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SOTP12-01	G32-SOTP12-01-D	G32-SOTP12-01-AVG	G32-SOTP13-01	GI-SB401-1218	GI-SB401-2430	GI-SB401-4248	GI-SB402-1218	GI-SB402-2430	GI-SB402-4248	GI-SB403-1218	GI-SB403-1218-D	GI-SB403-1218-AVG	GI-SB403-2430
LOCATION ID	G32-TP12	G32-TP12	G32-TP12	G32-TP13	GI-SB401	GI-SB401	GI-SB401	GI-SB402	GI-SB402	GI-SB402	GI-SB403	GI-SB403	GI-SB403	GI-SB403
SAMPLE DATE	07/21/05	07/21/05	07/21/05	07/21/05	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10	06/02/10
TOP DEPTH					1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	1 FT	1 FT	2 FT
BOTTOM DEPTH					1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
CYANIDE	0.11 U	0.12 U	0.115 U	0.12 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	24000 J	28000 J	26000 J	17300 J	12500	16600	11000	8470	19200	15900	19600	17600	18600	17100
LEAD	24.5 J	11.8 J	18.2 J	12.9 J	14.9 J	5.8 J	4.8 J	9 J	23.1 J	7.4 J	12.6 J	13.4	13 J	11.1
MAGNESIUM	4410	4870	4640	3460	2310 J	2500 J	1960 J	1130 J	3250 J	2540 J	3040 J	2630	2840 J	2570
MANGANESE	191	222	206	181	159	131	105	318	246	160	148	144	146	129
MERCURY	0.022 UJ	0.0073 UJ	0.0146 UJ	0.02 UJ	0.024 U	0.026 U	0.027 U	0.0065 J	0.028 U	0.026 U	0.024 U	0.022 U	0.023 U	0.024 U
NICKEL	24.8 J	17.9 J	21.4 J	23.2 J	9.9 J	10.9 J	9.1 J	5.6 J	22.2 J	18.3 J	12.2 J	11.4	11.8 J	9.9
POTASSIUM	411 J	553 J	482 J	486 J	823 J	614 J	509 J	423 J	1760 J	598 J	698 J	600	649 J	633
SELENIUM	0.065 U	0.065 U	0.065 U	0.066 U	1.1 UJ	0.91 UJ	1.1 UJ	0.9 UJ	0.82 UJ	0.74 UJ	0.81 UJ	0.87 U	0.84 UJ	1 U
SILVER	0.75 UJ	0.95 UJ	0.85 UJ	0.62 UJ	0.17 UJ	0.14 UJ	0.17 UJ	0.14 UJ	0.13 UJ	0.12 UJ	0.13 UJ	0.14 UJ	0.135 UJ	0.16 UJ
SODIUM	40.9 UJ	53.8 UJ	47.4 UJ	31.5 UJ	30.9 J	30.4 J	30.5 J	28.8 J	27 J	29.2 J	44.4 J	40 J	42.2 J	31.2 J
THALLIUM	0.077 U	0.076 U	0.0765 U	0.078 U	0.42 U	0.36 U	0.43 U	0.58 J	0.3 J	0.3 U	0.15 J	0.35 U	0.162 J	0.4 U
VANADIUM	17.7 J	18.4 J	18 J	13 J	13.2	12.9	9.4	5.7	18.3	12.8	15.4	14.2	14.8	11.6
ZINC	59.6 J	48.8 J	54.2 J	66.4 J	45.7	25.9	21.8	31.2	48.7	48.7	37.7	32.5	35.1	26.5
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	67	42	54.5	42	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	31 UJ	8 U	19.5 UJ	3.5 U	2.2 U	2.1 U	2.1 U	2.4 U	2.4 U	9.8	2.1 U	2.6 U	2.35 U	3 U
TOTAL PETROLEUM HYDROCARBONS	NA	NA	NA	NA	26 U	25 U	27 U	26 U	37	1100	27 U	27 U	27 U	27 U

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB403-4248	GI-SB404-1218	GI-SB404-1218-D	GI-SB404-1218-AVG	GI-SB404-2430	GI-SB404-4248	GI-SB405-1218	GI-SB405-2430	GI-SB405-4248	GI-SB406-1218	GI-SB406-2430	GI-SB406-2430-D	GI-SB406-2430-AVG	GI-SB406-4248
LOCATION ID	GI-SB403	GI-SB404	GI-SB404	GI-SB404	GI-SB404	GI-SB404	GI-SB405	GI-SB405	GI-SB405	GI-SB406	GI-SB406	GI-SB406	GI-SB406	GI-SB406
SAMPLE DATE	06/02/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10
TOP DEPTH	3.5 FT	1 FT	1 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	2 FT	2 FT	3.5 FT
BOTTOM DEPTH	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	2.5 FT	2.5 FT	4 FT
SACODE	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB403-4248	GI-SB404-1218	GI-SB404-1218-D	GI-SB404-1218-AVG	GI-SB404-2430	GI-SB404-4248	GI-SB405-1218	GI-SB405-2430	GI-SB405-4248	GI-SB406-1218	GI-SB406-2430	GI-SB406-2430-D	GI-SB406-2430-AVG	GI-SB406-4248
LOCATION ID	GI-SB403	GI-SB404	GI-SB404	GI-SB404	GI-SB404	GI-SB404	GI-SB405	GI-SB405	GI-SB405	GI-SB406	GI-SB406	GI-SB406	GI-SB406	GI-SB406
SAMPLE DATE	06/02/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10
TOP DEPTH	3.5 FT	1 FT	1 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	2 FT	2 FT	3.5 FT
BOTTOM DEPTH	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	2.5 FT	2.5 FT	4 FT
SACODE	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	71 U	74 U	74 U	74 U	76 U	76 U	73 U	74 U	73 U	72 U	72 U	NA	72 U	73 U
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	71 U	74 U	74 U	74 U	76 U	130 J	73 U	74 U	73 U	72 U	72 U	NA	72 U	73 U
ACENAPHTHYLENE	71 U	74 U	74 U	74 U	76 U	76 U	73 U	74 U	73 U	72 U	72 U	NA	72 U	73 U
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	71 U	74 U	74 U	74 U	76 U	120 J	73 U	74 U	73 U	72 U	72 U	NA	72 U	73 U

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB403-4248	GI-SB404-1218	GI-SB404-1218-D	GI-SB404-1218-AVG	GI-SB404-2430	GI-SB404-4248	GI-SB405-1218	GI-SB405-2430	GI-SB405-4248	GI-SB406-1218	GI-SB406-2430	GI-SB406-2430-D	GI-SB406-2430-AVG	GI-SB406-4248
LOCATION ID	GI-SB403	GI-SB404	GI-SB404	GI-SB404	GI-SB404	GI-SB404	GI-SB405	GI-SB405	GI-SB405	GI-SB406	GI-SB406	GI-SB406	GI-SB406	GI-SB406
SAMPLE DATE	06/02/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10
TOP DEPTH	3.5 FT	1 FT	1 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	2 FT	2 FT	3.5 FT
BOTTOM DEPTH	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	2.5 FT	2.5 FT	4 FT
SACODE	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	71 U	74 U	74 U	74 U	95 J	250 J	73 U	74 U	41 J	72 U	72 U	NA	72 U	73 U
BENZO(A)PYRENE	71 U	74 U	74 U	74 U	81 J	190 J	73 U	74 U	73 U	72 U	72 U	NA	72 U	73 U
BENZO(B)FLUORANTHENE	71 U	74 U	74 U	74 U	110 J	230 J	73 U	74 U	73 U	72 U	72 U	NA	72 U	73 U
BENZO(G,H,I)PERYLENE	71 U	74 U	74 U	74 U	48 J	97 J	73 U	74 U	73 U	72 U	72 U	NA	72 U	73 U
BENZO(K)FLUORANTHENE	71 U	74 U	74 U	74 U	50 J	120 J	73 U	74 U	73 U	72 U	72 U	NA	72 U	73 U
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	71 U	74 U	74 U	74 U	110 J	230 J	73 U	74 U	46 J	72 U	72 U	NA	72 U	73 U
DIBENZO(A,H)ANTHRACENE	71 U	74 U	74 U	74 U	76 U	76 U	73 U	74 U	73 U	72 U	72 U	NA	72 U	73 U
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	71 U	74 U	74 U	74 U	200 J	540	56 J	45 J	79 J	72 U	72 U	NA	72 U	73 U
FLUORENE	71 U	74 U	74 U	74 U	76 U	150 J	73 U	74 U	73 U	72 U	72 U	NA	72 U	73 U
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	71 U	74 U	74 U	74 U	938 J	2180 J	104 J	45 J	235 J	72 U	72 U	NA	72 U	73 U
INDENO(1,2,3-CD)PYRENE	71 U	74 U	74 U	74 U	44 J	85 J	73 U	74 U	73 U	72 U	72 U	NA	72 U	73 U
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	71 UJ	74 UJ	74 U	74 UJ	120 J	840 J	41 J	74 UJ	44 J	72 U	72 U	NA	72 U	73 U
NAPHTHALENE	71 UJ	74 UJ	74 U	74 UJ	76 UJ	76 UJ	73 UJ	74 UJ	73 UJ	72 U	72 U	NA	72 U	73 U
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	71 U	74 U	74 U	74 U	120 J	440	41 J	74 U	44 J	72 U	72 U	NA	72 U	73 U
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	71 U	74 U	74 U	74 U	200 J	440	48 J	74 U	69 J	72 U	72 U	NA	72 U	73 U
TOTAL CARCINOGENIC PAHS-HALFND	71 U	74 U	74 U	74 U	528 J	1140 J	73 U	74 U	270 J	72 U	72 U	NA	72 U	73 U
TOTAL CARCINOGENIC PAHS-POS	71 U	74 U	74 U	74 U	490 J	1100 J	73 U	74 U	87 J	72 U	72 U	NA	72 U	73 U
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	71 UJ	74 UJ	74 U	74 UJ	1060 J	3020 J	145 J	45 J	279 J	72 U	72 U	NA	72 U	73 U

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB403-4248	GI-SB404-1218	GI-SB404-1218-D	GI-SB404-1218-AVG	GI-SB404-2430	GI-SB404-4248	GI-SB405-1218	GI-SB405-2430	GI-SB405-4248	GI-SB406-1218	GI-SB406-2430	GI-SB406-2430-D	GI-SB406-2430-AVG	GI-SB406-4248
LOCATION ID	GI-SB403	GI-SB404	GI-SB404	GI-SB404	GI-SB404	GI-SB404	GI-SB405	GI-SB405	GI-SB405	GI-SB406	GI-SB406	GI-SB406	GI-SB406	GI-SB406
SAMPLE DATE	06/02/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10
TOP DEPTH	3.5 FT	1 FT	1 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	2 FT	2 FT	3.5 FT
BOTTOM DEPTH	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	2.5 FT	2.5 FT	4 FT
SACODE	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)														
ALUMINUM	6060	6880	7310	7100	4900	8780	6200	5020	7340	6660	5660	NA	5660	5340
ANTIMONY	0.23 UJ	0.33 UJ	0.21 UJ	0.27 UJ	0.84 UJ	0.8 UJ	0.33 UJ	0.2 UJ	0.3 UJ	0.73 UJ	0.28 UJ	NA	0.28 UJ	0.21 UJ
ARSENIC	0.57 J	1.3 J	1.8 J	1.55 J	2 J	2.1 J	0.87 J	0.85 J	1.1 J	2.9	0.93 J	NA	0.93 J	0.81 J
BARIUM	13 J	20.8 J	24.6 J	22.7 J	21.6 J	26.1 J	22.2 J	16.6 J	26.8 J	21.3	14.4	NA	14.4	10.5
BERYLLIUM	0.12 J	0.2 J	0.22 J	0.21 J	0.26 J	0.34 J	0.15 J	0.14 J	0.22 J	0.24	0.12 J	NA	0.12 J	0.12 J
CADMIUM	0.73 J	1.7	1.7 J	1.7 J	6.8	22.6	0.78 J	5.3	12.6	0.02 UJ	0.15 UJ	NA	0.15 UJ	0.14 UJ
CALCIUM	510	443	352	398	580	484	515	369	659	838	748 J	NA	748 J	786 J
CHROMIUM	8	13.2	12.8	13	9.5	22.6	8.7	8	13.9	9.1	10.5	NA	10.5	6.6
COBALT	3.4 J	3.9 J	3.8 J	3.85 J	6.4 J	8.3 J	4.7 J	3.5 J	7.4 J	4.7 J	4	NA	4	3.8
COPPER	14.8	43	50.2	46.6	70.3	84.8	14.7	14.9	50.4	12 J	8.2	NA	8.2	9

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB403-4248	GI-SB404-1218	GI-SB404-1218-D	GI-SB404-1218-AVG	GI-SB404-2430	GI-SB404-4248	GI-SB405-1218	GI-SB405-2430	GI-SB405-4248	GI-SB406-1218	GI-SB406-2430	GI-SB406-2430-D	GI-SB406-2430-AVG	GI-SB406-4248
LOCATION ID	GI-SB403	GI-SB404	GI-SB404	GI-SB404	GI-SB404	GI-SB404	GI-SB405	GI-SB405	GI-SB405	GI-SB406	GI-SB406	GI-SB406	GI-SB406	GI-SB406
SAMPLE DATE	06/02/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/03/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10
TOP DEPTH	3.5 FT	1 FT	1 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	2 FT	2 FT	3.5 FT
BOTTOM DEPTH	4 FT	1.5 FT	1.5 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	2.5 FT	2.5 FT	4 FT
SACODE	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	14000	16800	17300	17000	8830	20500	14000	13000	18200	16700	15100	NA	15100	13100
LEAD	5.4	88.2	89.5	88.8	43.2	111	9.3	13	55.1	6.2 J	4.8 J	NA	4.8 J	4.5 J
MAGNESIUM	2450	2530	2480	2500	1810	3700	2490	2080	2890	2520 J	2150	NA	2150	2100
MANGANESE	116	111	110	110	103	179	135	87.6	132	178	139	NA	139	130
MERCURY	0.024 U	0.024 J	0.031 J	0.0275 J	0.031 J	0.086	0.022 U	0.025 U	0.009 J	0.022 U	0.023 UJ	NA	0.023 UJ	0.023 UJ
NICKEL	8	11.4	11.6	11.5	13.1	18.3	8.7	7.3	14.4	9.7 J	7.1 J	NA	7.1 J	6 J
POTASSIUM	807	550	586	568	432	597	735	702	946	785 J	644	NA	644	468
SELENIUM	0.83 U	1.2 U	0.74 U	0.97 U	0.63 J	1.1 U	1.2 U	0.73 U	1.1 U	1 UJ	1 U	NA	1 U	0.74 U
SILVER	0.13 UJ	0.19 UJ	0.12 UJ	0.155 UJ	0.15 UJ	0.17 UJ	0.19 UJ	0.12 UJ	0.079 J	0.16 UJ	0.16 UJ	NA	0.16 UJ	0.12 UJ
SODIUM	28.1 J	26.7 J	27.3 J	27 J	61.7	35.9 J	23.1 J	20.9 J	27.7 J	26.2 J	27.8 J	NA	27.8 J	25.8 J
THALLIUM	0.33 U	0.46 U	0.3 U	0.38 U	0.39 U	0.44 U	0.47 U	0.29 U	0.43 U	0.41 U	0.4 U	NA	0.4 U	0.3 U
VANADIUM	10.4	12.7	12.9	12.8	10.8	15	13	11.5	16.4	12.8	11.7	NA	11.7	10.4
ZINC	21.5	31.9	33.5	32.7	36.4	99	32.8	22.9	45.1	29.8	19 J	NA	19 J	17.2 J
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	2.3 U	2.5 U	2.7 U	2.6 U	13	83	2.3 U	2.5 U	2.9 U	3.6 U	2.3 U	2.4 U	2.35 U	2.5 U
TOTAL PETROLEUM HYDROCARBONS	25 U	64	56	60	530	1200	26 U	32	49	26 U	26 U	26 U	26 U	26 U

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB406-4248-D	GI-SB406-4248-AVG	GI-SB407-1218	GI-SB407-2430	GI-SB407-4248	GI-SB408-1218	GI-SB408-2430	GI-SB408-4248	GI-SB409-1218	GI-SB409-2430	GI-SB409-4854	GI-SB409-4854-D	GI-SB409-4854-AVG	GI-SB410-6072
LOCATION ID	GI-SB406	GI-SB406	GI-SB407	GI-SB407	GI-SB407	GI-SB408	GI-SB408	GI-SB408	GI-SB409	GI-SB409	GI-SB409	GI-SB409	GI-SB409	GI-SB410
SAMPLE DATE	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10
TOP DEPTH	3.5 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	5 FT
BOTTOM DEPTH	4 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4.5 FT	4.5 FT	4.5 FT	6 FT
SACODE	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB406-4248-D	GI-SB406-4248-AVG	GI-SB407-1218	GI-SB407-2430	GI-SB407-4248	GI-SB408-1218	GI-SB408-2430	GI-SB408-4248	GI-SB409-1218	GI-SB409-2430	GI-SB409-4854	GI-SB409-4854-D	GI-SB409-4854-AVG	GI-SB410-6072
LOCATION ID	GI-SB406	GI-SB406	GI-SB407	GI-SB407	GI-SB407	GI-SB408	GI-SB408	GI-SB408	GI-SB409	GI-SB409	GI-SB409	GI-SB409	GI-SB409	GI-SB410
SAMPLE DATE	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10
TOP DEPTH	3.5 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	5 FT
BOTTOM DEPTH	4 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4.5 FT	4.5 FT	4.5 FT	6 FT
SACODE	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	73 U	73 U	71 U	72 U	70 U	71 U	70 U	72 U	70 U	71 U	71 U	71 U	71 U	69 U
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	73 U	73 U	71 U	54 J	70 U	71 U	70 U	72 U	70 U	71 U	71 U	71 U	71 U	69 U
ACENAPHTHYLENE	73 U	73 U	71 U	72 U	70 U	71 U	70 U	72 U	70 U	71 U	71 U	71 U	71 U	69 U
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	73 U	73 U	71 U	73 J	70 U	71 U	70 U	72 U	70 U	71 U	71 U	71 U	71 U	82 J

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB406-4248-D	GI-SB406-4248-AVG	GI-SB407-1218	GI-SB407-2430	GI-SB407-4248	GI-SB408-1218	GI-SB408-2430	GI-SB408-4248	GI-SB409-1218	GI-SB409-2430	GI-SB409-4854	GI-SB409-4854-D	GI-SB409-4854-AVG	GI-SB410-6072
LOCATION ID	GI-SB406	GI-SB406	GI-SB407	GI-SB407	GI-SB407	GI-SB408	GI-SB408	GI-SB408	GI-SB409	GI-SB409	GI-SB409	GI-SB409	GI-SB409	GI-SB410
SAMPLE DATE	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10
TOP DEPTH	3.5 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	5 FT
BOTTOM DEPTH	4 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4.5 FT	4.5 FT	4.5 FT	6 FT
SACODE	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	73 U	73 U	60 J	310 J	71 J	72 J	70 U	72 U	70 U	71 U	71 U	71 U	71 U	260 J
BENZO(A)PYRENE	73 U	73 U	42 J	300 J	47 J	71 U	70 U	72 U	70 U	71 U	71 U	71 U	71 U	180 J
BENZO(B)FLUORANTHENE	73 U	73 U	71 U	360 J	65 J	66 J	70 U	72 U	70 U	71 U	71 U	71 U	71 U	240 J
BENZO(G,H,I)PERYLENE	73 U	73 U	71 U	180 J	70 U	40 J	70 U	72 U	70 U	71 U	71 U	71 U	71 U	120 J
BENZO(K)FLUORANTHENE	73 U	73 U	36 J	230 J	37 J	39 J	70 U	72 U	70 U	71 U	71 U	71 U	71 U	150 J
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	73 U	73 U	56 J	370	70 J	70 J	70 U	72 U	70 U	71 U	71 U	71 U	71 U	350
DIBENZO(A,H)ANTHRACENE	73 U	73 U	71 U	72 U	70 U	71 U	70 U	72 U	70 U	71 U	71 U	71 U	71 U	69 UJ
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	73 U	73 U	95 J	630	140 J	100 J	70 U	72 U	70 U	71 U	71 U	71 U	71 U	760
FLUORENE	73 U	73 U	71 U	72 U	70 U	71 U	70 U	72 U	70 U	71 U	71 U	71 U	71 U	69 U
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	73 U	73 U	379 J	3150 J	540 J	507 J	70 U	72 U	70 U	71 U	71 U	71 U	71 U	3020 J
INDENO(1,2,3-CD)PYRENE	73 U	73 U	71 U	150 J	70 U	71 U	70 U	72 U	70 U	71 U	71 U	71 U	71 U	85 J
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	73 U	73 U	48 J	527 J	75 J	74 J	70 U	72 U	70 UJ	71 UJ	71 UJ	71 UJ	71 UJ	432 J
NAPHTHALENE	73 U	73 U	71 U	72 U	70 U	71 U	70 U	72 U	70 UJ	71 UJ	71 UJ	71 UJ	71 UJ	69 U
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	73 U	73 U	48 J	400	75 J	74 J	70 U	72 U	70 U	71 U	71 U	71 U	71 U	350
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	73 U	73 U	90 J	620	110 J	120 J	70 U	72 U	70 U	71 U	71 U	71 U	71 U	880
TOTAL CARCINOGENIC PAHS-HALFND	73 U	73 U	300 J	1760 J	360 J	354 J	70 U	72 U	70 U	71 U	71 U	71 U	71 U	1300 J
TOTAL CARCINOGENIC PAHS-POS	73 U	73 U	194 J	1720 J	290 J	247 J	70 U	72 U	70 U	71 U	71 U	71 U	71 U	1260 J
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	73 U	73 U	427 J	3680 J	615 J	581 J	70 U	72 U	70 UJ	71 UJ	71 UJ	71 UJ	71 UJ	3460 J

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB406-4248-D	GI-SB406-4248-AVG	GI-SB407-1218	GI-SB407-2430	GI-SB407-4248	GI-SB408-1218	GI-SB408-2430	GI-SB408-4248	GI-SB409-1218	GI-SB409-2430	GI-SB409-4854	GI-SB409-4854-D	GI-SB409-4854-AVG	GI-SB410-6072
LOCATION ID	GI-SB406	GI-SB406	GI-SB407	GI-SB407	GI-SB407	GI-SB408	GI-SB408	GI-SB408	GI-SB409	GI-SB409	GI-SB409	GI-SB409	GI-SB409	GI-SB410
SAMPLE DATE	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10
TOP DEPTH	3.5 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	5 FT
BOTTOM DEPTH	4 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4.5 FT	4.5 FT	4.5 FT	6 FT
SACODE	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.6 U
AROCLOR-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17 U
AROCLOR-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.6 U
AROCLOR-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.6 U
AROCLOR-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.6 U
AROCLOR-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.6 U
AROCLOR-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	82
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	82
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)														
ALUMINUM	6220	5780	7200	7410	6900	4300	6790	5820	9490	8060	10700	10100	10400	6290
ANTIMONY	0.28 UJ	0.245 UJ	0.59 UJ	0.88 UJ	0.82 UJ	0.67 UJ	0.65 UJ	0.67 UJ	0.41 UJ	0.3 UJ	0.6 UJ	0.47 UJ	0.535 UJ	1.1 UJ
ARSENIC	0.92 J	0.865 J	2	1.4	2.1	1.5	1.7	1.6	2.1 J	1.9 J	1.9 J	2.7 J	2.3 J	10.1 J
BARIUM	10.7 J	10.6 J	27.4	37.5	30	18.7	20.7	16.9	31.4	31.6	40.5	37.7	39.1	32.8
BERYLLIUM	0.1 J	0.11 J	0.21	0.15 J	0.19 J	0.18 J	0.18 J	0.17 J	0.3	0.29	0.27	0.3	0.285	0.35
CADMIUM	0.15 UJ	0.145 UJ	0.26 J	0.39 J	0.11 J	0.39 J	0.024 UJ	0.018 UJ	0.019 UJ	0.021 UJ	0.026 UJ	0.018 UJ	0.022 UJ	0.21 J
CALCIUM	862 J	824 J	1120	1740	1050	922	961	691	1090 J	908 J	1100 J	1220 J	1160 J	7260 J
CHROMIUM	8.7	7.65	11.7	14.8	9.9	7.2	9.9	8.1	11	11.4	14.7	14	14.4	9.1
COBALT	5.5	4.65	4.7 J	5.6 J	3.8 J	3.2 J	4.2 J	4.7 J	8.1	6.7	6.3	7.2	6.75	6.3
COPPER	11.2	10.1	14.3 J	12.9 J	10.9 J	10.7 J	11.3 J	11.2 J	16.6	14.3	15.5	17.7	16.6	17.9

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB406-4248-D	GI-SB406-4248-AVG	GI-SB407-1218	GI-SB407-2430	GI-SB407-4248	GI-SB408-1218	GI-SB408-2430	GI-SB408-4248	GI-SB409-1218	GI-SB409-2430	GI-SB409-4854	GI-SB409-4854-D	GI-SB409-4854-AVG	GI-SB410-6072
LOCATION ID	GI-SB406	GI-SB406	GI-SB407	GI-SB407	GI-SB407	GI-SB408	GI-SB408	GI-SB408	GI-SB409	GI-SB409	GI-SB409	GI-SB409	GI-SB409	GI-SB410
SAMPLE DATE	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	06/01/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10	05/28/10
TOP DEPTH	3.5 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	3.5 FT	1 FT	2 FT	4 FT	4 FT	4 FT	5 FT
BOTTOM DEPTH	4 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4 FT	1.5 FT	2.5 FT	4.5 FT	4.5 FT	4.5 FT	6 FT
SACODE	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
QC TYPE	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	15600	14400	18200	17500	17200	11200	14600	15400	19300	19000	22500	23500	23000	22300
LEAD	5.3 J	4.9 J	10.7 J	26.7 J	9.2 J	9.7 J	6.5 J	5.8 J	6.5 J	6.6 J	7 J	8.2 J	7.6 J	22.9 J
MAGNESIUM	2660	2380	2780 J	3520 J	2910 J	1640 J	2750 J	2230 J	3320	3090	4200	4080	4140	2100
MANGANESE	133	132	154	149	145	120	176	129	242	186	195	208	202	411
MERCURY	0.023 UJ	0.023 UJ	0.022 U	0.01 J	0.022 U	0.026 U	0.022 U	0.022 U	0.021 J	0.0075 J	0.0064 J	0.024 UJ	0.0092 J	0.031 J
NICKEL	8.3 J	7.15 J	10.5 J	11.8 J	8.3 J	6.3 J	8.5 J	9.8 J	12.2 J	10.1 J	13.2 J	12.2 J	12.7 J	12.5 J
POTASSIUM	551	510	1190 J	2240 J	1540 J	457 J	1020 J	615 J	1110	1190	1910	1910	1910	617
SELENIUM	1 U	0.87 U	0.85 UJ	1.2 UJ	0.93 UJ	1.1 UJ	1.2 UJ	0.92 UJ	0.96 U	1.1 U	1.3 U	0.92 U	1.11 U	1.1 U
SILVER	0.16 UJ	0.14 UJ	0.14 UJ	0.18 UJ	0.15 UJ	0.18 UJ	0.2 UJ	0.15 UJ	0.17 U	0.14 U	0.15 U	0.18 U	0.165 U	0.17 U
SODIUM	24.7 J	25.2 J	34 J	47.2 J	39.4 J	17.4 J	23.5 J	17.8 J	31.2 J	29.6 J	43.6 J	39 J	41.3 J	150 J
THALLIUM	0.4 U	0.35 U	0.18 J	0.46 U	0.37 U	0.44 U	0.49 U	0.37 U	0.38 U	0.42 U	0.52 U	0.37 U	0.445 U	0.43 U
VANADIUM	15.3	12.8	14.4	18	13.4	9.9	11.7	10.2	15.1	16.6	19.7	19.1	19.4	10.6
ZINC	19.2 J	18.2 J	30.2	56.3	28	27.6	27	20.5	30.2 J	27.3 J	34.6 J	33.7 J	34.2 J	65 J
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	2.5 U	2.2 U	2.6 U	2 U	2.4 U	2.4 U	2.2 U	2.3 U	2.7 U	2.4 U	2.6 U	2.5 U	NA
TOTAL PETROLEUM HYDROCARBONS	NA	26 U	26 U	56	25 U	25 U	26 U	25 UJ	25 U	26 U	26 U	26 U	26 U	NA

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB411-6072	GI-SB412-144156	GI-SB412-7296	GI-SB413-7296
LOCATION ID	GI-SB411	GI-SB412	GI-SB412	GI-SB413
SAMPLE DATE	05/28/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	5 FT	12 FT	6 FT	6 FT
BOTTOM DEPTH	6 FT	13 FT	8 FT	8 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM
VOLATILES (UG/KG)				
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA
1,2-DICHLOROPROPANE	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA
BTEX	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB411-6072	GI-SB412-144156	GI-SB412-7296	GI-SB413-7296
LOCATION ID	GI-SB411	GI-SB412	GI-SB412	GI-SB413
SAMPLE DATE	05/28/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	5 FT	12 FT	6 FT	6 FT
BOTTOM DEPTH	6 FT	13 FT	8 FT	8 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM
P-XYLENE	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA
SEMIVOLATILES (UG/KG)				
1,1-BIPHENYL	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA
2-METHYLNAPHTHALENE	70 U	76 U	75 U	74 U
2-METHYLPHENOL	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA
ACENAPHTHENE	70 U	76 U	75 U	74 U
ACENAPHTHYLENE	70 U	76 U	75 U	74 U
ACETOPHENONE	NA	NA	NA	NA
ANTHRACENE	70 U	76 U	75 U	74 U

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB411-6072	GI-SB412-144156	GI-SB412-7296	GI-SB413-7296
LOCATION ID	GI-SB411	GI-SB412	GI-SB412	GI-SB413
SAMPLE DATE	05/28/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	5 FT	12 FT	6 FT	6 FT
BOTTOM DEPTH	6 FT	13 FT	8 FT	8 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM
ATRAZINE	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA
BENZO(A)ANTHRACENE	43 J	76 UJ	60 J	74 UJ
BENZO(A)PYRENE	70 U	76 U	75 U	74 U
BENZO(B)FLUORANTHENE	49 J	76 UJ	52 J	74 UJ
BENZO(G,H,I)PERYLENE	70 U	76 U	75 U	74 U
BENZO(K)FLUORANTHENE	70 UJ	76 UJ	43 J	74 UJ
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA
CHRYSENE	70 U	76 U	73 J	74 U
DIBENZO(A,H)ANTHRACENE	70 UJ	76 UJ	75 UJ	74 UJ
DIBENZOFURAN	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA
FLUORANTHENE	69 J	76 U	110 J	74 U
FLUORENE	70 U	76 U	75 U	74 U
HEXACHLOROBENZENE	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	258 J	42 J	468 J	74 UJ
INDENO(1,2,3-CD)PYRENE	70 U	76 U	75 U	74 U
ISOPHORONE	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	70 U	76 U	78 J	74 U
NAPHTHALENE	70 U	76 U	75 U	74 U
NITROBENZENE	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA
PHENANTHRENE	70 U	76 U	78 J	74 U
PHENOL	NA	NA	NA	NA
PYRENE	97 J	42 J	130 J	74 U
TOTAL CARCINOGENIC PAHS-HALFND	267 J	76 UJ	340 J	74 UJ
TOTAL CARCINOGENIC PAHS-POS	92 J	76 UJ	228 J	74 UJ
TOTAL CHLORINATED VOCS	NA	NA	NA	NA
TOTAL PAHS	258 J	42 J	546 J	74 UJ

SAMPLE ID	GI-SB411-6072	GI-SB412-144156	GI-SB412-7296	GI-SB413-7296
LOCATION ID	GI-SB411	GI-SB412	GI-SB412	GI-SB413
SAMPLE DATE	05/28/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	5 FT	12 FT	6 FT	6 FT
BOTTOM DEPTH	6 FT	13 FT	8 FT	8 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM
PESTICIDES/PCBS (UG/KG)				
4,4'-DDD	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA
AROCLOR-1016	8.7 U	9.5 U	9.2 U	9.1 U
AROCLOR-1221	17 U	19 U	18 U	18 U
AROCLOR-1232	8.7 U	9.5 U	9.2 U	9.1 U
AROCLOR-1242	8.7 U	9.5 U	9.2 U	9.1 U
AROCLOR-1248	8.7 U	9.5 U	9.2 U	9.1 U
AROCLOR-1254	8.7 U	9.5 U	9.2 U	9.1 U
AROCLOR-1260	8.7 U	9.5 U	9.2 U	9.1 U
BETA-BHC	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA
TOTAL AROCLOR	9.89 U	10.9 U	10.5 U	10.4 U
TOTAL CHLORDANE	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA
METALS (MG/KG)				
ALUMINUM	8280	5140	7100	7350
ANTIMONY	0.44 UJ	0.5 UJ	0.59 UJ	0.52 UJ
ARSENIC	2.8 J	1.7 J	1.8 J	2.1 J
BARIUM	37.1	13.1	23	27
BERYLLIUM	0.33	0.16 J	0.22 J	0.16 J
CADMIUM	0.027 UJ	0.024 UJ	0.022 UJ	0.021 UJ
CALCIUM	1260 J	2810 J	1160 J	1030 J
CHROMIUM	14	8.3	9.8	18.8
COBALT	6.2	3.6	5.7	5.6
COPPER	16.2	7.1	13.3	13.3

TABLE D-4.8
ANALYTICAL RESULTS - SUBSURFACE SOIL
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SB411-6072	GI-SB412-144156	GI-SB412-7296	GI-SB413-7296
LOCATION ID	GI-SB411	GI-SB412	GI-SB412	GI-SB413
SAMPLE DATE	05/28/10	05/27/10	05/27/10	05/27/10
TOP DEPTH	5 FT	12 FT	6 FT	6 FT
BOTTOM DEPTH	6 FT	13 FT	8 FT	8 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SB	SB	SB	SB
QC TYPE	NM	NM	NM	NM
CYANIDE	NA	NA	NA	NA
IRON	20500	12400	16700	18000
LEAD	11.6 J	7 J	7 J	7.4 J
MAGNESIUM	3160	2250	2850	3570
MANGANESE	296	112	179	145
MERCURY	0.037 J	0.014 J	0.019 J	0.018 J
NICKEL	11.6 J	7.8 J	9.9 J	9.8 J
POTASSIUM	1390	654	952	1300
SELENIUM	1.3 U	1.2 U	1.1 U	1 U
SILVER	0.13 U	0.2 U	0.13 U	0.13 U
SODIUM	154 J	75.1 J	544 J	506 J
THALLIUM	0.53 U	0.49 U	0.44 U	0.42 U
VANADIUM	16.5	10.7	12.2	24
ZINC	46.2 J	24.5 J	27.3 J	24.8 J
PETROLEUM HYDROCARBONS (MG/KG)				
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA
TOTAL PETROLEUM HYDROCARBONS	NA	NA	NA	NA

TABLE D-4.4
ANALYTICAL RESULTS - INTERTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302F-000.5	G32-SD304F-000.5	G32-SD305F-000.5	G32-SD306F-000.5	G32-SD308F-000.5	G32-SD309F-000.5	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310F-000.5	G32-SD313F-000.5
LOCATION ID	G32-SD302F	G32-SD304F	G32-SD305F	G32-SD306F	G32-SD308F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310F	G32-SD313F
SAMPLE DATE	08/25/05	08/26/05	08/26/05	08/29/05	08/25/05	08/29/05	08/29/05	08/29/05	08/31/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
SEMIVOLATILES (UG/KG)										
1,1-BIPHENYL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4,5-TRICHLOROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U
2,4,6-TRICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DIMETHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DINITROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U
2,4-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,6-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-CHLORONAPHTHALENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-CHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-METHYLNAPHTHALENE	11	3.3 U	3.3 U	3.3 U	18	3.2 UJ	14 J	7.8 J	3.3 U	53
2-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-NITROANILINE	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U
2-NITROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
3,3'-DICHLOROBENZIDINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
3-NITROANILINE	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U
4,6-DINITRO-2-METHYLPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U
4-BROMOPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-CHLORO-3-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-CHLOROANILINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-CHLOROPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-METHYLPHENOL	330 U	330 U	490	400	330 U	990	1500	1240	1700	330 U
4-NITROANILINE	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U
4-NITROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U
ACENAPHTHENE	69	7.5	3.3 U	4.2	88	4.4 J	72 J	38.2 J	3.3 U	210
ACENAPHTHYLENE	5.6	26	3.8	12	30	3.9 J	6.3 J	5.1 J	5	42
ACETOPHENONE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
ANTHRACENE	160	74	10	24	300	18 J	160 J	89 J	15	520
ATRAZINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
BENZALDEHYDE	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
BENZO(A)ANTHRACENE	380	420	22	56	1000	170	260	215	34	1600
BENZO(A)PYRENE	270	210	25	68	510	140	220	180	31	760
BENZO(B)FLUORANTHENE	270 J	230 J	35	92	560	210	280	245	46	1200
BENZO(G,H,I)PERYLENE	110	54	11	31	150	53 J	96 J	74.5 J	16	270
BENZO(K)FLUORANTHENE	140	140	15	38	300	77	120	98.5	16	910
BIS(2-CHLOROETHOXY)METHANE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
BIS(2-CHLOROETHYL)ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
BIS(2-ETHYLHEXYL)PHTHALATE	56 J	53 J	53 J	51 J	46 J	50 J	74 J	62 J	42 J	51 J

TABLE D-4.4
ANALYTICAL RESULTS - INTERTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302F-000.5	G32-SD304F-000.5	G32-SD305F-000.5	G32-SD306F-000.5	G32-SD308F-000.5	G32-SD309F-000.5	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310F-000.5	G32-SD313F-000.5
LOCATION ID	G32-SD302F	G32-SD304F	G32-SD305F	G32-SD306F	G32-SD308F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310F	G32-SD313F
SAMPLE DATE	08/25/05	08/26/05	08/26/05	08/29/05	08/25/05	08/29/05	08/29/05	08/29/05	08/31/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
BUTYL BENZYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
CAPROLACTAM	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
CARBAZOLE	76 J	330 U	330 U	330 U	110 J	330 U	93 J	129 J	330 U	230 J
CHRYSENE	320 EB	310 EB	27 EB	61 EB	850	170 EB	230 SB	200 EB	38 EB	1500
DIBENZO(A,H)ANTHRACENE	37	22	3.6	10	56	21	31	26	4.3	100
DIBENZOFURAN	36 J	330 U	330 U	330 U	63 J	330 U	40 J	102 J	330 U	140 J
DIETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
DIMETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
DI-N-BUTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
DI-N-OCTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
FLUORANTHENE	830	800	49	96	3100	180 J	670 J	425 J	70	3400
FLUORENE	71	17	3.3 U	6	120	6 J	78 J	42 J	5.5	240
HEXACHLOROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
HEXACHLOROBUTADIENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
HEXACHLOROCYCLOPENTADIENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
HEXACHLOROETHANE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
HIGH MOLECULAR WEIGHT PAHS	3150 J	2850 J	239	591	9100	1260 J	2540 J	1900 J	329	12800
INDENO(1,2,3-CD)PYRENE	110	60	11	29	170	60	97	78.5	15	280
ISOPHORONE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
LOW MOLECULAR WEIGHT PAHS	935	250	31.8	90.1	1680	73.9 J	944 J	509 J	60.6	2680
NAPHTHALENE	18	5.8	3.3 U	3.9	25	4.6 J	34 J	19.3 J	6.1	110
NITROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-NITROSO-DI-N-PROPYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-NITROSODIPHENYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PENTACHLOROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U
PHENANTHRENE	600	120	18	40	1100	37 J	580	308 J	29	1500
PHENOL	330 U	330 U	220 J	290 J	330 U	520	420	470	820	330 U
PYRENE	680	600	40	110	2400	180 J	540	360 J	59	2800
TOTAL CARCINOGENIC PAHS-HALFND	1530 J	1390 J	139	354	3450	848	1240	1040	184	6350
TOTAL CARCINOGENIC PAHS-POS	1530 J	1390 J	139	354	3450	848	1240	1040	184	6350
TOTAL CHLORINATED VOCS	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
TOTAL PAHS	4080 J	3100 J	270	681	10800	1330 J	3490 J	2410 J	390	15500
PESTICIDES/PCBS (UG/KG)										
4,4'-DDD	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
4,4'-DDE	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
4,4'-DDT	3.3 U	6.2 R	5.8 R	4.9 R	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ALDRIN	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	0.95 R	1.7 U	1.7 U	1.7 U
ALPHA-BHC	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.6 J	1.22 J	1.7 U	1.7 U
ALPHA-CHLORDANE	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.4
ANALYTICAL RESULTS - INTERTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302F-000.5	G32-SD304F-000.5	G32-SD305F-000.5	G32-SD306F-000.5	G32-SD308F-000.5	G32-SD309F-000.5	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310F-000.5	G32-SD313F-000.5
LOCATION ID	G32-SD302F	G32-SD304F	G32-SD305F	G32-SD306F	G32-SD308F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310F	G32-SD313F
SAMPLE DATE	08/25/05	08/26/05	08/26/05	08/29/05	08/25/05	08/29/05	08/29/05	08/29/05	08/31/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
AROCLOR-1016	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1221	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1232	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1242	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1248	33 U	33 U	39 J	33 U	33 U	170	33 U	93.2	33 U	33 U
AROCLOR-1254	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1260	33 U	360	280	190 J	33 U	33 U	33 U	33 U	33 U	33 U
BETA-BHC	1.7 U	2.6 J	1.7 U	3.9	3 R	1.7 U	1.7 U	1.7 U	1.7 U	14 R
DELTA-BHC	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	0.98 J	0.915 J	1.7 U	1.7 U
DIELDRIN	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDOSULFAN I	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
ENDOSULFAN II	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDOSULFAN SULFATE	3.3 U	7.3 J	6.9 J	4.2 R	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDRIN	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDRIN ALDEHYDE	3.3 U	4.1 R	3.3 U	4.2 R	3.3 U	3.3 U	1.9 J	1.78 J	3.3 U	3.3 U
ENDRIN KETONE	3.3 U	7.8 J	6.4 J	3.3 U	5.2 J	3.3 U	3.3 U	3.3 U	3.3 U	5 J
GAMMA-BHC (LINDANE)	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	0.86 R	1.7 U	1.7 U	1.7 U
GAMMA-CHLORDANE	1.7 U	1.7 U	2.7 J	2.5 R	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
HEPTACHLOR	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
HEPTACHLOR EPOXIDE	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
METHOXYCHLOR	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	7.3 J
TOTAL AROCLOR	33 U	360	319 J	190 J	33 U	170	33 U	93.2	33 U	33 U
TOTAL CHLORDANE	1.7 U	1.7 U	2.7 J	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
TOTAL DDD/DDE/DDT	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
TOXAPHENE	170 U	170 U	170 U	170 U	170 U	170 U	170 U	170 U	170 U	170 U
METALS (MG/KG)										
ALUMINUM	6850	6930	7010	5640	4400	5090	5390	5240	6090	3880
ANTIMONY	0.26 UJ	43.5 J	0.055 UJ	0.82 UJ	0.056 UJ	0.14 UJ	0.057 UJ	0.0985 UJ	0.055 UJ	2 UJ
ARSENIC	3.4 J	0.076 UJ	4.6 J	3.9 J	2.1 J	4.8 J	3.3 J	4.05 J	5.2 J	7.3 J
BARIUM	15.7 J	14.1 J	8.5 J	13.6 J	9.2 J	9.2 J	9.2 J	9.2 J	15.8 J	10.8 J
BERYLLIUM	0.35	0.34	0.32	0.37	0.25	0.32	0.34	0.33	0.41	0.23
CADMIUM	0.31 UJ	1.6 J	0.47 UJ	0.21 UJ	0.41 UJ	0.25 UJ	1.7 J	0.912 J	0.36 UJ	0.6 UJ
CALCIUM	30100 J	17600 J	21900 J	33200 J	39200 J	30400 J	40200 J	35300 J	25700 J	21000 J
CHROMIUM	13.1 J	3910	26.3 J	16.7 J	9.3 J	16.6 J	12.2 J	14.4 J	15.2 J	37.7 J
COBALT	3.5 J	2.8 J	3.9 J	2.9 J	1.8 J	2.7 J	2.6 J	2.65 J	2.9 J	2.9 J
COPPER	35.1	46.8	77.8	32.6	26.4	36.4	24.7	30.6	33.4	64.4
CYANIDE	0.12 U	0.12 U	0.12 UJ	0.12 UJ	0.12 U	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.35 J
IRON	17800	35600	57300	21900	22300	23900	17600	20800	25700	72100
LEAD	23.4 J	21200	17.7 J	177	18.9 J	29.8 J	35.8	32.8 J	32.6 J	17.9 J

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

SAMPLE ID	G32-SD302F-000.5	G32-SD304F-000.5	G32-SD305F-000.5	G32-SD306F-000.5	G32-SD308F-000.5	G32-SD309F-000.5	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310F-000.5	G32-SD313F-000.5
LOCATION ID	G32-SD302F	G32-SD304F	G32-SD305F	G32-SD306F	G32-SD308F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310F	G32-SD313F
SAMPLE DATE	08/25/05	08/26/05	08/26/05	08/29/05	08/25/05	08/29/05	08/29/05	08/29/05	08/31/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
MAGNESIUM	4450	3950	6340	3800	2770	3360	3830	3600	4020	2770
MANGANESE	214 J	245 J	418 J	179 J	203 J	177 J	156 J	166 J	239 J	306 J
MERCURY	0.0068 U	0.0077 UJ	0.0072 U	0.74	0.0095 UJ	0.031 U	0.03 U	0.0305 U	0.05 U	0.008 UJ
NICKEL	11.6 J	10.8 J	19 J	8.7 J	6.4 J	10.2 J	8.3 J	9.25 J	11 J	47.4 J
POTASSIUM	958	1160	941	1240	742	1220	1150	1180	1430	757
SELENIUM	0.066 UJ	0.067 UJ	0.066 UJ	0.068 UJ	0.067 UJ	0.067 UJ	0.068 UJ	0.0675 UJ	0.066 UJ	0.066 UJ
SILVER	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ
SODIUM	3200	3440	2750	5820	3070	5310	6040	5680	5330	2380
THALLIUM	0.078 UJ	1.7 J	1.1 J	0.16 J	0.079 UJ	0.22 J	0.081 UJ	0.13 J	0.14 J	2.5 J
VANADIUM	15.1 J	15.2 J	16.5 J	22.6 J	10.8 J	19.2 J	17.8 J	18.5 J	21.6 J	11.3 J
ZINC	54.1 J	54.4 J	39.5 J	64.4 J	34.7 J	195 J	50.9 J	123 J	73 J	39.7 J
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON	5000 J	3000	7400 J	15000 J	29000 J	16000 J	5900 J	11000 J	13000 J	7500 J
MISCELLANEOUS PARAMETERS (UNITLESS)										
ERM-Q	0.14099	11.087379	0.280236	0.251576	0.204086	0.217033	0.145288	0.18116	0.09437	0.384659
MISCELLANEOUS PARAMETERS (%)										
PERCENT CLAY	2.7	2.1	2.7	5.2	2.3	6.2	3.9	5.05	5.4	1.8
PERCENT COARSE SAND	21.8	19.2	25.2	3.7	20.3	6.2	5.5	5.85	13.2	20.7
PERCENT FINE SAND	11.8	11.1	9	30.3	7	46.8	32.5	39.6	9.4	9.3
PERCENT GRAVEL	38.2	36.6	28.9	34.7	60.6	6.1	26.5	16.3	42.8	57.1
PERCENT MEDIUM SAND	18.8	21.3	30	20.2	8.2	30	22.4	26.2	21.8	9.5
PERCENT SILT	6.7	9.9	4.1	5.8	1.5	4.8	9.3	7.05	7.4	1.6
PERCENT SOLIDS	85.6	91.3	77.9	68.6	81.3	68.1	75.2	71.6	77.7	86.7
SIEVE 1"	100	100	100	66.7	100	100	78.1	89	88.1	100
SIEVE 1-1/2"	100	100	100	100	100	100	100	100	100	100
SIEVE 2"	100	100	100	100	100	100	100	100	100	100
SIEVE 3"	100	100	100	100	100	100	100	100	100	100
SIEVE 3/4"	100	84.8	100	66.7	100	100	78.1	89	79.6	89.2
SIEVE 3/8"	86.5	75.4	85	66.2	73.6	97.2	77.2	87.2	66.2	64.3
SIEVE NO. 004	61.8	63.4	71.1	65.3	39.4	93.9	73.5	83.7	57.2	42.9
SIEVE NO. 010	40.1	44.3	45.8	61.6	19	87.8	68	77.9	44	22.2
SIEVE NO. 020	31.9	33.6	28.5	55.6	15.4	80.3	62.1	71.2	34.5	17.4
SIEVE NO. 040	21.2	23	15.9	41.3	10.8	57.8	45.7	51.8	22.2	12.7
SIEVE NO. 060	15.6	16.5	9.5	22	7.6	33.2	28.2	30.7	15.7	9
SIEVE NO. 080	13.4	14.2	8.2	16.4	6	22.3	20.7	21.5	14.3	6.1
SIEVE NO. 100	12.3	13.4	7.9	14.8	5.4	18.4	18.1	18.2	13.9	5
SIEVE NO. 200	9.5	11.9	6.8	11	3.8	10.9	13.2	12	12.7	3.4

TABLE D-4.4
ANALYTICAL RESULTS - INTERTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302F-000.5	G32-SD304F-000.5	G32-SD305F-000.5	G32-SD306F-000.5	G32-SD308F-000.5	G32-SD309F-000.5	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310F-000.5	G32-SD313F-000.5
LOCATION ID	G32-SD302F	G32-SD304F	G32-SD305F	G32-SD306F	G32-SD308F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310F	G32-SD313F
SAMPLE DATE	08/25/05	08/26/05	08/26/05	08/29/05	08/25/05	08/29/05	08/29/05	08/29/05	08/31/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
AVS/SEM (UMOLES/G)										
ACID VOLATILE SULFIDE	10.2 J	0.9 J	7.9 J	7 J	5.7 J	24.7 J	12.3 J	18.5 J	14.3 J	0.83 J
CADMIUM	0.0023 UJ	0.0021 UJ	0.0021 UJ	0.0043 UJ	0.0022 UJ	0.02 UJ	0.0028 UJ	0.0114 UJ	0.0033 UJ	0.002 UJ
COPPER	0.33 J	0.1 J	0.083 UJ	0.19 J	0.34 J	0.15 J	0.23 J	0.19 J	0.2 J	0.28 J
LEAD	0.074 J	0.22 J	0.028 UJ	0.28 J	0.056 J	0.063 J	0.11 J	0.0865 J	0.11 J	0.11 J
MERCURY	0.00003 U	0.00003 UJ	0.00003 U	0.0037	0.00004 UJ	0.00015 U	0.00015 U	0.00015 U	0.00025 U	0.00004 UJ
NICKEL	0.037 UJ	0.02 UJ	0.11 UJ	0.036 UJ	0.5 UJ	0.051 UJ	0.072 UJ	0.0615 UJ	0.082 UJ	0.061 UJ
ZINC	0.36 J	0.14 J	0.16 J	0.49 J	0.43 J	0.41 J	0.7 J	0.555 J	1.9 J	0.28 J
AVS/SEM (RATIO)										
SEM/AVS	0.075	0.51	0.02	0.14	0.14	0.025	0.085	0.055	0.15	0.81
LOW LEVEL VOLATILES (UG/KG)										
1,1,1-TRICHLOROETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
1,1,2,2-TETRACHLOROETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
1,1,2-TRICHLOROETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
1,1-DICHLOROETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
1,1-DICHLOROETHENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
1,2,4-TRICHLOROBENZENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
1,2-DIBROMO-3-CHLOROPROPANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
1,2-DIBROMOETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
1,2-DICHLOROBENZENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
1,2-DICHLOROETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
1,2-DICHLOROPROPANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
1,3-DICHLOROBENZENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
1,4-DICHLOROBENZENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
2-BUTANONE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
2-HEXANONE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
4-METHYL-2-PENTANONE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
ACETONE	200 J	42 UJ	36 UJ	34 UJ	66 UJ	93 UJ	7 UJ	50 UJ	37 UJ	50 UJ
BENZENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
BROMODICHLOROMETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
BROMOFORM	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
BROMOMETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
BTEX	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
CARBON DISULFIDE	2 J	3 J	3 J	3 J	3 J	9	7 U	6.25	4 J	1 J
CARBON TETRACHLORIDE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
CHLOROBENZENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
CHLORODIBROMOMETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
CHLOROETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.4
ANALYTICAL RESULTS - INTERTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD302F-000.5	G32-SD304F-000.5	G32-SD305F-000.5	G32-SD306F-000.5	G32-SD308F-000.5	G32-SD309F-000.5	G32-SD309F-000.5-D	G32-SD309F-000.5-AVG	G32-SD310F-000.5	G32-SD313F-000.5
LOCATION ID	G32-SD302F	G32-SD304F	G32-SD305F	G32-SD306F	G32-SD308F	G32-SD309F	G32-SD309F	G32-SD309F	G32-SD310F	G32-SD313F
SAMPLE DATE	08/25/05	08/26/05	08/26/05	08/29/05	08/25/05	08/29/05	08/29/05	08/29/05	08/31/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
CHLOROFORM	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
CHLOROMETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
CIS-1,2-DICHLOROETHENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
CIS-1,3-DICHLOROPROPENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
CYCLOHEXANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
DICHLORODIFLUOROMETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
ETHYLBENZENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
ISOPROPYLBENZENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
M+P-XYLENES	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
METHYL ACETATE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
METHYL CYCLOHEXANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
METHYL TERT-BUTYL ETHER	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
METHYLENE CHLORIDE	14 U	11 U	37 U	16 U	9 U	15 U	18 U	16.5 U	31 U	23 U
O-XYLENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
STYRENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
TETRACHLOROETHENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
TOLUENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
TOTAL 1,2-DICHLOROETHENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
TOTAL CHLORINATED ETHENES	6 U	5 U	5 U	6 U	4 U	7 U	2 J	2.75 J	7 U	5 U
TOTAL CHLORINATED VOCS	6 U	5 U	5 U	6 U	4 U	7 U	2 J	2.75 J	7 U	5 U
TOTAL XYLENES	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
TRANS-1,2-DICHLOROETHENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
TRANS-1,3-DICHLOROPROPENE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
TRICHLOROETHENE	6 U	5 U	5 U	6 U	4 U	7 U	2 J	2.75 J	7 U	5 U
TRICHLOROFLUOROMETHANE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
VINYL CHLORIDE	6 U	5 U	5 U	6 U	4 U	7 U	7 U	7 U	7 U	5 U
PETROLEUM HYDROCARBONS (MG/KG)										
EXTRACTABLE PETROLEUM HYDROCARBONS	38 J	25	36 J	53 J	42	56 J	12 UJ	31 J	52 J	68
GASOLINE RANGE ORGANICS	7.4 U	8.5 U	6.5 U	12 U	6 U	10 U	12 U	11 U	13 U	11 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5
LOCATION ID	G32-SD301	G32-SD301	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD303	G32-SD303	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304
SAMPLE DATE	09/02/05	09/02/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	09/01/05	09/01/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	44 J	330 U	330 U	330 U	330 U	330 U	330 U
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4,5-TRICHLOROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U	670 U	670 U	670 U
2,4,6-TRICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DIMETHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DINITROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ
2,4-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,6-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-CHLORONAPHTHALENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-CHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-METHYLNAPHTHALENE	9.6	10	6.1	11	6.7	3.4	4.1	130	3.3 U	15	9.8	20	8 J	4.7
2-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-NITROANILINE	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U	670 U	670 U	670 U
2-NITROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
3,3'-DICHLOROBENZIDINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
3-NITROANILINE	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U	670 U	670 U	670 U
4,6-DINITRO-2-METHYLPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 UJ	670 U	670 UJ	670 UJ	670 U
4-BROMOPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-CHLORO-3-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-CHLOROANILINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-CHLOROPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-METHYLPHENOL	2100 J	330 U	330 U	330 U	330 U	330 U	82 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-NITROANILINE	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ
4-NITROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 UJ	670 U	670 UJ	670 UJ	670 U
ACENAPHTHENE	68 J	81	23	52	48	12	12	1000	13	71	75	80	47	28
ACENAPHTHYLENE	8.9	7.5	4.5	5.6	10	4.2	3.2 J	11	5.6	25	14	10	9 J	6.7
ACETOPHENONE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
ANTHRACENE	170	170	59	120	180	41	37	1200	29	200	330	220	100 J	84
ATRAZINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
BENZALDEHYDE	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
BENZO(A)ANTHRACENE	430	320	120	230	280	75	72	1700	64	310 J	540	350	170 J	200
BENZO(A)PYRENE	300 J	320	98	160	220	65	65	1400	66	350	420 J	280 J	160 J	180
BENZO(B)FLUORANTHENE	330	310 J	110 J	200 J	270	75 J	78 J	1200	86	530	600 J	360	220 J	240
BENZO(G,H,I)PERYLENE	160 J	140	62	100	130	44	45	850	38	210	290	190	96 J	97
BENZO(K)FLUORANTHENE	140 J	170	44	58	84	27	27	1200	29	170	210	150	63 J	84
BIS(2-CHLOROETHOXY)METHANE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
BIS(2-CHLOROETHYL)ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
BIS(2-ETHYLHEXYL)PHTHALATE	50 J	46 J	330 U	330 U	330 U	380 U	330 U	49 J	100 J	70 J	44 J	61 J	34 J	330 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5
LOCATION ID	G32-SD301	G32-SD301	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD303	G32-SD303	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304
SAMPLE DATE	09/02/05	09/02/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	09/01/05	09/01/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
BUTYL BENZYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
CAPROLACTAM	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
CARBAZOLE	82 J	89 J	35 J	71 J	81 J	330 U	330 U	600	330 U	100 J	81 J	63 J	59 J	330 UJ
CHRYSENE	320 EBJ	320 EB	79	150	190	51	49	1600	80 EB	310	490	320	130 J	130
DIBENZO(A,H)ANTHRACENE	46	42	18	30	39	12	13	190	10	67	89	57	27 J	30
DIBENZOFURAN	39 J	37 J	330 U	330 U	330 U	330 U	330 U	350	330 U	40 J	43 J	330 U	330 U	330 U
DIETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
DIMETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
DI-N-BUTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
DI-N-OCTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U	330 U	330 U
FLUORANTHENE	890	890	220	470	590	140	160	3100	140	620	1300	720	410	320
FLUORENE	70 J	77	24	49	63	17	14	690	13	62	98	86	36 J	29
HEXACHLOROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
HEXACHLOROBUTADIENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
HEXACHLOROCYCLOPENTADIENE	330 R	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 UJ	330 UJ	330 UJ	330 R	330 UJ
HEXACHLOROETHANE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
HIGH MOLECULAR WEIGHT PAHS	3470 J	3360 J	958 J	1860 J	2360	620 J	677 J	14900	687	3350 J	5200 J	3340 J	1710 J	1810
INDENO(1,2,3-CD)PYRENE	150 J	140	57	96	110	38	38	850	34	190	260	160	83 J	90
ISOPHORONE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
LOW MOLECULAR WEIGHT PAHS	988 J	1060	313	616	825	202	187 J	6380	174	891	1360	1150	506 J	342
NAPHTHALENE	12	20	6.6	18	7.2	4.4	7.1	350	3.6	58	15	13	16 J	10
NITROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-NITROSO-DI-N-PROPYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-NITROSODIPHENYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PENTACHLOROPHENOL	670 U	670 U	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U	670 U	670 U	670 U
PHENANTHRENE	650	690	190	360	510	120	110	3000	110	460	820	720	290 J	180
PHENOL	83 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	69 J	330 U	330 U
PYRENE	700	710	150	370	450	93	130	2800	140	590	1000	750	350	440
TOTAL CARCINOGENIC PAHS-HALFND	1720 J	1620 J	526 J	924 J	1190	343 J	342 J	8140	369	1930 J	2610 J	1680 J	853 J	954
TOTAL CARCINOGENIC PAHS-POS	1720 J	1620 J	526 J	924 J	1190	343 J	342 J	8140	369	1930 J	2610 J	1680 J	853 J	954
TOTAL CHLORINATED VOCS	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
TOTAL PAHS	4450 J	4420 J	1270 J	2480 J	3190	822 J	864 J	21300	861	4240 J	6560 J	4490 J	2220 J	2150
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	3.3 U	32 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	16 U	16 U	33 U	33 UJ	33 U
4,4'-DDE	3.3 U	32 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	16 U	16 U	33 U	33 UJ	33 U
4,4'-DDT	3.3 U	32 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	16 U	16 U	33 U	33 UJ	33 U
ALDRIN	1.7 U	17 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	8.5 U	8.4 U	17 U	17 U	17 U
ALPHA-BHC	1.7 U	17 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	8.5 U	8.4 U	17 U	17 U	17 U
ALPHA-CHLORDANE	1.7 U	17 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	8.5 U	8.4 U	17 U	17 U	17 U

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5
LOCATION ID	G32-SD301	G32-SD301	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD303	G32-SD303	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304
SAMPLE DATE	09/02/05	09/02/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	09/01/05	09/01/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
AROCLOR-1016	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	330 U	330 U	330 U
AROCLOR-1221	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	330 U	330 U	330 U
AROCLOR-1232	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	330 U	330 U	330 U
AROCLOR-1242	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	330 U	330 U	330 U
AROCLOR-1248	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	330 U	330 U	330 U
AROCLOR-1254	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	330 U	330 U	330 U
AROCLOR-1260	33 U	33 U	46	33 U	33 U	33 J	33 U	120	85	840 J	880 J	3600 J	3800 J	3300 J
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	7.4 J	17 U	1.7 U	1.7 U	1.8 R	1.7 U	1.7 U	1.7 U	2.1 R	8.5 U	7.8 R	17 U	17 U	17 U
DELTA-BHC	1.7 U	17 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	8.5 U	8.4 U	17 U	17 U	17 U
DIELDRIN	3.3 U	32 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	16 U	16 U	33 U	33 U	33 U
ENDOSULFAN I	1.7 U	17 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	8.5 U	8.2 J	17 U	17 UJ	17 U
ENDOSULFAN II	3.3 U	32 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	16 U	16 U	33 U	33 UJ	33 U
ENDOSULFAN SULFATE	3.3 U	32 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	26 J	26 J	67 J	79 J	58 R
ENDRIN	3.3 U	32 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	16 U	16 U	33 U	33 U	33 U
ENDRIN ALDEHYDE	3.3 U	32 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	16 U	16 U	33 U	35 R	33 U
ENDRIN KETONE	3.3 U	32 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	16 UJ	16 U	33 U	33 UJ	33 U
GAMMA-BHC (LINDANE)	1.7 U	17 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	8.5 U	8.4 U	17 U	17 U	17 U
GAMMA-CHLORDANE	1.7 U	17 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	13 R	13 J	51 J	66	47 J
HEPTACHLOR	1.7 U	17 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	8.5 U	8.4 U	17 U	17 U	17 U
HEPTACHLOR EPOXIDE	1.7 U	17 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	8.5 U	8.4 U	17 U	17 U	17 U
METHOXYCHLOR	17 U	170 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	85 U	84 U	170 U	170 U	170 U
TOTAL AROCLOR	33 U	33 U	46	33 U	33 U	33 J	33 U	120	85	840 J	880 J	3600 J	3800 J	3300 J
TOTAL CHLORDANE	1.7 U	17 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	8.5 U	13 J	51 J	66	47 J
TOTAL DDD/DDE/DDT	3.3 U	32 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	16 U	16 U	33 U	33 UJ	33 U
TOXAPHENE	170 U	1700 U	170 U	170 U	170 U	170 U	170 U	170 U	170 U	850 U	840 U	1700 U	1700 U	1700 U
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5
LOCATION ID	G32-SD301	G32-SD301	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD303	G32-SD303	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304
SAMPLE DATE	09/02/05	09/02/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	09/01/05	09/01/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)														
ALUMINUM	4750	5230	9100	5930	5500	7440	5390	8520	7740	4980 J	4590 J	6250 J	5960 J	5620 J
ANTIMONY	0.056 UJ	0.39 UJ	0.72 U	0.33 U	0.44 U	0.74 U	0.43 U	0.055 UJ	0.056 UJ	2.8 J	2.6 J	3.1 J	3 J	4.2 J
ARSENIC	1.3 J	1.2 J	7.1 J	4.6 J	3.1 J	4 J	3.3 J	2.6 J	1.7 J	2.4 J	2.4 J	2 J	2.9 J	2.6 J
BARIUM	5.5 J	6.8 J	24.9 J	15 J	10.6 J	13.7 J	16.3 J	10.9 J	18 J	11 J	9.4 J	11.2 J	12.5 J	10.3 J
BERYLLIUM	0.23	0.23	0.45	0.25	0.19	0.24	0.11	0.34	0.3	0.42	0.4	0.47	0.53	0.45
CADMIUM	0.04 UJ	0.049 UJ	0.83 J	0.62 J	0.48 UJ	0.6 J	0.5 J	0.18 UJ	0.16 UJ	0.0057 UJ	0.0057 UJ	0.0053 UJ	0.097 J	0.0056 UJ
CALCIUM	1740 J	1410 J	16700 J	32300 J	8860 J	15200 J	22900 J	31600 J	35000 J	22400 J	18700 J	26900 J	10600 J	11000 J
CHROMIUM	10.2 J	10.1 J	28.4	22.1	12.6	16	12.7	18.2 J	17.3 J	10.7 J	13.7 *	12.9 J	16.2	11.7 J
COBALT	2.2 J	2.2 J	4.5 J	3.1 J	3.1 J	3.6 J	3.4 J	3.2 J	3.2 J	3.1 J	2.9 J	2.7 J	3.7 J	3.1 J
COPPER	9.3	11	26.5 J	18.2 J	9.7 J	16.2 J	9.1 J	16.1	14.3	34 J	23.1 J	15.7 J	22.7 J	23.2 J
CYANIDE	0.3 J	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U	0.12 U	0.12 UJ	0.12 UJ	0.11 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.14 J
IRON	9520	10200	15200 J	10700 J	10800 J	13100 J	10600 J	18700	16200	11400	11300	14300	12600	12300
LEAD	10.5 J	9.5 J	33.6 J	21.7 J	14.1 J	40.3 J	12.5 J	23.4 J	20.5 J	43.6 J	20.5 J	23.5 J	59.6 J	41.9 J
MAGNESIUM	2830	2860	4760	3040	3080	3930	3050	4430	4240	2900 J	2770 J	3650 J	3050 J	2960 J
MANGANESE	114 J	113 J	158	114	117	154	121	177 J	157 J	108 J	99.1 J	134 J	111 J	118 J
MERCURY	0.01 UJ	0.0067 U	0.13	0.11	0.06	0.051	0.04	0.055 U	0.066 U	0.052 J	0.043 J	0.045 J	0.047 J	0.076 J
NICKEL	6.2 J	6.8 J	13.1 J	13 J	7.2 J	10 J	7.1 J	9.7 J	9.6 J	8.3 J	8.1 J	7.9 J	8.6 J	8.5 J
POTASSIUM	658	655	2400 J	1320 J	974 J	1250 J	1080 J	1220	1080	784	861	1170	980	836
SELENIUM	0.067 UJ	0.066 UJ	0.068 U	0.068 U	0.063 U	0.068 U	0.065 U	0.066 UJ	0.067 UJ	5.2 J	5.4 J	6.5 J	5 J	6.2 J
SILVER	0.019 UJ	0.019 UJ	0.019 U	0.019 U	0.018 U	0.019 U	0.018 U	0.019 UJ	0.019 UJ	0.02 U	0.02 U	0.018 U	0.018 U	0.019 U
SODIUM	2940	2250	9580	4780 J	3940 J	4830 J	3260 J	3480	3670	3300 J	4040 J	3980 J	3140 J	3250 J
THALLIUM	0.079 UJ	0.078 UJ	0.33 UJ	0.081 U	0.074 U	0.081 U	0.38 UJ	0.17 J	0.079 UJ	1 J	0.82 J	1.1 J	1 J	1.2 J
VANADIUM	13.8 J	13.9 J	28.4 J	17.8 J	16.7 J	17.1 J	17.9 J	24.1 J	22.4 J	18.5 J	15.6 J	18.5 J	16.5 J	18.4 J
ZINC	29.5 J	28.2 J	72.3	48.1	34.6 J	63.2	33.3 J	57.9 J	49.2 J	44.3 J	41 J	39.7 J	41.7 J	98.1 J
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	5200 J	9300 J	15000 J	5400 J	9400 J	7200 J	2400	10000 J	10000 J	4400 J	7000 J	5900 J	7200 J	7900 J
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	0.108872	0.110898	0.140154	0.120658	0.102645	0.106753	0.066477	0.482962	0.113127	0.595592	0.636911	2.119143	2.217052	1.938128
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT CLAY	3.8	3.2	6.9	9.4	5	6.3	3.8	7	7	3.6	4	4.6	3.1	5.1
PERCENT COARSE SAND	9.7	14.3	6.5	5.8	8.4	8	8.8	11.3	13.9	5.5	2.7	8	2.8	9.9
PERCENT FINE SAND	52.5	46.3	33	36.7	26	30.7	28.9	23.5	24	60.6	61.8	50.9	69.2	39.7
PERCENT GRAVEL	15.6	15.8	9.1	4.8	7.3	4.2	5.2	3.4	3.9	4.1	1.7	2.4	0.8	9.4
PERCENT MEDIUM SAND	15.9	16.6	24	17.1	41.4	38.9	45.4	42.4	42.5	18.8	19.1	26.9	15.2	19

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5
LOCATION ID	G32-SD301	G32-SD301	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD303	G32-SD303	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304
SAMPLE DATE	09/02/05	09/02/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	09/01/05	09/01/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
PERCENT SILT	2.4	3.9	20.5	26.2	12	11.9	7.9	12.3	8.7	7.3	10.7	7.2	8.9	16.9
PERCENT SOLIDS	80.1	84.7	74.9	77	82.7	76.9	82.9	76.5	75.1	77.1	81	82.3	77.7	83.4
SIEVE 1"	100	100	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1-1/2"	100	100	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE 2"	100	100	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE 3"	100	100	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE 3/4"	93.1	100	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE 3/8"	89.3	97	96.2	98.8	99	99.7	98.6	99.8	100	99.4	98.9	99.4	100	95.6
SIEVE NO. 004	84.4	84.2	90.9	95.2	92.7	95.8	94.8	96.6	96.1	95.9	98.3	97.6	99.2	90.6
SIEVE NO. 010	74.6	70	84.3	89.4	84.3	87.8	86.1	85.3	82.2	90.4	95.6	89.6	96.4	80.7
SIEVE NO. 020	67.3	61.5	74	80.4	69.7	71.9	69.8	67.3	64.8	82.7	90	77.5	90	70.9
SIEVE NO. 040	58.7	53.4	60.3	72.3	42.9	48.9	40.7	42.8	39.7	71.5	76.5	62.7	81.2	61.7
SIEVE NO. 060	35.6	33.8	51.2	62	27.5	36.1	26.7	30	26.2	51.4	56.7	44	51.8	49.5
SIEVE NO. 080	20	19.9	45.9	56.6	23.8	31.2	21.8	26.4	22.3	32.3	38	30.7	31	39.1
SIEVE NO. 100	15.2	15.5	42.3	52.9	22.2	28.4	19.2	24.7	20.6	24.8	28.4	23.7	24.1	34
SIEVE NO. 200	6.2	7.1	27.4	35.6	17	18.2	11.8	19.3	15.7	10.9	14.7	11.8	12	22
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	0.88 J	0.88 J	5.4 J	5.7 J	4.7 J	3.4 J	1.8 J	1.3 J	1.9 J	7 J	11.5 J	10.5 J	3.1 J	2.6 J
CADMIUM	0.002 UJ	0.002 UJ	0.0034 UJ	0.0017 UJ	0.0012 UJ	0.0098 UJ	0.0013 UJ	0.0022 UJ	0.0024 UJ	0.0043 UJ	0.0036 UJ	0.0051 UJ	0.038 J	0.0031 UJ
COPPER	0.069 UJ	0.039 UJ	0.14 J	0.16 J	0.088 J	2.4 J	0.063 UJ	0.066 UJ	0.1 UJ	0.23 J	0.15 J	0.17 J	0.16 J	0.14 J
LEAD	0.031 J	0.019 UJ	0.062 J	0.08 J	0.045 J	0.05 J	0.044 J	0.074 J	0.078 J	0.099 J	0.095 J	0.11 J	0.16 J	2.1 J
MERCURY	0.00005 UJ	0.00003 U	0.00065	0.00055	0.0003	0.00025	0.0002	0.00027 U	0.00033 U	0.00026 J	0.00021 J	0.00022 J	0.00023 J	0.00038 J
NICKEL	0.17 UJ	0.034 UJ	0.058 J	0.058 J	0.14 J	3.2 J	0.026 J	0.026 UJ	0.39 UJ	0.63 J	0.039 J	0.036 J	0.037 J	0.046 J
ZINC	0.19 J	0.11 J	0.45 J	0.54 J	0.32 J	0.35 J	0.33 J	0.35 J	0.4 J	0.36 J	0.56 J	0.36 J	0.49 J	0.85 J
AVS/SEM (RATIO)														
SEM/AVS	0.25	0.12	0.13	0.15	0.13	1.8	0.22	0.33	0.25	0.19	0.073	0.064	0.29	1.2
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	5 U	4 UJ	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
1,1,2,2-TETRACHLOROETHANE	5 UJ	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
1,1,2-TRICHLOROETHANE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	4 UJ	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
1,1-DICHLOROETHANE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
1,1-DICHLOROETHENE	5 U	4 UJ	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
1,2,4-TRICHLOROBENZENE	5 UJ	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
1,2-DIBROMO-3-CHLOROPROPANE	5 UJ	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
1,2-DIBROMOETHANE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
1,2-DICHLOROBENZENE	5 UJ	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
1,2-DICHLOROETHANE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5
LOCATION ID	G32-SD301	G32-SD301	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD303	G32-SD303	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304
SAMPLE DATE	09/02/05	09/02/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	09/01/05	09/01/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1,2-DICHLOROPROPANE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
1,3-DICHLOROBENZENE	5 UJ	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
1,4-DICHLOROBENZENE	5 UJ	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
2-BUTANONE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	5 J	6 U
2-HEXANONE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
4-METHYL-2-PENTANONE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
ACETONE	120 J	18 UJ	59 JEB	14 JEB	35 JEB	19 JEB	240 JEB	140 J	340 U	23 JEB	18 JEB	43 JEB	18 JEB	12 JEB
BENZENE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
BROMODICHLOROMETHANE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
BROMOFORM	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
BROMOMETHANE	5 U	4 U	6 U	3 U	2 U	2 U	4 UJ	6 U	5 U	6 U	6 U	9 U	6 U	6 U
BTEX	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
CARBON DISULFIDE	1 J	4 U	6	1 J	2 U	2 J	4 UJ	6 U	5 U	2 J	4 J	3 J	7	2 J
CARBON TETRACHLORIDE	5 U	4 UJ	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
CHLOROBENZENE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
CHLORODIBROMOMETHANE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
CHLOROETHANE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
CHLOROFORM	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
CHLOROMETHANE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
CIS-1,2-DICHLOROETHENE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
CIS-1,3-DICHLOROPROPENE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
CYCLOHEXANE	5 U	4 UJ	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
DICHLORODIFLUOROMETHANE	5 U	4 UJ	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
ETHYLBENZENE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
ISOPROPYLBENZENE	5 U	4 UJ	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
M+P-XYLENES	5 U	4 U	NA	NA	NA	NA	NA	6 U	5 U	NA	NA	NA	NA	NA
METHYL ACETATE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
METHYL CYCLOHEXANE	5 U	4 UJ	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
METHYL TERT-BUTYL ETHER	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
METHYLENE CHLORIDE	24 U	9 UJ	67 U	15 U	19 U	16 U	54 U	20 U	27 U	56 U	50 U	100 U	39 UJ	73 U
O-XYLENE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
P-XYLENE	NA	NA	6 U	3 U	2 U	2 U	4 U	NA	NA	6 U	6 U	9 U	6 U	6 U
STYRENE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
TETRACHLOROETHENE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
TOLUENE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
TOTAL 1,2-DICHLOROETHENE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
TOTAL CHLORINATED ETHENES	5 U	4 UJ	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
TOTAL CHLORINATED VOCS	5 UJ	4 UJ	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
TOTAL XYLENES	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
TRANS-1,2-DICHLOROETHENE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD301-000.5	G32-SD301-0.51.0	G32-SD302A-000.5	G32-SD302B-000.5	G32-SD302C-000.5	G32-SD302D-000.5	G32-SD302E-000.5	G32-SD303-000.5	G32-SD303-0.51.0	G32-SD304D-000.5	G32-SD304A-000.5	G32-SD304B-000.5	G32-SD304C-000.5	G32-SD304E-000.5
LOCATION ID	G32-SD301	G32-SD301	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD302	G32-SD303	G32-SD303	G32-SD304	G32-SD304	G32-SD304	G32-SD304	G32-SD304
SAMPLE DATE	09/02/05	09/02/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05	09/01/05	09/01/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TRANS-1,3-DICHLOROPROPENE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
TRICHLOROETHENE	5 U	4 U	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
TRICHLOROFLUOROMETHANE	5 U	4 UJ	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
VINYL CHLORIDE	5 U	4 UJ	6 U	3 U	2 U	2 U	4 U	6 U	5 U	6 U	6 U	9 U	6 U	6 U
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	33 J	20 J	28 J	20	33	15 J	21	32 J	29	46	38	41	69	35
GASOLINE RANGE ORGANICS	5.6 U	4.1 U	9.9 U	4.9 U	6.2 U	5.5 U	6.9 U	9.3 U	6.1 U	11 U	6.1 U	17 U	9.5 U	8.6 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	GI-SD511-0006	GI-SD304-0006	G32-SD305A-000.5	G32-SD305B-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	04/30/10	05/13/10	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,2'-OXYBIS(1-CHLOROPROPANE)	330 UJ	330 UJ	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U	330 UJ
2,4,5-TRICHLOROPHENOL	670 U	670 U	670 U	NA	NA	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U
2,4,6-TRICHLOROPHENOL	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DICHLOROPHENOL	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DIMETHYLPHENOL	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DINITROPHENOL	670 UJ	670 UJ	670 UJ	NA	NA	670 U	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	660 UJ	670 UJ	670 UJ
2,4-DINITROTOLUENE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,6-DINITROTOLUENE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-CHLORONAPHTHALENE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-CHLOROPHENOL	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-METHYLNAPHTHALENE	3.3 UJ	8.32 J	19 J	9.3 U	13 J	3.3 U	6.4	4.1	4.6	3.3 U	5.1	5	3.3 U	3.3 U
2-METHYLPHENOL	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-NITROANILINE	670 U	670 U	670 U	NA	NA	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U
2-NITROPHENOL	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
3,3'-DICHLOROBENZIDINE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
3-NITROANILINE	670 U	670 U	670 U	NA	NA	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U
4,6-DINITRO-2-METHYLPHENOL	670 U	670 UJ	670 UJ	NA	NA	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U
4-BROMOPHENYL PHENYL ETHER	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-CHLORO-3-METHYLPHENOL	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-CHLOROANILINE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-CHLOROPHENYL PHENYL ETHER	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-METHYLPHENOL	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-NITROANILINE	670 UJ	670 UJ	670 UJ	NA	NA	670 U	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	660 UJ	670 UJ	670 UJ
4-NITROPHENOL	670 UJ	670 UJ	670 UJ	NA	NA	670 U	670 U	670 U	670 U	670 U	670 U	660 UJ	670 U	670 UJ
ACENAPHTHENE	16 J	43.5 J	100 J	4.2 J	70 J	4.5	25	25	16	12	21	33	28 J	6.3
ACENAPHTHYLENE	8 J	16.5 J	20 J	1.9 J	44 UJ	4	9	5	8.3	6.8	6.1	6.8	6.7 J	6.6
ACETOPHENONE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
ANTHRACENE	58 J	129 J	310 J	11	120 J	18	74	68	54	49	68	88 J	86 J	22
ATRAZINE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
BENZALDEHYDE	330 UJ	330 UJ	330 UJ	NA	NA	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
BENZO(A)ANTHRACENE	110 J	210 J	550	25	220 J	37	140	110	81	80	100	180 J	140 J	47
BENZO(A)PYRENE	110 J	230 J	480	28	210 J	34	130	100	70	72	91	150 J	140 J	43
BENZO(B)FLUORANTHENE	160 J	345 J	610	27	160 J	51	170	120	110	88	120	180 J	180 J	57
BENZO(G,H,I)PERYLENE	82 J	146 J	300 J	21	120 J	25	86	64	46	46	58	100 J	76 J	35
BENZO(K)FLUORANTHENE	45 J	108 J	200 J	24	180 J	17	59	45	30	37	36	60 J	65 J	18
BIS(2-CHLOROETHOXY)METHANE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
BIS(2-CHLOROETHYL)ETHER	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
BIS(2-ETHYLHEXYL)PHTHALATE	54 J	62 J	43 J	NA	NA	330 U	330 U	46 J	52 J	44 J	43 J	57 J	40 J	39 J

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	GI-SD511-0006	GI-SD304-0006	G32-SD305A-000.5	G32-SD305B-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	04/30/10	05/13/10	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
BUTYL BENZYL PHTHALATE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
CAPROLACTAM	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
CARBAZOLE	330 UJ	132 J	140 J	NA	NA	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
CHRYSENE	90 J	200 J	550	31	230 J	26	110	73	74	53	68	120 J	100 J	29
DIBENZO(A,H)ANTHRACENE	22 J	44.5 J	90 J	7.1 J	33 J	7.3	25	18	14	13	17	28 J	22 J	9.3
DIBENZOFURAN	330 U	102 J	57 J	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
DIETHYL PHTHALATE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
DIMETHYL PHTHALATE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
DI-N-BUTYL PHTHALATE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
DI-N-OCTYL PHTHALATE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
FLUORANTHENE	220 J	420 J	1300	49	520 J	71	290	230	270	150	200	440	290 J	68
FLUORENE	15 J	38.5 J	96 J	4.7 J	57 J	4.5	25	21	12	11	21	26	24 J	5.1
HEXACHLOROBENZENE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
HEXACHLOROBUTADIENE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
HEXACHLOROCYCLOPENTADIENE	330 UJ	330 UJ	330 UJ	NA	NA	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
HEXACHLOROETHANE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
HIGH MOLECULAR WEIGHT PAHS	1120 J	2240 J	5450 J	271 J	2210 J	363	1350	1000	945	736	921	1660 J	1410 J	414
INDENO(1,2,3-CD)PYRENE	62 J	126 J	270 J	16	130 J	21	73	53	40	37	51	87 J	68 J	26
ISOPHORONE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
LOW MOLECULAR WEIGHT PAHS	211 J	551 J	1430 J	55.8 J	690 J	67	341	291	213	192	270	406 J	320 J	73
NAPHTHALENE	3.7 J	30.8 J	36 J	9.3 U	44 UJ	3.3 U	12	8.2	7.7	3.7	8.4	7.2	5.1 J	3.3 U
NITROBENZENE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-NITROSO-DI-N-PROPYLAMINE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-NITROSODIPHENYLAMINE	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PENTACHLOROPHENOL	670 U	670 U	670 U	NA	NA	670 U	670 U	670 U	670 U	670 U	670 U	660 U	670 U	670 U
PHENANTHRENE	110 J	285 J	850	34	430 J	36	190	160	110	110	140	240 J	170 J	33
PHENOL	330 U	330 U	80 J	NA	NA	330 U	41 J	330 U	330 U	330 U	330 U	330 U	330 U	36 J
PYRENE	220 J	405 J	1100	43	410 J	74	270	190	210	160	180	310 J	330 J	82
TOTAL CARCINOGENIC PAHS-HALFND	599 J	1260 J	2750 J	158 J	1160 J	193	707	519	419	380	483	805 J	715 J	229
TOTAL CARCINOGENIC PAHS-POS	599 J	1260 J	2750 J	158 J	1160 J	193	707	519	419	380	483	805 J	715 J	229
TOTAL CHLORINATED VOCS	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
TOTAL PAHS	1330 J	2780 J	6880 J	327 J	2900 J	430	1690	1290	1160	928	1190	2060 J	1730 J	487
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	16 U	16 U	3.3 U	NA	NA	4.2 UJ	3.3 U	3.3 U	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U
4,4'-DDE	16 U	16 U	3.3 U	NA	NA	4.2 UJ	3.3 U	3.3 U	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U
4,4'-DDT	16 U	16 U	3.3 U	NA	NA	4.2 UJ	3.3 U	3.3 U	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U
ALDRIN	8.4 U	8.45 U	1.7 U	NA	NA	2.2 UJ	1.7 U	2 J	8.5 U	1.9 J	1.7 U	1.7 U	1.7 U	1.8 U
ALPHA-BHC	8.4 U	8.45 U	1.7 U	NA	NA	2.2 UJ	1.7 U	1.7 U	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U
ALPHA-CHLORDANE	8.4 U	8.45 U	1.7 U	NA	NA	2.2 UJ	1.7 U	1.7 U	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	GI-SD511-0006	GI-SD304-0006	G32-SD305A-000.5	G32-SD305B-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	04/30/10	05/13/10	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
AROCLOR-1016	33 U	33 U	33 U	NA	NA	42 UJ	33 U	33 U	330 U	33 U	33 U	33 U	33 U	35 U
AROCLOR-1221	33 U	33 U	33 U	NA	NA	42 UJ	33 U	33 U	330 U	33 U	33 U	33 U	33 U	35 U
AROCLOR-1232	33 U	33 U	33 U	NA	NA	42 UJ	33 U	33 U	330 U	33 U	33 U	33 U	33 U	35 U
AROCLOR-1242	33 U	33 U	33 U	NA	NA	42 UJ	33 U	33 U	330 U	33 U	33 U	33 U	33 U	35 U
AROCLOR-1248	33 U	33 U	33 U	NA	NA	42 UJ	33 U	33 U	330 U	33 U	33 U	33 U	33 U	35 U
AROCLOR-1254	33 U	33 U	33 U	NA	NA	42 UJ	33 U	33 U	330 U	33 U	33 U	33 U	33 U	35 U
AROCLOR-1260	920 J	880 J	300 J	NA	NA	42 UJ	180	230	2200 J	220	350	170 J	33 UJ	230 J
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	11 J	7.62 J	1.7 U	NA	NA	2.2 UJ	1.7 U	2.1 J	8.5 U	4.1 J	2.8	1.7 U	1.7 U	1.8 U
DELTA-BHC	8.4 U	8.45 U	1.7 U	NA	NA	2.2 UJ	1.7 U	1.7 U	8.5 U	1.6 J	1.7 U	1.7 U	1.7 U	1.8 U
DIELDRIN	16 U	16 U	3.3 U	NA	NA	4.2 UJ	3.3 U	3.3 U	16 J	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U
ENDOSULFAN I	8.4 U	8.45 U	1.7 U	NA	NA	2.2 UJ	1.7 U	1.7 U	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U
ENDOSULFAN II	16 U	16 U	3.3 U	NA	NA	4.2 UJ	3.3 U	3.3 U	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U
ENDOSULFAN SULFATE	24 R	26 J	7.5 J	NA	NA	4.2 UJ	3.3 U	6.4 J	16 U	3.3 U	9.4 J	4.6 J	3.3 U	7.8 J
ENDRIN	16 U	16 U	3.3 U	NA	NA	4.2 UJ	3.3 U	3.3 U	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U
ENDRIN ALDEHYDE	16 U	16 U	3.2 R	NA	NA	4.2 UJ	5.8 J	3.3 U	20 R	3.3 U	3.9 R	3.3 U	3.3 U	3.5 U
ENDRIN KETONE	19 J	13.5 J	6.7 R	NA	NA	4.2 UJ	3.3 U	3.3 U	16 U	3.3 R	3.3 U	3.3 U	3.3 U	3.4 J
GAMMA-BHC (LINDANE)	8.4 U	8.45 U	1.7 U	NA	NA	2.2 UJ	1.7 U	1.7 U	8.5 U	1.7 U	1.1 J	1.7 U	1.7 U	1.8 U
GAMMA-CHLORDANE	11 R	12 R	2.4 R	NA	NA	2.2 UJ	1.7 U	1.7 U	8.5 U	1.9 J	2 R	1.7 U	1.7 U	3.6
HEPTACHLOR	8.4 U	8.45 U	1.7 U	NA	NA	2.2 UJ	1.7 U	1.7 U	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U
HEPTACHLOR EPOXIDE	8.4 U	8.45 U	1.7 U	NA	NA	2.2 UJ	1.7 U	1.7 U	8.5 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U
METHOXYCHLOR	84 U	84.5 U	17 U	NA	NA	22 UJ	30	17 U	85 U	17 U	17 U	17 U	17 U	18 U
TOTAL AROCLOR	920 J	880 J	300 J	NA	NA	42 UJ	180	230	2200 J	220	350	170 J	33 UJ	230 J
TOTAL CHLORDANE	8.4 U	8.45 U	1.7 U	NA	NA	2.2 UJ	1.7 U	1.7 U	8.5 U	1.9 J	1.7 U	1.7 U	1.7 U	3.6
TOTAL DDD/DDE/DDT	16 U	16 U	3.3 U	NA	NA	4.2 UJ	3.3 U	3.3 U	16 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U
TOXAPHENE	840 U	845 U	170 U	NA	NA	220 UJ	170 U	170 U	850 U	170 U	170 U	170 U	170 U	180 U
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	NA	2.3 U	3.3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	0.75 UJ	0.67 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	94 J	410	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	140 J	650	NA	NA	NA	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	0.48 U	0.67 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	2.3 U	3.3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	30 J	190	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	0.93 U	11	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	12 J	74	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	276 J	1340	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	280 J	1340	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	GI-SD511-0006	GI-SD304-0006	G32-SD305A-000.5	G32-SD305B-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	04/30/10	05/13/10	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	0.48 U	0.67 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)														
ALUMINUM	5290 J	5140 J	4290 J	4770	4840	4580	4730	5500 J	6020 J	6010 J	5000 J	7210 J	6820 J	7640 J
ANTIMONY	2.9 J	2.85 J	1.9 J	0.71 UJ	1.96 UJ	0.41 U	0.52 U	3.2 J	2.8 J	3.2 J	2 J	2.6 J	2.7 J	2.4 J
ARSENIC	2.1 J	2.25 J	1.9 J	0.278 J	0.467 J	2.9 J	4 J	2.1 J	2.3 J	2.1 J	1.8 J	2.1 J	2.4 J	1.9 J
BARIUM	15.2 J	13.1 J	11.1 J	9.9 J	8.6	12.5 J	11 J	8.7 J	10.7 J	10.3 J	10.5 J	13.6 J	13.4 J	16.2 J
BERYLLIUM	0.44	0.43	0.38	0.238	0.219	0.13	0.17	0.39	0.47	0.43	0.42	0.51	0.5	0.51
CADMIUM	0.0053 UJ	0.0055 UJ	0.0056 UJ	0.301 J	0.23	0.61 J	0.69 J	0.0054 UJ	0.0055 UJ	0.0055 UJ	0.0056 UJ	0.0053 UJ	0.0053 UJ	0.0056 UJ
CALCIUM	26600 J	24500 J	9760 J	26700 J	16200	19000 J	33200 J	41100 J	36600 J	43300 J	24900 J	29400 J	4950 J	22000 J
CHROMIUM	10.9 J	10.8 J	8.8 J	11.9 J	9.8 J	12.8	14.6	14.1 J	16.2	15.5 J	17.4	12.2 J	12.1 J	13.9 J
COBALT	2.8 J	2.95 J	2.4 J	3.4 J	3.6	2.8 J	3 J	2.5 J	3 J	3.2 J	2.4 J	3.5 J	3.5 J	4 J
COPPER	16.3 J	25.2 J	14.8 J	10.6 J	13.4 J	15 J	21.5 J	23.3 J	38 J	23.8 J	26 J	17.3 J	18.5 J	20.4 J
CYANIDE	0.12 UJ	0.115 UJ	0.13 UJ	NA	NA	0.12 U	0.11 U	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ
IRON	11600	11500	9470	14300	11400	10100 J	11400 J	13200	13200	13000	10900	15100	12900	15800
LEAD	35.4 J	39.5 J	15.7 J	20.7 J	20.7 J	31.6 J	55.5	35 J	48.8 J	29.4 J	24.6 J	68.8 J	32.9 J	419 J
MAGNESIUM	3090 J	3000 J	2390 J	2800 J	2870	2400	2590	3210 J	3360 J	3660 J	3440 J	3610 J	3080 J	4220 J
MANGANESE	109 J	108 J	86 J	117 J	111	91.2	102	123 J	127 J	124 J	114 J	142 J	116 J	153 J
MERCURY	0.044 J	0.048 J	0.034 J	0.029	0.02 J	0.023 U	0.06	0.036 J	0.061 J	0.057 J	0.054 J	0.047 J	0.041 J	0.045 J
NICKEL	7.9 J	8.1 J	6.5 J	7.6 J	7.7	6.4 J	8 J	7.6 J	9.3 J	9.8 J	7.1 J	9.2 J	9.3 J	9.1 J
POTASSIUM	988	886	768	871	791 J	929 J	822 J	858	981	898	746	1020	922	984
SELENIUM	6.4 J	5.8 J	4.4 J	0.71 U	1.96 U	0.066 U	0.064 U	7 J	7.6 J	6.6 J	5.6 J	6.5 J	4.5 J	6 J
SILVER	0.018 U	0.019 U	0.019 U	0.24 UJ	0.22 UJ	0.019 U	0.018 U	0.019 U	0.019 U	0.019 U	0.019 U	0.018 U	0.018 U	0.019 U
SODIUM	3440 J	3370 J	3370 J	4540	3530	2840 J	3330 J	3570 J	3760 J	3490 J	3240 J	3260 J	2460 J	3800 J
THALLIUM	0.84 J	0.92 J	0.88 J	0.47 UJ	0.44 UJ	0.12 UJ	0.32 UJ	0.71 UJ	0.84 UJ	0.78 UJ	0.91 J	1.3 J	1.2 J	1.3 J
VANADIUM	18.1 J	18.3 J	13.9 J	18.2 J	15.3	15.5 J	15.4 J	15.3 J	20.6 J	19.4 J	16.6 J	24 J	15.6 J	24.1 J
ZINC	44.9 J	44.6 J	31.7 J	32.2 J	38.1 J	32.4 J	44 J	47 J	46.8 J	50 J	44.8 J	44.6 J	43.5 J	64.4 J
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	8700 J	6550 J	8200 J	5900	4100	13000 J	10000 J	5400 J	4800 J	8600 J	5400 J	14000 J	9800 J	12000 J
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	0.583965	0.589849	0.306824	0.200675	0.833686	0.071881	0.201359	0.205119	1.312397	0.196671	0.265486	0.197584	0.091284	0.374001
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT CLAY	4	3.8	3.4	NA	NA	3.8	5.7	4.1	5.2	5.2	4	6.2	8.9	4.5
PERCENT COARSE SAND	6.4	5.95	3.2	NA	NA	3.4	6.9	9.4	9.1	10	8.4	6.3	2.1	5.6
PERCENT FINE SAND	60.6	60.6	71.2	NA	NA	69.2	57.3	42.8	54	43.7	60.1	34.6	37.4	27.8
PERCENT GRAVEL	3.2	3.65	1.2	NA	NA	1.6	0.4	2.9	3.6	9.6	2.9	9.4	2.3	3
PERCENT MEDIUM SAND	17.2	18	11.9	NA	NA	17.2	27.4	36	22.8	24.1	20.7	28.7	19.5	51.9

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	GI-SD511-0006	GI-SD304-0006	G32-SD305A-000.5	G32-SD305B-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	04/30/10	05/13/10	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
PERCENT SILT	8.6	7.95	9.1	NA	NA	4.8	2.3	4.9	5.3	7.5	3.9	14.8	29.8	7.2
PERCENT SOLIDS	77.7	77.4	82	NA	NA	82.6	79.5	80.6	80.3	79.6	83.6	79.8	82.6	78.9
SIEVE 1"	100	100	100	100	NA	100	100	100	100	100	100	100	100	100
SIEVE 1/2"	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1-1/2"	100	100	100	NA	NA	100	100	100	100	100	100	100	100	100
SIEVE 2"	100	100	100	NA	NA	100	100	100	100	100	100	100	100	100
SIEVE 3"	100	100	100	NA	NA	100	100	100	100	100	100	100	100	100
SIEVE 3/4"	100	100	100	100	NA	100	100	100	100	100	100	100	100	100
SIEVE 3/8"	99.5	99.4	100	100	NA	100	100	100	100	94.8	100	93.1	98.5	99
SIEVE NO. 004	96.8	96.4	98.8	99	NA	98.4	99.6	97.1	96.4	90.4	97.1	90.6	97.7	97
SIEVE NO. 010	90.4	90.4	95.5	94	NA	95	92.7	87.6	87.2	80.4	88.7	84.3	95.6	91.4
SIEVE NO. 020	82.7	82.7	89.9	84	NA	88.5	80.2	71	76	68.5	80.2	73.7	91.3	74.8
SIEVE NO. 040	73.2	72.4	83.7	59	NA	77.8	65.3	51.7	64.4	56.4	67.9	55.6	76.1	39.5
SIEVE NO. 060	52.6	52	56.2	38	NA	58	42.7	35.3	48.2	43.7	49.1	35.2	66.7	20.7
SIEVE NO. 080	34	33.2	35	NA	NA	37.5	26.9	23.3	32.5	31.3	32.6	30.2	60	17.1
SIEVE NO. 100	26.5	25.6	27.3	18	NA	25.6	19.1	16.8	23.2	23.8	22.7	28.1	55	15.9
SIEVE NO. 200	12.6	11.8	12.5	8	NA	8.7	8	8.9	10.5	12.6	7.8	21	38.6	11.7
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	3.6 J	5.3 J	1.2 J	NA	NA	3.8 J	8 J	7.4 J	5.9 J	7.3 J	2 J	2.7 J	3.3 J	0.61 UJ
CADMIUM	0.0017 UJ	0.003 UJ	0.0031 UJ	NA	NA	0.0059 UJ	0.0016 UJ	0.00086 UJ	0.0025 UJ	0.0073 UJ	0.0052 UJ	0.0021 UJ	0.0049 UJ	0.019 UJ
COPPER	0.18 J	0.205 J	0.17 J	NA	NA	0.1 J	0.15 J	0.077 J	0.42 J	0.17 J	0.16 J	0.076 UJ	0.16 J	0.14 J
LEAD	0.28 J	0.19 J	0.089 J	NA	NA	0.075 J	0.19 J	0.057 J	0.083 J	0.088 J	0.23 J	0.29 J	0.078 J	1.1 J
MERCURY	0.00022 J	0.00024 J	0.00017 J	NA	NA	0.00011 U	0.0003	0.00018 J	0.0003 J	0.00028 J	0.00027 J	0.00023 J	0.0002 J	0.00022 J
NICKEL	0.043 J	0.336 J	0.26 J	NA	NA	0.031 J	0.23 J	0.031 J	1.2 J	0.061 J	0.048 J	0.036 UJ	0.073 UJ	0.031 UJ
ZINC	0.71 J	0.535 J	0.34 J	NA	NA	0.37 J	0.38 J	0.31 J	0.33 J	0.44 J	0.49 J	0.38 J	0.32 J	0.92 J
AVS/SEM (RATIO)														
SEM/AVS	0.34	0.265	0.72	NA	NA	0.15	0.12	0.064	0.34	0.1	0.46	0.25	0.17	3.5
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
1,1,2,2-TETRACHLOROETHANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
1,1,2-TRICHLOROETHANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
1,1,2-TRICHLOROTRIFLUOROETHANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
1,1-DICHLOROETHANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
1,1-DICHLOROETHENE	4 U	5 U	6	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
1,2,4-TRICHLOROBENZENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
1,2-DIBROMO-3-CHLOROPROPANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
1,2-DIBROMOETHANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
1,2-DICHLOROBENZENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
1,2-DICHLOROETHANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	GI-SD511-0006	GI-SD304-0006	G32-SD305A-000.5	G32-SD305B-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	04/30/10	05/13/10	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1,2-DICHLOROPROPANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
1,3-DICHLOROBENZENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
1,4-DICHLOROBENZENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
2-BUTANONE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	2 J
2-HEXANONE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
4-METHYL-2-PENTANONE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
ACETONE	16 JEB	19.5 JEB	16 JEB	NA	NA	240 JEB	81 JEB	20 JEB	62 JEB	80 JEB	20 JEB	29 JEB	31 JEB	190 JEB
BENZENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
BROMODICHLOROMETHANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
BROMOFORM	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
BROMOMETHANE	4 U	5 U	5 U	NA	NA	6 UJ	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
BTEX	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
CARBON DISULFIDE	3 J	2.5 J	12	NA	NA	5 J	2 J	2 J	3 J	2 J	7 J	2 J	10	6 U
CARBON TETRACHLORIDE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
CHLOROBENZENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
CHLORODIBROMOMETHANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
CHLOROETHANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
CHLOROFORM	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
CHLOROMETHANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
CIS-1,2-DICHLOROETHENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
CIS-1,3-DICHLOROPROPENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
CYCLOHEXANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
DICHLORODIFLUOROMETHANE	4 UJ	5 UJ	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 UJ	7 UJ	6 UJ
ETHYLBENZENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
ISOPROPYLBENZENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
METHYL CYCLOHEXANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
METHYL TERT-BUTYL ETHER	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
METHYLENE CHLORIDE	48 U	52 U	12 U	NA	NA	130 U	160 U	62 U	83 U	91 U	86 U	22 UJ	7 U	10 U
O-XYLENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
P-XYLENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
STYRENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
TETRACHLOROETHENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
TOLUENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
TOTAL 1,2-DICHLOROETHENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
TOTAL CHLORINATED ETHENES	4 U	5 U	6	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	1 J	6 U
TOTAL CHLORINATED VOCS	4 UJ	5 UJ	6	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 UJ	1 J	6 UJ
TOTAL XYLENES	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
TRANS-1,2-DICHLOROETHENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD304D-000.5-D	G32-SD304D-000.5-AVG	G32-SD304D-0.51.0	GI-SD511-0006	GI-SD304-0006	G32-SD305A-000.5	G32-SD305B-000.5	G32-SD305C-000.5	G32-SD305D-000.5	G32-SD305E-000.5	G32-SD305D-0.51.0	G32-SD306D-000.5	G32-SD306E-000.5	G32-SD306A-000.5
LOCATION ID	G32-SD304	G32-SD304	G32-SD304	G32-SD304F	G32-SD304F	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD305	G32-SD306	G32-SD306	G32-SD306
SAMPLE DATE	08/26/05	08/26/05	08/26/05	04/30/10	05/13/10	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/26/05	08/29/05	08/29/05	08/29/05
TOP DEPTH	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	ORIG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TRANS-1,3-DICHLOROPROPENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
TRICHLOROETHENE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	1 J	6 U
TRICHLOROFLUOROMETHANE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
VINYL CHLORIDE	4 U	5 U	5 U	NA	NA	6 U	7 U	7 U	9 U	7 U	8 U	7 U	7 U	6 U
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	46	46	51	NA	NA	25	36	49	28	31	35	34	24 J	32
GASOLINE RANGE ORGANICS	7 U	9 U	10 U	NA	NA	7.1 U	9.5 U	11 U	12 U	8.7 U	9.8 U	13 U	8 U	10 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD306B-000.5	G32-SD306C-000.5	G32-SD306D-000.5-D	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	GI-SD528-0006	GI-SD531-0006	G32-SD307-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5
LOCATION ID	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD307	G32-SD308	G32-SD308	G32-SD308	G32-SD308
SAMPLE DATE	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/30/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	DUP	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	FD	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	330 U	41 J	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
2,2'-OXYBIS(1-CHLOROPROPANE)	330 UJ	330 U	330 U	330 U	330 UJ	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
2,4,5-TRICHLOROPHENOL	660 U	670 U	670 U	670 U	665 U	670 U	670 U	NA	NA	670 U	670 U	670 U	670 U	670 U
2,4,6-TRICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
2,4-DICHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
2,4-DIMETHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
2,4-DINITROPHENOL	660 UJ	670 UJ	670 UJ	670 UJ	665 UJ	670 UJ	670 UJ	NA	NA	670 UJ	670 U	670 U	670 U	670 U
2,4-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 UJ	330 U	330 U	330 U	330 U
2,6-DINITROTOLUENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
2-CHLORONAPHTHALENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
2-CHLOROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
2-METHYLNAPHTHALENE	3.3 U	110	3.3 U	6.9	3.32	4.28	3.3 U	3.1 J	3.5 J	3.3 U	3.7	3.3 U	14	3.8
2-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
2-NITROANILINE	660 U	670 U	670 U	670 U	665 U	670 U	670 U	NA	NA	670 U	670 U	670 U	670 U	670 U
2-NITROPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
3,3'-DICHLOROBENZIDINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
3-NITROANILINE	660 U	670 U	670 U	670 U	665 U	670 U	670 U	NA	NA	670 U	670 U	670 U	670 U	670 U
4,6-DINITRO-2-METHYLPHENOL	660 U	670 UJ	670 U	670 UJ	665 U	670 UJ	670 U	NA	NA	670 U	670 U	670 U	670 U	670 U
4-BROMOPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
4-CHLORO-3-METHYLPHENOL	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
4-CHLOROANILINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
4-CHLOROPHENYL PHENYL ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
4-METHYLPHENOL	400	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	43 J	480	330 U	200 J	330 U
4-NITROANILINE	660 UJ	670 UJ	670 UJ	670 UJ	665 UJ	670 UJ	670 UJ	NA	NA	670 U	670 U	670 U	670 U	670 U
4-NITROPHENOL	660 UJ	670 UJ	670 U	670 UJ	665 UJ	670 UJ	670 U	NA	NA	670 U	670 U	670 U	670 U	670 U
ACENAPHTHENE	4.6	500	5.7	54 J	19.4	41 J	6.8	13	17	6.7	9.1	9.8	25	19
ACENAPHTHYLENE	5.3	12	3.3 U	17 J	4.22	11.8 J	5.3	2.2 J	6 J	6.2	3.3 U	3.3 U	3.4	3.3 U
ACETOPHENONE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
ANTHRACENE	17	830	21 J	260 J	54.5 J	173 J	43	22	32	15	48	28	98	44
ATRAZINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
BENZALDEHYDE	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
BENZO(A)ANTHRACENE	39	1100	28 J	460	104 J	300 J	99	55	69	30	72	74	310 J	87
BENZO(A)PYRENE	26	820	27 J	400	88.5 J	270 J	130	53 J	77 J	33	64	63	290	74
BENZO(B)FLUORANTHENE	48	1000	36 J	520	108 J	350 J	170	46	93	49	73 J	88	310	91
BENZO(G,H,I)PERYLENE	29	380 J	16 J	260 J	58 J	168 J	66	38 J	78 J	13	47	42	180	58
BENZO(K)FLUORANTHENE	18	330	13 J	170 J	36.5 J	118 J	60	40	64	19	24	26	110	30
BIS(2-CHLOROETHOXY)METHANE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
BIS(2-CHLOROETHYL)ETHER	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	35 J	41 J	40 J	49 J	40 J	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD306B-000.5	G32-SD306C-000.5	G32-SD306D-000.5-D	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	GI-SD528-0006	GI-SD531-0006	G32-SD307-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5
LOCATION ID	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD307	G32-SD308	G32-SD308	G32-SD308	G32-SD308
SAMPLE DATE	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/30/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	DUP	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	FD	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
BUTYL BENZYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
CAPROLACTAM	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
CARBAZOLE	330 U	560 J	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	330 U	330 U	330 U	57 J	330 U
CHRYSENE	27	1100	21 J	440	70.5 J	270 J	83	54	82	30	47	53	210	59
DIBENZO(A,H)ANTHRACENE	8.6	150	5.4 J	72 J	16.7 J	47 J	20	12	25	4	14	13	59	16
DIBENZOFURAN	330 U	300 J	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
DIETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
DIMETHYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
DI-N-BUTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
DI-N-OCTYL PHTHALATE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
FLUORANTHENE	50	2700	47 J	1100 J	244 J	695 J	120	120	140	70	160	150	510	170
FLUORENE	4.8	390	5.6	52 J	15.8	38 J	6.4	9.3	13	7.3	11	9.5	33	14
HEXACHLOROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
HEXACHLOROBUTADIENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
HEXACHLOROCYCLOPENTADIENE	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	330 UJ	330 U	330 U	330 U	330 U
HEXACHLOROETHANE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
HIGH MOLECULAR WEIGHT PAHS	326	10100 J	269 J	4550 J	964 J	2980 J	1030	551 J	824 J	313	687 J	655	2610 J	767
INDENO(1,2,3-CD)PYRENE	22	380 J	14 J	230 J	50.5 J	149 J	60	33	66	13	36	36	170	42
ISOPHORONE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
LOW MOLECULAR WEIGHT PAHS	64	4530	68.8 J	961 J	237 J	640 J	108	124 J	166 J	79.2	167	133	479	197
NAPHTHALENE	4.3	290	4.5	11 J	5.85	8.05 J	3.3 U	8.8 U	10 U	4	5.4	4.6	16	6.6
NITROBENZENE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
N-NITROSO-DI-N-PROPYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
N-NITROSODIPHENYLAMINE	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
PENTACHLOROPHENOL	660 U	670 U	670 U	670 U	665 U	670 U	670 U	NA	NA	670 U	670 U	670 U	670 U	670 U
PHENANTHRENE	28	2400	32 J	560	136 J	365 J	46	74	95	40	90	81	290	110
PHENOL	370	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	36 J	1400	330 U	180 J	330 U
PYRENE	58	2100	62 J	900 J	186 J	615 J	220	100 J	130 J	52	150	110	460	140
TOTAL CARCINOGENIC PAHS-HALFND	189	4880 J	144 J	2290 J	474 J	1500 J	622	293 J	476 J	178	330 J	353	1460 J	399
TOTAL CARCINOGENIC PAHS-POS	189	4880 J	144 J	2290 J	474 J	1500 J	622	293 J	476 J	178	330 J	353	1460 J	399
TOTAL CHLORINATED VOCS	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U
TOTAL PAHS	390	14600 J	338 J	5510 J	1200 J	3620 J	1140	675 J	990 J	392	854 J	788	3090 J	964
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	4.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	NA	4.1 U	3.3 U	3.3 U	3.3 U	3.3 U
4,4'-DDE	4.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	NA	4.1 U	3.3 U	3.3 U	3.3 U	3.3 U
4,4'-DDT	4.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	NA	4.1 U	3.3 U	3.3 U	3.3 U	3.3 U
ALDRIN	2.2 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	NA	2.1 U	1.7 U	1.7 U	1.7 U	1.7 U
ALPHA-BHC	2.2 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	NA	2.1 U	1.7 U	1.7 U	1.7 U	1.7 U
ALPHA-CHLORDANE	2.2 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	NA	2.1 U	1.7 U	1.7 U	1.7 U	1.7 U

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD306B-000.5	G32-SD306C-000.5	G32-SD306D-000.5-D	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	GI-SD528-0006	GI-SD531-0006	G32-SD307-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5
LOCATION ID	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD307	G32-SD308	G32-SD308	G32-SD308	G32-SD308
SAMPLE DATE	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/30/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	DUP	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	FD	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
AROCLOR-1016	43 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	NA	41 U	33 U	33 U	33 U	33 U
AROCLOR-1221	43 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	NA	41 U	33 U	33 U	33 U	33 U
AROCLOR-1232	43 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	NA	41 U	33 U	33 U	33 U	33 U
AROCLOR-1242	43 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	NA	41 U	33 U	33 U	33 U	33 U
AROCLOR-1248	43 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	NA	41 U	33 U	33 U	33 U	33 U
AROCLOR-1254	43 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	NA	41 U	33 U	33 U	33 U	33 U
AROCLOR-1260	100	520 J	33 UJ	74 J	93.2 J	45.2 J	33 U	NA	NA	41 U	33 U	33 U	33 U	33 U
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	2.2 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	NA	4.1 J	6.8 J	1.7 J	4.2 J	1.7 R
DELTA-BHC	2.2 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	NA	2.1 U	1.7 U	1.7 U	1.7 U	1.7 U
DIELDRIN	4.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	NA	4.1 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDOSULFAN I	2.2 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	NA	2.1 U	1.7 U	1.7 U	1.7 U	1.7 U
ENDOSULFAN II	4.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	NA	4.1 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDOSULFAN SULFATE	4.3 U	11 J	3.3 U	3.3 U	3.12 J	3.3 U	3.3 U	NA	NA	4.1 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDRIN	4.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	NA	4.1 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDRIN ALDEHYDE	4.3 U	4.9 R	3.3 U	5.6	3.3 U	3.62	3.3 U	NA	NA	4.1 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDRIN KETONE	4.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	NA	4.1 U	3.3 U	3.3 U	3.3 U	3.3 U
GAMMA-BHC (LINDANE)	2.2 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	NA	2.1 U	1.7 U	1.7 U	1.7 U	1.7 U
GAMMA-CHLORDANE	2.2 U	6	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	NA	2.1 U	1.7 U	1.7 U	1.7 U	1.7 U
HEPTACHLOR	2.2 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	NA	2.1 U	1.7 U	1.7 U	1.7 U	1.7 U
HEPTACHLOR EPOXIDE	2.2 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	NA	2.1 U	1.7 U	1.7 U	1.7 U	1.7 U
METHOXYCHLOR	22 U	17 U	17 U	17 U	17 U	17 U	17 U	NA	NA	21 U	17 U	17 U	17 U	17 U
TOTAL AROCLOR	100	520 J	33 UJ	74 J	93.2 J	45.2 J	33 U	NA	NA	41 U	33 U	33 U	33 U	33 U
TOTAL CHLORDANE	2.2 U	6	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	NA	NA	2.1 U	1.7 U	1.7 U	1.7 U	1.7 U
TOTAL DDD/DDE/DDT	4.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	NA	NA	4.1 U	3.3 U	3.3 U	3.3 U	3.3 U
TOXAPHENE	220 U	170 U	170 U	170 U	170 U	170 U	170 U	NA	NA	210 U	170 U	170 U	170 U	170 U
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	2.2 U	3.8 U	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	0.45 U	0.77 U	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	23	5.1 J	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	30	14	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	0.45 U	0.77 U	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	2.2 U	3.8 U	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	8.8 U	6.5 UJ	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	0.88 U	1.5 U	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	3.1 J	1.9 U	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	56.1 J	19.1 J	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	63.8 J	33.1 J	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD306B-000.5	G32-SD306C-000.5	G32-SD306D-000.5-D	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	GI-SD528-0006	GI-SD531-0006	G32-SD307-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5
LOCATION ID	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD307	G32-SD308	G32-SD308	G32-SD308	G32-SD308
SAMPLE DATE	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/30/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	DUP	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	FD	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	0.45 U	9 U	NA	NA	NA	NA	NA
METALS (MG/KG)														
ALUMINUM	7050	5840 J	6160 J	5800 J	6680 J	6310 J	6600 J	4450	4570	4450	5770	5540	5970	5250
ANTIMONY	0.055 UJ	3 J	2.6 J	2.5 J	2.6 J	2.6 J	2.2 J	0.67 UJ	0.75 UJ	0.055 UJ	0.32 U	0.39 U	0.42 U	0.45 U
ARSENIC	3 J	1.8 J	2.1 J	2.1 J	2.1 J	2.25 J	2.1 J	0.841 J	1.4 J	1.6 J	2.9 J	2.7 J	3.9 J	3.9 J
BARIUM	27 J	11.9 J	14.5 J	10.6 J	14 J	12 J	11.8 J	12.9	10.7	7.5 J	9.4 J	10.4 J	10.3 J	11.1 J
BERYLLIUM	0.41	0.47	0.47	0.42	0.49	0.46	0.56	0.253	0.242 J	0.24	0.28	0.12	0.13	0.16
CADMIUM	0.3 UJ	0.0053 UJ	0.0055 UJ	0.0056 UJ	0.0054 UJ	0.00545 UJ	0.0053 UJ	0.17 J	0.288	0.055 UJ	0.54 UJ	0.48 UJ	0.56 UJ	0.63 J
CALCIUM	11000 J	22300 J	15500 J	10100 J	22400 J	7520 J	9390 J	35400	18000	34800 J	25400 J	14700 J	34800 J	35600 J
CHROMIUM	12.5	12.3 J	11 J	11.1 J	11.6 J	11.6 J	10.5 J	8.9 J	11.3 J	9.3	11	11.2	12.2	14.2
COBALT	3.4 J	3.3 J	3.1 J	4 J	3.3 J	3.75 J	3.6 J	3	4	2.1 J	3.1 J	3.4 J	3.4 J	3.2 J
COPPER	20.7	14.1 J	14.7 J	20.7 J	16 J	19.6 J	16.6 J	16.4 J	102 J	15.9	9.6 J	9 J	12.4 J	13 J
CYANIDE	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	NA	NA	0.12 UJ	0.12 U	0.12 U	0.12 U	0.12 U
IRON	17200 J	11700	12100	12500	13600	12700	13000	12100	16500	11800 J	12300 J	11400 J	12600 J	13000 J
LEAD	690 J	61.6 J	85.9 J	43.7 J	77.4 J	38.3 J	25.3 J	96.8 J	199 J	24.9 J	14 J	14.2 J	14.1 J	13.5 J
MAGNESIUM	3390	3040 J	2940 J	2910 J	3280 J	3000 J	2830 J	2660	3040	3010	3230	3170	3690	3140
MANGANESE	140 J	118 J	115 J	110 J	128 J	113 J	116 J	127	122	121 J	134	124	172	135
MERCURY	0.066 J	0.045 J	0.022 J	0.039 J	0.0345 J	0.04 J	0.035 J	0.018 J	0.229	0.023 J	0.013 UJ	0.054	0.018 UJ	0.012 UJ
NICKEL	9.8 J	8 J	8.3 J	9.1 J	8.75 J	9.2 J	9.1 J	7.3	8.2	6.4 J	7.2 J	7.5 J	8.3 J	8.9 J
POTASSIUM	954 J	928	878	783	949	852	902	788 J	894 J	658 J	805 J	814 J	909 J	923 J
SELENIUM	0.066 UJ	6.6 J	4.8 J	5.3 J	5.65 J	4.9 J	5.9 J	2 U	2.24 U	0.065 UJ	0.064 U	0.066 U	0.065 U	0.068 U
SILVER	0.019 UJ	0.018 U	0.019 U	0.019 U	0.0185 U	0.0185 U	0.018 U	0.254 UJ	0.25 UJ	0.019 UJ	0.018 U	0.019 U	0.018 U	0.019 U
SODIUM	2870 J	3080 J	2880 J	2870 J	3070 J	2660 J	2200 J	3410	5480	3330 J	3190 J	3090 J	4420 J	3660 J
THALLIUM	0.078 U	1.1 J	1.1 J	1.2 J	1.2 J	1.2 J	1.2 J	0.123 J	0.5 UJ	0.077 U	0.12 UJ	0.078 U	0.22 UJ	0.26 UJ
VANADIUM	19.1 J	17 J	15.7 J	14.3 J	19.8 J	15 J	16.3 J	14.2	23.8	17.3 J	16.2 J	17.5 J	15 J	22.8 J
ZINC	131 J	40.5 J	41.2 J	37.1 J	42.9 J	40.3 J	45.3 J	40 J	47.2 J	30.9 J	35.8 J	33.4 J	38.1 J	34.9 J
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	3800	7500 J	6800 J	12000 J	10400 J	10900 J	7900 J	4400	6460	10000 J	4800 J	2500	2500	6500 J
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	0.445327	0.602236	0.09113	0.179344	0.144334	0.135271	0.075617	0.120589	0.188968	0.059492	0.064199	0.062111	0.099736	0.07613
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	-9999	-9999	NA	NA	NA	NA	NA
PERCENT CLAY	7.5	5.8	9	4.6	7.6	6.75	5.8	NA	NA	2.2	2.8	2.8	2.2	3.2
PERCENT COARSE SAND	9.1	3.5	4.5	4.7	5.4	3.4	4.2	NA	NA	10.6	8.5	7.3	12.2	6.5
PERCENT FINE SAND	32.1	47.2	43.5	58.3	39	47.8	49.1	NA	NA	28.3	18.9	23.2	21.4	25.9
PERCENT GRAVEL	3.7	0.8	1.4	1.5	5.4	1.9	0.6	NA	NA	14.7	8.8	8.8	13.5	12.3
PERCENT MEDIUM SAND	38.1	21	11.9	13.7	20.3	16.6	14.5	NA	NA	37.4	51	49.7	41.6	46

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD306B-000.5	G32-SD306C-000.5	G32-SD306D-000.5-D	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	GI-SD528-0006	GI-SD531-0006	G32-SD307-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5
LOCATION ID	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD307	G32-SD308	G32-SD308	G32-SD308	G32-SD308
SAMPLE DATE	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/30/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	DUP	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	FD	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
PERCENT SILT	9.6	21.7	29.6	17.3	22.2	23.6	25.8	NA	NA	6.9	10	8.2	9.1	6.1
PERCENT SOLIDS	79.4	80.1	81	79	80.4	80.8	83.1	NA	NA	85.7	83.1	82.9	83.5	82.5
SIEVE 1"	100	100	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	100	100	NA	NA	NA	NA	NA
SIEVE 1-1/2"	100	100	100	100	100	100	100	NA	NA	100	100	100	100	100
SIEVE 2"	100	100	100	100	100	100	100	NA	NA	100	100	100	100	100
SIEVE 3"	100	100	100	100	100	100	100	NA	NA	100	100	100	100	100
SIEVE 3/4"	100	100	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE 3/8"	100	100	100	100	96.6	99.2	100	100	100	92.7	95.1	95.4	94.2	90.1
SIEVE NO. 004	96.3	99.2	98.6	98.5	94.6	98.1	99.4	97	100	85.3	91.2	91.2	86.5	87.7
SIEVE NO. 010	87.3	95.7	94	93.9	89.2	94.8	95.2	90	97	74.8	82.7	83.9	74.3	81.2
SIEVE NO. 020	78.5	87.8	88.3	86.2	81	88.8	90.2	82	91	62.1	61.3	64.9	53.3	63.5
SIEVE NO. 040	49.2	74.7	82.1	80.2	68.8	78.2	80.7	47	66	37.4	31.7	34.2	32.7	35.2
SIEVE NO. 060	29.2	56.4	63.4	57.7	49.3	62.2	69.2	19	28	15	17.6	17.8	17.2	15.5
SIEVE NO. 080	24.8	46.6	57	46.4	43.6	53.2	59.6	NA	NA	11.7	15.2	14.6	14.3	12.4
SIEVE NO. 100	22.6	41.8	53.7	40.8	40.9	47.9	52.8	11	14	10.9	14.6	13.7	13.5	11.5
SIEVE NO. 200	17.1	27.6	38.6	21.9	29.8	30.2	31.6	7	8	9.1	12.8	11	11.3	9.3
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	4 J	3.6 J	7.2 J	6.8 J	4.95 J	5.05 J	6.1 J	NA	NA	1.1 J	3.1 J	7.1 J	2.6 J	1.9 J
CADMIUM	0.0061 UJ	0.0064 UJ	0.0048 UJ	0.0024 UJ	0.00345 UJ	0.00365 UJ	0.0063 UJ	NA	NA	0.0014 UJ	0.00086 UJ	0.00088 UJ	0.00098 UJ	0.0016 UJ
COPPER	0.39 J	0.21 J	0.2 J	0.15 J	0.119 J	0.155 J	0.094 J	NA	NA	0.11 J	0.098 J	0.022 UJ	0.068 UJ	0.063 UJ
LEAD	2.3 J	0.24 J	0.5 J	0.19 J	0.395 J	0.134 J	0.12 J	NA	NA	0.052 J	0.026 UJ	0.03 UJ	0.043 J	0.034 J
MERCURY	0.00033 J	0.00022 J	0.00011 J	0.00019 J	0.00017 J	0.000195 J	0.00017 J	NA	NA	0.00011 J	0.00006 UJ	0.00027	0.00009 UJ	0.00006 UJ
NICKEL	0.57 J	0.48 J	0.037 UJ	0.22 UJ	0.0365 UJ	0.146 UJ	0.037 UJ	NA	NA	0.024 UJ	0.36 J	0.015 J	0.027 J	0.044 J
ZINC	0.72 J	0.37 J	0.47 J	0.4 J	0.425 J	0.36 J	0.3 J	NA	NA	0.26 J	0.21 J	0.21 J	0.29 J	0.4 J
AVS/SEM (RATIO)														
SEM/AVS	1	0.36	0.16	0.11	0.205	0.14	0.084	NA	NA	0.38	0.22	0.032	0.14	0.25
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
1,1,2,2-TETRACHLOROETHANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
1,1,2-TRICHLOROETHANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
1,1,2-TRICHLOROTRIFLUOROETHANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
1,1-DICHLOROETHANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
1,1-DICHLOROETHENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
1,2,4-TRICHLOROBENZENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
1,2-DIBROMO-3-CHLOROPROPANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
1,2-DIBROMOETHANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
1,2-DICHLOROBENZENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
1,2-DICHLOROETHANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD306B-000.5	G32-SD306C-000.5	G32-SD306D-000.5-D	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	GI-SD528-0006	GI-SD531-0006	G32-SD307-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5
LOCATION ID	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD307	G32-SD308	G32-SD308	G32-SD308	G32-SD308
SAMPLE DATE	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/30/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	DUP	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	FD	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1,2-DICHLOROPROPANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
1,3-DICHLOROBENZENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
1,4-DICHLOROBENZENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
2-BUTANONE	7	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
2-HEXANONE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
4-METHYL-2-PENTANONE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
ACETONE	34 JEB	93 JEB	31 JEB	130 JEB	30 JEB	80.5 JEB	56 JEB	NA	NA	45 JEB	76 JEB	27 JEB	27 JEB	94 JEB
BENZENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
BROMODICHLOROMETHANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
BROMOFORM	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
BROMOMETHANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
BTEX	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
CARBON DISULFIDE	2 J	2 J	3 J	6 U	2.5 J	6.5	2 J	NA	NA	1 J	3 U	3 U	3 U	3 U
CARBON TETRACHLORIDE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
CHLOROBENZENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
CHLORODIBROMOMETHANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
CHLOROETHANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
CHLOROFORM	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
CHLOROMETHANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
CIS-1,2-DICHLOROETHENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
CIS-1,3-DICHLOROPROPENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
CYCLOHEXANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
DICHLORODIFLUOROMETHANE	6 UJ	8 UJ	5 UJ	6 UJ	6 UJ	6.5 UJ	6 UJ	NA	NA	5 U	3 U	3 U	3 U	3 U
ETHYLBENZENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
ISOPROPYLBENZENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
M+P-XYLENES	6 U	NA	NA	NA	NA	NA	NA	NA	NA	5 U	NA	NA	NA	NA
METHYL ACETATE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
METHYL CYCLOHEXANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
METHYL TERT-BUTYL ETHER	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
METHYLENE CHLORIDE	14 U	14 U	9 UJ	11 U	15.5 UJ	9 U	16 U	NA	NA	8 U	22 U	19 U	22 U	16 U
O-XYLENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
P-XYLENE	NA	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	NA	3 U	3 U	3 U	3 U
STYRENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
TETRACHLOROETHENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
TOLUENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
TOTAL 1,2-DICHLOROETHENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
TOTAL CHLORINATED ETHENES	6 U	8 U	5 U	6 U	6 U	2 J	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
TOTAL CHLORINATED VOCS	6 UJ	8 UJ	5 UJ	6 UJ	6 UJ	2 J	6 UJ	NA	NA	5 U	3 U	3 U	3 U	3 U
TOTAL XYLENES	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
TRANS-1,2-DICHLOROETHENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD306B-000.5	G32-SD306C-000.5	G32-SD306D-000.5-D	G32-SD306E-000.5-D	G32-SD306D-000.5-AVG	G32-SD306E-000.5-AVG	G32-SD306C-0.51.0	GI-SD528-0006	GI-SD531-0006	G32-SD307-000.5	G32-SD308A-000.5	G32-SD308B-000.5	G32-SD308C-000.5	G32-SD308D-000.5
LOCATION ID	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306	G32-SD306F	G32-SD307	G32-SD308	G32-SD308	G32-SD308	G32-SD308
SAMPLE DATE	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/30/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	DUP	DUP	AVG	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	FD	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TRANS-1,3-DICHLOROPROPENE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
TRICHLOROETHENE	6 U	8 U	5 U	6 U	6 U	2 J	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
TRICHLOROFLUOROMETHANE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
VINYL CHLORIDE	6 U	8 U	5 U	6 U	6 U	6.5 U	6 U	NA	NA	5 U	3 U	3 U	3 U	3 U
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	35	28	26	53 J	30	38.5 J	30	NA	NA	33	31	27	45	27
GASOLINE RANGE ORGANICS	8.1 U	9.5 U	8.5 U	8.3 U	10.8 U	8.15 U	8.6 U	NA	NA	7.9 U	4.4 U	4.5 U	5.5 U	4.3 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD308E-000.5	GI-SD520-0006	GI-SD521-0006	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5	GI-SD513-0006	GI-SD512-0006	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5
LOCATION ID	G32-SD308	G32-SD308	G32-SD308F	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/25/05	05/13/10	05/13/10	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/31/05	08/31/05	08/31/05	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	54 J	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	68 J
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	NA	NA	330 U	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	320 UJ	330 U	330 UJ	330 UJ
2,4,5-TRICHLOROPHENOL	670 U	NA	NA	670 U	660 U	670 U	670 U	670 U	NA	NA	660 U	660 U	670 U	680 U
2,4,6-TRICHLOROPHENOL	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
2,4-DICHLOROPHENOL	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
2,4-DIMETHYLPHENOL	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
2,4-DINITROPHENOL	670 U	NA	NA	670 UJ	660 UJ	670 UJ	670 UJ	670 UJ	NA	NA	660 UJ	660 U	670 UJ	680 UJ
2,4-DINITROTOLUENE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
2,6-DINITROTOLUENE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
2-CHLORONAPHTHALENE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
2-CHLOROPHENOL	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
2-METHYLNAPHTHALENE	280	8.9 J	31 J	4.2	3.3 U	3.3 U	3.3 U	5.1	1.4 J	42 J	6.4	3.3 U	3.3 U	220
2-METHYLPHENOL	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
2-NITROANILINE	670 U	NA	NA	670 U	660 U	670 U	670 U	670 U	NA	NA	660 U	660 U	670 U	680 U
2-NITROPHENOL	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
3,3'-DICHLOROBENZIDINE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
3-NITROANILINE	670 U	NA	NA	670 U	660 U	670 U	670 U	670 U	NA	NA	660 U	660 U	670 U	680 U
4,6-DINITRO-2-METHYLPHENOL	670 U	NA	NA	670 UJ	660 U	670 U	670 U	670 U	NA	NA	660 U	660 U	670 U	680 U
4-BROMOPHENYL PHENYL ETHER	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
4-CHLORO-3-METHYLPHENOL	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
4-CHLOROANILINE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
4-CHLOROPHENYL PHENYL ETHER	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
4-METHYLPHENOL	330 U	NA	NA	330 U	170 J	47 J	330 U	330 U	NA	NA	120 J	330 U	330 U	330 U
4-NITROANILINE	670 U	NA	NA	670 UJ	660 UJ	670 UJ	670 UJ	670 UJ	NA	NA	660 UJ	660 U	670 UJ	680 UJ
4-NITROPHENOL	670 U	NA	NA	670 UJ	660 UJ	670 UJ	670 UJ	670 UJ	NA	NA	660 UJ	660 U	670 UJ	680 UJ
ACENAPHTHENE	620	21 J	290 J	14	3.3 U	12	3.3 U	27	9 U	190 J	59 J	3.3 U	17	1300
ACENAPHTHYLENE	9.9	12 J	12 J	3.3 U	3.3 U	3.3 U	3.3 U	4.2	12	32 UJ	3.2 U	3.9	3.4	7.8
ACETOPHENONE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
ANTHRACENE	880	70 J	780 J	45	9.6	46	9.4	72	9 U	360 J	79 J	7.5	24	1300
ATRAZINE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
BENZALDEHYDE	330 UJ	NA	NA	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	320 UJ	330 UJ	330 UJ	330 UJ
BENZO(A)ANTHRACENE	1200	150 J	1600 J	56	16	59	27	100	28	420 J	130	17	39	1400
BENZO(A)PYRENE	960	150 J	1400 J	43	17	47	28	83	31 J	380 J	120	21	42	980
BENZO(B)FLUORANTHENE	1100	110 J	990 J	48	26	57	35	100	22	280 J	150	32	58	1200
BENZO(G,H,I)PERYLENE	300 J	92 J	680 J	30	12	34	24	52	25 J	190 J	65	13	26	410 J
BENZO(K)FLUORANTHENE	790	110 J	1100 J	17	9.2	21	13	38	24	260 J	57	12	22	760
BIS(2-CHLOROETHOXY)METHANE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
BIS(2-CHLOROETHYL)ETHER	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	NA	NA	47 J	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD308E-000.5	GI-SD520-0006	GI-SD521-0006	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5	GI-SD513-0006	GI-SD512-0006	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5
LOCATION ID	G32-SD308	G32-SD308	G32-SD308F	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/25/05	05/13/10	05/13/10	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/31/05	08/31/05	08/31/05	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
BUTYL BENZYL PHTHALATE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
CAPROLACTAM	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
CARBAZOLE	710 J	NA	NA	330 UJ	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	910
CHRYSENE	1300	160 J	1500 J	39	18	38	18	75	31	370 J	120	22	41	1200
DIBENZO(A,H)ANTHRACENE	190	29 J	270 J	8.6	3.3 U	9.2	6.6	17	6.8 J	70 J	17	3.6	6.5	140
DIBENZOFURAN	350	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	510
DIETHYL PHTHALATE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
DIMETHYL PHTHALATE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
DI-N-BUTYL PHTHALATE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
DI-N-OCTYL PHTHALATE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
FLUORANTHENE	2400	360 J	3300 J	110	36	120	36	220	48	1000 J	300 J	34	97	3400
FLUORENE	510	34 J	290 J	12	3.3 U	14	3.3 U	31	9 U	170 J	35 J	3.3 U	11	820
HEXACHLOROBENZENE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
HEXACHLOROBUTADIENE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
HEXACHLOROCYCLOPENTADIENE	330 U	NA	NA	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	320 UJ	330 U	330 UJ	330 UJ
HEXACHLOROETHANE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
HIGH MOLECULAR WEIGHT PAHS	10800 J	1520 J	14100 J	466	175	505	238	891	283 J	3910 J	1260 J	196	428	12500 J
INDENO(1,2,3-CD)PYRENE	320 J	82 J	690 J	25	9.8	28	18	46	19	190 J	61	12	21	400 J
ISOPHORONE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
LOW MOLECULAR WEIGHT PAHS	4920	425 J	3800 J	177	26.6	172	29.4	327	38.4 J	1880 J	433 J	27.4	134	7680
NAPHTHALENE	220	19 J	78 UJ	9.5	3.3 U	6	3.3 U	7.3	9 U	130 J	14 J	3.3 U	6.6	730
NITROBENZENE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
N-NITROSO-DI-N-PROPYLAMINE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
N-NITROSODIPHENYLAMINE	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
PENTACHLOROPHENOL	670 U	NA	NA	670 U	660 U	670 U	670 U	670 U	NA	NA	660 U	660 U	670 U	680 U
PHENANTHRENE	2400	260 J	2400 J	92	17	94	20	180	25	990 J	240 J	16	72	3300
PHENOL	330 U	NA	NA	330 U	330 U	62 J	330 U	330 U	NA	NA	150 J	330 U	330 U	330 U
PYRENE	2200	280 J	2600 J	89	31	92	32	160	48 J	750 J	240 J	29	76	2600
TOTAL CARCINOGENIC PAHS-HALFND	5860 J	791 J	7550 J	237	97.6	259	146	459	162 J	1970 J	655	120	230	6080 J
TOTAL CARCINOGENIC PAHS-POS	5860 J	791 J	7550 J	237	96	259	146	459	162 J	1970 J	655	120	230	6080 J
TOTAL CHLORINATED VOCS	330 U	NA	NA	330 U	330 U	330 U	330 U	330 U	NA	NA	320 U	330 U	330 U	330 U
TOTAL PAHS	15700 J	1950 J	17900 J	642	202	677	267	1220	321 J	5790 J	1690 J	223	562	20200 J
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	3.3 U	NA	NA	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U	NA	NA	4.2 U	4.1 U	4.6 U	4.3 U
4,4'-DDE	3.3 U	NA	NA	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U	NA	NA	4.2 U	4.1 U	4.6 U	4.3 U
4,4'-DDT	3.3 U	NA	NA	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U	NA	NA	4.2 U	4.1 U	4.6 U	4.3 U
ALDRIN	1.7 U	NA	NA	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U	NA	NA	2.2 U	2.1 U	2.4 U	2.2 U
ALPHA-BHC	1.7 U	NA	NA	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U	NA	NA	2.2 U	2.1 U	2.4 U	2.2 U
ALPHA-CHLORDANE	1.7 U	NA	NA	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U	NA	NA	2.2 U	2.1 U	2.4 U	2.2 U

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD308E-000.5	GI-SD520-0006	GI-SD521-0006	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5	GI-SD513-0006	GI-SD512-0006	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5
LOCATION ID	G32-SD308	G32-SD308	G32-SD308F	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/25/05	05/13/10	05/13/10	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/31/05	08/31/05	08/31/05	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
AROCLOR-1016	33 U	NA	NA	33 U	42 U	41 U	46 U	52 U	NA	NA	42 U	41 U	46 U	43 U
AROCLOR-1221	33 U	NA	NA	33 U	42 U	41 U	46 U	52 U	NA	NA	42 U	41 U	46 U	43 U
AROCLOR-1232	33 U	NA	NA	33 U	42 U	41 U	46 U	52 U	NA	NA	42 U	41 U	46 U	43 U
AROCLOR-1242	33 U	NA	NA	33 U	42 U	41 U	46 U	52 U	NA	NA	42 U	41 U	46 U	43 U
AROCLOR-1248	33 U	NA	NA	33 U	42 U	41 U	46 U	52 U	NA	NA	42 U	41 U	46 U	43 U
AROCLOR-1254	33 U	NA	NA	33 U	42 U	41 U	46 U	52 U	NA	NA	42 U	41 U	46 U	43 U
AROCLOR-1260	33 U	NA	NA	33 U	42 U	50	46 U	52 U	NA	NA	42 U	41	46 U	43 U
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	2 R	NA	NA	1.7 U	2.2 U	2.1 U	2.4 U	6.4	NA	NA	2.2 U	2.1 U	2.4 U	2.2 U
DELTA-BHC	1.7 U	NA	NA	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U	NA	NA	2.2 U	2.1 U	2.4 U	2.2 U
DIELDRIN	3.3 U	NA	NA	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U	NA	NA	4.2 U	4.1 U	4.6 U	4.3 U
ENDOSULFAN I	1.7 U	NA	NA	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U	NA	NA	2.2 U	2.1 U	2.4 U	2.2 U
ENDOSULFAN II	3.3 U	NA	NA	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U	NA	NA	4.2 U	4.1 U	4.6 U	4.3 U
ENDOSULFAN SULFATE	3.3 U	NA	NA	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U	NA	NA	4.2 U	4.1 U	4.6 U	4.3 U
ENDRIN	3.3 U	NA	NA	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U	NA	NA	4.2 U	4.1 U	4.6 U	4.3 U
ENDRIN ALDEHYDE	3.3 U	NA	NA	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U	NA	NA	4.2 U	4.1 U	4.6 U	4.3 U
ENDRIN KETONE	3.3 U	NA	NA	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U	NA	NA	4.2 U	4.1 U	4.6 U	4.3 U
GAMMA-BHC (LINDANE)	1.7 U	NA	NA	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U	NA	NA	2.2 U	2.1 U	2.4 U	2.2 U
GAMMA-CHLORDANE	1.7 U	NA	NA	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U	NA	NA	2.2 U	2.1 U	2.4 U	2.2 U
HEPTACHLOR	1.7 U	NA	NA	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U	NA	NA	2.2 U	2.1 U	2.4 U	2.2 U
HEPTACHLOR EPOXIDE	1.7 U	NA	NA	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U	NA	NA	2.2 U	2.1 U	2.4 U	2.2 U
METHOXYCHLOR	17 U	NA	NA	17 U	22 U	21 U	24 U	27 U	NA	NA	22 U	21 U	24 U	22 U
TOTAL AROCLOR	33 U	NA	NA	33 U	42 U	50	46 U	52 U	NA	NA	42 U	41	46 U	43 U
TOTAL CHLORDANE	1.7 U	NA	NA	1.7 U	2.2 U	2.1 U	2.4 U	2.7 U	NA	NA	2.2 U	2.1 U	2.4 U	2.2 U
TOTAL DDD/DDE/DDT	3.3 U	NA	NA	3.3 U	4.2 U	4.1 U	4.6 U	5.2 U	NA	NA	4.2 U	4.1 U	4.6 U	4.3 U
TOXAPHENE	170 U	NA	NA	170 U	220 U	210 U	240 U	270 U	NA	NA	220 U	210 U	240 U	220 U
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	2.2 U	2.9 U	NA	NA	NA	NA	NA	2.3 U	2 U	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	0.45 U	0.6 U	NA	NA	NA	NA	NA	0.5 U	0.41 U	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	1.1 U	1.5 U	NA	NA	NA	NA	NA	1.2 U	1 U	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	5.1 J	1.2 U	NA	NA	NA	NA	NA	4.3 J	3.2 J	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	0.45 U	0.6 U	NA	NA	NA	NA	NA	0.47 U	0.41 U	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	2.2 U	2.9 U	NA	NA	NA	NA	NA	2.3 U	2 U	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	8.7 U	1.2 U	NA	NA	NA	NA	NA	4.7 UJ	3.9 UJ	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	0.88 U	1.2 U	NA	NA	NA	NA	NA	0.9 U	0.79 U	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	1.1 U	1.5 U	NA	NA	NA	NA	NA	1.2 U	1 U	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	6.7 J	1.42 U	NA	NA	NA	NA	NA	4.3 J	3.2 J	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	15.2 J	1.42 U	NA	NA	NA	NA	NA	11.3 J	9.16 J	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD308E-000.5	GI-SD520-0006	GI-SD521-0006	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5	GI-SD513-0006	GI-SD512-0006	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5
LOCATION ID	G32-SD308	G32-SD308	G32-SD308F	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/25/05	05/13/10	05/13/10	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/31/05	08/31/05	08/31/05	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	1.6 J	0.6 U	NA	NA	NA	NA	NA	0.47 U	0.41 U	NA	NA	NA	NA
METALS (MG/KG)														
ALUMINUM	5500	4400	4210	4850 J	4870	5310	5220	6300	4570	5730	4750	5630	6500	5470
ANTIMONY	0.41 U	0.67 UJ	0.58 UJ	2.7 J	0.055 UJ	0.056 UJ	0.11 UJ	0.41 UJ	2.05 UJ	1.77 UJ	0.29 UJ	0.26 UJ	0.92 UJ	0.32 UJ
ARSENIC	3.2 J	0.193 J	1.2 J	1.8 J	2.6 J	1.7 J	1.7 J	2.3 J	0.13 UJ	2.9 J	2.7 J	2.4 J	2.2 J	2 J
BARIUM	12.7 J	10.4	7.4	7.9 J	21.1 J	19 J	10.1 J	9.6 J	12.8	7.9 J	7.4 J	7.9 J	9.4 J	12.1 J
BERYLLIUM	0.12	0.194 J	0.188 J	0.42	0.22	0.21	0.22	0.31	0.214 J	0.234	0.22	0.28	0.79	0.23
CADMIUM	0.46 UJ	0.15 J	0.212	0.0053 UJ	0.069 UJ	0.066 UJ	0.046 UJ	0.13 UJ	0.166 J	0.555	0.06 UJ	0.13 UJ	3.2 J	0.11 UJ
CALCIUM	36800 J	45500	8220	46700 J	20900 J	36800 J	49100 J	55200 J	112000	11500	32500 J	34100 J	42100 J	46100 J
CHROMIUM	10.4	8.2 J	10.1 J	11.8 J	12.4	10.4	11.2	13.5	8.4 J	19.9 J	15.1	21.4	16.5	10.5
COBALT	2.7 J	3	3.7	2.3 J	2.7 J	2.2 J	2.4 J	3.6 J	2.8	6	2.3 J	5 J	2.9	2.1 J
COPPER	10.1 J	6.5 J	22.9 J	11.6 J	17.7	11.3	13.9	15.1	6.8 J	30.6 J	21.8	24.5	20.7	14.7
CYANIDE	0.11 U	NA	NA	0.12 UJ	0.11 UJ	0.12 UJ	0.21 UJ	0.12 UJ	NA	NA	0.14 UJ	0.12 UJ	0.12 UJ	0.14 UJ
IRON	10600 J	11000	13800	12800	13400 J	11700 J	13100 J	13300 J	9830	31900	20300 J	23200 J	24700 J	13200 J
LEAD	11.8 J	9.3 J	13.2 J	14.9 J	16.6 J	9.3 J	9.5 J	127 J	7.3 J	8.4 J	8.8 J	178 J	11.7 J	13.2 J
MAGNESIUM	3590	2950	2550	3050 J	3420	3120	3510	4100	3610	3140	2740	3280	3890	3360
MANGANESE	140	155	136	127 J	126 J	120 J	135 J	150 J	175	211	152 J	156 J	179 J	139 J
MERCURY	0.011 UJ	0.015 J	0.019 J	0.03 J	0.037 J	0.032 J	0.023 J	0.045 J	0.039 U	0.006 J	0.034 J	0.025 J	0.027 J	0.036 J
NICKEL	6.8 J	6.7	9.4	8.1 J	10.4 J	6.4 J	6.8 J	8.7 J	6.2	33.4	8.7 J	14.8 J	11 J	5.9 J
POTASSIUM	853 J	852 J	742 J	840	654 J	731 J	725 J	1060 J	1040 J	1170 J	728 J	881 J	964 J	868 J
SELENIUM	0.063 U	2 U	2.89 U	7.9 J	0.066 UJ	0.067 UJ	0.066 UJ	0.067 UJ	2.05 U	5.91 U	0.067 UJ	0.066 UJ	0.067 UJ	0.067 UJ
SILVER	0.018 U	0.435 J	0.19 UJ	0.018 U	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.524	0.2 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ
SODIUM	3670 J	4180	2710	3460 J	2920 J	4210 J	4120 J	5110 J	5600	2240	3170 J	3600 J	3580 J	4490 J
THALLIUM	0.41 UJ	0.107 J	1.93 UJ	0.64 UJ	0.078 U	0.79 UJ	0.22 UJ	0.96 UJ	2.4	1.18 UJ	2 UJ	1.1 UJ	0.34 UJ	0.23 UJ
VANADIUM	14 J	13.2	12	17.4 J	16 J	13 J	13.8 J	22.6 J	13	12.3	13.4 J	17.4 J	17.5 J	13.6 J
ZINC	32 J	26.8 J	33.7 J	46.2 J	34 J	35.1 J	39 J	42.1 J	27.6 J	43.4 J	33.6 J	65.8 J	44.9 J	51.6 J
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	6000 J	4290	2960	7500 J	6900 J	11000 J	12000 J	5000 J	6700	2330	2800	7400 J	13000 J	15000 J
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	0.317278	0.063254	0.315148	0.063507	0.064374	0.07348	0.054079	0.132663	0.035259	0.207804	0.083911	0.171032	0.107715	0.426978
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	-9999	-9999	NA	NA	NA	NA	NA	-9999	-9999	NA	NA	NA	NA
PERCENT CLAY	2.3	NA	NA	4.1	4.1	5.6	3.6	5.2	NA	NA	4.2	4.1	2.5	4.3
PERCENT COARSE SAND	10	NA	NA	7	5.5	6.7	7.6	7.7	NA	NA	14.2	11.5	15.2	11.7
PERCENT FINE SAND	18.7	NA	NA	22	16.4	13	12.7	13.8	NA	NA	7.2	14.1	4.1	5.3
PERCENT GRAVEL	12.6	NA	NA	10.5	27.7	12.2	19.8	13.2	NA	NA	15	23.9	13.4	32.2
PERCENT MEDIUM SAND	44.2	NA	NA	49.4	45.6	60.4	55.2	56.9	NA	NA	53	44.5	50.5	40.7

SAMPLE ID	G32-SD308E-000.5	GI-SD520-0006	GI-SD521-0006	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5	GI-SD513-0006	GI-SD512-0006	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5
LOCATION ID	G32-SD308	G32-SD308	G32-SD308F	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/25/05	05/13/10	05/13/10	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/31/05	08/31/05	08/31/05	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
PERCENT SILT	12.3	NA	NA	7	0.8	2	1.2	3.2	NA	NA	6.4	2	14.3	5.8
PERCENT SOLIDS	87.4	NA	NA	64.3	83.8	77.5	78.6	78.7	NA	NA	77.3	77.4	79.5	78.5
SIEVE 1"	100	100	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE 1/2"	NA	92	100	NA	NA	NA	NA	NA	100	100	NA	NA	NA	NA
SIEVE 1-1/2"	100	NA	NA	100	100	100	100	100	NA	NA	100	100	100	100
SIEVE 2"	100	NA	NA	100	100	100	100	100	NA	NA	100	100	100	100
SIEVE 3"	100	NA	NA	100	100	100	100	100	NA	NA	100	100	100	100
SIEVE 3/4"	100	100	100	100	93.1	100	87.7	100	100	100	100	100	100	84.4
SIEVE 3/8"	95.3	89	99	94.1	77	91.9	85.4	91.2	93	90	92.3	86.9	94.1	78.5
SIEVE NO. 004	87.4	74	88	89.5	72.3	87.8	80.2	86.8	80	77	85	76.1	86.6	67.8
SIEVE NO. 010	77.5	64	84	82.4	66.8	81	72.6	79.1	71	46	70.8	64.6	71.4	56.1
SIEVE NO. 020	56.5	42	67	68.1	57.8	68.5	61	66	54	24	46.5	41.1	45.1	37.8
SIEVE NO. 040	33.3	12	28	33.1	21.2	20.6	17.5	22.2	15	8	17.8	20.2	20.9	15.4
SIEVE NO. 060	18.6	4	11	15.1	8.5	11.6	7.3	12.2	8	2	13.4	10	18.5	12.2
SIEVE NO. 080	16.6	NA	NA	13.2	6.6	9.9	6.1	10.6	NA	NA	12.2	8.1	17.8	11.3
SIEVE NO. 100	16.1	2	7	12.7	5.9	9.2	5.6	9.9	7	1	11.6	7.6	17.5	10.9
SIEVE NO. 200	14.6	1	5	11.1	4.8	7.6	4.8	8.4	7	1	10.6	6.1	16.8	10.1
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	2.5 J	NA	NA	5.4 J	2.7 J	1.7 J	1.4 J	8.4 J	NA	NA	0.8 J	6.6 J	2.2 J	1.3 J
CADMIUM	0.0028 UJ	NA	NA	0.0028 UJ	0.0029 UJ	0.0045 UJ	0.004 UJ	0.0044 UJ	NA	NA	0.0022 UJ	0.0021 UJ	0.0023 UJ	0.0023 UJ
COPPER	0.09 J	NA	NA	0.091 UJ	0.08 UJ	0.071 UJ	0.055 UJ	0.12 J	NA	NA	0.085 J	0.077 J	0.063 UJ	0.057 UJ
LEAD	0.035 J	NA	NA	0.069 J	0.048 UJ	0.05 UJ	0.059 J	0.076 J	NA	NA	0.052 UJ	0.31 J	0.035 UJ	0.039 UJ
MERCURY	0.00005 UJ	NA	NA	0.00015 J	0.00018 J	0.00016 J	0.00011 J	0.00022 J	NA	NA	0.00017 J	0.00012 J	0.00013 J	0.00018 J
NICKEL	0.037 J	NA	NA	0.2 UJ	0.032 UJ	0.24 UJ	0.2 UJ	0.051 UJ	NA	NA	0.043 UJ	0.036 UJ	0.065 UJ	0.066 UJ
ZINC	0.28 J	NA	NA	0.5 J	0.42 J	0.99 J	0.24 J	0.43 J	NA	NA	0.29 J	0.43 J	0.31 J	0.26 J
AVS/SEM (RATIO)														
SEM/AVS	0.18	NA	NA	0.11	0.16	0.58	0.21	0.075	NA	NA	0.47	0.12	0.14	0.2
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
1,1,2,2-TETRACHLOROETHANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
1,1,2-TRICHLOROETHANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
1,1,2-TRICHLOROTRIFLUOROETHANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
1,1-DICHLOROETHANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
1,1-DICHLOROETHENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
1,2,4-TRICHLOROBENZENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
1,2-DIBROMO-3-CHLOROPROPANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
1,2-DIBROMOETHANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
1,2-DICHLOROBENZENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
1,2-DICHLOROETHANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD308E-000.5	GI-SD520-0006	GI-SD521-0006	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5	GI-SD513-0006	GI-SD512-0006	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5
LOCATION ID	G32-SD308	G32-SD308	G32-SD308F	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/25/05	05/13/10	05/13/10	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/31/05	08/31/05	08/31/05	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1,2-DICHLOROPROPANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
1,3-DICHLOROBENZENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
1,4-DICHLOROBENZENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
2-BUTANONE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
2-HEXANONE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
4-METHYL-2-PENTANONE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
ACETONE	24 JEB	NA	NA	46 JEB	140 JEB	40 JEB	88 JEB	56 JEB	NA	NA	10 JEB	110 JEB	25 JEB	100 JEB
BENZENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
BROMODICHLOROMETHANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
BROMOFORM	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
BROMOMETHANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
BTEX	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
CARBON DISULFIDE	3 U	NA	NA	6 U	6 U	7 U	1 J	2 J	NA	NA	7 U	5 U	7 U	7 U
CARBON TETRACHLORIDE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
CHLOROBENZENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
CHLORODIBROMOMETHANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
CHLOROETHANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
CHLOROFORM	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
CHLOROMETHANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
CIS-1,2-DICHLOROETHENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
CIS-1,3-DICHLOROPROPENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
CYCLOHEXANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
DICHLORODIFLUOROMETHANE	3 U	NA	NA	6 UJ	6 U	7 U	5 UJ	6 U	NA	NA	7 U	5 U	7 U	7 U
ETHYLBENZENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
ISOPROPYLBENZENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
M+P-XYLENES	NA	NA	NA	NA	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
METHYL ACETATE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
METHYL CYCLOHEXANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
METHYL TERT-BUTYL ETHER	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
METHYLENE CHLORIDE	21 U	NA	NA	19 U	6 U	14 U	5 U	21 U	NA	NA	12 U	5 U	7 U	10 U
O-XYLENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
P-XYLENE	3 U	NA	NA	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
TETRACHLOROETHENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
TOLUENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
TOTAL 1,2-DICHLOROETHENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
TOTAL CHLORINATED ETHENES	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
TOTAL CHLORINATED VOCS	3 U	NA	NA	6 UJ	6 U	7 U	5 UJ	6 U	NA	NA	7 U	5 U	7 U	7 U
TOTAL XYLENES	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
TRANS-1,2-DICHLOROETHENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD308E-000.5	GI-SD520-0006	GI-SD521-0006	G32-SD309A-000.5	G32-SD309B-000.5	G32-SD309C-000.5	G32-SD309D-000.5	G32-SD309E-000.5	GI-SD513-0006	GI-SD512-0006	G32-SD310A-000.5	G32-SD310B-000.5	G32-SD310C-000.5	G32-SD310D-000.5
LOCATION ID	G32-SD308	G32-SD308	G32-SD308F	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309	G32-SD309F	G32-SD310	G32-SD310	G32-SD310	G32-SD310
SAMPLE DATE	08/25/05	05/13/10	05/13/10	08/29/05	08/29/05	08/29/05	08/29/05	08/29/05	05/13/10	05/13/10	08/31/05	08/31/05	08/31/05	08/31/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TRANS-1,3-DICHLOROPROPENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
TRICHLOROETHENE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
TRICHLOROFLUOROMETHANE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
VINYL CHLORIDE	3 U	NA	NA	6 U	6 U	7 U	5 U	6 U	NA	NA	7 U	5 U	7 U	7 U
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	41	NA	NA	31	24	23	29	31	NA	NA	30	31	34	27
GASOLINE RANGE ORGANICS	5.3 U	NA	NA	9.5 U	6.7 U	7.8 U	9 U	9 U	NA	NA	7.9 U	6.3 U	8.6 U	12 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD310E-000.5	G32-SD310A-000.5-D	G32-SD310A-000.5-AVG	GI-SD510-0006	G32-SD311-000.5	G32-SD311-0.51.0	GI-SD311-0006	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5
LOCATION ID	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD311	G32-SD311	G32-SD311	G32-SD312	G32-SD312	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313
SAMPLE DATE	08/31/05	08/31/05	08/31/05	04/30/10	09/02/05	09/02/05	05/13/10	08/31/05	08/31/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
2,2'-OXYBIS(1-CHLOROPROPANE)	330 UJ	330 UJ	325 UJ	NA	330 U	330 U	NA	330 UJ	330 U	330 U	330 U	330 U	330 UJ	330 U
2,4,5-TRICHLOROPHENOL	660 U	670 U	665 U	NA	670 U	670 U	NA	660 U	670 U	670 U	670 U	670 U	670 UJ	670 U
2,4,6-TRICHLOROPHENOL	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
2,4-DICHLOROPHENOL	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
2,4-DIMETHYLPHENOL	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 UJ	330 U	330 U	330 U	330 UJ	330 U
2,4-DINITROPHENOL	660 UJ	670 UJ	665 UJ	NA	670 U	670 U	NA	660 UJ	670 UJ	670 UJ	670 U	670 U	670 UJ	670 U
2,4-DINITROTOLUENE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
2,6-DINITROTOLUENE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
2-CHLORONAPHTHALENE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
2-CHLOROPHENOL	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
2-METHYLNAPHTHALENE	3.3 U	3.3 U	4.02	8.4 UJ	3.3 U	3.3 U	6 J	31	59	3.3 U	3.5	4.5	6	4.2
2-METHYLPHENOL	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
2-NITROANILINE	660 U	670 U	665 U	NA	670 U	670 U	NA	660 U	670 U	670 U	670 U	670 U	670 UJ	670 U
2-NITROPHENOL	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
3,3'-DICHLOROBENZIDINE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
3-NITROANILINE	660 U	670 U	665 U	NA	670 U	670 U	NA	660 U	670 U	670 U	670 U	670 U	670 UJ	670 U
4,6-DINITRO-2-METHYLPHENOL	660 U	670 U	665 U	NA	670 U	670 U	NA	660 U	670 U	670 U	670 U	670 U	670 UJ	670 U
4-BROMOPHENYL PHENYL ETHER	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
4-CHLORO-3-METHYLPHENOL	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
4-CHLOROANILINE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
4-CHLOROPHENYL PHENYL ETHER	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
4-METHYLPHENOL	330 U	330 U	142 J	NA	330 U	330 U	NA	330 U	35 J	51 J	330 U	330 U	95 J	210 J
4-NITROANILINE	660 UJ	670 UJ	665 UJ	NA	670 U	670 U	NA	660 UJ	670 U	670 U	670 U	670 U	670 UJ	670 U
4-NITROPHENOL	660 UJ	670 UJ	665 UJ	NA	670 U	670 U	NA	660 UJ	670 U	670 U	670 U	670 U	670 UJ	670 U
ACENAPHTHENE	3.8	23 J	41 J	11 J	16	6.6	32 J	210	400	9.6 J	16	24	40	19
ACENAPHTHYLENE	3.7	3.3 U	3.25 U	12 J	3.3 U	3.3	40 UJ	300	810	3.3 U	4.6	3.6	7	5.3
ACETOPHENONE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
ANTHRACENE	16	36 J	57.5 J	76 J	57	14	54 UJ	900	3000	29 J	52	65	110	58
ATRAZINE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
BENZALDEHYDE	330 UJ	330 UJ	325 UJ	NA	330 UJ	330 UJ	NA	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
BENZO(A)ANTHRACENE	35	100	115	96 J	200	34	77 J	2000	4900	55 J	120	290	210	100
BENZO(A)PYRENE	27	88	104	130 J	130	36	62 J	1200 J	2300	50 J	100	320	180	92
BENZO(B)FLUORANTHENE	43	110	130	120 J	210	50	58 J	2400 J	4900	54 J	140	320 J	230	120
BENZO(G,H,I)PERYLENE	12	40	52.5	71 J	36	24	18 J	380 J	1100	36 J	64	180	110	57
BENZO(K)FLUORANTHENE	15	43	50	93 J	79	18	56 J	1500 J	2300	17 J	41	130	83	38
BIS(2-CHLOROETHOXY)METHANE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
BIS(2-CHLOROETHYL)ETHER	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	330 U	325 U	NA	48 J	56 J	NA	330 U	330 U	330 U	330 U	330 UJ	330 UJ	330 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD310E-000.5	G32-SD310A-000.5-D	G32-SD310A-000.5-AVG	GI-SD510-0006	G32-SD311-000.5	G32-SD311-0.51.0	GI-SD311-0006	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5
LOCATION ID	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD311	G32-SD311	G32-SD311	G32-SD312	G32-SD312	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313
SAMPLE DATE	08/31/05	08/31/05	08/31/05	04/30/10	09/02/05	09/02/05	05/13/10	08/31/05	08/31/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
BUTYL BENZYL PHTHALATE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
CAPROLACTAM	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
CARBAZOLE	330 U	330 U	325 U	NA	330 U	330 U	NA	530	1400	330 U	330 U	330 U	330 UJ	330 U
CHRYSENE	40	95	108	140 J	160 EB	34 EB	81 J	4400	8700	43 J	84	200	160	76
DIBENZO(A,H)ANTHRACENE	3.7	13	15	26 J	14	5.9	20 J	120	250	10 J	20	58	35	17
DIBENZOFURAN	330 U	330 U	325 U	NA	330 U	330 U	NA	130 J	260 J	330 U	330 U	330 U	330 UJ	330 U
DIETHYL PHTHALATE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
DIMETHYL PHTHALATE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
DI-N-BUTYL PHTHALATE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
DI-N-OCTYL PHTHALATE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 UJ	330 U	330 U	330 U	330 U	330 UJ	330 U
FLUORANTHENE	77	170 J	235 J	150 J	700	80	240 J	10000	28000	130 J	250	440 J	270 J	240
FLUORENE	3.7	13 J	24 J	23 J	16	5.4	24 J	260	800	12	16	20	45	19
HEXACHLOROBENZENE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
HEXACHLOROBUTADIENE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
HEXACHLOROCYCLOPENTADIENE	330 UJ	330 UJ	325 UJ	NA	330 U	330 U	NA	330 U	330 UJ	330 R	330 U	330 U	330 UJ	330 U
HEXACHLOROETHANE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 UJ	330 U	330 U	330 UJ	330 U
HIGH MOLECULAR WEIGHT PAHS	312	838 J	1050 J	1020 J	2080	370	812 J	31000 J	75800	584 J	1060	2560 J	1640 J	956
INDENO(1,2,3-CD)PYRENE	12	39	50	73 J	42	20	40 J	410 J	1300	29 J	55	170	95	46
ISOPHORONE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
LOW MOLECULAR WEIGHT PAHS	53.2	178 J	306 J	244 J	299	72.3	242 J	5360	12400	165 J	238	325	527	262
NAPHTHALENE	3.3 U	6.1 J	10 J	12 J	3.3 U	3.3 U	40 UJ	55	100	4.6	5.6	8.3	8.6	6
NITROBENZENE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
N-NITROSO-DI-N-PROPYLAMINE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
N-NITROSODIPHENYLAMINE	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
PENTACHLOROPHENOL	660 U	670 U	665 U	NA	670 U	670 U	NA	660 U	670 U	670 U	670 U	670 U	670 UJ	670 U
PHENANTHRENE	26	100 J	170 J	110 J	210	43	180 J	3600	7200	110 J	140	200	310	150
PHENOL	330 U	38 J	94 J	NA	38 J	330 U	NA	330 U	35 J	65 J	39 J	330 U	39 J	250 J
PYRENE	47	140 J	190 J	120 J	510	68	160 J	8600	22000	160 J	190	450 J	270 J	170
TOTAL CARCINOGENIC PAHS-HALFND	176	488	572	678 J	835	198	394 J	12000 J	24600	258 J	560	1490 J	993	489
TOTAL CARCINOGENIC PAHS-POS	176	488	572	678 J	835	198	394 J	12000 J	24600	258 J	560	1490 J	993	489
TOTAL CHLORINATED VOCS	330 U	330 U	325 U	NA	330 U	330 U	NA	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U
TOTAL PAHS	365	1020 J	1360 J	1260 J	2380	442	1050 J	36400 J	88100	749 J	1300	2880 J	2170 J	1220
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	4.1 U	4.4 U	4.3 U	NA	3.3 U	3.3 U	NA	50 U	100 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
4,4'-DDE	4.1 U	4.4 U	4.3 U	NA	3.3 U	3.3 U	NA	53 R	230 J	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
4,4'-DDT	4.1 U	4.4 U	4.3 U	NA	3.3 U	3.3 U	NA	220 R	660 R	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ALDRIN	2.1 U	2.3 U	2.25 U	NA	1.7 U	1.7 U	NA	26 U	54 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
ALPHA-BHC	2.1 U	2.3 U	2.25 U	NA	1.7 U	1.7 U	NA	26 U	54 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
ALPHA-CHLORDANE	2.1 U	2.3 U	2.25 U	NA	1.7 U	1.7 U	NA	26 U	54 U	1.7 UJ	1.7 U	1.7 U	1.7 U	1.7 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD310E-000.5	G32-SD310A-000.5-D	G32-SD310A-000.5-AVG	GI-SD510-0006	G32-SD311-000.5	G32-SD311-0.51.0	GI-SD311-0006	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5
LOCATION ID	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD311	G32-SD311	G32-SD311	G32-SD312	G32-SD312	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313
SAMPLE DATE	08/31/05	08/31/05	08/31/05	04/30/10	09/02/05	09/02/05	05/13/10	08/31/05	08/31/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
AROCLOR-1016	41 U	44 U	43 U	NA	33 U	33 U	NA	500 U	1000 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1221	41 U	44 U	43 U	NA	33 U	33 U	NA	500 U	1000 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1232	41 U	44 U	43 U	NA	33 U	33 U	NA	500 U	1000 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1242	41 U	44 U	43 U	NA	33 U	33 U	NA	500 U	1000 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1248	41 U	44 U	43 U	NA	33 U	33 U	NA	500 U	1000 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1254	41 U	44 U	43 U	NA	33 U	33 U	NA	500 U	1000 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1260	41 U	44 U	43 U	NA	33 U	33 U	NA	8900	41000	33 U	33 U	33 U	33 U	33 U
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	2.1 U	2.3 U	2.25 U	NA	1.7 U	3	NA	26 U	57 J	3.3 J	3.2	1.7 U	2.3	2.4 J
DELTA-BHC	2.1 U	2.3 U	2.25 U	NA	1.7 U	1.7 U	NA	26 U	54 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
DIELDRIN	4.1 U	4.4 U	4.3 U	NA	3.3 U	3.3 U	NA	50 U	100 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDOSULFAN I	2.1 U	2.3 U	2.25 U	NA	1.7 U	1.7 U	NA	26 U	54 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
ENDOSULFAN II	4.1 U	4.4 U	4.3 U	NA	3.3 U	3.3 U	NA	50 U	100 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDOSULFAN SULFATE	4.1 U	4.4 U	4.3 U	NA	3.3 U	3.3 U	NA	50 U	640 J	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDRIN	4.1 U	4.4 U	4.3 U	NA	3.3 U	3.3 U	NA	50 U	100 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDRIN ALDEHYDE	4.1 U	4.4 U	4.3 U	NA	3.3 U	3.3 U	NA	79 R	190 R	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDRIN KETONE	4.1 U	4.4 U	4.3 U	NA	3.3 U	3.3 U	NA	50 U	100 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
GAMMA-BHC (LINDANE)	2.1 U	2.3 U	2.25 U	NA	1.7 U	1.7 U	NA	26 U	54 U	1.7 UJ	1.7 U	1.7 U	1.7 U	1.7 U
GAMMA-CHLORDANE	2.1 U	2.3 U	2.25 U	NA	1.7 U	1.7 U	NA	26 U	570	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
HEPTACHLOR	2.1 U	2.3 U	2.25 U	NA	1.7 U	1.7 U	NA	26 U	54 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
HEPTACHLOR EPOXIDE	2.1 U	2.3 U	2.25 U	NA	1.7 U	1.7 U	NA	26 U	54 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
METHOXYCHLOR	21 U	23 U	22.5 U	NA	17 U	17 U	NA	260 U	540 U	17 U	17 U	17 U	17 U	17 U
TOTAL AROCLOR	41 U	44 U	43 U	NA	33 U	33 U	NA	8900	41000	33 U	33 U	33 U	33 U	33 U
TOTAL CHLORDANE	2.1 U	2.3 U	2.25 U	NA	1.7 U	1.7 U	NA	26 U	570	1.7 UJ	1.7 U	1.7 U	1.7 U	1.7 U
TOTAL DDD/DDE/DDT	4.1 U	4.4 U	4.3 U	NA	3.3 U	3.3 U	NA	50 U	230 J	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
TOXAPHENE	210 U	230 U	225 U	NA	170 U	170 U	NA	2600 U	5400 U	170 U	170 U	170 U	170 U	170 U
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	NA	3.2 U	NA	NA	2 U	NA	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	0.65 U	NA	NA	0.41 U	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	1.6 U	NA	NA	1 U	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	1.3 U	NA	NA	0.8 U	NA	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	0.65 U	NA	NA	0.41 U	NA	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	3.2 U	NA	NA	2 U	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	7.2 UJ	NA	NA	0.8 U	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	1.3 U	NA	NA	0.8 U	NA	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	1.6 U	NA	NA	1 U	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	2.14 UJ	NA	NA	0.963 U	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	2.14 UJ	NA	NA	0.963 U	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD310E-000.5	G32-SD310A-000.5-D	G32-SD310A-000.5-AVG	GI-SD510-0006	G32-SD311-000.5	G32-SD311-0.51.0	GI-SD311-0006	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5
LOCATION ID	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD311	G32-SD311	G32-SD311	G32-SD312	G32-SD312	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313
SAMPLE DATE	08/31/05	08/31/05	08/31/05	04/30/10	09/02/05	09/02/05	05/13/10	08/31/05	08/31/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	0.65 U	NA	NA	0.41 U	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)														
ALUMINUM	6120	6810	5780	8070	4970	4710	4280	5080	5880	5350	6720	5540	5870	5200
ANTIMONY	0.054 UJ	0.056 UJ	0.173 UJ	0.63 UJ	0.057 UJ	33.8 J	0.59 UJ	0.35 UJ	0.058 UJ	0.7 U	0.35 U	0.44 U	1.1 U	0.55 U
ARSENIC	3 J	2.3 J	2.5 J	2.2 J	2.5 J	2.6 J	0.293 J	3.9 J	3.8 J	4.6 J	3.8 J	2.7 J	6.9 J	4.4 J
BARIUM	8.1 J	10.4 J	8.9 J	11.3 J	13.2 J	11.8 J	7.4	22.2 J	19.7 J	11.4 J	14.1 J	10.5 J	15.3 J	12.1 J
BERYLLIUM	0.27	0.35	0.285	0.222 J	0.4	0.34	0.203	0.35	0.43	0.11	0.18	0.15	0.16	0.19
CADMIUM	0.077 UJ	0.092 UJ	0.076 UJ	0.443 J	0.13 UJ	0.22 UJ	0.22	0.18 UJ	0.32 UJ	20.7 J	0.64 UJ	0.47 UJ	1.2 UJ	0.75 J
CALCIUM	14800 J	27100 J	29800 J	35900 J	8220 J	6620 J	14700	59700 J	70800 J	30200 J	17700 J	21400 J	16000 J	38300 J
CHROMIUM	10.6	14.1	14.6	16.1 J	12 J	11.2 J	8.3 J	17.1	14.8	15.5	13.3	10.8	23.5	11.9
COBALT	2.7 J	3.1 J	2.7 J	4.7 J	2.7 J	2.5 J	2.8	2.4 J	2.9 J	3 J	3.8 J	3.4 J	4 J	2.8 J
COPPER	15.9	19.6	20.7	17.7 J	18	20.7	17 J	25.3	25.2	37.7 J	18	11.8	42.7	20.9 J
CYANIDE	0.12 UJ	0.13 J	0.1 J	NA	0.12 U	0.31 J	NA	0.12 UJ	0.13 UJ	0.12 U	0.11 U	0.12 U	0.11 U	0.12 U
IRON	19200 J	19400 J	19800 J	22900	11800	11800	10200	12100 J	12900 J	24000 J	16400 J	11200 J	27000 J	16100 J
LEAD	14.1 J	10.9 J	9.85 J	10.7 J	19.6 J	27.2	14.1 J	18.3 J	23.4 J	19.3 J	14.8 J	13.2 J	21.3 J	15.8 J
MAGNESIUM	3900	4380	3560	4220 J	2840	2570	2450	3260	3290	3360	3590	3350	3840	3100
MANGANESE	163 J	175 J	164 J	210 J	105 J	101 J	102	118 J	130 J	164 J	145	135	240	167
MERCURY	0.007 U	0.025 J	0.0295 J	0.012 J	0.024 U	0.019 U	0.011 J	0.042 J	0.052 J	0.017 UJ	0.018 UJ	0.022 UJ	0.02 UJ	0.02 UJ
NICKEL	7.7 J	9.3 J	9 J	10.8 J	8 J	8.5 J	6.4	9.1 J	7.7 J	10.2 J	8.7 J	7.8 J	23.9 J	7.8 J
POTASSIUM	795 J	948 J	838 J	869	942	768	809 J	1140 J	1350 J	921 J	1200 J	922 J	991 J	917 J
SELENIUM	0.064 UJ	0.067 UJ	0.067 UJ	0.63 U	0.068 UJ	0.068 UJ	1.78 U	0.067 UJ	0.069 UJ	0.072 U	0.064 U	0.067 U	0.066 U	0.064 U
SILVER	0.018 UJ	0.019 UJ	0.019 UJ	0.017 U	0.019 UJ	0.019 UJ	0.331 J	0.019 UJ	0.02 UJ	0.02 U	0.018 U	0.019 U	0.019 U	0.018 U
SODIUM	2810 J	3430 J	3300 J	3120	3070	2370	3020	6640 J	6700 J	3270 J	3820 J	3460 J	3680 J	4110 J
THALLIUM	0.076 U	0.11 UJ	1.06 UJ	0.42 UJ	0.08 UJ	0.08 UJ	0.4 UJ	0.15 UJ	1.7 UJ	0.085 U	0.075 U	0.08 U	0.078 U	0.18 UJ
VANADIUM	15.5 J	17.9 J	15.6 J	13.9 J	18 J	16.5 J	13.2	15.1 J	17.6 J	12.6 J	17.6 J	16.9 J	16.1 J	13.2 J
ZINC	55.1 J	46.7 J	40.2 J	43.9 J	38.9 J	42.1 J	29.8 J	55.6 J	67.4 J	37.5 J	42.2 J	35 J	48.2 J	45.7 J
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	12000 J	18000 J	10400 J	4740	7200 J	5000 J	5570	16000 J	17000 J	2800	4800 J	2300 J	9000 J	10000 J
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	0.064592	0.075833	0.07991	0.074151	0.088436	0.070081	0.053773	5.497073	24.02229	0.298587	0.080705	0.08942	0.149045	0.085982
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT CLAY	2.5	2.5	3.35	NA	4.4	3.2	NA	4.2	5.6	2.3	3.1	2.5	3.4	2.9
PERCENT COARSE SAND	14.7	12.1	13.2	NA	4.2	5.9	NA	8.9	7.3	11.1	9.1	7.3	18.7	14
PERCENT FINE SAND	4.6	6	6.6	NA	42.9	48.4	NA	46.4	52.1	17.2	11.1	15.5	14.7	10.5
PERCENT GRAVEL	17.8	22.1	18.6	NA	12.8	5	NA	9.6	8.3	7.7	20.2	21.9	14.3	16.5
PERCENT MEDIUM SAND	52.9	49.6	51.3	NA	33	34.1	NA	10.5	5.5	54.3	52.1	48.5	44.9	48.8

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD310E-000.5	G32-SD310A-000.5-D	G32-SD310A-000.5-AVG	GI-SD510-0006	G32-SD311-000.5	G32-SD311-0.51.0	GI-SD311-0006	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5
LOCATION ID	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD311	G32-SD311	G32-SD311	G32-SD312	G32-SD312	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313
SAMPLE DATE	08/31/05	08/31/05	08/31/05	04/30/10	09/02/05	09/02/05	05/13/10	08/31/05	08/31/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
PERCENT SILT	7.6	7.6	7	NA	2.6	3.3	NA	20.6	21.1	7.3	4.4	4.3	4	7.4
PERCENT SOLIDS	75.8	77.3	77.3	NA	77.6	80.6	NA	70.6	64	82.9	83.4	84.1	84	83.1
SIEVE 1"	100	100	100	100	100	100	NA	100	100	100	100	100	100	100
SIEVE 1/2"	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1-1/2"	100	100	100	NA	100	100	NA	100	100	100	100	100	100	100
SIEVE 2"	100	100	100	NA	100	100	NA	100	100	100	100	100	100	100
SIEVE 3"	100	100	100	NA	100	100	NA	100	100	100	100	100	100	100
SIEVE 3/4"	100	89.6	94.8	100	93.4	100	NA	100	100	100	91.3	100	100	100
SIEVE 3/8"	91.2	85	88.6	95	88.9	98.8	NA	94.1	96.8	96.7	88.5	89.8	96.8	93.8
SIEVE NO. 004	82.2	77.9	81.4	75	87.2	95	NA	90.4	91.7	92.3	79.8	78.1	85.7	83.5
SIEVE NO. 010	67.5	65.8	68.3	57	83	89.1	NA	81.6	84.4	81.2	70.7	70.8	67	69.5
SIEVE NO. 020	40.1	41.6	44	27	75.3	80.6	NA	74.4	80.2	56.7	48.7	54.6	45.3	48.6
SIEVE NO. 040	14.6	16.1	17	5	49.9	55	NA	71.1	78.9	26.8	18.6	22.3	22.1	20.7
SIEVE NO. 060	11.7	12.5	13	2	25.5	30.6	NA	63.2	72.4	14.2	11.4	11.5	12.9	13.8
SIEVE NO. 080	11	11.5	11.8	NA	16.8	19.9	NA	53.5	61.6	11.8	9.7	9.1	10.4	12.3
SIEVE NO. 100	10.7	11	11.3	1	13.7	15.9	NA	47.7	54.6	11.3	9	8.3	9.4	11.6
SIEVE NO. 200	10	10.2	10.4	1	7	6.6	NA	24.7	26.7	9.6	7.5	6.8	7.4	10.3
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	0.57 J	2 J	1.4 J	NA	0.97 J	1.1 J	NA	33.7 J	19.8 J	1.7 J	12.3 J	1.3 J	8.5 J	0.61 UJ
CADMIUM	0.002 UJ	0.0024 UJ	0.0023 UJ	NA	0.0023 UJ	0.0021 UJ	NA	0.0018 UJ	0.0015 UJ	0.012 UJ	0.00098 UJ	0.0012 UJ	0.037 J	0.0031 UJ
COPPER	0.12 J	0.077 UJ	0.0618 J	NA	0.14 J	0.076 UJ	NA	0.33 J	0.13 J	0.13 J	0.2 J	0.069 UJ	0.49 J	0.21 J
LEAD	0.048 J	0.031 UJ	0.0415 UJ	NA	0.057 J	0.055 J	NA	0.075 J	0.068 J	0.037 J	0.075 J	0.028 UJ	0.19 J	0.13 J
MERCURY	0.00003 U	0.00012 J	0.000145 J	NA	0.00012 U	0.00009 U	NA	0.00021 J	0.00026 J	0.00008 UJ	0.00009 UJ	0.00011 UJ	0.0001 UJ	0.0001 UJ
NICKEL	0.1 UJ	0.037 UJ	0.04 UJ	NA	0.043 UJ	0.022 UJ	NA	0.099 J	0.034 J	0.039 J	0.034 J	0.051 J	0.075 J	0.053 J
ZINC	0.35 J	0.24 J	0.265 J	NA	0.24 J	0.29 J	NA	0.62 J	0.56 J	0.34 J	0.74 J	0.23 J	0.62 J	0.5 J
AVS/SEM (RATIO)														
SEM/AVS	0.91	0.12	0.295	NA	0.45	0.31	NA	0.033	0.04	0.32	0.085	0.22	0.17	1.5
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
1,1,2,2-TETRACHLOROETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 UJ	3 U	3 U	5 U	5 U	6 U
1,1,2-TRICHLOROETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
1,1-DICHLOROETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
1,1-DICHLOROETHENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
1,2,4-TRICHLOROBENZENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 UJ	3 U	3 U	5 U	5 U	6 U
1,2-DIBROMO-3-CHLOROPROPANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 UJ	3 U	3 U	5 U	5 U	6 U
1,2-DIBROMOETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
1,2-DICHLOROBENZENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 UJ	3 U	3 U	5 U	5 U	6 U
1,2-DICHLOROETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD310E-000.5	G32-SD310A-000.5-D	G32-SD310A-000.5-AVG	GI-SD510-0006	G32-SD311-000.5	G32-SD311-0.51.0	GI-SD311-0006	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5
LOCATION ID	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD311	G32-SD311	G32-SD311	G32-SD312	G32-SD312	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313
SAMPLE DATE	08/31/05	08/31/05	08/31/05	04/30/10	09/02/05	09/02/05	05/13/10	08/31/05	08/31/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1,2-DICHLOROPROPANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
1,3-DICHLOROBENZENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	3 J	3 U	3 U	5 U	5 U	6 U
1,4-DICHLOROBENZENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	11 J	3 U	3 U	5 U	5 U	6 U
2-BUTANONE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
2-HEXANONE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
4-METHYL-2-PENTANONE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
ACETONE	32 JEB	24 JEB	17 JEB	NA	230 J	11 UJ	NA	45 JEB	120 JEB	35 JEB	99 JEB	38 JEB	96 JEB	99 JEB
BENZENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
BROMODICHLOROMETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
BROMOFORM	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
BROMOMETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
BTEX	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
CARBON DISULFIDE	5 U	6 U	6.5 U	NA	3 J	1 J	NA	8	16	2 J	3 U	1 J	1 J	3 J
CARBON TETRACHLORIDE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
CHLOROBENZENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
CHLORODIBROMOMETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
CHLOROETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
CHLOROFORM	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
CHLOROMETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
CIS-1,2-DICHLOROETHENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
CIS-1,3-DICHLOROPROPENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
CYCLOHEXANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
DICHLORODIFLUOROMETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
ETHYLBENZENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
ISOPROPYLBENZENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
M+P-XYLENES	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	NA	NA	NA	NA	NA
METHYL ACETATE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
METHYL CYCLOHEXANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
METHYL TERT-BUTYL ETHER	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
METHYLENE CHLORIDE	13 U	21 U	16.5 U	NA	60 U	57 U	NA	5 U	18 U	31 UJ	29 U	87 U	82 U	92 U
O-XYLENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	3 U	3 U	5 U	5 U	6 U
STYRENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
TETRACHLOROETHENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
TOLUENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
TOTAL 1,2-DICHLOROETHENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
TOTAL CHLORINATED ETHENES	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
TOTAL CHLORINATED VOCS	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	14 J	3 U	3 U	5 U	5 U	6 U
TOTAL XYLENES	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
TRANS-1,2-DICHLOROETHENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD310E-000.5	G32-SD310A-000.5-D	G32-SD310A-000.5-AVG	GI-SD510-0006	G32-SD311-000.5	G32-SD311-0.51.0	GI-SD311-0006	G32-SD312-000.5	G32-SD312-0.51.0	G32-SD313D-000.5	G32-SD313A-000.5	G32-SD313B-000.5	G32-SD313C-000.5	G32-SD313E-000.5
LOCATION ID	G32-SD310	G32-SD310	G32-SD310	G32-SD310	G32-SD311	G32-SD311	G32-SD311	G32-SD312	G32-SD312	G32-SD313	G32-SD313	G32-SD313	G32-SD313	G32-SD313
SAMPLE DATE	08/31/05	08/31/05	08/31/05	04/30/10	09/02/05	09/02/05	05/13/10	08/31/05	08/31/05	08/25/05	08/25/05	08/25/05	08/25/05	08/25/05
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TRANS-1,3-DICHLOROPROPENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
TRICHLOROETHENE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
TRICHLOROFLUOROMETHANE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
VINYL CHLORIDE	5 U	6 U	6.5 U	NA	6 U	5 U	NA	5 U	8 U	3 U	3 U	5 U	5 U	6 U
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	44	49	39.5	NA	26	32	NA	200 J	220 J	33	36	20	35	34
GASOLINE RANGE ORGANICS	5.5 U	8.4 U	8.15 U	NA	9.3 U	7.4 U	NA	10 U	11 U	4.7 U	5.6 U	8 U	5.6 U	6.9 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

SAMPLE ID	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	GI-SD522-0006	GI-SD523-0006	G32-SD314-000.5	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0	GI-SD529-0006	G32-SD315-000.5	G32-SD316-000.5	G32-SD316-0.51.0	G32-SD317-000.5	GI-SD530-0006
LOCATION ID	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD315	G32-SD316	G32-SD316	G32-SD317	G32-SD317
SAMPLE DATE	08/25/05	08/25/05	05/13/10	05/13/10	09/01/05	09/01/05	09/01/05	09/01/05	05/04/10	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 UJ	320 U	NA
2,4,5-TRICHLOROPHENOL	670 U	670 U	NA	NA	670 U	670 UJ	670 UJ	670 U	NA	670 U	660 U	660 U	660 U	NA
2,4,6-TRICHLOROPHENOL	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
2,4-DICHLOROPHENOL	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
2,4-DIMETHYLPHENOL	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 UJ	320 UJ	330 U	320 U	NA
2,4-DINITROPHENOL	670 U	670 UJ	NA	NA	670 U	670 UJ	670 UJ	670 U	NA	670 UJ	660 UJ	660 UJ	660 U	NA
2,4-DINITROTOLUENE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
2,6-DINITROTOLUENE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
2-CHLORONAPHTHALENE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
2-CHLOROPHENOL	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
2-METHYLNAPHTHALENE	3.3 U	3.3 U	2.9 J	4.8 J	17 J	5 J	11 J	7.7	13	3.3 U	10	6.8	3.2 U	3.2 J
2-METHYLPHENOL	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
2-NITROANILINE	670 U	670 U	NA	NA	670 U	670 UJ	670 UJ	670 U	NA	670 U	660 U	660 U	660 U	NA
2-NITROPHENOL	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
3,3'-DICHLOROBENZIDINE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
3-NITROANILINE	670 U	670 U	NA	NA	670 U	670 UJ	670 UJ	670 U	NA	670 U	660 U	660 U	660 U	NA
4,6-DINITRO-2-METHYLPHENOL	670 U	670 U	NA	NA	670 U	670 UJ	670 UJ	670 U	NA	670 U	660 U	660 U	660 U	NA
4-BROMOPHENYL PHENYL ETHER	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
4-CHLORO-3-METHYLPHENOL	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
4-CHLOROANILINE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
4-CHLOROPHENYL PHENYL ETHER	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
4-METHYLPHENOL	35 J	43 J	NA	NA	710 J	330 UJ	438 J	330 U	NA	330 U	320 U	330 U	300 J	NA
4-NITROANILINE	670 U	670 U	NA	NA	670 U	670 UJ	670 UJ	670 U	NA	670 U	660 U	660 UJ	660 U	NA
4-NITROPHENOL	670 U	670 U	NA	NA	670 U	670 UJ	670 UJ	670 U	NA	670 U	660 U	660 UJ	660 U	NA
ACENAPHTHENE	23 J	16.3 J	7.5 J	30	93	32 J	62.5 J	43	57	5	54	20	3.2 U	7.9 J
ACENAPHTHYLENE	3.3 U	3.3 U	5.2 J	2 J	7.3 J	5.2 J	6.25 J	3.9	2.4 J	15	74	52	3.2 U	6.9 J
ACETOPHENONE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
ANTHRACENE	99 J	64 J	25	65	170 J	70 J	120 J	95	98	23	270	140	13	23
ATRAZINE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
BENZALDEHYDE	330 UJ	330 UJ	NA	NA	330 UJ	330 UJ	330 UJ	330 UJ	NA	330 UJ	320 UJ	330 UJ	320 UJ	NA
BENZO(A)ANTHRACENE	230 J	142 J	130	150	300 J	130 J	215 J	170	180	74	590	200	17	68
BENZO(A)PYRENE	150 J	100 J	81 J	150	260 J	110 J	185 J	150	180	53	490	300	15	67 J
BENZO(B)FLUORANTHENE	210 J	132 J	76	110	330 J	140 J	235 J	180	140	130	630	490	24	59
BENZO(G,H,I)PERYLENE	82 J	59 J	43 J	89	150 J	67 J	108 J	83	110	20	120	99	7.2	40 J
BENZO(K)FLUORANTHENE	62 J	39.5 J	89	110	140 J	56 J	98 J	79	150	46	600	210	8.6	55
BIS(2-CHLOROETHOXY)METHANE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
BIS(2-CHLOROETHYL)ETHER	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	330 U	NA	NA	46 J	33 J	39.5 J	330 U	NA	330 U	320 U	330 U	320 U	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	GI-SD522-0006	GI-SD523-0006	G32-SD314-000.5	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0	GI-SD529-0006	G32-SD315-000.5	G32-SD316-000.5	G32-SD316-0.51.0	G32-SD317-000.5	GI-SD530-0006
LOCATION ID	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD315	G32-SD316	G32-SD316	G32-SD317	G32-SD317
SAMPLE DATE	08/25/05	08/25/05	05/13/10	05/13/10	09/01/05	09/01/05	09/01/05	09/01/05	05/04/10	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
BUTYL BENZYL PHTHALATE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
CAPROLACTAM	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
CARBAZOLE	38 J	102 J	NA	NA	81 J	330 UJ	123 J	43 J	NA	330 U	130 J	64 J	320 U	NA
CHRYSENE	150 J	96.5 J	160	150	310 EBJ	120 EBJ	215 EBJ	160 EB	180	120	960	300	22	100
DIBENZO(A,H)ANTHRACENE	25 J	17.5 J	15	30	41 J	17 J	29 J	22	36	7.9	43	35	3.2 U	15
DIBENZOFURAN	330 U	330 U	NA	NA	48 J	330 UJ	106 J	330 U	NA	330 U	37 J	330 U	320 U	NA
DIETHYL PHTHALATE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
DIMETHYL PHTHALATE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
DI-N-BUTYL PHTHALATE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
DI-N-OCTYL PHTHALATE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
FLUORANTHENE	380	255 J	490	320	700 J	280 J	490 J	460	400	140	2000 J	700	52	140
FLUORENE	19	15.5	6.9 J	28	88 J	31 J	59.5 J	40	47	7.8	72	31	5.2	7.9 J
HEXACHLOROBENZENE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
HEXACHLOROBUTADIENE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
HEXACHLOROCYCLOPENTADIENE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 UJ	320 R	330 UJ	320 U	NA
HEXACHLOROETHANE	330 U	330 UJ	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
HIGH MOLECULAR WEIGHT PAHS	1720 J	1150 J	1490 J	1450 J	2970 J	1220 J	2100 J	1700	1780	735	7770 J	4040	187	711 J
INDENO(1,2,3-CD)PYRENE	73 J	51 J	42	84	140 J	58 J	99 J	74	98	24	140	110	6.4	37
ISOPHORONE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
LOW MOLECULAR WEIGHT PAHS	389 J	277 J	116 J	360 J	1030 J	383 J	706 J	498	567 J	90.8	1460 J	540	49.8	123 J
NAPHTHALENE	7.7	6.15	11 U	7.9 UJ	26 J	9.4 J	17.7 J	18	30	3.3 U	22	10	4.6	9.2 U
NITROBENZENE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
N-NITROSO-DI-N-PROPYLAMINE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
N-NITROSODIPHENYLAMINE	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
PENTACHLOROPHENOL	670 U	670 U	NA	NA	670 U	670 UJ	670 UJ	670 U	NA	670 U	660 U	660 U	660 U	NA
PHENANTHRENE	240 J	175 J	69	230	630	230 J	430 J	290	320	40	960 J	280	27	74
PHENOL	35 J	50 J	NA	NA	56 J	330 UJ	110 J	330 U	NA	330 U	320 U	330 U	270 J	NA
PYRENE	360 J	260 J	360 J	260 J	600	240 J	420 J	320	310	120	2200 J	1600	35	130 J
TOTAL CARCINOGENIC PAHS-HALFND	900 J	579 J	593 J	784	1520 J	631 J	1080 J	835	964	455	3450	1640	94.6	401 J
TOTAL CARCINOGENIC PAHS-POS	900 J	579 J	593 J	784	1520 J	631 J	1080 J	835	964	455	3450	1640	93	401 J
TOTAL CHLORINATED VOCS	330 U	330 U	NA	NA	330 U	330 UJ	330 UJ	330 U	NA	330 U	320 U	330 U	320 U	NA
TOTAL PAHS	2110 J	1430 J	1600 J	1810 J	4000 J	1600 J	2800 J	2200	2350 J	826	9240 J	4580	237	834 J
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	3.3 U	3.3 U	NA	NA	3.3 U	3.3 U	3.3 U	3.3 U	NA	4.6 U	4.9 U	97 U	3.9 U	NA
4,4'-DDE	3.3 U	3.3 U	NA	NA	3.3 U	3.3 U	3.3 U	3.3 U	NA	5.1 J	69	220 J	3.9 U	NA
4,4'-DDT	3.3 U	3.3 U	NA	NA	7.6 R	4.4 R	6 R	3.3 U	NA	10 R	360 R	420 J	3.9 U	NA
ALDRIN	1.7 U	1.7 U	NA	NA	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.4 U	2.5 U	50 U	2 U	NA
ALPHA-BHC	1.7 U	1.7 U	NA	NA	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.4 U	2.5 U	50 U	2 U	NA
ALPHA-CHLORDANE	1.7 U	1.7 UJ	NA	NA	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.4 U	2.5 U	50 U	2 U	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	GI-SD522-0006	GI-SD523-0006	G32-SD314-000.5	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0	GI-SD529-0006	G32-SD315-000.5	G32-SD316-000.5	G32-SD316-0.51.0	G32-SD317-000.5	GI-SD530-0006
LOCATION ID	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD315	G32-SD316	G32-SD316	G32-SD317	G32-SD317
SAMPLE DATE	08/25/05	08/25/05	05/13/10	05/13/10	09/01/05	09/01/05	09/01/05	09/01/05	05/04/10	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
AROCLOR-1016	33 U	33 U	NA	NA	33 U	33 U	33 U	33 U	NA	46 U	990 U	970 U	39 U	NA
AROCLOR-1221	33 U	33 U	NA	NA	33 U	33 U	33 U	33 U	NA	46 U	990 U	970 U	39 U	NA
AROCLOR-1232	33 U	33 U	NA	NA	33 U	33 U	33 U	33 U	NA	46 U	990 U	970 U	39 U	NA
AROCLOR-1242	33 U	33 U	NA	NA	33 U	33 U	33 U	33 U	NA	46 U	990 U	970 U	39 U	NA
AROCLOR-1248	33 U	33 U	NA	NA	33 U	33 U	33 U	33 U	NA	46 U	990 U	970 U	39 U	NA
AROCLOR-1254	33 U	33 U	NA	NA	33 U	33 U	33 U	33 U	NA	46 U	990 U	970 U	39 U	NA
AROCLOR-1260	33 U	33 U	NA	NA	270	190	230	33 U	NA	500	22000	22000	39 U	NA
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	1.8 J	2.55 J	NA	NA	1.7 U	1.7 U	1.7 U	1.8	NA	4.7	4.6 J	50 U	2 U	NA
DELTA-BHC	1.7 U	1.7 U	NA	NA	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.4 U	2.5 U	50 U	2 U	NA
DIELDRIN	3.3 U	3.3 U	NA	NA	3.3 U	3.3 U	3.3 U	3.3 U	NA	4.6 U	4.9 U	97 U	3.9 U	NA
ENDOSULFAN I	1.7 U	1.7 U	NA	NA	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.4 U	2.5 U	50 U	2 U	NA
ENDOSULFAN II	3.3 U	3.3 U	NA	NA	3.3 U	3.3 U	3.3 U	3.3 U	NA	4.6 U	48 R	97 U	3.9 U	NA
ENDOSULFAN SULFATE	3.3 U	3.3 U	NA	NA	3.3 U	4 J	2.82 J	3.3 U	NA	12 J	340 J	380 J	3.9 U	NA
ENDRIN	3.3 U	3.3 U	NA	NA	3.3 U	3.3 U	3.3 U	3.3 U	NA	4.6 U	4.9 U	97 U	3.9 U	NA
ENDRIN ALDEHYDE	3.3 U	3.3 U	NA	NA	3.4 R	3.3 U	3.3 U	3.3 U	NA	4.6 U	130 R	120 J	3.9 U	NA
ENDRIN KETONE	3.3 U	3.3 U	NA	NA	6.8 J	4.6 J	5.7 J	3.3 U	NA	4.6 U	4.9 U	97 U	3.9 U	NA
GAMMA-BHC (LINDANE)	1.7 U	1.7 UJ	NA	NA	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.4 U	2.5 U	50 U	2 U	NA
GAMMA-CHLORDANE	1.7 U	1.7 U	NA	NA	4 J	2.3 J	3.15 J	1.7 U	NA	11	250	600	2 U	NA
HEPTACHLOR	1.7 U	1.7 U	NA	NA	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.4 U	2.5 U	50 U	2 U	NA
HEPTACHLOR EPOXIDE	1.7 U	1.7 U	NA	NA	1.7 U	1.7 U	1.7 U	1.7 U	NA	2.4 U	2.5 U	50 U	2 U	NA
METHOXYCHLOR	17 U	17 U	NA	NA	17 U	17 U	17 U	17 U	NA	24 U	25 U	500 U	20 U	NA
TOTAL AROCLOR	33 U	33 U	NA	NA	270	190	230	33 U	NA	500	22000	22000	39 U	NA
TOTAL CHLORDANE	1.7 U	1.7 UJ	NA	NA	4 J	2.3 J	3.15 J	1.7 U	NA	11	250	600	2 U	NA
TOTAL DDD/DDE/DDT	3.3 U	3.3 U	NA	NA	3.3 U	3.3 U	3.3 U	3.3 U	NA	5.1 J	69	640 J	3.9 U	NA
TOXAPHENE	170 U	170 U	NA	NA	170 U	170 U	170 U	170 U	NA	240 U	250 U	5000 U	200 U	NA
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	2.9 U	1 U	NA	NA	NA	NA	6 U	NA	NA	NA	NA	5.8 U
DICHLOROBIPHENYLS	NA	NA	0.59 U	0.2 U	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	1.2 U
HEPTACHLOROBIPHENYLS	NA	NA	1.5 U	0.5 U	NA	NA	NA	NA	3 U	NA	NA	NA	NA	2.9 U
HEXACHLOROBIPHENYL	NA	NA	6.4 J	3.2	NA	NA	NA	NA	16	NA	NA	NA	NA	8.1 J
MONOCHLOROBIPHENYLS	NA	NA	0.59 U	0.2 U	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	1.2 U
NONACHLOROBIPHENYLS	NA	NA	2.9 U	1 U	NA	NA	NA	NA	6 U	NA	NA	NA	NA	5.8 U
PENTACHLOROBIPHENYLS	NA	NA	8.8 U	5.2 U	NA	NA	NA	NA	2.4 U	NA	NA	NA	NA	2.3 U
TETRACHLOROBIPHENYLS	NA	NA	1.1 U	0.4 U	NA	NA	NA	NA	2.4 U	NA	NA	NA	NA	2.3 U
TOTAL OCTACHLOROBIPHENYLS	NA	NA	1.5 U	0.5 U	NA	NA	NA	NA	3 U	NA	NA	NA	NA	2.9 U
TOTAL PCB HOMOLOGS	NA	NA	6.4 J	3.92 J	NA	NA	NA	NA	16	NA	NA	NA	NA	8.1 J
TOTAL PCB HOMOLOGS-HALFND	NA	NA	16.6 J	8.42 J	NA	NA	NA	NA	29.2	NA	NA	NA	NA	20.9 J

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	GI-SD522-0006	GI-SD523-0006	G32-SD314-000.5	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0	GI-SD529-0006	G32-SD315-000.5	G32-SD316-000.5	G32-SD316-0.51.0	G32-SD317-000.5	GI-SD530-0006
LOCATION ID	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD315	G32-SD316	G32-SD316	G32-SD317	G32-SD317
SAMPLE DATE	08/25/05	08/25/05	05/13/10	05/13/10	09/01/05	09/01/05	09/01/05	09/01/05	05/04/10	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	NA	0.59 U	0.72 J	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	1.2 U
METALS (MG/KG)														
ALUMINUM	5760	5560	6990	5460	6040	7110	6580	6980	6250	4890	6090	7780	5560	6060
ANTIMONY	0.34 U	0.52 U	2.6 UJ	0.6 UJ	0.057 UJ	0.056 UJ	0.0565 UJ	0.057 UJ	0.718 UJ	0.18 UJ	0.055 UJ	0.056 UJ	0.46 UJ	0.69 UJ
ARSENIC	3.5 J	4.05 J	5.3 J	3.3 J	1.4 J	1.2 J	1.3 J	1.2 J	0.49 J	1.7 J	4.9 J	6.1 J	4.8 J	5.6 J
BARIUM	15.4 J	13.4 J	10.6 J	13.1	5.6 J	7.7 J	6.65 J	6.1 J	10.1	8.2 J	17 J	25.3 J	8.7 J	10.2 J
BERYLLIUM	0.14	0.125	0.495	0.188 J	0.25	0.26	0.255	0.3	0.213 J	0.27	0.46	0.59	0.27	0.254
CADMIUM	3.9 J	12.3 J	1	0.783	0.061 UJ	0.088 UJ	0.0745 UJ	0.048 UJ	0.205 J	0.15 UJ	0.29 UJ	0.48 UJ	398	0.724
CALCIUM	16500 J	23400 J	16800	13800	23500 J	21100 J	22300 J	12000 J	31100	19200 J	28900 J	10200 J	5630 J	33400
CHROMIUM	10.8	13.2	24.7 J	18 J	11.9 J	15.3 J	13.6 J	13.8 J	11.3	10.6	20.8	31.5	72.1	28.1 J
COBALT	3.2 J	3.1 J	5.7	4.4	2.7 J	3 J	2.85 J	3.1 J	3.6	2.3 J	3 J	3.8 J	2 J	5.2
COPPER	16.8 J	27.2 J	40.6 J	37.7 J	14.1	12.6	13.4	13.6	8.1 J	17.2	42.5	92.5	36.5	186 J
CYANIDE	0.12 U	0.12 U	NA	NA	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	NA	0.13 UJ	0.12 UJ	0.12 UJ	0.12 UJ	NA
IRON	12800 J	18400 J	46500	35200	12400	14600	13500	15200	13200	11000 J	12500 J	17200 J	71800 J	37400
LEAD	13.8 J	16.6 J	22.2 J	35.9 J	12.1 J	14.4 J	13.2 J	12.8 J	12.7	14 J	90.6 J	90.6 J	56.4 J	20.9 J
MAGNESIUM	3360	3360	4450	3460	3040	3490	3260	3340	3230	3180	3160	3760	3660	3050
MANGANESE	143	154 J	281	229	118 J	141 J	130 J	143 J	129	111 J	115 J	155 J	348 J	230
MERCURY	0.017 UJ	0.017 UJ	0.039	0.005 J	0.03 U	0.031 U	0.0305 U	0.035 U	0.027 J	0.026 J	0.19 J	0.22 J	0.0099 J	0.031
NICKEL	8.8 J	9.5 J	21.6	17.2	9 J	10.6 J	9.8 J	10.9 J	8.4	6.9 J	10.2 J	12.5 J	8.7 J	32.8
POTASSIUM	840 J	880 J	1190 J	897 J	736	783	760	644	867	819 J	1450 J	1690 J	787 J	712 J
SELENIUM	0.069 U	0.0705 U	8.68 U	6 U	0.068 UJ	0.068 UJ	0.068 UJ	0.068 UJ	0.718 U	0.067 UJ	0.065 UJ	0.067 UJ	0.065 UJ	2.08 U
SILVER	0.019 U	0.0195 U	0.492 J	0.277 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.252 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.019 UJ	0.23 UJ
SODIUM	2900 J	3080 J	6610	3380	3480	3310	3400	2470	4830	3890	6480	5410 J	2560 J	3700
THALLIUM	0.081 U	0.083 U	1.74 UJ	1.2 UJ	0.08 UJ	0.08 UJ	0.08 UJ	0.08 UJ	0.479 UJ	0.67 UJ	0.077 U	0.079 U	1.1 UJ	0.46 UJ
VANADIUM	12.3 J	12.4 J	21.4	11	13.8 J	15 J	14.4 J	17.1 J	13.4	19.6 J	20.4 J	25.6 J	14.6 J	14.9
ZINC	39.3 J	38.4 J	65.4 J	50.7 J	37.3 J	44.1 J	40.7 J	42.3 J	35.2 J	36.8 J	95.9 J	144 J	145 J	41.2 J
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	3700 J	3250 J	11900	3660	7000 J	9200 J	8100 J	7500 J	8300	6800 J	20000 J	14000 J	3000	5000
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	0.12713	0.212855	0.130443	0.12254	0.256378	0.179263	0.217852	0.090678	0.084953	0.329522	12.463952	12.436288	4.278151	0.191026
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	3	-9999	NA	NA	NA	NA	2	NA	NA	NA	NA	-9999
PERCENT CLAY	2	2.15	NA	NA	2.9	5	3.95	3.2	NA	3.1	10.4	14.3	2.9	NA
PERCENT COARSE SAND	10.7	10.9	NA	NA	5.5	7.2	6.35	6.9	NA	7.5	2.2	1.7	23.4	NA
PERCENT FINE SAND	15.4	16.3	NA	NA	25.9	42.9	34.4	38.5	NA	31.6	50.2	41.3	13.7	NA
PERCENT GRAVEL	8.1	7.9	NA	NA	57.9	32.8	45.4	39.2	NA	22.7	4.5	3.2	29.3	NA
PERCENT MEDIUM SAND	58.5	56.4	NA	NA	5.6	8.9	7.25	8.3	NA	30.7	3.1	2.3	25.7	NA

SAMPLE ID	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	GI-SD522-0006	GI-SD523-0006	G32-SD314-000.5	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0	GI-SD529-0006	G32-SD315-000.5	G32-SD316-000.5	G32-SD316-0.51.0	G32-SD317-000.5	GI-SD530-0006
LOCATION ID	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD315	G32-SD316	G32-SD316	G32-SD317	G32-SD317
SAMPLE DATE	08/25/05	08/25/05	05/13/10	05/13/10	09/01/05	09/01/05	09/01/05	09/01/05	05/04/10	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
PERCENT SILT	5.3	6.3	NA	NA	2.1	3.1	2.6	3.9	NA	4.4	29.6	37.1	4.9	NA
PERCENT SOLIDS	81.4	82.2	NA	NA	75	71.9	73.4	82.9	NA	80.8	72.8	68.7	84.6	NA
SIEVE 1"	100	100	100	100	78.5	100	89.2	100	100	100	100	100	100	100
SIEVE 1/2"	NA	NA	100	95	NA	NA	NA	NA	100	NA	NA	NA	NA	100
SIEVE 1-1/2"	100	100	NA	NA	100	100	100	100	NA	100	100	100	100	NA
SIEVE 2"	100	100	NA	NA	100	100	100	100	NA	100	100	100	100	NA
SIEVE 3"	100	100	NA	NA	100	100	100	100	NA	100	100	100	100	NA
SIEVE 3/4"	100	100	100	100	78.5	100	89.2	94.6	100	100	100	100	95	100
SIEVE 3/8"	99.7	98.2	98	91	50.4	84.2	67.3	71.5	100	84.6	97.6	98	86.3	77
SIEVE NO. 004	91.9	92.1	95	70	42.1	67.2	54.6	60.8	95	77.3	95.5	96.8	70.7	54
SIEVE NO. 010	81.2	81.2	88	45	36.6	60.1	48.4	53.9	91	69.8	93.3	95.1	47.2	39
SIEVE NO. 020	55.6	56.2	71	24	34.8	57.3	46	51.6	85	60.5	91.4	93.5	29.2	22
SIEVE NO. 040	22.7	24.8	37	11	30.9	51.1	41	45.6	77	39.1	90.2	92.8	21.5	9
SIEVE NO. 060	11	12.6	21	7	18.4	30.8	24.6	26.4	47	14.3	82.6	85.3	15.9	4
SIEVE NO. 080	8.9	10.4	NA	NA	10.4	17.4	13.9	14.7	NA	10.8	72.3	77.3	12	NA
SIEVE NO. 100	8.4	9.85	14	7	8.1	13.5	10.8	11.3	17	9.9	66.3	72.8	10.8	1
SIEVE NO. 200	7.2	8.4	12	7	5.1	8.2	6.65	7.1	9	7.5	40	51.4	7.8	1
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	1.2 J	1.45 J	NA	NA	2.4 J	6.5 J	4.45 J	1.3 J	NA	6.6 J	22.1 J	13.3 J	3.8 J	NA
CADMIUM	0.027 J	0.0165 J	NA	NA	0.0024 UJ	0.0021 UJ	0.00225 UJ	0.002 UJ	NA	0.0016 UJ	0.0072 UJ	0.0045 UJ	0.0021 UJ	NA
COPPER	0.2 J	0.165 J	NA	NA	0.041 UJ	0.12 J	0.0702 J	0.042 UJ	NA	0.071 J	0.2 J	1.2 J	0.19 J	NA
LEAD	0.054 J	0.0455 J	NA	NA	0.052 J	0.038 J	0.045 J	0.033 J	NA	0.1 J	0.12 J	0.54 J	0.17 J	NA
MERCURY	0.00008 UJ	0.00008 UJ	NA	NA	0.00015 U	0.00015 U	0.00015 U	0.00017 U	NA	0.00013 J	0.00095 J	0.0011 J	0.00004 J	NA
NICKEL	0.026 J	0.0325 J	NA	NA	0.073 UJ	0.41 UJ	0.242 UJ	0.022 UJ	NA	0.026 UJ	0.066 J	0.12 J	0.078 UJ	NA
ZINC	0.24 J	0.29 J	NA	NA	0.31 J	0.28 J	0.295 J	0.16 J	NA	0.3 J	0.73 J	4.2 J	0.26 J	NA
AVS/SEM (RATIO)														
SEM/AVS	0.46	0.39	NA	NA	0.15	0.067	0.108	0.15	NA	0.071	0.051	0.46	0.16	NA
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
1,1,2,2-TETRACHLOROETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 UJ	8 UJ	8 UJ	4 U	NA
1,1,2-TRICHLOROETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
1,1-DICHLOROETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
1,1-DICHLOROETHENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
1,2,4-TRICHLOROBENZENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 UJ	8 UJ	8 UJ	4 U	NA
1,2-DIBROMO-3-CHLOROPROPANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 UJ	8 UJ	8 UJ	4 U	NA
1,2-DIBROMOETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
1,2-DICHLOROBENZENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 UJ	8 UJ	8 UJ	4 U	NA
1,2-DICHLOROETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	GI-SD522-0006	GI-SD523-0006	G32-SD314-000.5	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0	GI-SD529-0006	G32-SD315-000.5	G32-SD316-000.5	G32-SD316-0.51.0	G32-SD317-000.5	GI-SD530-0006
LOCATION ID	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD315	G32-SD316	G32-SD316	G32-SD317	G32-SD317
SAMPLE DATE	08/25/05	08/25/05	05/13/10	05/13/10	09/01/05	09/01/05	09/01/05	09/01/05	05/04/10	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
1,2-DICHLOROPROPANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
1,3-DICHLOROBENZENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 UJ	8 UJ	8 UJ	4 U	NA
1,4-DICHLOROBENZENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 UJ	8 UJ	8 UJ	4 U	NA
2-BUTANONE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
2-HEXANONE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
4-METHYL-2-PENTANONE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
ACETONE	67 JEB	51 JEB	NA	NA	250 J	150 J	200 J	71 UJ	NA	700 UJ	71 JEB	42 JEB	30 JEB	NA
BENZENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
BROMODICHLOROMETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
BROMOFORM	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
BROMOMETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
BTEX	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
CARBON DISULFIDE	1 J	1.5 J	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	10 J	12	1 J	NA
CARBON TETRACHLORIDE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 UJ	8 U	4 U	NA
CHLOROBENZENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
CHLORODIBROMOMETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
CHLOROETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
CHLOROFORM	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
CHLOROMETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
CIS-1,2-DICHLOROETHENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
CIS-1,3-DICHLOROPROPENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 UJ	8 U	4 U	NA
CYCLOHEXANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
DICHLORODIFLUOROMETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
ETHYLBENZENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
ISOPROPYLBENZENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
M+P-XYLENES	NA	NA	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
METHYL ACETATE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
METHYL CYCLOHEXANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
METHYL TERT-BUTYL ETHER	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
METHYLENE CHLORIDE	86 UJ	58.5 UJ	NA	NA	28 U	18 U	23 U	29 U	NA	17 U	11 U	39 U	15 U	NA
O-XYLENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
P-XYLENE	5 U	4 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
TETRACHLOROETHENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
TOLUENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
TOTAL 1,2-DICHLOROETHENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
TOTAL CHLORINATED ETHENES	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
TOTAL CHLORINATED VOCS	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 UJ	8 UJ	8 UJ	4 U	NA
TOTAL XYLENES	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
TRANS-1,2-DICHLOROETHENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD313D-000.5-D	G32-SD313D-000.5-AVG	GI-SD522-0006	GI-SD523-0006	G32-SD314-000.5	G32-SD314-000.5-D	G32-SD314-000.5-AVG	G32-SD314-0.51.0	GI-SD529-0006	G32-SD315-000.5	G32-SD316-000.5	G32-SD316-0.51.0	G32-SD317-000.5	GI-SD530-0006
LOCATION ID	G32-SD313	G32-SD313	G32-SD313	G32-SD313F	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD314	G32-SD315	G32-SD316	G32-SD316	G32-SD317	G32-SD317
SAMPLE DATE	08/25/05	08/25/05	05/13/10	05/13/10	09/01/05	09/01/05	09/01/05	09/01/05	05/04/10	08/31/05	08/31/05	08/31/05	08/30/05	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT	0 FT	0.5 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	0.5 FT	0.5 FT
SACODE	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
TRANS-1,3-DICHLOROPROPENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 UJ	8 U	4 U	NA
TRICHLOROETHENE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
TRICHLOROFLUOROMETHANE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
VINYL CHLORIDE	5 U	4 U	NA	NA	7 U	5 U	6 U	6 U	NA	6 U	8 U	8 U	4 U	NA
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	30	31.5	NA	NA	18	16	17	14 J	NA	38	76	230	21	NA
GASOLINE RANGE ORGANICS	5.9 U	5.3 U	NA	NA	12 U	9.3 U	10.6 U	10 U	NA	8.4 U	10 U	9 U	6.8 U	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	ARD1A	ARD1B	ARD2	ARD3	ARD4	ARD5	ARD6	ARD7	ARD8	ARD9	GISD1	GISD10	GISD10-AVG	GISD10-D
LOCATION ID	G32-SD-ARD1	G32-SD-ARD1	G32-SD-ARD2	G32-SD-ARD3	G32-SD-ARD4	G32-SD-ARD5	G32-SD-ARD6	G32-SD-ARD7	G32-SD-ARD8	G32-SD-ARD9	G32-SD-GISD1	G32-SD-GISD10	G32-SD-GISD10	G32-SD-GISD10
SAMPLE DATE	09/29/03	09/29/03	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/29/03	09/29/03	09/30/03
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	AVG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(B)FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(G,H,I)PERYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(K)FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	ARD1A	ARD1B	ARD2	ARD3	ARD4	ARD5	ARD6	ARD7	ARD8	ARD9	GISD1	GISD10	GISD10-AVG	GISD10-D
LOCATION ID	G32-SD-ARD1	G32-SD-ARD1	G32-SD-ARD2	G32-SD-ARD3	G32-SD-ARD4	G32-SD-ARD5	G32-SD-ARD6	G32-SD-ARD7	G32-SD-ARD8	G32-SD-ARD9	G32-SD-GISD1	G32-SD-GISD10	G32-SD-GISD10	G32-SD-GISD10
SAMPLE DATE	09/29/03	09/29/03	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/29/03	09/29/03	09/30/03
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	AVG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIBENZO(A,H)ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CARCINOGENIC PAHS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CARCINOGENIC PAHS-POS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	ARD1A	ARD1B	ARD2	ARD3	ARD4	ARD5	ARD6	ARD7	ARD8	ARD9	GISD1	GISD10	GISD10-AVG	GISD10-D
LOCATION ID	G32-SD-ARD1	G32-SD-ARD1	G32-SD-ARD2	G32-SD-ARD3	G32-SD-ARD4	G32-SD-ARD5	G32-SD-ARD6	G32-SD-ARD7	G32-SD-ARD8	G32-SD-ARD9	G32-SD-GISD1	G32-SD-GISD10	G32-SD-GISD10	G32-SD-GISD10
SAMPLE DATE	09/29/03	09/29/03	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/29/03	09/29/03	09/30/03
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	AVG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
AROCLOR-1016	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1221	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1232	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1242	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1248	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1254	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1260	140	450	520	60	100 U	230	100 U	60	100 U	490	170	100 U	100 U	100 U
AROCLOR-1262	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1268	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	140	450	520	60	100 U	230	100 U	60	100 U	490	170	100 U	100 U	100 U
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	ARD1A	ARD1B	ARD2	ARD3	ARD4	ARD5	ARD6	ARD7	ARD8	ARD9	GISD1	GISD10	GISD10-AVG	GISD10-D
LOCATION ID	G32-SD-ARD1	G32-SD-ARD1	G32-SD-ARD2	G32-SD-ARD3	G32-SD-ARD4	G32-SD-ARD5	G32-SD-ARD6	G32-SD-ARD7	G32-SD-ARD8	G32-SD-ARD9	G32-SD-GISD1	G32-SD-GISD10	G32-SD-GISD10	G32-SD-GISD10
SAMPLE DATE	09/29/03	09/29/03	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/29/03	09/29/03	09/30/03
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	AVG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)														
ALUMINUM	7100	9100	9200	6600	6200	8400	7600	7400	9000	6700	6800	6200	5750	5300
ANTIMONY	10.0 U	12.0 U	10.0 U	11.0 U	12.0 U	11.0 U	10.0 U	10.0 U	12.0 U	11.0 U	11.0 U	10.0 U	10 U	10.0 U
ARSENIC	20.0 U	24.0 U	20.0 U	22.0 U	24.0 U	22.0 U	20.0 U	20.0 U	24.0 U	22.0 U	22.0 U	20.0 U	20 U	20.0 U
BARIUM	21.0	25.0	25.0	20.0	19.0	24.0	15.0	20.0	26.0	19.0	18.0	32.0	23	14.0
BERYLLIUM	1.0 U	1.2 U	1.0 U	1.1 U	1.2 U	1.1 U	1.0 U	1.0 U	1.2 U	1.1 U	1.1 U	1.0 U	1 U	1.0 U
CADMIUM	3.0 U	3.6 U	3.0 U	3.3 U	3.6 U	3.3 U	3.0 U	3.0 U	3.6 U	3.3 U	3.3 U	3.0 U	3 U	3.0 U
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	25.0	38.0	32.0	22.0	23.0	27.0	22.0	25.0	28.0	22.0	21.0	14.0	12.5	11.0
COBALT	4.8	6.0	6.1	4.4	4.3	5.7	5.3	4.9	6.2	4.4	4.7	5.4	4.6	3.8
COPPER	25.0	44.0	29.0	20.0	25.0	22.0	14.0	22.0	21.0	20.0	19.0	20.0	60	100
CYANIDE	0.21	0.44	0.32	0.21 U	0.19 U	0.15 U	0.15 U	0.18 U	0.16 U	0.09 U	0.17 U	0.09	0.07	0.10 U
IRON	13000	17000	17000	12000	13000	16000	16000	13000	16000	12000	13000	14000	12500	11000
LEAD	35.0	51.0	38.0	26.0	29.0	32.0	23.0	27.0	28.0	26.0	25.0	12.0	12	12.0
MAGNESIUM	5400	6300	6100	5000	5300	5600	4500	5100	6100	4800	4700	3600	3600	3600
MANGANESE	160	170	190	170	150	210	170	180	230	180	180	100	110	120
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	10.0	20.0	14.0	11.0	12.0	12.0	11.0	10.0	10.0	8.3	8.5	12.0	10	8.0
POTASSIUM	2500	3100	3000	2300	2200	2700	1900	2400	2900	2200	2000	2400	1800	1200
SELENIUM	10.0 U	12.0 U	10.0 U	11.0 U	12.0 U	11.0 U	10.0 U	10.0 U	12.0 U	11.0 U	11.0 U	10.0 U	10 U	10.0 U
SILVER	3.0 U	3.6 U	3.0 U	3.3 U	3.6 U	3.3 U	3.0 U	3.0 U	3.6 U	3.3 U	3.3 U	3.0 U	3 U	3.0 U
SODIUM	15000	18000	16000	14000	16000	13000	6600	11000	15000	12000	11000	3800	4300	4800
THALLIUM	20.0 U	24.0 U	20.0 U	22.0 U	24.0 U	22.0 U	20.0 U	20.0 U	24.0 U	22.0 U	22.0 U	20.0 U	20 U	20.0 U
VANADIUM	26.0	36.0	32.0	22.0	23.0	27.0	22.0	24.0	26.0	21.0	21.0	20.0	17.5	15.0
ZINC	79.0	110	38.0	62.0	71.0	71.0	58.0	66.0	69.0	59.0	69.0	53.0	58.5	64.0
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT CLAY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	ARD1A	ARD1B	ARD2	ARD3	ARD4	ARD5	ARD6	ARD7	ARD8	ARD9	GISD1	GISD10	GISD10-AVG	GISD10-D
LOCATION ID	G32-SD-ARD1	G32-SD-ARD1	G32-SD-ARD2	G32-SD-ARD3	G32-SD-ARD4	G32-SD-ARD5	G32-SD-ARD6	G32-SD-ARD7	G32-SD-ARD8	G32-SD-ARD9	G32-SD-GISD1	G32-SD-GISD10	G32-SD-GISD10	G32-SD-GISD10
SAMPLE DATE	09/29/03	09/29/03	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/29/03	09/29/03	09/30/03
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	AVG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
PERCENT SILT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1-1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/8"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 040	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 060	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 080	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)														
SEM/AVS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	ARD1A	ARD1B	ARD2	ARD3	ARD4	ARD5	ARD6	ARD7	ARD8	ARD9	GISD1	GISD10	GISD10-AVG	GISD10-D
LOCATION ID	G32-SD-ARD1	G32-SD-ARD1	G32-SD-ARD2	G32-SD-ARD3	G32-SD-ARD4	G32-SD-ARD5	G32-SD-ARD6	G32-SD-ARD7	G32-SD-ARD8	G32-SD-ARD9	G32-SD-GISD1	G32-SD-GISD10	G32-SD-GISD10	G32-SD-GISD10
SAMPLE DATE	09/29/03	09/29/03	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/29/03	09/29/03	09/30/03
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	AVG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	ARD1A	ARD1B	ARD2	ARD3	ARD4	ARD5	ARD6	ARD7	ARD8	ARD9	GISD1	GISD10	GISD10-AVG	GISD10-D
LOCATION ID	G32-SD-ARD1	G32-SD-ARD1	G32-SD-ARD2	G32-SD-ARD3	G32-SD-ARD4	G32-SD-ARD5	G32-SD-ARD6	G32-SD-ARD7	G32-SD-ARD8	G32-SD-ARD9	G32-SD-GISD1	G32-SD-GISD10	G32-SD-GISD10	G32-SD-GISD10
SAMPLE DATE	09/29/03	09/29/03	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/29/03	09/29/03	09/30/03
TOP DEPTH	0 FT	0.5 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	1 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	AVG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GISD11	GISD12	GISD12A	GISD12A-D	GISD12A-AVG	GISD3	GISD4	GISD5	GISD5-D	GISD5-AVG	GISD6	GISD6-D	GISD6-AVG	GISD6A
LOCATION ID	G32-SD-GISD11	G32-SD-GISD12	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD3	G32-SD-GISD4	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6A
SAMPLE DATE	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	FD	NM	NM	NM	NM	FD	NM	NM	FD	NM	NM
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(B)FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(G,H,I)PERYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(K)FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GISD11	GISD12	GISD12A	GISD12A-D	GISD12A-AVG	GISD3	GISD4	GISD5	GISD5-D	GISD5-AVG	GISD6	GISD6-D	GISD6-AVG	GISD6A
LOCATION ID	G32-SD-GISD11	G32-SD-GISD12	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD3	G32-SD-GISD4	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6A
SAMPLE DATE	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	FD	NM	NM	NM	NM	FD	NM	NM	FD	NM	NM
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIBENZO(A,H)ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CARCINOGENIC PAHS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CARCINOGENIC PAHS-POS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GISD11	GISD12	GISD12A	GISD12A-D	GISD12A-AVG	GISD3	GISD4	GISD5	GISD5-D	GISD5-AVG	GISD6	GISD6-D	GISD6-AVG	GISD6A
LOCATION ID	G32-SD-GISD11	G32-SD-GISD12	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD3	G32-SD-GISD4	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6A
SAMPLE DATE	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	FD	NM	NM	NM	NM	FD	NM	NM	FD	NM	NM
AROCLOR-1016	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1221	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1232	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1242	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1248	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1254	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1260	70	100 U	100 U	100 U	100 U	180	130	110	100 U	80	100 U	100 U	100 U	100 U
AROCLOR-1262	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
AROCLOR-1268	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	70	100 U	100 U	100 U	100 U	180	130	110	100 U	80	100 U	100 U	100 U	100 U
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GISD11	GISD12	GISD12A	GISD12A-D	GISD12A-AVG	GISD3	GISD4	GISD5	GISD5-D	GISD5-AVG	GISD6	GISD6-D	GISD6-AVG	GISD6A
LOCATION ID	G32-SD-GISD11	G32-SD-GISD12	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD3	G32-SD-GISD4	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6A
SAMPLE DATE	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	FD	NM	NM	NM	NM	FD	NM	NM	FD	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)														
ALUMINUM	7900	8800	7300	7000	7150	4100	6800	7300	7400	7350	5600	6900	6250	6500
ANTIMONY	11.0 U	10.0 U	10.0 U	10.0 U	10 U	10.0 U	10.0 U	10.0 U	10.0 U	10 U	10.0 U	10.0 U	10 U	10.0 U
ARSENIC	22.0 U	20.0 U	20.0 U	20.0 U	20 U	20.0 U	20.0 U	20.0 U	20.0 U	20 U	20.0 U	20.0 U	20 U	20.0 U
BARIUM	26.0	20.0	18.0	18.0	18	11.0	20.0	17.0	19.0	18	11.0	11.0	11	11.0
BERYLLIUM	1.1 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1.0 U	1.0 U	1 U	1.0 U
CADMIUM	3.3 U	3.0 U	3.0 U	3.0 U	3 U	3.0 U	3.0 U	3.0 U	3.0 U	3 U	3.0 U	3.0 U	3 U	3.0 U
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	26.0	26.0	22.0	21.0	21.5	10.0	17.0	20.0	26.0	23	12.0	12.0	12	15.0
COBALT	5.4	6.8	6.0	5.7	5.85	3.3	4.6	4.6	5.2	4.9	4.8	5.5	5.15	4.6
COPPER	25.0	16.0	14.0	12.0	13	9.5	14.0	15.0	18.0	16.5	11.0	11.0	11	8.3
CYANIDE	0.23 U	0.18 U	0.15 U	0.10 U	0.125 U	0.12 U	0.13 U	0.18 U	0.17 U	0.175 U	0.18	0.23	0.205	0.17 U
IRON	15000	21000	19000	18000	18500	8700	14000	14000	15000	14500	11000	15000	13000	14000
LEAD	32.0	26.0	21.0	21.0	21	15.0	22.0	22.0	26.0	24	12.0	10.0 U	8.5	14.0
MAGNESIUM	4700	5200	4600	4200	4400	2300	4000	4500	4600	4550	3000	3400	3200	3600
MANGANESE	150	280	230	220	225	88.0	130	160	180	170	110	130	120	140
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	13.0	14.0	12.0	11.0	11.5	6.0 U	6.1	10.0	13.0	11.5	8.2	9.6	8.9	9.0
POTASSIUM	2300	2600	2400	2300	2350	880	1500	1600	1900	1750	930	960	945	1200
SELENIUM	11.0 U	10.0 U	10.0 U	10.0 U	10 U	10.0 U	10.0 U	10.0 U	10.0 U	10 U	10.0 U	10.0 U	10 U	10.0 U
SILVER	3.3 U	3.0 U	3.0 U	3.0 U	3 U	3.0 U	3.0 U	3.0 U	3.0 U	3 U	3.0 U	3.0 U	3 U	3.0 U
SODIUM	9200	8200	7100	5800	6450	3000	4500	7800	7500	7650	3700	3100	3400	3600
THALLIUM	22.0 U	20.0 U	20.0 U	20.0 U	20 U	20.0 U	20.0 U	20.0 U	20.0 U	20 U	20.0 U	20.0 U	20 U	20.0 U
VANADIUM	25.0	25.0	22.0	21.0	21.5	11.0	17.0	19.0	22.0	20.5	12.0	12.0	12	16.0
ZINC	71.0	72.0	63.0	58.0	60.5	34.0	69.0	67.0	70.0	68.5	38.0	39.0	38.5	47.0
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT CLAY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SAMPLE ID	GISD11	GISD12	GISD12A	GISD12A-D	GISD12A-AVG	GISD3	GISD4	GISD5	GISD5-D	GISD5-AVG	GISD6	GISD6-D	GISD6-AVG	GISD6A
LOCATION ID	G32-SD-GISD11	G32-SD-GISD12	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD3	G32-SD-GISD4	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6A
SAMPLE DATE	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	FD	NM	NM	NM	NM	FD	NM	NM	FD	NM	NM
PERCENT SILT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1-1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/8"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 040	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 060	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 080	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)														
SEM/AVS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GISD11	GISD12	GISD12A	GISD12A-D	GISD12A-AVG	GISD3	GISD4	GISD5	GISD5-D	GISD5-AVG	GISD6	GISD6-D	GISD6-AVG	GISD6A
LOCATION ID	G32-SD-GISD11	G32-SD-GISD12	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD3	G32-SD-GISD4	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6A
SAMPLE DATE	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	FD	NM	NM	NM	NM	FD	NM	NM	FD	NM	NM
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GISD11	GISD12	GISD12A	GISD12A-D	GISD12A-AVG	GISD3	GISD4	GISD5	GISD5-D	GISD5-AVG	GISD6	GISD6-D	GISD6-AVG	GISD6A
LOCATION ID	G32-SD-GISD11	G32-SD-GISD12	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD12A	G32-SD-GISD3	G32-SD-GISD4	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD5	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6	G32-SD-GISD6A
SAMPLE DATE	09/29/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03	09/30/03
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.33 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	FD	NM	NM	NM	NM	FD	NM	NM	FD	NM	NM
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GISD7	GISD8	FS1	FS2	GI-SD401-0006	GI-SD401-0612	GI-SD401-1218	GI-SD532-0006	GI-SD402-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612	GI-SD502-0006	GI-SD403-0006
LOCATION ID	G32-SD-GISD7	G32-SD-GISD8	GIFS-SD-FS1	GIFS-SD-FS2	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD403
SAMPLE DATE	09/29/03	09/29/03	09/30/03	09/30/03	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1.33 FT	2.67 FT	4 FT	0.5 FT	2 FT	2 FT	2 FT	4 FT	0.5 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	NA	NA	NA	NA	4.1	5.4	6.7	290 U	7.1	5.1	6.1	12	320 U	4
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	NA	NA	NA	NA	17	23	26	230 J	27	22	24.5	75	200 J	3.5
ACENAPHTHYLENE	NA	NA	NA	NA	88	30	57	87 J	77	100	88.5	310 D	110 J	22
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	NA	NA	NA	NA	130	63	88	2400	150	170	160	510 D	2300	36
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	NA	NA	NA	NA	680 D	180	180	2900	310 D	350 D	330 D	1400 D	2200	80
BENZO(A)PYRENE	NA	NA	NA	NA	240	90	160	2100	260	310	285	1000 D	1500	110
BENZO(B)FLUORANTHENE	NA	NA	NA	NA	450 D	130	210	2600	540 D	500 D	520 D	2700 D	1700	220
BENZO(G,H,I)PERYLENE	NA	NA	NA	NA	84	35	70	970	130	150	140	510 D	620	54
BENZO(K)FLUORANTHENE	NA	NA	NA	NA	200	100	180	2000	160	240	200	990 D	1400	70
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GISD7	GISD8	FS1	FS2	GI-SD401-0006	GI-SD401-0612	GI-SD401-1218	GI-SD532-0006	GI-SD402-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612	GI-SD502-0006	GI-SD403-0006
LOCATION ID	G32-SD-GISD7	G32-SD-GISD8	GIFS-SD-FS1	GIFS-SD-FS2	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD403
SAMPLE DATE	09/29/03	09/29/03	09/30/03	09/30/03	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1.33 FT	2.67 FT	4 FT	0.5 FT	2 FT	2 FT	2 FT	4 FT	0.5 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	NA	NA	NA	NA	660 D	160	180	4900	600 D	560 D	580 D	3100 D	3800	110
DIBENZO(A,H)ANTHRACENE	NA	NA	NA	NA	36	14	27	360	44	56	50	240	250 J	17
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	NA	NA	NA	NA	2800 D	570 D	320	8900	2200 D	1900 D	2050 D	14000 D	8800	120
FLUORENE	NA	NA	NA	NA	31	28	31	330	36	35	35.5	130	440	6.5
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	7440	1850	2020	32000	6770	6320	6540	36500	27000 J	1100
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	NA	90	37	73	980	130	150	140	540 D	690	55
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	463	305	415	6650 J	696	650	673	1590	7750 J	107
NAPHTHALENE	NA	NA	NA	NA	13	16	16	290 U	8.9	8.4	8.65	16	320 U	4.6
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	NA	NA	NA	NA	180	140	190	3600	390 D	310 D	350 D	540 D	4700	30
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	NA	NA	NA	NA	2200 D	530 D	620 D	6300	2400 D	2100 D	2250 D	12000 D	6000	260
TOTAL CARCINOGENIC PAHS-HALFND	NA	NA	NA	NA	2360	711	1010	15800	2040	2170	2100	9970	11500 J	662
TOTAL CARCINOGENIC PAHS-POS	NA	NA	NA	NA	2360	711	1010	15800	2040	2170	2100	9970	11500 J	662
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	NA	NA	NA	NA	7900	2150	2430	38700 J	7470	6970	7220	38100	34700 J	1200
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GISD7	GISD8	FS1	FS2	GI-SD401-0006	GI-SD401-0612	GI-SD401-1218	GI-SD532-0006	GI-SD402-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612	GI-SD502-0006	GI-SD403-0006
LOCATION ID	G32-SD-GISD7	G32-SD-GISD8	GIFS-SD-FS1	GIFS-SD-FS2	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD403
SAMPLE DATE	09/29/03	09/29/03	09/30/03	09/30/03	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1.33 FT	2.67 FT	4 FT	0.5 FT	2 FT	2 FT	2 FT	4 FT	0.5 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM
AROCLOR-1016	100 U	100 U	100 U	100 U	170 U	66 U	330 U	NA	4900 U	3300 U	4100 U	9900 U	NA	830 U
AROCLOR-1221	100 U	100 U	100 U	100 U	170 U	66 U	330 U	NA	4900 U	3300 U	4100 U	9900 U	NA	830 U
AROCLOR-1232	100 U	100 U	100 U	100 U	170 U	66 U	330 U	NA	4900 U	3300 U	4100 U	9900 U	NA	830 U
AROCLOR-1242	100 U	100 U	100 U	100 U	170 U	66 U	330 U	NA	4900 U	3300 U	4100 U	9900 U	NA	830 U
AROCLOR-1248	100 U	100 U	100 U	100 U	170 U	66 U	330 U	NA	4900 U	3300 U	4100 U	9900 U	NA	830 U
AROCLOR-1254	100 U	100 U	100 U	100 U	170 U	66 U	330 U	NA	4900 U	3300 U	4100 U	9900 U	NA	830 U
AROCLOR-1260	100 U	100 U	90 U	2000	980	600	2200	NA	25000	16000	20500	55000	NA	4800
AROCLOR-1262	100 U	100 U	100 U	100 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	100 U	100 U	100 U	100 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	100 U	100 U	98.9 U	2000	980	600	2200	NA	25000	16000	20500	55000	NA	4800
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	6 U	NA	NA	NA	NA	6.8 U	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	1.4 U	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	540	NA	NA	NA	NA	360 J	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	640	NA	NA	NA	NA	440 J	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	1.4 U	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	6 U	NA	NA	NA	NA	6.8 U	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	48 U	NA	NA	NA	NA	51 UJ	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	2.4 U	NA	NA	NA	NA	22 J	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	61	NA	NA	NA	NA	40 J	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	1240	NA	NA	NA	NA	862 J	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	1270	NA	NA	NA	NA	896 J	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GISD7	GISD8	FS1	FS2	GI-SD401-0006	GI-SD401-0612	GI-SD401-1218	GI-SD532-0006	GI-SD402-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612	GI-SD502-0006	GI-SD403-0006
LOCATION ID	G32-SD-GISD7	G32-SD-GISD8	GIFS-SD-FS1	GIFS-SD-FS2	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD403
SAMPLE DATE	09/29/03	09/29/03	09/30/03	09/30/03	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1.33 FT	2.67 FT	4 FT	0.5 FT	2 FT	2 FT	2 FT	4 FT	0.5 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	1.4 U	NA
METALS (MG/KG)														
ALUMINUM	4400	4200	3700	6700	5230 *E	7300 *E	6300 *E	4500	4930 E	4760 E	4840 E	5340 E	5190	5660 E
ANTIMONY	10.0 U	10.0 U	10.0 U	10.0 U	0.36 BN	0.53 N	0.51 N	0.71 UJ	0.35 BN	0.2 BN	0.275 BN	0.55 N	0.81 J	0.39 BN
ARSENIC	20.0 U	20.0 U	20.0 U	20.0 U	2.6	3.6	3.7	0.876 J	3.3 E	3.5 E	3.4 E	4.5 E	2.7 J	5.3 E
BARIUM	14.0	17.0	17.0	17.0	13 E	10.6 E	18.5 E	24.7 J	13 NE	10.4 NE	11.7 NE	11.6 NE	26.7 J	13 NE
BERYLLIUM	1.0 U	1.0 U	1.0 U	1.0 U	0.34 E	0.43 E	0.42 E	0.206 J	0.17 NE	0.18 NE	0.175 NE	0.26 NE	0.271 J	0.22 NE
CADMIUM	3.0 U	3.0 U	3.0 U	3.0 U	0.34	0.65	0.57	0.324 J	0.22	0.2	0.21	0.22	0.507 J	0.34
CALCIUM	NA	NA	NA	NA	25400 *	8000 *	19200 *	77100 J	45900	64500	55200	90500	122000 J	45900
CHROMIUM	13.0	11.0	16.0	18.0	10.1 E	14.9 E	16.8 E	10 J	10.7 NE	9.4 NE	10 NE	14.2 NE	12.4 J	13.3 NE
COBALT	3.3	2.5	3.5	5.3	3.9 *E	5.8 *E	4.8 *E	3.2 J	4.3 NE	3.2 NE	3.75 NE	3.4 NE	3.7 J	4.6 NE
COPPER	11.0	8.7	20.0	17.0	13.9 N	21.4 N	22.1 N	10.4 J	19.9 NE	20.2 NE	20 NE	22.9 NE	21.2 J	35.1 NE
CYANIDE	0.41	0.09 U	0.18 U	0.15 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	9000	9300	20000	21000	17000 *	29400 *	25500 *	13600	22500	23400	23000	22500	20100	34800
LEAD	13.0	11.0	21.0	67.0	10.3 N*E	12.8 N*E	18 N*E	7.1 J	8.4 NE	11.4 NE	9.9 NE	38.4 NE	11.3 J	14.6 NE
MAGNESIUM	2400	2400	4700	4300	2710 *E	3360 *E	3430 *E	3160 J	2950 E	2620 E	2780 E	3110 E	3990 J	2990 E
MANGANESE	91.0	94.0	160	250	119 *E	200 *E	143 *E	148 J	131 E	137 E	134 E	144 E	203 J	195 E
MERCURY	NA	NA	NA	NA	0.016 B	0.01 B	0.027	0.023 J	0.03	0.025	0.0275	0.059	0.02 J	0.011 B
NICKEL	7.5	6.9	7.8	10.0	8.6 *E	14.1 *E	11.9 *E	8.4 J	10.5 NE	8.1 NE	9.3 NE	9.1 NE	10 J	11.5 NE
POTASSIUM	1000	980	1000	1200	857 *	834 *	1450 *	1160	1940	707	1320	1230	835 J	1030
SELENIUM	10.0 U	10.0 U	10.0 U	10.0 U	0.42 B	0.72	0.66	0.71 U	0.35 UN	0.36 UN	0.355 UN	0.37 UN	2.42 U	0.32 UN
SILVER	3.0 U	3.0 U	3.0 U	3.0 U	0.034 U	0.032 U	0.033 U	0.24 U	0.035 UN	0.036 UN	0.0355 UN	0.037 UN	0.27 U	0.033 UN
SODIUM	2800	3500	8800	5600	3250	2520	3680	4530	2880	3700	3290	8270	6710	3870
THALLIUM	2.0 U	20.0 U	20.0 U	20.0 U	0.29 B	0.098 U	0.15 B	1.3 J	0.29 BN	0.42 BN	0.355 BN	0.58 N	2.4 J	0.13 BN
VANADIUM	13.0	13.0	14.0	18.0	12.8 *E	14 *E	15.6 *E	10.8 J	10.9 NE	11.1 NE	11 NE	15.5 NE	11.5 J	12.4 NE
ZINC	39.0	36.0	42.0	45.0	32.9 E	36.2 E	43 E	31 J	52.1 NE	49.1 NE	50.6 NE	46.9 NE	43.8 J	38.5 NE
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	4420	NA	NA	NA	NA	9460	NA
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	NA	NA	NA	NA	0.681146	0.428149	1.322152	1.270943	14.035613	9.0253	11.530372	31.053809	1.06098	2.747593
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	1	NA	NA	NA	NA	NA	NA
PERCENT CLAY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GISD7	GISD8	FS1	FS2	GI-SD401-0006	GI-SD401-0612	GI-SD401-1218	GI-SD532-0006	GI-SD402-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612	GI-SD502-0006	GI-SD403-0006
LOCATION ID	G32-SD-GISD7	G32-SD-GISD8	GIFS-SD-FS1	GIFS-SD-FS2	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD403
SAMPLE DATE	09/29/03	09/29/03	09/30/03	09/30/03	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1.33 FT	2.67 FT	4 FT	0.5 FT	2 FT	2 FT	2 FT	4 FT	0.5 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM
PERCENT SILT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	100	NA
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	94	NA	NA	NA	NA	96	NA
SIEVE 1-1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	100	NA
SIEVE 3/8"	NA	NA	NA	NA	NA	NA	NA	89	NA	NA	NA	NA	89	NA
SIEVE NO. 004	NA	NA	NA	NA	NA	NA	NA	79	NA	NA	NA	NA	88	NA
SIEVE NO. 010	NA	NA	NA	NA	NA	NA	NA	67	NA	NA	NA	NA	74	NA
SIEVE NO. 020	NA	NA	NA	NA	NA	NA	NA	55	NA	NA	NA	NA	49	NA
SIEVE NO. 040	NA	NA	NA	NA	NA	NA	NA	43	NA	NA	NA	NA	26	NA
SIEVE NO. 060	NA	NA	NA	NA	NA	NA	NA	28	NA	NA	NA	NA	12	NA
SIEVE NO. 080	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	NA	NA	NA	NA	NA	NA	NA	14	NA	NA	NA	NA	4	NA
SIEVE NO. 200	NA	NA	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	0	NA
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)														
SEM/AVS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GISD7	GISD8	FS1	FS2	GI-SD401-0006	GI-SD401-0612	GI-SD401-1218	GI-SD532-0006	GI-SD402-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612	GI-SD502-0006	GI-SD403-0006
LOCATION ID	G32-SD-GISD7	G32-SD-GISD8	GIFS-SD-FS1	GIFS-SD-FS2	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD403
SAMPLE DATE	09/29/03	09/29/03	09/30/03	09/30/03	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1.33 FT	2.67 FT	4 FT	0.5 FT	2 FT	2 FT	2 FT	4 FT	0.5 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GISD7	GISD8	FS1	FS2	GI-SD401-0006	GI-SD401-0612	GI-SD401-1218	GI-SD532-0006	GI-SD402-0006	GI-SD402-0006-D	GI-SD402-0006-AVG	GI-SD402-0612	GI-SD502-0006	GI-SD403-0006
LOCATION ID	G32-SD-GISD7	G32-SD-GISD8	GIFS-SD-FS1	GIFS-SD-FS2	GI-SD401	GI-SD401	GI-SD401	GI-SD401	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD402	GI-SD403
SAMPLE DATE	09/29/03	09/29/03	09/30/03	09/30/03	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09	10/09/09	10/09/09	10/09/09	05/03/10	10/09/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	0 FT	0 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	1.33 FT	2.67 FT	4 FT	0.5 FT	2 FT	2 FT	2 FT	4 FT	0.5 FT	4 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD404-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD505-0006	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006	GI-SD406-0612	GI-SD501-0006	GI-SD407-0006
LOCATION ID	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406	GI-SD406	GI-SD406	GI-SD407
SAMPLE DATE	10/09/09	10/09/09	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	04/30/10	10/09/09
TOP DEPTH	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.71 FT	1.42 FT	2.83 FT	4 FT	0.5 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT	4 FT	0.5 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	5.2	7.4	17	18	110 U	12	17	14.5	4.6	3.3 U	22	5.3	520 U	3.3 U
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	13	14	23	60	38 J	74	44	59	4.3	3.3 U	130	24	130 J	3.4
ACENAPHTHYLENE	31	47	67	89	54 J	50	55	52.5	22	3.3 U	590 E	36	210 J	8.2
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	120	100	150	310 D	270	140	110	125	29	3.3 U	3400 D	1200 D	4400	33
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	170	150	270	560 D	580	410 D	280	345 D	34	3.3 U	5400 D	750 D	5200	73
BENZO(A)PYRENE	140	250	430 D	470 D	600	350 D	280	315 D	49	3.3 U	2700 D	260	3800	50
BENZO(B)FLUORANTHENE	240	420 D	700 D	690 D	590	520 D	490 D	505 D	93	3.3 U	4800 D	410 D	4100	87
BENZO(G,H,I)PERYLENE	74	130	240	220	320	180	150	165	20	3.3 U	1100 D	73	1600	17
BENZO(K)FLUORANTHENE	97	160	270	270	520	230	220	225	31	3.3 U	2500 D	140	3900	29
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD404-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD505-0006	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006	GI-SD406-0612	GI-SD501-0006	GI-SD407-0006
LOCATION ID	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406	GI-SD406	GI-SD406	GI-SD407
SAMPLE DATE	10/09/09	10/09/09	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	04/30/10	10/09/09
TOP DEPTH	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.71 FT	1.42 FT	2.83 FT	4 FT	0.5 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT	4 FT	0.5 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	230	230	450 D	920 D	840	500 D	460 D	480 D	37	3.3 U	7600 D	890 D	6900	67
DIBENZO(A,H)ANTHRACENE	22	40	69	69	110	62	55	58.5	9.7	3.3 U	480 E	27	580	5.5
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	210	210	320 D	3100 D	830	1200 D	1100 D	1150 D	50	3.3 U	27000 D	4100 D	12000	120
FLUORENE	17	19	31	53	49 J	86	57	71.5	7.1	3.3 U	240	41	210 J	5.7
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	1560	2410	5170	9820	5510	4720	4280	4500	544	19	73700	9230	48600	816
INDENO(1,2,3-CD)PYRENE	71	130	220	220	280	170	150	160	20	3.3 U	1100 D	77	1600	17
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	288	295	473	788	801 J	1150	1020	1080	95.5	3.3 U	6620	1650	6550 J	68.3
NAPHTHALENE	9.2	9.3	15	38	110 U	30	38	34	4.5	3.3 U	39	3.3 U	520 U	3.3 U
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	93	98	170	220	390	760 D	700 D	730 D	24	3.3 U	2200 D	340 D	1600	18
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	310 D	690 D	2200 D	3300 D	840	1100 D	1100 D	1100 D	200	19	21000 D	2500 D	8900	350 D
TOTAL CARCINOGENIC PAHS-HALFND	970	1380	2410	3200	3520	2240	1940	2090	274	3.3 U	24600	2550	26100	328
TOTAL CARCINOGENIC PAHS-POS	970	1380	2410	3200	3520	2240	1940	2090	274	3.3 U	24600	2550	26100	328
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	1850	2700	5640	10600	6310 J	5870	5310	5590	639	19	80300	10900	55100 J	884
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD404-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD505-0006	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006	GI-SD406-0612	GI-SD501-0006	GI-SD407-0006
LOCATION ID	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406	GI-SD406	GI-SD406	GI-SD407
SAMPLE DATE	10/09/09	10/09/09	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	04/30/10	10/09/09
TOP DEPTH	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.71 FT	1.42 FT	2.83 FT	4 FT	0.5 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT	4 FT	0.5 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM
AROCLOR-1016	660 U	660 U	660 U	33 U	NA	330 U	330 U	330 U	33 U	33 U	660 U	33 U	NA	33 U
AROCLOR-1221	660 U	660 U	660 U	33 U	NA	330 U	330 U	330 U	33 U	33 U	660 U	33 U	NA	33 U
AROCLOR-1232	660 U	660 U	660 U	33 U	NA	330 U	330 U	330 U	33 U	33 U	660 U	33 U	NA	33 U
AROCLOR-1242	660 U	660 U	660 U	33 U	NA	330 U	330 U	330 U	33 U	33 U	660 U	33 U	NA	33 U
AROCLOR-1248	660 U	660 U	660 U	33 U	NA	330 U	330 U	330 U	33 U	33 U	660 U	33 U	NA	33 U
AROCLOR-1254	660 U	660 U	660 U	45	NA	330 U	330 U	330 U	33 U	33 U	660 U	33 U	NA	33 U
AROCLOR-1260	2000	2500	1200	33 U	NA	2100	2300	2200	250	33 U	5100	300	NA	190
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	2000	2500	1200	45	NA	2100	2300	2200	250	33 U	5100	300	NA	190
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	NA	NA	6.8 U	NA	NA	NA	NA	NA	NA	NA	13 U	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	16 U	NA	NA	NA	NA	NA	NA	NA	2.7 U	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	360	NA	NA	NA	NA	NA	NA	NA	890 J	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	470	NA	NA	NA	NA	NA	NA	NA	1400 J	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	1.4 U	NA	NA	NA	NA	NA	NA	NA	2.7 U	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	6.8 U	NA	NA	NA	NA	NA	NA	NA	13 U	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	78	NA	NA	NA	NA	NA	NA	NA	300 J	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	2.7 U	NA	NA	NA	NA	NA	NA	NA	5.2 U	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	42	NA	NA	NA	NA	NA	NA	NA	130 J	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	950	NA	NA	NA	NA	NA	NA	NA	2720 J	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	968	NA	NA	NA	NA	NA	NA	NA	2740 J	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD404-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD505-0006	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006	GI-SD406-0612	GI-SD501-0006	GI-SD407-0006
LOCATION ID	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406	GI-SD406	GI-SD406	GI-SD407
SAMPLE DATE	10/09/09	10/09/09	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	04/30/10	10/09/09
TOP DEPTH	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.71 FT	1.42 FT	2.83 FT	4 FT	0.5 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT	4 FT	0.5 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	1.4 U	NA	NA	NA	NA	NA	NA	NA	2.7 U	NA
METALS (MG/KG)														
ALUMINUM	3940 E	5040 E	5510 E	6100 E	4690	4290 *E	7570 E	5930 *E	6950 *E	5860 *E	4550 E	6450 E	5070	5780 E
ANTIMONY	0.18 BN	0.1 UN	6.5 N	0.46 BN	0.208 J	0.28 BN	0.85 N	0.565 BN	0.56 N	0.081 BN	0.85 N	0.15 BN	0.79 UJ	0.21 BN
ARSENIC	4.1 E	4.6 E	7.2 E	5.1 E	0.543 UJ	3.4	3.7 E	3.55 E	3.5	1.7	3.8 E	2.2 E	1.6 J	2.3 E
BARIUM	9.4 NE	13.9 NE	26.6 NE	19.5 NE	14.7	10.7 E	12.1 NE	11.4 E	13 E	14.5 E	17.3 NE	25.6 NE	32.5 J	16.9 NE
BERYLLIUM	0.19 NE	0.27 NE	0.29 NE	0.32 NE	0.359 J	0.31 E	0.33 NE	0.32 E	0.46 E	0.33 E	0.2 NE	0.23 NE	0.336	0.23 NE
CADMIUM	0.16	0.22	2.1	0.44	0.288 J	0.56	0.39	0.475	0.36	0.23	0.14	0.05 B	0.307 J	0.033 B
CALCIUM	133000	135000	121000	132000	165000 J	59100 *	45300	52200 *	4640 *	14400 *	63000	3110	47000 J	2120
CHROMIUM	12.9 NE	16.3 NE	53.2 NE	30.1 NE	13.9	11.2 E	20.3 NE	15.8 E	11.9 E	9.7 E	11.2 NE	13.5 NE	18.8 J	9.6 NE
COBALT	2.4 NE	2.9 NE	4.8 NE	3.5 NE	2.7 J	3 *E	3.4 NE	3.2 *E	4.7 *E	3.8 *E	2.9 NE	4.7 NE	3.2 J	4 NE
COPPER	19.1 NE	22.6 NE	497 NE	139 NE	25 J	27.7 N	46 NE	36.8 N	18.1 N	9.7 N	20 NE	13.6 NE	28.7 J	47.4 NE
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	15500	16400	20900	19600	8860	24300 *	31700	28000 *	16300 *	15100 *	13900	16900	11200	16000
LEAD	21.4 NE	21.7 NE	407 NE	51.9 NE	20.4	21.2 N*E	21.8 NE	21.5 N*E	19.6 N*E	5.3 N*E	19.7 NE	6.3 NE	35.2 J	6.9 NE
MAGNESIUM	2440 E	3320 E	3600 E	3320 E	3070	2250 *E	3570 E	2910 *E	2600 *E	2730 *E	2280 E	2870 E	2950 J	2450 E
MANGANESE	108 E	144 E	154 E	151 E	109	142 *E	163 E	152 *E	104 *E	123 *E	91.9 E	122 E	107 J	103 E
MERCURY	0.057	0.1	0.41	0.3	0.079	0.038	0.06	0.049	0.065	0.0075 B	0.059	0.004 B	0.107	0.012 B
NICKEL	6.3 NE	8.1 NE	12 NE	9.5 NE	6.7	7.7 *E	9.8 NE	8.75 *E	9.5 *E	7.1 *E	6.5 NE	10.6 NE	7.7 J	9.5 NE
POTASSIUM	1050	1520	1650	1820	1220 J	801 *	981	891 *	880 *	865 *	976	1370	1290	762
SELENIUM	0.39 UN	0.43 UN	0.47 UN	0.49 UN	2.4 U	0.34 U	0.36 UN	0.35 U	0.94	0.87	0.36 UN	0.48 BN	0.79 U	0.61 N
SILVER	0.039 UN	0.16 BN	0.56 BN	0.32 BN	0.271 U	0.034 U	1.2 N	0.608 N	0.035 U	0.033 U	0.036 UN	0.031 UN	0.145 J	0.031 UN
SODIUM	8860	10700	11200	11400	7690	4270	4610	4440	3300	2040	4970	2180	6130	2720
THALLIUM	0.84 N	0.87 N	0.92 N	0.86 N	4.5 J	0.55	0.11 UN	0.302	0.11 U	0.2 B	0.45 BN	0.093 UN	0.417 J	0.094 UN
VANADIUM	12.5 NE	18 NE	21.9 NE	18.8 NE	16.5	11.3 *E	17.6 NE	14.4 *E	13.9 *E	12.9 *E	12.3 NE	15.5 NE	17.3 J	12 NE
ZINC	39.9 NE	54.8 NE	616 NE	121 NE	48.2 J	42.2 E	123 NE	82.6 E	65.7 E	20.6 E	54.6 NE	23.7 NE	51.9 J	27.3 NE
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	NA	NA	NA	NA	13800	NA	NA	NA	NA	NA	NA	NA	11700	NA
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	1.186317	1.483985	1.326299	0.295444	0.661024	1.311142	1.445504	1.37816	0.209674	0.041671	3.862807	0.35659	2.289562	0.168231
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	4	NA
PERCENT CLAY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD404-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD505-0006	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006	GI-SD406-0612	GI-SD501-0006	GI-SD407-0006
LOCATION ID	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406	GI-SD406	GI-SD406	GI-SD407
SAMPLE DATE	10/09/09	10/09/09	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	04/30/10	10/09/09
TOP DEPTH	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.71 FT	1.42 FT	2.83 FT	4 FT	0.5 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT	4 FT	0.5 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM
PERCENT SILT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	100	NA
SIEVE 1/2"	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	100	NA
SIEVE 1-1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	100	NA
SIEVE 3/8"	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	100	NA
SIEVE NO. 004	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	98	NA
SIEVE NO. 010	NA	NA	NA	NA	88	NA	NA	NA	NA	NA	NA	NA	95	NA
SIEVE NO. 020	NA	NA	NA	NA	77	NA	NA	NA	NA	NA	NA	NA	92	NA
SIEVE NO. 040	NA	NA	NA	NA	71	NA	NA	NA	NA	NA	NA	NA	90	NA
SIEVE NO. 060	NA	NA	NA	NA	65	NA	NA	NA	NA	NA	NA	NA	86	NA
SIEVE NO. 080	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	NA	NA	NA	NA	55	NA	NA	NA	NA	NA	NA	NA	72	NA
SIEVE NO. 200	NA	NA	NA	NA	38	NA	NA	NA	NA	NA	NA	NA	44	NA
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)														
SEM/AVS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD404-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD505-0006	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006	GI-SD406-0612	GI-SD501-0006	GI-SD407-0006
LOCATION ID	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406	GI-SD406	GI-SD406	GI-SD407
SAMPLE DATE	10/09/09	10/09/09	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	04/30/10	10/09/09
TOP DEPTH	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.71 FT	1.42 FT	2.83 FT	4 FT	0.5 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT	4 FT	0.5 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD404-0006	GI-SD404-0612	GI-SD404-1824	GI-SD404-2834	GI-SD505-0006	GI-SD405-0006	GI-SD405-0006-D	GI-SD405-0006-AVG	GI-SD405-0612	GI-SD405-1218	GI-SD406-0006	GI-SD406-0612	GI-SD501-0006	GI-SD407-0006
LOCATION ID	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD404	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD405	GI-SD406	GI-SD406	GI-SD406	GI-SD407
SAMPLE DATE	10/09/09	10/09/09	10/09/09	10/09/09	05/04/10	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	04/30/10	10/09/09
TOP DEPTH	0 FT	0.71 FT	2.13 FT	3.29 FT	0 FT	0 FT	0 FT	0 FT	1.33 FT	2.67 FT	0 FT	2 FT	0 FT	0 FT
BOTTOM DEPTH	0.71 FT	1.42 FT	2.83 FT	4 FT	0.5 FT	1.33 FT	1.33 FT	1.33 FT	2.67 FT	4 FT	2 FT	4 FT	0.5 FT	2 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD407-0612	GI-SD408-0006	GI-SD408-0612	GI-SD408-1218	GI-SD506-0006	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248	GI-SD410-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD507-0006
LOCATION ID	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410
SAMPLE DATE	10/09/09	10/13/09	10/13/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	2 FT	0 FT	1.27 FT	2.53 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.27 FT	2.53 FT	3.79 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	0.75 FT	1.5 FT	3 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	6.1	3.3 U	3.3 U	3.3 U	46 U	3.3 U	17	5.5	3.3 U	3.3 U	3.3 U	3.3 U	6.1	46 UJ
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	38	3.4	3.3 U	3.3 U	19 J	3.3 U	7.6	9.5	3.3 U	7.1	3.3 U	3.3 U	8.5	62 J
ACENAPHTHYLENE	140	9.2	5.8	3.3 U	35 J	3.3 U	4.1	23	3.3 U	18	6.5	3.3 U	14	51 J
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	280 D	10	9.3	3.3 U	97	3.3 U	5.4	44	3.3 U	28	5.8	3.3 U	13	230 J
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	510 D	21	32	3.3 U	290	3.3 U	4.2	110	3.3 U	74	13	3.4	16	750 J
BENZO(A)PYRENE	740 D	23	23	3.3 U	260	3.3 U	3.3 U	87	3.3 U	59	14	3.3 U	15	740 J
BENZO(B)FLUORANTHENE	1100 D	35	40	3.3 U	280	3.3 U	3.5	150	4	110	21	6.4	17	770 J
BENZO(G,H,I)PERYLENE	330	15	14	3.3 U	150	3.3 U	3.3 U	49	3.3 U	32	8.2	3.3 U	15	330 J
BENZO(K)FLUORANTHENE	320	17	18	3.3 U	240	3.3 U	3.3 U	64	3.3 U	34	15	3.3 U	15	590 J
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD407-0612	GI-SD408-0006	GI-SD408-0612	GI-SD408-1218	GI-SD506-0006	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248	GI-SD410-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD507-0006
LOCATION ID	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410
SAMPLE DATE	10/09/09	10/13/09	10/13/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	2 FT	0 FT	1.27 FT	2.53 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.27 FT	2.53 FT	3.79 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	0.75 FT	1.5 FT	3 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	790 D	28	44	3.3 U	480	3.3 U	3.3 U	170	3.3 U	110	21	6.5	16	1100 J
DIBENZO(A,H)ANTHRACENE	100	5	5	3.3 U	49	3.3 U	3.3 U	18	3.3 U	12	3.3 U	3.3 U	14	120 J
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	780 D	78	76	3.3 U	940	3.3 U	7.4	250	3.3 U	180	30	4.1	17	1500 J
FLUORENE	54	5.9	3.3	3.3 U	26 J	3.3 U	6.2	11	3.3 U	9.8	3.3 U	3.3 U	14	72 J
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	7690	304	335	3.3 U	3570	3.3 U	24.4	1220	4	813	165	25.7	158	7430 J
INDENO(1,2,3-CD)PYRENE	320 D	15	13	3.3 U	140	3.3 U	3.3 U	49	3.3 U	32	8.1	3.3 U	15	330 J
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	801	92.5	45.4	3.3 U	494 J	3.3 U	71.3	192	3.3 U	132	25.3	3.3 U	70.6	1090 J
NAPHTHALENE	13	3.3 U	3.3 U	3.3 U	7 J	3.3 U	15	9.1	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	67 J
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	270	64	27	3.3 U	310	3.3 U	16	90	3.3 U	69	13	3.3 U	15	610 J
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	2700 D	67	70	3.3 U	740	3.3 U	9.3	270	3.3 U	170	35	5.3	18	1200 J
TOTAL CARCINOGENIC PAHS-HALFND	3880	144	175	3.3 U	1740	3.3 U	16	648	13.9	431	93.8	22.9	108	4400 J
TOTAL CARCINOGENIC PAHS-POS	3880	144	175	3.3 U	1740	3.3 U	7.7	648	4	431	92.1	16.3	108	4400 J
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	8490	396	380	3.3 U	4060 J	3.3 U	95.7	1410	4	945	191	25.7	229	8520 J
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD407-0612	GI-SD408-0006	GI-SD408-0612	GI-SD408-1218	GI-SD506-0006	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248	GI-SD410-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD507-0006
LOCATION ID	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410
SAMPLE DATE	10/09/09	10/13/09	10/13/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	2 FT	0 FT	1.27 FT	2.53 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.27 FT	2.53 FT	3.79 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	0.75 FT	1.5 FT	3 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
AROCLOR-1016	660 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U	990 U	33 U	33 U	33 U	NA
AROCLOR-1221	660 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U	990 U	33 U	33 U	33 U	NA
AROCLOR-1232	660 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U	990 U	33 U	33 U	33 U	NA
AROCLOR-1242	660 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U	990 U	33 U	33 U	33 U	NA
AROCLOR-1248	660 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U	990 U	33 U	33 U	33 U	NA
AROCLOR-1254	660 U	33 U	33 U	33 U	NA	33 U	40	33 U	320	990 U	33 U	33 U	88	NA
AROCLOR-1260	6000	160	96	33 U	NA	33 U	33 U	310	33 U	4100	410	54	33 U	NA
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	6000	160	96	33 U	NA	33 U	40	310	320	4100	410	54	88	NA
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	NA	NA	5.8 U	NA	NA	NA	NA	NA	NA	NA	NA	12 U
DICHLOROBIPHENYLS	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	NA	NA	NA	NA	2.4 U
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	210	NA	NA	NA	NA	NA	NA	NA	NA	970
HEXACHLOROBIPHENYL	NA	NA	NA	NA	270	NA	NA	NA	NA	NA	NA	NA	NA	1300
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	NA	NA	NA	NA	2.4 U
NONACHLOROBIPHENYLS	NA	NA	NA	NA	5.8 U	NA	NA	NA	NA	NA	NA	NA	NA	12 U
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	41	NA	NA	NA	NA	NA	NA	NA	NA	220
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	2.3 U	NA	NA	NA	NA	NA	NA	NA	NA	4.6 U
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	26	NA	NA	NA	NA	NA	NA	NA	NA	100
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	547	NA	NA	NA	NA	NA	NA	NA	NA	2590
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	556	NA	NA	NA	NA	NA	NA	NA	NA	2610

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD407-0612	GI-SD408-0006	GI-SD408-0612	GI-SD408-1218	GI-SD506-0006	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248	GI-SD410-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD507-0006
LOCATION ID	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410
SAMPLE DATE	10/09/09	10/13/09	10/13/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	2 FT	0 FT	1.27 FT	2.53 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.27 FT	2.53 FT	3.79 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	0.75 FT	1.5 FT	3 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	1.2 U	NA	NA	NA	NA	NA	NA	NA	NA	2.4 U
METALS (MG/KG)														
ALUMINUM	5700 E	2680 *E	3610 *E	3510 *E	3930	2990 E	3060 E	5140 E	5790 E	3440 E	5540 E	4940 E	4900 E	4230
ANTIMONY	0.19 BN	0.12 BN	0.075 UN	0.13 BN	0.692 UJ	0.08 UN	0.15 BN	0.083 UN	0.084 BN	0.13 BN	0.084 UN	0.1 BN	0.17 BN	0.69 UJ
ARSENIC	3.9 E	1.5 E	1.7 E	1.7 E	0.999 J	1.6 E	1.8 E	2.2 E	2.5 E	1.7 E	2.2 E	2.5 E	2.3 E	1.3 J
BARIUM	15.1 NE	9 E	9.2 E	9.8 E	9.2	10.3 *E	7.3 *E	23.6 *E	20.2 *E	9.4 *E	15 *E	13.8 *E	15.6 *E	8.8 J
BERYLLIUM	0.25 NE	0.23 E	0.25 E	0.37 E	0.257 J	0.27 E	0.31 E	0.39 E	0.41 E	0.29 E	0.34 E	0.32 E	0.31 E	0.237
CADMIUM	0.11	0.0087 B	0.018 B	0.0083 B	0.103 J	0.058 B	0.079 B	0.14	0.12	0.081 B	0.12 B	0.11	0.11 B	0.145 J
CALCIUM	4170	2240 *	5450 *	2820 *	7790 J	1060 *	1000 *	2170 *	1800 *	2170 *	2270 *	2240 *	3180 *	3810 J
CHROMIUM	62.3 NE	6 E	7 E	8.5 E	10.1	7 E	6.9 E	12.8 E	9.5 E	7.6 E	8.5 E	8.2 E	8.2 E	11.2 J
COBALT	4.2 NE	2.4 E	2.8 E	3.8 E	3.2	2.3 E	2.8 E	3.4 E	4.5 E	2.6 E	3.6 E	3.5 E	3.6 E	3 J
COPPER	28.4 NE	7.3 E	8.6 E	7.8 E	11.1 J	8.3 NE	9.7 NE	18.9 NE	14.9 NE	9.5 NE	12.7 NE	11.1 NE	10.6 NE	12.5 J
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	16700	6220 *	9400 *	9110 *	9110	8280	10300	13500	14700	9710	13200	12400	11800	10200
LEAD	18.9 NE	5 E	5.4 E	4.8 E	11.4	3.7 NE	4.5 NE	8.7 NE	6 NE	7.4 NE	7.3 NE	6.8 NE	6.7 NE	12.4 J
MAGNESIUM	2820 E	1360 *E	1650 *E	1830 *E	2150	1340 E	1420 E	2310 E	2460 E	1710 E	2250 E	2090 E	2200 E	2250 J
MANGANESE	111 E	51.3 *E	64.8 *E	82.6 *E	75	61 E	63.7 E	78.2 E	109 E	69.2 E	92.4 E	91.3 E	99.6 E	83.5 J
MERCURY	0.6	0.0087 B	0.015 B	0.006 B	0.035	0.0042 U	0.004 U	0.033	0.009 B	0.032 B	0.014 B	0.011 B	0.012 B	0.045
NICKEL	30.1 NE	5.6 E	6.1 E	11.2 E	6.5	6 E	6.1 E	7.8 E	9.7 E	5.5 E	7.7 E	7.1 E	7.1 E	6.5 J
POTASSIUM	1130	452	507	977	818	452	448	1510	883	586	690	665	669	868
SELENIUM	0.7 N	0.81	0.8	0.85	0.692 U	0.58 B	1	1.3	1.2	0.98	1.2	0.79	1.1	0.69 U
SILVER	0.035 UN	0.033 U	0.033 U	0.031 U	0.231 UJ	0.035 U	0.035 U	0.036 U	0.035 U	0.039 U	0.037 U	0.036 U	0.036 U	0.143 J
SODIUM	5050	2240	2200	1130	3830	1670	1590	2310	2090	2920	2010	2510	2710	3440
THALLIUM	0.11 UN	0.1 UN	0.1 UN	0.095 UN	0.461 UJ	0.12 BN	0.22 BN	0.24 BN	0.14 BN	0.12 UN	0.15 BN	0.11 UN	0.14 BN	0.46 UJ
VANADIUM	18 NE	7.5 *E	8.5 *E	8.7 *E	12.2	7 E	9.1 E	14.5 E	11.8 E	9.6 E	10.4 E	9.6 E	9.6 E	12.7 J
ZINC	48.3 NE	16 E	17.4 E	21.4 E	40 J	13.6 *E	14.1 *E	27.3 *E	24.9 *E	20.1 *E	23.1 *E	20.9 *E	20.7 *E	42 J
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	NA	NA	NA	NA	7200	NA	NA	NA	NA	NA	NA	NA	NA	7240
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	3.551643	0.11859	0.084495	0.046064	0.393633	0.033734	0.050909	0.231833	0.218403	2.318224	0.265596	0.063341	0.085224	1.590331
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA	3
PERCENT CLAY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD407-0612	GI-SD408-0006	GI-SD408-0612	GI-SD408-1218	GI-SD506-0006	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248	GI-SD410-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD507-0006
LOCATION ID	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410
SAMPLE DATE	10/09/09	10/13/09	10/13/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	2 FT	0 FT	1.27 FT	2.53 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.27 FT	2.53 FT	3.79 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	0.75 FT	1.5 FT	3 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
PERCENT SILT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	100
SIEVE 1/2"	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	100
SIEVE 1-1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	100
SIEVE 3/8"	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	100
SIEVE NO. 004	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	100
SIEVE NO. 010	NA	NA	NA	NA	98	NA	NA	NA	NA	NA	NA	NA	NA	98
SIEVE NO. 020	NA	NA	NA	NA	96	NA	NA	NA	NA	NA	NA	NA	NA	96
SIEVE NO. 040	NA	NA	NA	NA	92	NA	NA	NA	NA	NA	NA	NA	NA	90
SIEVE NO. 060	NA	NA	NA	NA	82	NA	NA	NA	NA	NA	NA	NA	NA	83
SIEVE NO. 080	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	NA	NA	NA	NA	60	NA	NA	NA	NA	NA	NA	NA	NA	70
SIEVE NO. 200	NA	NA	NA	NA	29	NA	NA	NA	NA	NA	NA	NA	NA	41
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)														
SEM/AVS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD407-0612	GI-SD408-0006	GI-SD408-0612	GI-SD408-1218	GI-SD506-0006	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248	GI-SD410-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD507-0006
LOCATION ID	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410
SAMPLE DATE	10/09/09	10/13/09	10/13/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	2 FT	0 FT	1.27 FT	2.53 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.27 FT	2.53 FT	3.79 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	0.75 FT	1.5 FT	3 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD407-0612	GI-SD408-0006	GI-SD408-0612	GI-SD408-1218	GI-SD506-0006	GI-SD409-0006	GI-SD409-0612	GI-SD409-1824	GI-SD409-4248	GI-SD410-0006	GI-SD410-0612	GI-SD410-1824	GI-SD410-2632	GI-SD507-0006
LOCATION ID	GI-SD407	GI-SD408	GI-SD408	GI-SD408	GI-SD408	GI-SD409	GI-SD409	GI-SD409	GI-SD409	GI-SD410	GI-SD410	GI-SD410	GI-SD410	GI-SD410
SAMPLE DATE	10/09/09	10/13/09	10/13/09	10/13/09	05/04/10	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	2 FT	0 FT	1.27 FT	2.53 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.27 FT	2.53 FT	3.79 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	0.75 FT	1.5 FT	3 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

SAMPLE ID	GI-SD411-0006	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824	GI-SD509-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD413-0612	GI-SD504-0006
LOCATION ID	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10	04/30/10	04/30/10	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	10/06/09	04/30/10
TOP DEPTH	0 FT	0.86 FT	1.72 FT	2.58 FT	0 FT	0 FT	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	2 FT	0 FT
BOTTOM DEPTH	0.86 FT	1.72 FT	2.58 FT	3.43 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	14	3.3 U	3.3 U	3.3 U	45 U	13 J	17.8 J	41	26	31	30	20	7.3	96 U
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	52	3.3 U	3.3 U	3.3 U	29 J	59 J	44 J	200	66	34	18	64	11	110
ACENAPHTHYLENE	13	3.3 U	3.3 U	3.3 U	14 J	20 J	17 J	62	160	49	37	63	81	29 J
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	270	3.3 U	3.3 U	3.3 U	93 J	180 J	136 J	550 D	200	110	88	200	170	240
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	240	3.5	3.3 U	4.4	240	360 J	300 J	930 D	460 D	290	93	470 D	310	650
BENZO(A)PYRENE	130	4.9	3.3 U	4.3	220	350 J	285 J	960 D	570 D	320	200	230	260	590
BENZO(B)FLUORANTHENE	170	7.3	3.3 U	7	220	300 J	260 J	1200 D	950 D	610 D	350 D	410 D	490 D	490
BENZO(G,H,I)PERYLENE	48	3.3	3.3 U	3.3 U	120	190 J	155 J	530 D	340 D	210	120	70	97	340
BENZO(K)FLUORANTHENE	130	4.4	3.3 U	4.3	180	270 J	225 J	310	300	230	100	140	190	530
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD411-0006	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824	GI-SD509-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD413-0612	GI-SD504-0006
LOCATION ID	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10	04/30/10	04/30/10	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	10/06/09	04/30/10
TOP DEPTH	0 FT	0.86 FT	1.72 FT	2.58 FT	0 FT	0 FT	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	2 FT	0 FT
BOTTOM DEPTH	0.86 FT	1.72 FT	2.58 FT	3.43 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	230	4.3	3.3 U	5.2	370	480 J	425 J	810 D	590 D	330	170	520 D	420 D	730
DIBENZO(A,H)ANTHRACENE	18	3.3 U	3.3 U	3.3 U	43 J	67 J	55 J	130	130	74	38	33	38	110
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	1000 D	4.9	3.3 U	5.3	570	680 J	625 J	2400 D	870 D	700 D	200	1100 D	320	1200
FLUORENE	110	3.3 U	3.3 U	3.3 U	32 J	56 J	44 J	220	84	39	28	72	35	87 J
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	2840	47.6	4	37.3	2540 J	3470 J	3000 J	10200	6530	4560	2480	4550	3320	5960
INDENO(1,2,3-CD)PYRENE	52	3.3 U	3.3 U	3.3 U	120	190 J	155 J	480 D	320 D	200	110	77	100	320
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	1950	3.3 U	3.3 U	8.5	448 J	738 J	593 J	2450	959	585	319	1040	472	1240 J
NAPHTHALENE	190	3.3 U	3.3 U	3.3 U	45 U	28 UJ	36.5 UJ	75	33	32	27	29	18	96 U
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	1300 D	3.3 U	3.3 U	8.5	280	410 J	345 J	1300 D	390 D	290	91	590 D	150	770
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	820 D	15	4	6.8	460	580 J	520 J	2400 D	2000 D	1600 D	1100 D	1500 D	1100 D	1000
TOTAL CARCINOGENIC PAHS-HALFND	970	27.7	3.3 U	28.5	1390 J	2020 J	1700 J	4820	3320	2050	1060	1880	1810	3420
TOTAL CARCINOGENIC PAHS-POS	970	24.4	3.3 U	25.2	1390 J	2020 J	1700 J	4820	3320	2050	1060	1880	1810	3420
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	4790	47.6	4	45.8	2990 J	4200 J	3600 J	12600	7490	5150	2800	5590	3800	7200 J
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD411-0006	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824	GI-SD509-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD413-0612	GI-SD504-0006
LOCATION ID	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10	04/30/10	04/30/10	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	10/06/09	04/30/10
TOP DEPTH	0 FT	0.86 FT	1.72 FT	2.58 FT	0 FT	0 FT	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	2 FT	0 FT
BOTTOM DEPTH	0.86 FT	1.72 FT	2.58 FT	3.43 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
AROCLOR-1016	170 U	33 U	33 U	33 U	NA	NA	NA	160 U	1700 U	160 U	33 U	330 U	330 U	NA
AROCLOR-1221	170 U	33 U	33 U	33 U	NA	NA	NA	160 U	1700 U	160 U	33 U	330 U	330 U	NA
AROCLOR-1232	170 U	33 U	33 U	33 U	NA	NA	NA	160 U	1700 U	160 U	33 U	330 U	330 U	NA
AROCLOR-1242	170 U	33 U	33 U	33 U	NA	NA	NA	160 U	1700 U	160 U	33 U	330 U	330 U	NA
AROCLOR-1248	170 U	33 U	33 U	33 U	NA	NA	NA	160 U	1700 U	1400	33 U	330 U	330 U	NA
AROCLOR-1254	170 U	46 P	33 U	33 U	NA	NA	NA	160 U	1700 U	160 U	64	330 U	330 U	NA
AROCLOR-1260	570	55 P	33 U	33 U	NA	NA	NA	5300 D	7200	320	65	2800	2400	NA
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	570	101	33 U	33 U	NA	NA	NA	5300	7200	1720	129	2800	2400	NA
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	NA	NA	5.6 U	2.3 U	3.95 U	NA	NA	NA	NA	NA	NA	12 U
DICHLOROBIPHENYLS	NA	NA	NA	NA	1.2 U	0.48 U	0.84 U	NA	NA	NA	NA	NA	NA	2.5 U
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	170	190	180	NA	NA	NA	NA	NA	NA	180
HEXACHLOROBIPHENYL	NA	NA	NA	NA	220	230	225	NA	NA	NA	NA	NA	NA	200
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	1.2 U	0.48 U	0.84 U	NA	NA	NA	NA	NA	NA	2.5 U
NONACHLOROBIPHENYLS	NA	NA	NA	NA	5.6 U	2.3 U	3.95 U	NA	NA	NA	NA	NA	NA	12 U
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	30 UJ	55 J	35 J	NA	NA	NA	NA	NA	NA	43 U
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	2.9 J	9.5	6.2 J	NA	NA	NA	NA	NA	NA	4.8 U
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	20	23	21.5	NA	NA	NA	NA	NA	NA	14 J
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	413 J	508 J	460 J	NA	NA	NA	NA	NA	NA	394 J
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	435 J	511 J	473 J	NA	NA	NA	NA	NA	NA	434 J

SAMPLE ID	GI-SD411-0006	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824	GI-SD509-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD413-0612	GI-SD504-0006
LOCATION ID	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10	04/30/10	04/30/10	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	10/06/09	04/30/10
TOP DEPTH	0 FT	0.86 FT	1.72 FT	2.58 FT	0 FT	0 FT	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	2 FT	0 FT
BOTTOM DEPTH	0.86 FT	1.72 FT	2.58 FT	3.43 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	1.2 U	0.48 U	0.84 U	NA	NA	NA	NA	NA	NA	2.5 U
METALS (MG/KG)														
ALUMINUM	2980 E	4730 E	4040 E	4700 E	4150	3390	3770	5380 E	6020 E	7400 E	7810 E	5120 *E	5470 *E	4380
ANTIMONY	0.12 BN	0.13 BN	0.096 BN	0.082 UN	0.67 UJ	0.69 UJ	0.68 UJ	0.61 N	1.9 N	8.9 N	3.2 N	0.48 BN	0.41 BN	0.72 UJ
ARSENIC	1.6 E	2.4 E	1.9 E	2.4 E	1.3 J	0.29 J	0.795 J	4.8 E	9.6 E	11.3 E	10 E	6	5.2	1.9 J
BARIUM	6.6 *E	15.2 *E	12.2 *E	14.6 *E	9.8 J	8.4 J	9.1 J	13.6 NE	24.1 NE	24.2 NE	29.8 NE	13.9 E	16.4 E	13.8 J
BERYLLIUM	0.23 E	0.32 E	0.29 E	0.31 E	0.254	0.209 J	0.232 J	0.29 NE	0.35 NE	0.44 NE	0.38 NE	0.41 E	0.46 E	0.304
CADMIUM	0.1 B	0.12	0.093 B	0.11 B	0.156 J	0.143 J	0.15 J	0.26	1.3	1.3	1.1	0.77	0.89	0.305 J
CALCIUM	3750 *	2740 *	2370 *	3560 *	5260 J	15000 J	10100 J	65600	92200	14600	15600	106000 *	118000 *	18700 J
CHROMIUM	6.2 E	7.8 E	6.7 E	7.9 E	10.5 J	9.1 J	9.8 J	17.3 NE	33.7 NE	34.4 NE	41.9 NE	23.1 E	25.9 E	14.1 J
COBALT	2.2 E	3.3 E	3 E	3.2 E	3.1 J	2.5 J	2.8 J	3.3 NE	4.9 NE	5.9 NE	6.4 NE	3.7 *E	3.4 *E	3.2 J
COPPER	8.9 NE	11.1 NE	10 NE	9.4 NE	13.3 J	10.3 J	11.8 J	26.6 NE	162 NE	109 NE	130 NE	37.4 N	41.9 N	17.8 J
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	8410	12400	10800	11900	10600	8500	9550	21400	31200	33300	41600	29700 *	33100 *	15400
LEAD	6 NE	6.6 NE	5.5 NE	6.7 NE	11.8 J	9.4 J	10.6 J	25.7 NE	345 NE	202 NE	111 NE	27 N*E	31.9 N*E	21 J
MAGNESIUM	1460 E	2020 E	1740 E	2020 E	2150 J	1860 J	2000 J	3080 E	3470 E	4940 E	4670 E	3370 *E	4980 *E	2320 J
MANGANESE	63 E	86 E	78.5 E	96.6 E	82.9 J	72.6 J	77.8 J	114 E	161 E	225 E	246 E	142 *E	188 *E	94.3 J
MERCURY	0.0099 B	0.017 B	0.018 B	0.021 B	0.028	0.029	0.0285	0.044	0.36	0.94	0.29	0.075	0.13	0.083
NICKEL	4.6 E	6.6 E	5.7 E	6.4 E	6.4 J	5.3 J	5.85 J	9.2 NE	13.8 NE	13.6 NE	20.9 NE	13.3 *E	12.5 *E	7 J
POTASSIUM	459	632	554	658	897	715	806	1510	1870	2250	1980	1630 *	1960 *	1120
SELENIUM	0.98	1.1	0.91	0.92	0.67 U	0.69 U	0.68 U	0.4 UN	0.43 UN	0.4 UN	0.43 UN	0.39 U	0.43 U	0.321 U
SILVER	0.036 U	0.035 U	0.035 U	0.036 U	0.098 J	0.23 UJ	0.106 J	0.04 UN	0.39 BN	0.058 BN	0.081 BN	0.2 B	0.37 B	0.223 J
SODIUM	2160	2010	1740	2360	3750	3870	3810	9190	9430	8170	10900	10800	13500	4700
THALLIUM	0.15 BN	0.15 BN	0.11 BN	0.18 BN	0.45 UJ	0.46 UJ	0.455 UJ	0.48 BN	0.64 N	0.12 UN	0.13 UN	0.79	0.8	0.48 UJ
VANADIUM	7.5 E	10.1 E	9 E	9.5 E	13.1 J	10.9 J	12 J	18.4 NE	27.2 NE	24.1 NE	23.8 NE	19 *E	22.4 *E	14 J
ZINC	16.7 *E	19.6 *E	16.5 *E	19.8 *E	34.5 J	26.6 J	30.6 J	68.2 NE	1160 NE	599 NE	207 NE	237 E	326 E	76.9 J
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	NA	NA	NA	NA	5700	6100	5900	NA	NA	NA	NA	NA	NA	11300
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	0.431998	0.088156	0.036052	0.040321	0.307556	0.370972	0.338952	3.198572	4.662661	1.366035	0.334721	1.768516	1.540441	0.378463
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	NA	NA	3	2	2.5	NA	NA	NA	NA	NA	NA	3
PERCENT CLAY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD411-0006	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824	GI-SD509-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD413-0612	GI-SD504-0006
LOCATION ID	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10	04/30/10	04/30/10	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	10/06/09	04/30/10
TOP DEPTH	0 FT	0.86 FT	1.72 FT	2.58 FT	0 FT	0 FT	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	2 FT	0 FT
BOTTOM DEPTH	0.86 FT	1.72 FT	2.58 FT	3.43 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
PERCENT SILT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	NA	NA	NA	NA	100	100	100	NA	NA	NA	NA	NA	NA	100
SIEVE 1/2"	NA	NA	NA	NA	100	100	100	NA	NA	NA	NA	NA	NA	100
SIEVE 1-1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	NA	NA	NA	NA	100	100	100	NA	NA	NA	NA	NA	NA	100
SIEVE 3/8"	NA	NA	NA	NA	100	100	100	NA	NA	NA	NA	NA	NA	83
SIEVE NO. 004	NA	NA	NA	NA	98	99	98.5	NA	NA	NA	NA	NA	NA	73
SIEVE NO. 010	NA	NA	NA	NA	97	98	97.5	NA	NA	NA	NA	NA	NA	66
SIEVE NO. 020	NA	NA	NA	NA	96	97	96.5	NA	NA	NA	NA	NA	NA	62
SIEVE NO. 040	NA	NA	NA	NA	93	94	93.5	NA	NA	NA	NA	NA	NA	57
SIEVE NO. 060	NA	NA	NA	NA	84	85	84.5	NA	NA	NA	NA	NA	NA	49
SIEVE NO. 080	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	NA	NA	NA	NA	64	65	64.5	NA	NA	NA	NA	NA	NA	38
SIEVE NO. 200	NA	NA	NA	NA	26	25	25.5	NA	NA	NA	NA	NA	NA	21
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)														
SEM/AVS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD411-0006	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824	GI-SD509-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD413-0612	GI-SD504-0006
LOCATION ID	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10	04/30/10	04/30/10	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	10/06/09	04/30/10
TOP DEPTH	0 FT	0.86 FT	1.72 FT	2.58 FT	0 FT	0 FT	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	2 FT	0 FT
BOTTOM DEPTH	0.86 FT	1.72 FT	2.58 FT	3.43 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD411-0006	GI-SD411-0612	GI-SD411-1218	GI-SD411-1824	GI-SD509-0006	GI-SD509-0006-D	GI-SD509-0006-AVG	GI-SD412-0006	GI-SD412-0612	GI-SD412-1218	GI-SD412-1824	GI-SD413-0006	GI-SD413-0612	GI-SD504-0006
LOCATION ID	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD411	GI-SD412	GI-SD412	GI-SD412	GI-SD412	GI-SD413	GI-SD413	GI-SD413
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10	04/30/10	04/30/10	10/09/09	10/09/09	10/09/09	10/09/09	10/06/09	10/06/09	04/30/10
TOP DEPTH	0 FT	0.86 FT	1.72 FT	2.58 FT	0 FT	0 FT	0 FT	0 FT	1 FT	2 FT	3 FT	0 FT	2 FT	0 FT
BOTTOM DEPTH	0.86 FT	1.72 FT	2.58 FT	3.43 FT	0.5 FT	0.5 FT	0.5 FT	1 FT	2 FT	3 FT	4 FT	2 FT	4 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD414-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD527-0006	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D
LOCATION ID	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	0 FT	0.93 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT
BOTTOM DEPTH	0.93 FT	0.93 FT	0.93 FT	1.85 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	FD
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	3.9	3.3 U	2.78	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	18 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	13	16	14.5	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	13 J	3.3 U	3.5	3.3 U	3.3 U	3.3 U
ACENAPHTHYLENE	36	26	31	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	17 J	3.6	18	3.3 U	3.3 U	3.3 U
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	84	62	73	4.6	3.3 U	3.3 U	3.3 U	3.3 U	57	4.3	39	5.9	3.3 U	3.3 U
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	210	140	175	11	5.3	3.3 U	3.5	2.58	160	12	110	16	3.3 U	3.3 U
BENZO(A)PYRENE	190	150	170	22	3.3 U	3.3 U	6.2	3.92	160	13	110	15	3.3 U	3.3 U
BENZO(B)FLUORANTHENE	290	260	275	32	5.2	3.3 U	5.1	3.38	160	22	200	27	3.3 U	3.3 U
BENZO(G,H,I)PERYLENE	100	86	93	13	3.3 U	3.3 U	3.3 U	3.3 U	98	8.4	62	11	3.3 U	3.3 U
BENZO(K)FLUORANTHENE	150	92	121	11	3.3 U	3.3 U	3.3 U	3.3 U	140	6.3	60	7.9	3.3 U	3.3 U
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD414-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD527-0006	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D
LOCATION ID	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	0 FT	0.93 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT
BOTTOM DEPTH	0.93 FT	0.93 FT	0.93 FT	1.85 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	FD
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	190	210	200	14	4.8	3.3 U	4.3	2.98	240	13	170	21	3.3 U	3.3 U
DIBENZO(A,H)ANTHRACENE	39	35	37	5.6	3.3 U	3.3 U	3.3 U	3.3 U	33	3.3 U	21	4.7	3.3 U	3.3 U
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	270	240	255	16	6.7	3.3 U	4.2	2.92	260	15	170	19	3.3 U	3.3 U
FLUORENE	20	20	20	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	16 J	3.3 U	6.1	3.3 U	3.3 U	3.3 U
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	2090	1800	1940	170	30.1	3.3 U	30.7	16.2	1570	115	1120	150	3.3 U	3.3 U
INDENO(1,2,3-CD)PYRENE	100	82	91	12	3.3 U	3.3 U	3.3 U	3.3 U	91	8.2	58	9.9	3.3 U	3.3 U
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	295	261	278	13.8	3.3 U	3.3 U	3.3 U	3.3 U	233 J	14.2	121	15.7	4.4	3.3 U
NAPHTHALENE	7.9	7.4	7.65	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	18 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	130	130	130	9.2	3.3 U	3.3 U	3.3 U	3.3 U	130	6.3	54	9.8	4.4	3.3 U
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	550 D	500 D	525 D	33	8.1	3.3 U	7.4	4.52	230	17	160	18	3.3 U	3.3 U
TOTAL CARCINOGENIC PAHS-HALFND	1170	969	1070	108	21.9	3.3 U	24	12.8	984	76.2	729	102	3.3 U	3.3 U
TOTAL CARCINOGENIC PAHS-POS	1170	969	1070	108	15.3	3.3 U	19.1	10.4	984	74.5	729	102	3.3 U	3.3 U
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	2380	2060	2220	183	30.1	3.3 U	30.7	16.2	1800 J	129	1240	165	4.4	3.3 U
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SAMPLE ID	GI-SD414-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD527-0006	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D
LOCATION ID	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	0 FT	0.93 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT
BOTTOM DEPTH	0.93 FT	0.93 FT	0.93 FT	1.85 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	FD
AROCLOR-1016	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U	33 U
AROCLOR-1221	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U	33 U
AROCLOR-1232	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U	33 U
AROCLOR-1242	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U	33 U
AROCLOR-1248	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U	33 U
AROCLOR-1254	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA	33 U	33 U	33 U	33 U	33 U
AROCLOR-1260	300	480	390	33 U	33 U	33 U	33 U	33 U	NA	33 U	35	33 U	33 U	33 U
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	300	480	390	33 U	33 U	33 U	33 U	33 U	NA	33 U	35	33 U	33 U	33 U
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	1.1 U	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	0.23 U	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	8.3	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	17	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	0.23 U	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	1.1 U	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	5.2 U	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	0.45 U	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	0.58 U	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	NA	25.3	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	29.9	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD414-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD527-0006	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D
LOCATION ID	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	0 FT	0.93 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT
BOTTOM DEPTH	0.93 FT	0.93 FT	0.93 FT	1.85 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	FD
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	0.23 U	NA	NA	NA	NA	NA
METALS (MG/KG)														
ALUMINUM	5460 *E	4480 *E	4970 *E	5920 *E	5380 *E	5710 *E	6090 *E	5900 *E	5510	3910 *E	4800 *E	6190 *E	6000 *E	5840 *E
ANTIMONY	0.24 BN	0.22 BN	0.23 BN	0.084 BN	0.074 UN	0.078 BN	0.16 BN	0.119 BN	0.71 UJ	0.099 BN	0.081 UN	0.11 BN	0.073 BN	0.15 BN
ARSENIC	3.9 E	3.6 E	3.75 E	2.6 E	2.3 E	2.6 E	2.4 E	2.5 E	0.975 J	4.9 E	5 E	9.8 E	3.8 E	3.2 E
BARIUM	15.2 E	12.2 E	13.7 E	17 E	16.1 E	13.6 E	11.7 E	12.6 E	11.4 J	7.2 E	7.5 E	8.1 E	15.8 E	15.3 E
BERYLLIUM	0.39 E	0.31 E	0.35 E	0.32 E	0.27 E	0.27 E	0.28 E	0.275 E	0.321	0.27 E	0.36 E	0.32 E	0.3 E	0.27 E
CADMIUM	0.2	0.19	0.195	0.071 B	0.036 B	0.051 B	0.053 B	0.052 B	0.222 J	0.052 B	0.083 B	0.11	0.049 B	0.036 B
CALCIUM	10300 *	11700 *	11000 *	2450 *	1550 *	1950 *	1670 *	1810 *	27000 J	27400 *	9520 *	12800 *	3600 *	2100 *
CHROMIUM	17.4 E	15.4 E	16.4 E	9.5 E	8.5 E	11.8 E	11.5 E	11.6 E	14.2 J	10.5 E	12.9 E	30.3 E	9.4 E	9 E
COBALT	3.8 E	3.4 E	3.6 E	4 E	4.8 E	4.5 E	4.7 E	4.6 E	3.5 J	3.5 E	3.7 E	5.4 E	4.7 E	4.7 E
COPPER	25 E	25 E	25 E	11.9 E	14.2 E	14.6 E	15.4 E	15 E	14.9 J	7.3 E	9.6 E	7.9 E	8.2 E	7.1 E
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	14900 *	12000 *	13400 *	14700 *	12900 *	14100 *	15900 *	15000 *	12100	13000 *	15600 *	21000 *	16000 *	14800 *
LEAD	22.4 E	20.9 E	21.6 E	7.8 E	5.6 E	4.7 E	4.9 E	4.8 E	15 J	8.5 E	12 E	9 E	4.9 E	3.9 E
MAGNESIUM	2780 *E	2450 *E	2620 *E	2540 *E	2230 *E	2540 *E	2760 *E	2650 *E	2760 J	2080 *E	2500 *E	3230 *E	2760 *E	2660 *E
MANGANESE	107 *E	90.7 *E	98.8 *E	102 *E	89.2 *E	106 *E	111 *E	108 *E	105 J	165 *E	137 *E	248 *E	135 *E	130 *E
MERCURY	0.1	0.091	0.0955	0.01 B	0.004 U	0.0043 B	0.014 B	0.00915 B	0.054	0.038	0.059	0.036	0.0066 B	0.0046 B
NICKEL	8.7 E	7.5 E	8.1 E	8.3 E	9 E	9.5 E	9.7 E	9.6 E	7.7 J	6.8 E	7.4 E	16.6 E	7.7 E	8.2 E
POTASSIUM	1180	1050	1120	810	669	757	690	724	1270	819	925	939	920	1110
SELENIUM	1.1	0.77	0.935	0.93	1.2	1.2	1.2	1.2	0.322 J	0.33 B	1.1	0.82	1.1	1.1
SILVER	0.19 B	0.17 B	0.18 B	0.033 U	0.032 U	0.031 U	0.031 U	0.031 U	0.23 UJ	0.033 U	0.062 B	0.034 U	0.031 U	0.031 U
SODIUM	4550	4580	4560	2690	2160	2060	2000	2030	5060	2660	2620	2350	1940	1290
THALLIUM	0.2 BN	0.11 UN	0.128 BN	0.15 BN	0.1 BN	0.096 UN	0.096 BN	0.072 BN	0.45 UJ	0.3 BN	0.24 BN	0.18 BN	0.12 BN	0.17 BN
VANADIUM	16.5 *E	13.7 *E	15.1 *E	11 *E	9.6 *E	11.5 *E	12 *E	11.8 *E	15.8 J	14.2 *E	16.1 *E	24.2 *E	13.5 *E	12.3 *E
ZINC	84.6 E	75.7 E	80.2 E	26.2 E	20.2 E	20.7 E	21.9 E	21.3 E	38.3 J	26.3 E	33.3 E	32.9 E	20.2 E	20.6 E
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	11400	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	0.26716	0.356805	0.311919	0.048857	0.045687	0.047694	0.048719	0.048193	0.08199	0.047389	0.077957	0.08181	0.042937	0.041949
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	5	NA	NA	NA	NA	NA
PERCENT CLAY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD414-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD527-0006	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D
LOCATION ID	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	0 FT	0.93 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT
BOTTOM DEPTH	0.93 FT	0.93 FT	0.93 FT	1.85 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	FD
PERCENT SILT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	NA	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	NA
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	NA
SIEVE 1-1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	NA	NA	NA	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	NA
SIEVE 3/8"	NA	NA	NA	NA	NA	NA	NA	NA	94	NA	NA	NA	NA	NA
SIEVE NO. 004	NA	NA	NA	NA	NA	NA	NA	NA	87	NA	NA	NA	NA	NA
SIEVE NO. 010	NA	NA	NA	NA	NA	NA	NA	NA	77	NA	NA	NA	NA	NA
SIEVE NO. 020	NA	NA	NA	NA	NA	NA	NA	NA	71	NA	NA	NA	NA	NA
SIEVE NO. 040	NA	NA	NA	NA	NA	NA	NA	NA	64	NA	NA	NA	NA	NA
SIEVE NO. 060	NA	NA	NA	NA	NA	NA	NA	NA	56	NA	NA	NA	NA	NA
SIEVE NO. 080	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	NA	NA	NA	NA	NA	NA	NA	NA	46	NA	NA	NA	NA	NA
SIEVE NO. 200	NA	NA	NA	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	NA
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)														
SEM/AVS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD414-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD527-0006	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D
LOCATION ID	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	0 FT	0.93 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT
BOTTOM DEPTH	0.93 FT	0.93 FT	0.93 FT	1.85 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	FD
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD414-0006	GI-SD414-0006-D	GI-SD414-0006-AVG	GI-SD414-0612	GI-SD414-1218	GI-SD414-1824	GI-SD414-1824-D	GI-SD414-1824-AVG	GI-SD527-0006	GI-SD415-0006	GI-SD415-0612	GI-SD415-1824	GI-SD415-4248	GI-SD415-4248-D
LOCATION ID	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD414	GI-SD415	GI-SD415	GI-SD415	GI-SD415	GI-SD415
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	04/30/10	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09
TOP DEPTH	0 FT	0 FT	0 FT	0.93 FT	1.85 FT	2.77 FT	2.77 FT	2.77 FT	0 FT	0 FT	0.5 FT	1.5 FT	3.5 FT	3.5 FT
BOTTOM DEPTH	0.93 FT	0.93 FT	0.93 FT	1.85 FT	2.77 FT	3.69 FT	3.69 FT	3.69 FT	0.5 FT	0.5 FT	1 FT	2 FT	4 FT	4 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM	FD
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD503-0006
LOCATION ID	GI-SD415	GI-SD416	GI-SD416	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	3.5 FT	0 FT	1.5 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.5 FT	3 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	1.58 FT	3 FT	4 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	3.3 U	15	34	3.3 U	4.3	3.3 U	3.3 U	14	13	17	3.7	12	3.3 U	93 U
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	3.3 U	21	210	3.3 U	27	3.3 U	3.3 U	12	3.3 U	32	4	24	3.3 U	42 J
ACENAPHTHYLENE	3.3 U	170	40	11	18	3.3 U	3.3 U	47	8.3	240	20	69	8.9	24 J
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	3.3 U	250	320	14	80	5	3.3 U	65	6.5	300	41	160	11	300
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	3.3 U	700 D	590 D	46	200	8	3.3 U	100	15	1200 D	110	650 D	22	1000
BENZO(A)PYRENE	3.3 U	780 D	590 D	44	150	7.4	3.3 U	170	16	960 D	99	320	22	760
BENZO(B)FLUORANTHENE	3.3 U	1500 D	920 D	82	240	14	3.3 U	270	25	1500 D	170	910 D	33	770
BENZO(G,H,I)PERYLENE	3.3 U	320	270	27	77	4.8	3.3 U	110	11	500 D	48	220	15	330
BENZO(K)FLUORANTHENE	3.3 U	470 D	280 D	26	94	4.2	3.3 U	150	14	330	56	320 D	19	580
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD503-0006
LOCATION ID	GI-SD415	GI-SD416	GI-SD416	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	3.5 FT	0 FT	1.5 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.5 FT	3 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	1.58 FT	3 FT	4 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	3.3 U	1200 D	690 D	67	240	9.3	3.3 U	160	18	1400 D	160	830 D	28	1100
DIBENZO(A,H)ANTHRACENE	3.3 U	150	100	9.4	28	3.3 U	3.3 U	54	4.2	140	23	87	6	130
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	3.3 U	1000 D	1300 D	93	430 D	10	3.3 U	180	19	1800 D	140	580 D	21	2100
FLUORENE	3.3 U	85	180	5.4	28	3.3 U	3.3 U	18	5	100	9.2	52	3.3 U	38 J
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	3.3 U	8640	6210	540	1920	76.3	3.3 U	1710	174	9850	1010	4830	202	8900
INDENO(1,2,3-CD)PYRENE	3.3 U	320	270	26	77	4.6	3.3 U	110	11	520 D	55	210	14	330
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	3.02	879	2130	70.2	358	12.4	3.3 U	266	61.1	1350	131	560	29	944 J
NAPHTHALENE	3.3 U	18	150	3.8	11	3.3 U	3.3 U	19	5.3	19	3.3 U	13	3.3 U	93 U
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	3.02	320	1200 D	36	190	7.4	3.3 U	91	23	640 D	53	230	9.1	540
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	3.3 U	2200 D	1200 D	120	380 D	14	3.3 U	410 D	41	1500 D	150	700 D	22	1800
TOTAL CARCINOGENIC PAHS-HALFND	3.3 U	5120	3440	300	1030	49.2	3.3 U	1010	103	6050	673	3330	144	4670
TOTAL CARCINOGENIC PAHS-POS	3.3 U	5120	3440	300	1030	47.5	3.3 U	1010	103	6050	673	3330	144	4670
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	3.02	9520	8340	611	2270	88.7	3.3 U	1980	235	11200	1140	5390	231	9840 J
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

SAMPLE ID	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD503-0006
LOCATION ID	GI-SD415	GI-SD416	GI-SD416	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	3.5 FT	0 FT	1.5 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.5 FT	3 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	1.58 FT	3 FT	4 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
AROCLOR-1016	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA
AROCLOR-1221	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA
AROCLOR-1232	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA
AROCLOR-1242	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA
AROCLOR-1248	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	NA
AROCLOR-1254	33 U	33 U	33 U	33 U	33 U	33 U	33 U	35 P	33 U	33 U	120	33 U	33 U	NA
AROCLOR-1260	33 U	33 U	33 U	33 U	33 U	33 U	33 U	100	33 U	61	33 U	34 P	33 U	NA
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	33 U	33 U	33 U	33 U	33 U	33 U	33 U	135	33 U	61	120	34	33 U	NA
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12 U
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.4 U
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.9 U
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.7 U
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.4 U
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12 U
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.7 U
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.7 U
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.9 U
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.71 U
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.71 U

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD503-0006
LOCATION ID	GI-SD415	GI-SD416	GI-SD416	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	3.5 FT	0 FT	1.5 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.5 FT	3 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	1.58 FT	3 FT	4 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.4 U
METALS (MG/KG)														
ALUMINUM	5920 *E	6950 E	4410 *E	4120 *E	4550 *E	4050 *E	4500 *E	7360 E	5190 E	6370 E	3980 E	4890 E	6100 E	4790
ANTIMONY	0.112 BN	0.37 BN	0.084 UN	0.092 BN	0.21 BN	0.083 BN	0.19 BN	0.45 BN	0.086 BN	0.38 BN	0.083 UN	0.21 BN	0.19 BN	0.7 UJ
ARSENIC	3.5 E	6.5 E	6.5 E	3.9 E	4.1 E	2.3 E	2.1 E	6.7 E	3.1 E	7.1 E	3.7 E	4.3 E	8.6 E	2 J
BARIUM	15.6 E	24.4 *E	15.1 E	6.9 E	18.4 E	17.2 E	22.2 E	22.3 *E	19.1 *E	15.6 *E	17.3 *E	7.7 *E	4.6 *E	7.4 J
BERYLLIUM	0.285 E	0.61 E	0.33 E	0.29 E	0.37 E	0.3 E	0.27 E	0.63 E	0.42 E	0.58 E	0.3 E	0.35 E	0.3 E	0.27
CADMIUM	0.0425 B	0.53	0.091 B	0.055 B	1.1	0.042 B	0.019 B	0.46	0.15	0.3	0.13	0.2	0.2	0.211 J
CALCIUM	2850 *	20000 *	52500 *	8740 *	4400 *	3140 *	722 *	3220 *	2400 *	45600 *	18400 *	15300 *	9900 *	36600 J
CHROMIUM	9.2 E	30.7 E	15.3 E	13 E	20.1 E	7.5 E	7.9 E	29.5 E	10.8 E	25.7 E	11.4 E	13 E	12.6 E	13.7 J
COBALT	4.7 E	5.1 E	3.8 E	4.1 E	3.4 E	3.4 E	3.9 E	5.2 E	4.7 E	5.6 E	3.2 E	3.7 E	5.1 E	3.4 J
COPPER	7.65 E	39 NE	14.6 E	10.5 E	31.3 E	7.6 E	8.2 E	41 NE	16.1 NE	25.5 NE	8.7 NE	11 NE	7.8 NE	9.6 J
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	15400 *	21300	14900 *	14500 *	13400 *	12400 *	12900 *	19700	13900	19500	13000	14500	19800	12700
LEAD	4.4 E	38.6 NE	19.1 E	14.1 E	30.6 E	5.8 E	5.2 E	38.7 NE	10 NE	28 NE	39.9 NE	14 NE	9.4 NE	13.9 J
MAGNESIUM	2710 *E	3770 E	2340 *E	2390 *E	2530 *E	1960 *E	2090 *E	3830 E	2390 E	3800 E	2230 E	2670 E	3280 E	2700 J
MANGANESE	132 *E	184 E	125 *E	112 *E	97.1 *E	81 *E	89.8 *E	143 E	106 E	365 E	122 E	129 E	314 E	106 J
MERCURY	0.0056 B	0.17	0.13	0.076	0.1	0.036	0.024 B	0.14	0.06	0.13	0.048	0.065	0.037	0.059
NICKEL	7.95 E	11.5 E	7.2 E	6.8 E	8.5 E	6.2 E	7.2 E	12.3 E	8.8 E	12.9 E	6.2 E	7.1 E	9.3 E	6.7 J
POTASSIUM	1020	1920	1120	887	1130	757	737	1740	883	1820	776	918	600	1100
SELENIUM	1.1	1.5	0.36 U	1.1	1.3	1.1	1.1	1.5	1	0.64 B	0.73	0.81	1.1	0.7 U
SILVER	0.031 U	0.41 B	0.085 B	0.055 B	0.26 B	0.032 U	0.032 U	0.31 B	0.036 U	0.11 B	0.036 U	0.036 U	0.037 U	0.23 UJ
SODIUM	1620	7910	3730	2260	4580	1830	1550	7660	2830	10300	2750	2590	2200	4390
THALLIUM	0.145 BN	0.32 BN	0.54 N	0.18 BN	0.18 BN	0.15 BN	0.13 BN	0.22 BN	0.11 BN	0.16 BN	0.27 BN	0.22 BN	0.11 BN	0.136 J
VANADIUM	12.9 *E	23 E	14.9 *E	15.3 *E	14.6 *E	10.8 *E	10.5 *E	21.2 E	11.6 E	25 E	15.2 E	17 E	24.6 E	17 J
ZINC	20.4 E	82.8 *E	38.6 E	32.8 E	77.8 E	18.1 E	16.4 E	78.2 *E	29.6 *E	72.2 *E	37.6 *E	38.1 *E	31.8 *E	43.8 J
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8000
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	0.042443	0.22472	0.193165	0.058206	0.124321	0.03801	0.037945	0.199414	0.056647	0.264327	0.133765	0.132211	0.062943	0.166525
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1
PERCENT CLAY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD503-0006
LOCATION ID	GI-SD415	GI-SD416	GI-SD416	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	3.5 FT	0 FT	1.5 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.5 FT	3 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	1.58 FT	3 FT	4 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
PERCENT SILT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100
SIEVE 1-1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100
SIEVE 3/8"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100
SIEVE NO. 004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	87
SIEVE NO. 010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	78
SIEVE NO. 020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	61
SIEVE NO. 040	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40
SIEVE NO. 060	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24
SIEVE NO. 080	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16
SIEVE NO. 200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)														
SEM/AVS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD503-0006
LOCATION ID	GI-SD415	GI-SD416	GI-SD416	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	3.5 FT	0 FT	1.5 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.5 FT	3 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	1.58 FT	3 FT	4 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD415-4248-AVG	GI-SD416-0006	GI-SD416-0612	GI-SD416-1218	GI-SD417-0006	GI-SD417-0612	GI-SD417-1218	GI-SD418-0006	GI-SD418-0612	GI-SD419-0006	GI-SD419-0612	GI-SD419-1824	GI-SD419-2632	GI-SD503-0006
LOCATION ID	GI-SD415	GI-SD416	GI-SD416	GI-SD416	GI-SD417	GI-SD417	GI-SD417	GI-SD418	GI-SD418	GI-SD419	GI-SD419	GI-SD419	GI-SD419	GI-SD419
SAMPLE DATE	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/12/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	10/13/09	04/30/10
TOP DEPTH	3.5 FT	0 FT	1.5 FT	3 FT	0 FT	1.27 FT	2.53 FT	0 FT	1.85 FT	0 FT	0.75 FT	2.25 FT	3.25 FT	0 FT
BOTTOM DEPTH	4 FT	1.5 FT	3 FT	4 FT	1.27 FT	2.53 FT	3.79 FT	1.85 FT	3.69 FT	0.75 FT	1.58 FT	3 FT	4 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD420-0006	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006
LOCATION ID	GI-SD420	GI-SD420	GI-SD420	GI-SD420	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425	GI-SD426	GI-SD427	GI-SD428
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09	10/05/09	09/21/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	1.6 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	3.3 U	4.3	2.98	3.3 U	3.3 U	6.2	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	6.9	12	9.45	3.3 U	4.5	18	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	25	3.9
ACENAPHTHYLENE	6.8	6.2	6.5	3.3 U	3.9	7.8	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	6.5	3.3 U	3.3 U
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	19	30	24.5	3.3 U	11	54	3.3 U	3.3 U	3.3 U	6.9	3.3 U	5.9	41	7.1
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	40	54	47	4.5	24	100	3.6	5.2	4.4	12	7.9	8.7	67	17
BENZO(A)PYRENE	32	43	37.5	4	23	90	3.3 U	3.8	2.72	12	19	7.4	60	21
BENZO(B)FLUORANTHENE	46	56	51	5.5	27	110	4.3	5.5	4.9	16	21	13	68	30
BENZO(G,H,I)PERYLENE	20	28	24	3.8	10	54	3.3 U	3.3 U	3.3 U	7.2	9.4	5.4	39	17
BENZO(K)FLUORANTHENE	25	36	30.5	3.4	17	82	3.3 U	3.6	2.62	11	17	4.1	47	9.6
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD420-0006	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006
LOCATION ID	GI-SD420	GI-SD420	GI-SD420	GI-SD420	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425	GI-SD426	GI-SD427	GI-SD428
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09	10/05/09	09/21/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	1.6 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	36	49	42.5	4.6	24	100	3.7	4.3	4	16	8.3	8	58	16
DIBENZO(A,H)ANTHRACENE	7.1	9.7	8.4	3.3 U	3.3	18	3.3 U	3.3 U	3.3 U	3.3 U	4.4	3.3 U	11	4.8
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	69	110	89.5	5.9	42	220	5.3	6.4	5.85	16	7.8	13	150	34
FLUORENE	11	22	16.5	3.3 U	4.7	25	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	19	3.5
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	356	508	432	42	211	1000	21.1	34.5	27.8	111	114	75.9	655	191
INDENO(1,2,3-CD)PYRENE	19	27	23	3.8	9.9	51	3.3 U	3.3 U	3.3 U	7	11	5.3	35	14
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	95.9	176	136	3.3 U	54.1	283	3.3 U	16.1	8.88	20.9	3.4	52.4	220	43.7
NAPHTHALENE	5.2	11	8.1	3.3 U	3.3 U	12	3.3 U	7.9	4.78	3.3 U	3.3 U	30	5.5	4.2
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	47	91	69	3.3 U	30	160	3.3 U	8.2	4.92	14	3.4	10	130	25
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	62	95	78.5	6.5	31	180	4.2	5.7	4.95	14	8.2	11	120	28
TOTAL CARCINOGENIC PAHS-HALFND	205	275	240	27.4	128	551	18.2	25.7	22	75.6	88.6	48.2	346	112
TOTAL CARCINOGENIC PAHS-POS	205	275	240	25.8	128	551	11.6	22.4	17	74	88.6	46.5	346	112
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	452	684	568	42	265	1290	21.1	50.6	35.8	132	117	128	876	235
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SAMPLE ID	GI-SD420-0006	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006
LOCATION ID	GI-SD420	GI-SD420	GI-SD420	GI-SD420	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425	GI-SD426	GI-SD427	GI-SD428
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09	10/05/09	09/21/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	1.6 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM
AROCLOR-1016	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1221	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1232	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1242	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1248	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1254	33 U	33 U	33 U	56	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1260	65	33 U	40.8	33 U	33 U	100	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	65	33 U	40.8	56	33 U	100	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SAMPLE ID	GI-SD420-0006	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006
LOCATION ID	GI-SD420	GI-SD420	GI-SD420	GI-SD420	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425	GI-SD426	GI-SD427	GI-SD428
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09	10/05/09	09/21/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	1.6 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)														
ALUMINUM	3580 E	3370 *E	3480 E	4550	6890 *E	4520 E	5490 *E	5010 *E	5250 *E	6940 *E	5390 E	6810 *E	5140 E	4660 E
ANTIMONY	0.16 BN	0.076 UN	0.099 BN	0.1 BN	0.21 BN	0.11 BN	0.26 BN	0.074 UN	0.148 BN	0.39 BN	0.082 UN	0.36 BN	0.15 BN	0.21 BN
ARSENIC	1.6 E	1.8 E	1.7 E	2.1	2.3	2.8 *	3.1	2.6	2.85	4.1	2.1 *	2.6	1.9 *	2.6 *
BARIUM	7.7 *E	8.4 E	8.05 *E	13.5 E	10.1 E	10.5 E	6.5 E	5.2 E	5.85 E	11.1 E	13.9 E	11.6 E	13.6 E	6.2 E
BERYLLIUM	0.3 E	0.25 E	0.275 E	0.37 E	0.29 E	0.11 BE	0.25 E	0.19 E	0.22 E	0.33 E	0.065 BE	0.33 E	0.077 BE	0.15 E
CADMIUM	0.086 B	0.029 B	0.0575 B	0.11 B	0.26	0.028 B*	0.81	0.42	0.615	0.59	0.0059 U*	0.33	0.052 B*	0.037 B*
CALCIUM	1240 *	1900 *	1570 *	1490	8770 *	33400 *	5160 *	5180 *	5170 *	19500 *	30400 *	8060 *	21100 *	42400 *
CHROMIUM	6.8 E	7.2 E	7 E	8	10.1 E	10.1 E	11.7 E	10.2 E	11 E	16.5 E	10.4 E	12.2 E	10.2 E	9.3 E
COBALT	3.1 E	3 E	3.05 E	4 E	4.1 *E	2.6 E	3.3 *E	3.5 *E	3.4 *E	4.8 *E	2.8 E	4.8 *E	2.9 E	3.6 E
COPPER	10.5 NE	9.7 E	10.1 NE	15.6	25.5 N	14.9 E	20.3 N	12.8 N	16.6 N	19.4 N	9.8 E	16 N	7.3 E	28.2 E
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	8930	8930 *	8930 *	12300	18100 *	12300 *	23700 *	14700 *	19200 *	21800 *	14700 *	21800 *	13700 *	14500 *
LEAD	5.9 NE	6.6 E	6.25 NE	5.4 E	138 N*E	10.8 NE	9.8 N*E	5.7 N*E	7.75 N*E	32.8 N*E	6.4 NE	34.7 N*E	8.2 NE	7.6 NE
MAGNESIUM	1760 E	1750 *E	1760 E	1970 E	2860 *E	2390 E	2670 *E	2520 *E	2600 *E	3790 *E	2940 E	3930 *E	2810 E	2690 E
MANGANESE	69.8 E	67.2 *E	68.5 E	85.3 E	152 *E	140 *E	139 *E	109 *E	124 *E	141 *E	119 *E	121 *E	108 *E	124 *E
MERCURY	0.024 B	0.81	0.417 B	0.0067 B	0.0075 B	0.032	0.003 U	0.0079 B	0.0047 B	0.029	0.0098 B	0.018 B	0.025 B	0.011 B
NICKEL	8 E	6.6 E	7.3 E	8 E	8 *E	6 E	8.5 *E	7.8 *E	8.15 *E	9.5 *E	5.9 E	9.3 *E	6.3 E	6.4 E
POTASSIUM	483	589	536	626	724 *	996 *	600 *	444 *	522 *	1110 *	1070 *	937 *	942 *	761 *
SELENIUM	0.79	1.1	0.945	1	0.86	0.38 U	1.1	0.66	0.88	0.79	0.35 U	1.2	0.34 U	0.38 U
SILVER	0.037 U	0.033 U	0.035 U	0.035 U	0.031 U	0.039 U	0.03 U	0.032 U	0.031 U	0.033 U	0.036 U	0.035 U	0.035 U	0.039 U
SODIUM	2030	2850	2440	2120	2180	4400 E	1780	1520	1650	3140	3510 E	4230	3430 E	3640 E
THALLIUM	0.13 BN	0.1 BN	0.115 BN	0.18 B	0.094 U	0.12 U	0.14 B	0.15 B	0.145 B	0.23 B	0.11 U	0.24 B	0.11 U	0.12 U
VANADIUM	7.2 E	8.5 *E	7.85 E	10.9	11 *E	11.5 E	8.9 *E	12 *E	10.4 *E	21.9 *E	12.8 E	19.2 *E	12.4 E	14 E
ZINC	22 *E	21.5 E	21.8 *E	19.9 E	26.1 E	31.1 E	119 E	31.9 E	75.4 E	164 E	27.2 E	40.1 E	30.6 E	23.9 E
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	0.075339	0.049502	0.062462	0.066521	0.116417	0.111635	0.082978	0.051134	0.067076	0.108089	0.040968	0.071712	0.055102	0.051315
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT CLAY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD420-0006	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006
LOCATION ID	GI-SD420	GI-SD420	GI-SD420	GI-SD420	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425	GI-SD426	GI-SD427	GI-SD428
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09	10/05/09	09/21/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	1.6 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM
PERCENT SILT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1-1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/8"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 040	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 060	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 080	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)														
SEM/AVS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SAMPLE ID	GI-SD420-0006	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006
LOCATION ID	GI-SD420	GI-SD420	GI-SD420	GI-SD420	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425	GI-SD426	GI-SD427	GI-SD428
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09	10/05/09	09/21/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	1.6 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD420-0006	GI-SD420-0006-D	GI-SD420-0006-AVG	GI-SD420-0612	GI-SD421-0006	GI-SD422-0006	GI-SD423-0006	GI-SD423-0006-D	GI-SD423-0006-AVG	GI-SD424-0006	GI-SD425-0006	GI-SD426-0006	GI-SD427-0006	GI-SD428-0006
LOCATION ID	GI-SD420	GI-SD420	GI-SD420	GI-SD420	GI-SD421	GI-SD422	GI-SD423	GI-SD423	GI-SD423	GI-SD424	GI-SD425	GI-SD426	GI-SD427	GI-SD428
SAMPLE DATE	10/13/09	10/13/09	10/13/09	10/13/09	10/05/09	09/21/09	10/05/09	10/05/09	10/05/09	10/05/09	09/21/09	10/05/09	09/21/09	09/21/09
TOP DEPTH	0 FT	0 FT	0 FT	1.6 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	1.6 FT	1.6 FT	1.6 FT	3.2 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	FD	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	NM	NM
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

SAMPLE ID	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006	GI-SD566-0006	GI-SD436-0006	GI-SD437-0006	GI-SD517-0006	GI-SD517-0006-D
LOCATION ID	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437
SAMPLE DATE	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09	04/30/10	09/21/09	09/21/09	05/13/10	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	9 J	3.3 U	3.3 U	24	117 UJ	19	15	26 J	3.3 U	13 J	3.3 U	3.3 U	1.5 J	2.4 J
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	110	8.1	14	110	220 J	120	130	150 J	23	91 J	15	21	3.1 J	2.4 J
ACENAPHTHYLENE	18 U	3.3 U	3.3 U	4.5	47 J	7.9	9.3	14 J	4	5.7 J	3.3 U	3.3 U	3.6 J	3.9 J
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	130	14	20	210	500 J	220	160	260 J	49	190 J	28	42	12 UJ	10 U
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	200	30	30	540 D	910 J	420 D	250	510 J	100	340 J	58	110	42 J	32
BENZO(A)PYRENE	190	27	22	480 D	890 J	290	220	530 J	88	330 J	53	99	37 J	37 J
BENZO(B)FLUORANTHENE	150	32	24	590 D	700 J	400 D	300	440 J	120	250 J	71	140	39 J	38
BENZO(G,H,I)PERYLENE	120	18	9.1	290	490 J	170	130	290 J	55	180 J	33	61	26 J	22 J
BENZO(K)FLUORANTHENE	120	25	16	240	630 J	170	110	340 J	47	230 J	25	50	32 J	32
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006	GI-SD566-0006	GI-SD436-0006	GI-SD437-0006	GI-SD517-0006	GI-SD517-0006-D
LOCATION ID	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437
SAMPLE DATE	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09	04/30/10	09/21/09	09/21/09	05/13/10	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	190	29	22	450 D	940 J	330	230	500 J	98	340 J	56	110	52 J	32
DIBENZO(A,H)ANTHRACENE	38	5.3	3.3 U	110	170 J	74	43	100 J	22	74 J	9.8	22	8.2 J	7.2 J
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	480	61	49	1300 D	2000 J	1000 D	670 D	1100 J	230	770 J	130	220	64 J	49
FLUORENE	59	5	14	88	200 J	89	68	100 J	16	66 J	8.5	15	4.6 J	2.9 J
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	1970	298	221	5250	8700 J	3810	2600	4970 J	1020	3290 J	576	1070	377 J	307 J
INDENO(1,2,3-CD)PYRENE	110	16	8.6	250	470 J	160	120	300 J	50	190 J	30	56	23 J	21
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	730 J	71.1	130	1230	2470 J	1290	961	1390 J	257	949 J	140	226	40.8 J	33.6 J
NAPHTHALENE	22	3.3 U	10	78	117 UJ	42	49	54 J	5	33 J	3.5	7.6	10 UJ	10 U
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	400	44	72	720 D	1500 J	790 D	530 D	790 J	160	550 J	85	140	28 J	22
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	370	55	40	1000 D	1500 J	800 D	530 D	860 J	210	590 J	110	200	54 J	37 J
TOTAL CARCINOGENIC PAHS-HALFND	998	164	124	2660	4710 J	1840	1270	2720 J	525	1750 J	303	587	233 J	199 J
TOTAL CARCINOGENIC PAHS-POS	998	164	123	2660	4710 J	1840	1270	2720 J	525	1750 J	303	587	233 J	199 J
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	2700 J	369	351	6480	11200 J	5100	3560	6360 J	1280	4240 J	716	1290	418 J	341 J
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SAMPLE ID	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006	GI-SD566-0006	GI-SD436-0006	GI-SD437-0006	GI-SD517-0006	GI-SD517-0006-D
LOCATION ID	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437
SAMPLE DATE	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09	04/30/10	09/21/09	09/21/09	05/13/10	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
AROCLOR-1016	NA	33 U	33 U	33 U	NA	33 U	33 U	NA	160 U	NA	33 U	33 U	NA	NA
AROCLOR-1221	NA	33 U	33 U	33 U	NA	33 U	33 U	NA	160 U	NA	33 U	33 U	NA	NA
AROCLOR-1232	NA	33 U	33 U	33 U	NA	33 U	33 U	NA	160 U	NA	33 U	33 U	NA	NA
AROCLOR-1242	NA	33 U	33 U	33 U	NA	33 U	33 U	NA	160 U	NA	33 U	33 U	NA	NA
AROCLOR-1248	NA	33 U	33 U	33 U	NA	33 U	33 U	NA	160 U	NA	33 U	33 U	NA	NA
AROCLOR-1254	NA	33 U	33 U	33 U	NA	33 U	33 U	NA	160 U	NA	33 U	33 U	NA	NA
AROCLOR-1260	NA	42	33 U	360	NA	170	400	NA	890	NA	170	310	NA	NA
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	NA	42	33 U	360	NA	170	400	NA	890	NA	170	310	NA	NA
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	2.2 U	NA	NA	NA	7.4 U	NA	NA	6.7 U	NA	12 U	NA	NA	2.6 U	2.4 U
DICHLOROBIPHENYLS	0.46 U	NA	NA	NA	1.5 U	NA	NA	1.4 U	NA	2.4 U	NA	NA	0.62 J	0.49 U
HEPTACHLOROBIPHENYLS	4.1 J	NA	NA	NA	3.7 UJ	NA	NA	120	NA	41	NA	NA	27 J	67 J
HEXACHLOROBIPHENYL	6.9	NA	NA	NA	16 J	NA	NA	160	NA	88	NA	NA	39 J	88 J
MONOCHLOROBIPHENYLS	0.46 U	NA	NA	NA	1.5 U	NA	NA	1.4 U	NA	2.4 U	NA	NA	0.52 U	0.49 U
NONACHLOROBIPHENYLS	2.2 U	NA	NA	NA	7.4 U	NA	NA	6.7 U	NA	12 U	NA	NA	2.6 U	2.4 U
PENTACHLOROBIPHENYLS	0.89 U	NA	NA	NA	2.9 U	NA	NA	26 U	NA	16 UJ	NA	NA	12 U	20
TETRACHLOROBIPHENYLS	0.89 U	NA	NA	NA	2.9 U	NA	NA	2.7 U	NA	4.7 U	NA	NA	1 U	0.95 U
TOTAL OCTACHLOROBIPHENYLS	1.4 J	NA	NA	NA	3.7 U	NA	NA	9.5 J	NA	6 U	NA	NA	7	7.2
TOTAL PCB HOMOLOGS	12.4 J	NA	NA	NA	16 J	NA	NA	290 J	NA	129 J	NA	NA	117 J	182 J
TOTAL PCB HOMOLOGS-HALFND	16.2 J	NA	NA	NA	32.2 J	NA	NA	313 J	NA	158 J	NA	NA	126 J	186 J

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006	GI-SD566-0006	GI-SD436-0006	GI-SD437-0006	GI-SD517-0006	GI-SD517-0006-D
LOCATION ID	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437
SAMPLE DATE	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09	04/30/10	09/21/09	09/21/09	05/13/10	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
TOTAL TRICHLOROBIPHENYLS	0.46 U	NA	NA	NA	1.5 U	NA	NA	1.4 U	NA	2.4 U	NA	NA	43 J	0.49 UJ
METALS (MG/KG)														
ALUMINUM	6160	4520 E	7500 *E	3220 E	4090	3340 E	3530 E	3860	3380 E	4430	3660 E	4100 E	4620	5070
ANTIMONY	0.666 UJ	0.089 BN	0.25 BN	0.084 UN	0.89 UJ	0.098 BN	0.21 BN	0.253 J	0.21 BN	0.71 UJ	0.081 UN	0.085 UN	0.76 UJ	2.17 UJ
ARSENIC	0.7 J	2.4 *	3.8	2 *	0.59 UJ	4.5 *	7.6 *	2.6 J	2.4 *	0.84 J	1.7 *	2.3 *	1.7 J	1.5 J
BARIUM	7.6	8.6 E	19.9 E	6.2 E	15.9 J	13.3 E	10.1 E	15.4 J	7.9 E	8.1 J	5.4 E	9.4 E	8.6	8.5
BERYLLIUM	0.204 J	0.097 BE	0.37 E	0.074 BE	0.333 J	0.15 E	0.076 BE	0.275 J	0.072 BE	0.222 J	0.08 BE	0.086 BE	0.274	0.281
CADMIUM	0.2 J	0.053 B*	0.35	0.011 B*	0.327 UJ	0.083 B*	0.26 *	0.465 J	0.091 B*	0.256 J	0.062 B*	0.16 *	0.264	0.243
CALCIUM	30500 J	38500 *	19100 *	77800 *	206000 J	140000 *	80300 *	140000 J	45800 *	33100 J	42900 *	28500 *	15000	13800
CHROMIUM	12	10.5 E	17.5 E	6.2 E	13.5 J	10.4 E	25.8 E	20.4 J	9.4 E	11.9 J	7.9 E	9.4 E	16.8 J	12.1 J
COBALT	3.8	2.7 E	4.5 *E	1.9 E	2.6 J	1.8 E	2.9 E	2.6 J	2.2 E	3 J	2 E	2.6 E	4.3	5.1
COPPER	7.5 J	7.5 E	10.7 N	7.2 E	13.9 J	12.1 E	21.4 E	18.7 J	11.8 E	16 J	12.6 E	9.6 E	14.2 J	13.3 J
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	12500	12200 *	22100 *	6220 *	11400	6340 *	42500 *	17900	13100 *	13800	10400 *	13100 *	17400	16200
LEAD	11.2	11.4 NE	10.3 N*E	13.8 NE	23 J	14.6 NE	9.3 NE	18.3 J	14.7 NE	17.7 J	18.6 NE	24.3 NE	54.4 J	28.9 J
MAGNESIUM	3390	2560 E	3820 *E	1960 E	3140 J	2460 E	2400 E	3210 J	2200 E	2650 J	1920 E	2320 E	2960	3050
MANGANESE	137	118 *E	141 *E	93.8 *E	188 J	134 *E	193 *E	146 J	93.4 *E	127 J	84.6 *E	108 *E	141	142
MERCURY	0.026 J	0.037	0.014 B	0.02 B	0.087	0.059	0.021 B	0.239	0.025 B	0.03	0.068	0.029 B	0.022 J	0.04
NICKEL	7.4	5.7 E	10.2 *E	3.8 E	6.3 J	4.1 E	15.4 E	8.2 J	5.1 E	8.8 J	4.5 E	5.9 E	8.4	8.6
POTASSIUM	758	831 *	1800 *	677 *	1390 J	1330 *	804 *	1120 J	686 *	817	631 *	768 *	857 J	869 J
SELENIUM	0.666 U	0.36 U	0.8	0.36 U	2.7 U	0.39 U	0.38 U	2.4 U	0.38 U	0.71 U	0.35 U	0.37 U	2.28 U	2.17 U
SILVER	0.222 UJ	0.037 U	0.034 U	0.037 U	0.3 U	0.04 U	0.038 U	0.27 U	0.038 U	0.24 UJ	0.036 U	0.037 U	0.25 UJ	0.24 UJ
SODIUM	3390	3880 E	2620	4070 E	9070	10900 E	4700 E	8420	4900 E	4490	3370 E	3440 E	4750	4100
THALLIUM	0.444 UJ	0.11 U	0.23 B	0.43 B	4.9 J	0.89	0.12 U	3.5 J	0.12 U	0.47 UJ	0.11 U	0.11 U	0.51 UJ	0.48 UJ
VANADIUM	15	11.8 E	23.3 *E	7.8 E	14.9 J	12.8 E	11.9 E	16.8 J	9.9 E	12.5 J	11.2 E	13.9 E	23.7	22.5
ZINC	34.4 J	26.5 E	36 E	19.3 E	47.2 J	29.9 E	21.1 E	37 J	33.9 E	36.4 J	23.6 E	28.1 E	39.9 J	40.8 J
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	5860	NA	NA	NA	13700	NA	NA	14700	NA	10300	NA	NA	9700	6800
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	0.087484	0.061023	0.066622	0.319328	0.222872	0.211476	0.347439	0.311177	0.549385	0.18303	0.13776	0.231003	0.136161	0.158117
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	1	NA	NA	NA	7	NA	NA	4	NA	1	NA	NA	3	-9999
PERCENT CLAY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SAMPLE ID	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006	GI-SD566-0006	GI-SD436-0006	GI-SD437-0006	GI-SD517-0006	GI-SD517-0006-D
LOCATION ID	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437
SAMPLE DATE	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09	04/30/10	09/21/09	09/21/09	05/13/10	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
PERCENT SILT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	NA	NA	NA	100	NA	NA	100	NA	100	NA	NA	100	100
SIEVE 1/2"	100	NA	NA	NA	92	NA	NA	100	NA	100	NA	NA	100	100
SIEVE 1-1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	NA	NA	NA	100	NA	NA	100	NA	100	NA	NA	100	100
SIEVE 3/8"	100	NA	NA	NA	92	NA	NA	96	NA	100	NA	NA	100	100
SIEVE NO. 004	98	NA	NA	NA	86	NA	NA	94	NA	100	NA	NA	99	98
SIEVE NO. 010	88	NA	NA	NA	77	NA	NA	79	NA	98	NA	NA	96	95
SIEVE NO. 020	63	NA	NA	NA	68	NA	NA	57	NA	92	NA	NA	86	86
SIEVE NO. 040	21	NA	NA	NA	62	NA	NA	49	NA	77	NA	NA	48	42
SIEVE NO. 060	14	NA	NA	NA	59	NA	NA	43	NA	48	NA	NA	28	19
SIEVE NO. 080	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	11	NA	NA	NA	53	NA	NA	36	NA	21	NA	NA	23	11
SIEVE NO. 200	9	NA	NA	NA	40	NA	NA	27	NA	13	NA	NA	19	6
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)														
SEM/AVS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SAMPLE ID	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006	GI-SD566-0006	GI-SD436-0006	GI-SD437-0006	GI-SD517-0006	GI-SD517-0006-D
LOCATION ID	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437
SAMPLE DATE	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09	04/30/10	09/21/09	09/21/09	05/13/10	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD429-0006	GI-SD430-0006	GI-SD431-0006	GI-SD432-0006	GI-SD514-0006	GI-SD433-0006	GI-SD434-0006	GI-SD515-0006	GI-SD435-0006	GI-SD566-0006	GI-SD436-0006	GI-SD437-0006	GI-SD517-0006	GI-SD517-0006-D
LOCATION ID	GI-SD429	GI-SD430	GI-SD431	GI-SD432	GI-SD432	GI-SD433	GI-SD434	GI-SD434	GI-SD435	GI-SD435	GI-SD436	GI-SD437	GI-SD437	GI-SD437
SAMPLE DATE	05/04/10	09/21/09	10/05/09	09/21/09	04/30/10	09/21/09	09/21/09	04/30/10	09/21/09	04/30/10	09/21/09	09/21/09	05/13/10	05/13/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	FD
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD439-0006	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006	GI-SD446-0006	GI-SD447-0006	GI-SD447-0006-D
LOCATION ID	GI-SD437	GI-SD438	GI-SD439	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445	GI-SD446	GI-SD447	GI-SD447
SAMPLE DATE	05/13/10	05/13/10	10/05/09	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	FD
SEMIVOLATILES (UG/KG)														
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	1.95 J	18 J	4.6	3.3 U	3.3 U	17	3.3 U	3.3 U	5.1	3.38	4.9	3.3 U	5.9	4.5
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	2.75 J	85 J	12	3.3 U	16	84	24	14	38	26	24	16	67	50
ACENAPHTHYLENE	3.75 J	89 UJ	8.1	3.3 U	3.3 U	5.6	3.3 U	3.3 U	4.4	3.02	8.3	3.3 U	12	9.5
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	11 UJ	130 UJ	25	3.6	25	130	58	34	80	57	57	40	150	110
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	37 J	270 J	56	7.6	63	190	96	120	180	150	120	110	400 D	290
BENZO(A)PYRENE	37 J	290 J	51	8.6	49	150	77	110	140	125	120	96	300	250
BENZO(B)FLUORANTHENE	38.5 J	220 J	59	11	57	170	100	140	180	160	160	140	510 D	310
BENZO(G,H,I)PERYLENE	24 J	150 J	30	5.1	25	77	50	67	84	75.5	72	57	180	160
BENZO(K)FLUORANTHENE	32 J	200 J	43	6.5	40	130	45	56	90	73	66	49	190	180
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD439-0006	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006	GI-SD446-0006	GI-SD447-0006	GI-SD447-0006-D
LOCATION ID	GI-SD437	GI-SD438	GI-SD439	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445	GI-SD446	GI-SD447	GI-SD447
SAMPLE DATE	05/13/10	05/13/10	10/05/09	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	FD
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	42 J	270 J	45	8.8	50	150	99	110	180	145	120	100	350 D	290
DIBENZO(A,H)ANTHRACENE	7.7 J	67 J	11	3.3 U	9.1	29	17	26	29	27.5	28	18	72	57
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	56.5 J	630 J	77	11	92	300	220	240	460 D	350 D	260	230	890 D	770 D
FLUORENE	3.75 J	67 J	11	3.3 U	19	75	21	9.8	26	17.9	18	13	60	29
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	342 J	2700 J	476	73.3	494	1530	925	1120	1810	1460	1240	1040	3770	3070
INDENO(1,2,3-CD)PYRENE	22 J	150 J	28	4.7	23	75	41	60	75	67.5	64	52	170	140
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	37.2 J	660 J	163	10.9	188	787	287	181	436	308	291	205	826	622
NAPHTHALENE	10 UJ	89 UJ	23	3.3 U	8.3	55	4.4	3.6	13	8.3	8.4	5.6	11	8.6
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	25 J	490 J	79	7.3	120	420 D	180	120	270	195	170	130	520 D	410 D
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	45.5 J	450 J	76	10	86	260	180	190	390 D	290 D	230	190	710 D	620 D
TOTAL CARCINOGENIC PAHS-HALFND	216 J	1470 J	293	48.8	291	894	475	622	874	748	678	565	1990	1520
TOTAL CARCINOGENIC PAHS-POS	216 J	1470 J	293	47.2	291	894	475	622	874	748	678	565	1990	1520
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	380 J	3360 J	639	84.2	682	2320	1210	1300	2240	1770	1530	1250	4600	3690
PESTICIDES/PCBS (UG/KG)														
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD439-0006	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006	GI-SD446-0006	GI-SD447-0006	GI-SD447-0006-D
LOCATION ID	GI-SD437	GI-SD438	GI-SD439	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445	GI-SD446	GI-SD447	GI-SD447
SAMPLE DATE	05/13/10	05/13/10	10/05/09	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	FD
AROCLOR-1016	NA	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1221	NA	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1232	NA	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1242	NA	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1248	NA	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1254	NA	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1260	NA	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	140	240	130
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	NA	NA	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	140	240	130
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)														
DECACHLOROBIPHENYL	2.5 U	1.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	0.432 J	0.23 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	47 J	38 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	63.5 J	50 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	0.505 U	0.23 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	2.5 U	1.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	13	11 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	0.975 U	0.44 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	7.1	6.7 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	150 J	106 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	156 J	107 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD439-0006	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006	GI-SD446-0006	GI-SD447-0006	GI-SD447-0006-D
LOCATION ID	GI-SD437	GI-SD438	GI-SD439	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445	GI-SD446	GI-SD447	GI-SD447
SAMPLE DATE	05/13/10	05/13/10	10/05/09	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	FD
TOTAL TRICHLOROBIPHENYLS	21.6 J	0.23 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)														
ALUMINUM	4840	5400	7870 *E	5630 *E	5090 *E	5710 *E	4540 E	4020 E	4000 E	4010 E	5770 E	7800 E	7020 E	7100 E
ANTIMONY	1.46 UJ	0.67 UJ	2.6 N	0.21 BN	0.3 BN	0.55 N	0.081 UN	0.085 UN	0.11 BN	0.0762 BN	0.18 BN	0.22 BN	0.26 BN	0.29 BN
ARSENIC	1.6 J	2.6 J	6.8	1.7	2.7	4.6	1.9 *	2 *	1.9 *	1.95 *	4.3 *	2.3 *	2.8 *	2.4 *
BARIUM	8.55	11.2	25.3 E	11 E	10.7 E	12.4 E	14.5 E	7.1 E	11.6 E	9.35 E	13.2 E	26.7 E	23.8 E	20.2 E
BERYLLIUM	0.278	0.257	0.73 E	0.35 E	0.31 E	0.35 E	0.061 BE	0.086 BE	0.083 BE	0.0845 BE	0.25 E	0.25 E	0.2 E	0.2 E
CADMIUM	0.254	0.283	0.9	0.25	0.42	0.61	0.052 B*	0.069 B*	0.076 B*	0.0725 B*	0.1 B*	0.11 B*	0.15 *	0.13 *
CALCIUM	14400	39200	19900 *	9000 *	31200 *	57800 *	42100 *	29700 *	22900 *	26300 *	45800 *	2950 *	1680 *	1640 *
CHROMIUM	14.4 J	15.5 J	21.8 E	12.8 E	19.3 E	21.5 E	9.7 E	9.5 E	20 E	14.8 E	19.2 E	10.5 E	9.9 E	11 E
COBALT	4.7	4.9	5.7 *E	3.4 *E	3.3 *E	3.7 *E	2.5 E	2.3 E	2.1 E	2.2 E	3.2 E	6.9 E	5.8 E	5.8 E
COPPER	13.8 J	15.7 J	33 N	8.1 N	9.9 N	42 N	6.9 E	7.3 E	7.2 E	7.25 E	18.2 E	17.1 E	29.7 E	23.4 E
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	16800	19500	34100 *	14700 *	21800 *	25300 *	11300 *	10300 *	10300 *	10300 *	15500 *	20300 *	17600 *	19200 *
LEAD	41.6 J	108 J	51.4 N*E	9.2 N*E	11.5 N*E	23.1 N*E	8.6 NE	9.2 NE	34.5 NE	21.8 NE	21.3 NE	9.8 NE	20.3 NE	14.9 NE
MAGNESIUM	3000	3460	3810 *E	3150 *E	3120 *E	3270 *E	2610 E	2320 E	2300 E	2310 E	3230 E	4410 E	2910 E	3330 E
MANGANESE	142	164	185 *E	112 *E	147 *E	177 *E	102 *E	110 *E	87.5 *E	98.8 *E	123 *E	261 *E	152 *E	160 *E
MERCURY	0.031 J	0.012 J	0.043	0.024	0.026	0.031	0.029	0.035	0.03	0.0325	0.084	0.004 U	0.041	0.019 B
NICKEL	8.5	11.4	16.9 *E	7.3 *E	11.2 *E	12.3 *E	6 E	5.4 E	5.3 E	5.35 E	8.4 E	10.9 E	11.3 E	11.7 E
POTASSIUM	863 J	794 J	1820 *	1050 *	1080 *	1070 *	1550 *	829 *	1120 *	974 *	1860 *	1050 *	1020 *	1170 *
SELENIUM	2.22 U	6.74 U	0.47 B	0.97	0.58 B	0.36 U	0.35 U	0.37 U	0.35 U	0.36 U	0.44 U	0.33 U	0.42 B	0.32 U
SILVER	0.245 UJ	0.248 UJ	0.037 U	0.033 U	0.035 U	0.045 B	0.036 U	0.037 U	0.036 U	0.0365 U	0.14 B	0.034 U	0.034 U	0.032 U
SODIUM	4420	3560	4290	2840	3960	4570	3790 E	4610 E	4340 E	4480 E	8830 E	1690 E	2490 E	2080 E
THALLIUM	0.495 UJ	0.45 UJ	0.18 B	0.13 B	0.24 B	0.46 B	0.12 B	0.11 U	0.11 U	0.11 U	0.14 U	0.1 U	0.1 U	0.098 U
VANADIUM	23.1	14.4	21.8 *E	15.4 *E	18 *E	16.7 *E	13.8 E	11.2 E	11.4 E	11.3 E	19 E	14 E	12.9 E	14.7 E
ZINC	40.4 J	35.8 J	67.5 E	32.2 E	33.5 E	48.5 E	24.8 E	26.4 E	32.7 E	29.6 E	47.4 E	37.3 E	44.8 E	40.8 E
MISCELLANEOUS PARAMETERS (MG/KG)														
TOTAL ORGANIC CARBON	8250	5550	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UNITLESS)														
ERM-Q	0.147417	0.204932	0.12928	0.047988	0.072528	0.130564	0.057939	0.056533	0.087469	0.071936	0.088017	0.143418	0.26012	0.179768
MISCELLANEOUS PARAMETERS (%)														
HYDROMETER-0.002MM	-5000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT CLAY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD439-0006	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006	GI-SD446-0006	GI-SD447-0006	GI-SD447-0006-D
LOCATION ID	GI-SD437	GI-SD438	GI-SD439	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445	GI-SD446	GI-SD447	GI-SD447
SAMPLE DATE	05/13/10	05/13/10	10/05/09	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	FD
PERCENT SILT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1/2"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1-1/2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/8"	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 004	98.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 010	95.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 020	86	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 040	45	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 060	23.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 080	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 200	12.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (UMOLES/G)														
ACID VOLATILE SULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)														
SEM/AVS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)														
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD439-0006	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006	GI-SD446-0006	GI-SD447-0006	GI-SD447-0006-D
LOCATION ID	GI-SD437	GI-SD438	GI-SD439	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445	GI-SD446	GI-SD447	GI-SD447
SAMPLE DATE	05/13/10	05/13/10	10/05/09	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	FD
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD517-0006-AVG	GI-SD438-0006	GI-SD439-0006	GI-SD440-0006	GI-SD441-0006	GI-SD442-0006	GI-SD443-0006	GI-SD444-0006	GI-SD444-0006-D	GI-SD444-0006-AVG	GI-SD445-0006	GI-SD446-0006	GI-SD447-0006	GI-SD447-0006-D
LOCATION ID	GI-SD437	GI-SD438	GI-SD439	GI-SD440	GI-SD441	GI-SD442	GI-SD443	GI-SD444	GI-SD444	GI-SD444	GI-SD445	GI-SD446	GI-SD447	GI-SD447
SAMPLE DATE	05/13/10	05/13/10	10/05/09	10/05/09	10/05/09	10/05/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09	09/22/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL	ORIG	DUP
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM	NM	FD
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)														
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

SAMPLE ID	GI-SD447-0006-AVG	GI-SD518-0006	GI-SD449-0006	GI-SD450-0006	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG	GI-SD519-0006
LOCATION ID	GI-SD447	GI-SD447	GI-SD449	GI-SD450	GI-SD508	GI-SD508	GI-SD508	GI-SD519
SAMPLE DATE	09/22/09	05/03/10	09/22/09	09/22/09	05/03/10	05/03/10	05/03/10	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM
SEMIVOLATILES (UG/KG)								
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	5.2	37 U	3.3 U	3.3 U	17 U	26 U	21.5 U	1.8 J
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	58.5	70	3.3 U	3.3 U	21	15 J	18 J	6.8 J
ACENAPHTHYLENE	10.8	13 J	31	3.3 U	12 J	12 J	12 J	2.3 J
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	130	160	53	3.3 U	150 J	39 J	94.5 J	25
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	345 D	560	16	3.3 U	180	190 J	185 J	68
BENZO(A)PYRENE	275	540	7.3	3.3 U	140	97 J	118 J	68
BENZO(B)FLUORANTHENE	410 D	430	14	3.3 U	160	130 J	145 J	60
BENZO(G,H,I)PERYLENE	170	330	4.3	3.3 U	67	56	61.5	37
BENZO(K)FLUORANTHENE	185	360	5.5	3.3 U	120	130 J	125 J	49
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD447-0006-AVG	GI-SD518-0006	GI-SD449-0006	GI-SD450-0006	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG	GI-SD519-0006
LOCATION ID	GI-SD447	GI-SD447	GI-SD449	GI-SD450	GI-SD508	GI-SD508	GI-SD508	GI-SD519
SAMPLE DATE	09/22/09	05/03/10	09/22/09	09/22/09	05/03/10	05/03/10	05/03/10	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	320 D	560	21	3.3 U	270	270 J	270 J	74
DIBENZO(A,H)ANTHRACENE	64.5	110	3.3 U	3.3 U	24	17 J	20.5 J	13
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	830 D	1000	160	3.3 U	550	760	655	120
FLUORENE	44.5	57	100	3.3 U	26	17 J	21.5 J	6.3 J
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	3420	5100	372	3.3 U	1990	2310 J	2150 J	633
INDENO(1,2,3-CD)PYRENE	155	310	4.3	3.3 U	62	51	56.5	34
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	724	840 J	484	3.3 U	389 J	263 J	326 J	112 J
NAPHTHALENE	9.8	37 U	110	3.3 U	17 U	26 U	21.5 U	2.7 J
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	465 D	540	190	3.3 U	180	180 J	180 J	67
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	665 D	900	140	3.3 U	420	610	515	110
TOTAL CARCINOGENIC PAHS-HALFND	1760	2870	69.8	3.3 U	956	885 J	920 J	366
TOTAL CARCINOGENIC PAHS-POS	1760	2870	68.1	3.3 U	956	885 J	920 J	366
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	4140	5940 J	856	3.3 U	2380 J	2570 J	2480 J	745 J
PESTICIDES/PCBS (UG/KG)								
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD447-0006-AVG	GI-SD518-0006	GI-SD449-0006	GI-SD450-0006	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG	GI-SD519-0006
LOCATION ID	GI-SD447	GI-SD447	GI-SD449	GI-SD450	GI-SD508	GI-SD508	GI-SD508	GI-SD519
SAMPLE DATE	09/22/09	05/03/10	09/22/09	09/22/09	05/03/10	05/03/10	05/03/10	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM
AROCLOR-1016	33 U	NA	33 U	33 U	NA	NA	NA	NA
AROCLOR-1221	33 U	NA	33 U	33 U	NA	NA	NA	NA
AROCLOR-1232	33 U	NA	33 U	33 U	NA	NA	NA	NA
AROCLOR-1242	33 U	NA	33 U	33 U	NA	NA	NA	NA
AROCLOR-1248	33 U	NA	340	33 U	NA	NA	NA	NA
AROCLOR-1254	33 U	NA	33 U	33 U	NA	NA	NA	NA
AROCLOR-1260	185	NA	33 U	33 U	NA	NA	NA	NA
AROCLOR-1262	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1268	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	185	NA	340	33 U	NA	NA	NA	NA
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)								
DECACHLOROBIPHENYL	NA	4.7 U	NA	NA	3.3 U	5.5 U	4.4 U	3.4 U
DICHLOROBIPHENYLS	NA	1 U	NA	NA	0.67 U	1.1 U	0.885 U	0.69 U
HEPTACHLOROBIPHENYLS	NA	62	NA	NA	260 J	470 J	365 J	100
HEXACHLOROBIPHENYL	NA	95	NA	NA	300 J	560 J	430 J	150
MONOCHLOROBIPHENYLS	NA	1 U	NA	NA	0.67 U	1.1 U	0.885 U	0.69 U
NONACHLOROBIPHENYLS	NA	4.7 U	NA	NA	3.3 U	5.5 U	4.4 U	3.4 U
PENTACHLOROBIPHENYLS	NA	15 U	NA	NA	40 J	77 J	58.5 J	26
TETRACHLOROBIPHENYLS	NA	1.9 U	NA	NA	1.3 U	3.3 J	1.98 J	1.3 U
TOTAL OCTACHLOROBIPHENYLS	NA	7 J	NA	NA	30 J	51 J	40.5 J	10
TOTAL PCB HOMOLOGS	NA	164 J	NA	NA	630 J	1160 J	895 J	286
TOTAL PCB HOMOLOGS-HALFND	NA	179 J	NA	NA	635 J	1170 J	902 J	291

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD447-0006-AVG	GI-SD518-0006	GI-SD449-0006	GI-SD450-0006	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG	GI-SD519-0006
LOCATION ID	GI-SD447	GI-SD447	GI-SD449	GI-SD450	GI-SD508	GI-SD508	GI-SD508	GI-SD519
SAMPLE DATE	09/22/09	05/03/10	09/22/09	09/22/09	05/03/10	05/03/10	05/03/10	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM
TOTAL TRICHLOROBIPHENYLS	NA	1 U	NA	NA	0.67 U	1.1 U	0.885 U	0.69 U
METALS (MG/KG)								
ALUMINUM	7060 E	5910	6950 E	7410 E	4650	4020	4340	4520
ANTIMONY	0.275 BN	0.57 UJ	0.079 UN	0.19 BN	0.65 UJ	0.65 UJ	0.65 UJ	0.665 UJ
ARSENIC	2.6 *	0.643 J	2.5 *	2.9 *	0.854 J	1.2 J	1.03 J	0.554 J
BARIUM	22 E	19.3 J	19.1 E	25.1 E	12.6 J	9.8 J	11.2 J	10.5
BERYLLIUM	0.2 E	0.286	0.27 E	0.2 E	0.221	0.209 J	0.215 J	0.205 J
CADMIUM	0.14 *	0.282 J	0.11 B*	0.0056 U*	0.328 J	0.531 J	0.43 J	0.177 J
CALCIUM	1660 *	1390 J	414 *	3010 *	25900	34000	30000	20000
CHROMIUM	10.4 E	8.9 J	7.9 E	9 E	9.4 J	10.3 J	9.85 J	9.3
COBALT	5.8 E	4.9 J	10.8 E	5.5 E	3.8 J	3.1 J	3.45 J	3
COPPER	26.6 E	17.9 J	11 E	11.9 E	13.5 J	16 J	14.8 J	10.9 J
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA
IRON	18400 *	13700	12900 *	15100 *	16800	18100	17400	10400
LEAD	17.6 NE	14.5 J	9 NE	10.1 NE	9.5 J	11.7 J	10.6 J	17.9
MAGNESIUM	3120 E	2530 J	2090 E	2550 E	2580 J	2370 J	2480 J	2570
MANGANESE	156 *E	142 J	84.9 *E	122 *E	133 J	136 J	134 J	107
MERCURY	0.03 B	0.023	0.019 B	0.0083 B	0.019 J	0.02 J	0.0195 J	0.02 J
NICKEL	11.5 E	9.6 J	13.1 E	10.1 E	8.4 J	9.4 J	8.9 J	6
POTASSIUM	1100 *	932	718 *	819 *	880	659	770	709
SELENIUM	0.29 B	0.57 U	0.63 B	0.52 B	0.65 U	0.65 U	0.65 U	0.665 U
SILVER	0.033 U	0.19 U	0.034 U	0.034 U	0.063 J	0.024 J	0.0435 J	0.222 UJ
SODIUM	2280 E	810	2070 E	2110 E	3270	3720	3500	3100
THALLIUM	0.099 U	1.1 UJ	0.1 U	0.1 U	0.43 UJ	0.44 UJ	0.435 UJ	0.443 U
VANADIUM	13.8 E	11.2 J	12.5 E	12.1 E	10.8 J	10.7 J	10.8 J	12.4
ZINC	42.8 E	38.3 J	78.9 E	26.7 E	36.8 J	57.5 J	47.2 J	30.9 J
MISCELLANEOUS PARAMETERS (MG/KG)								
TOTAL ORGANIC CARBON	NA	9700	NA	NA	2770	2980	2880	5240
MISCELLANEOUS PARAMETERS (UNITLESS)								
ERM-Q	0.219949	0.218307	0.267767	0.050996	0.424829	0.730393	0.577651	0.205588
MISCELLANEOUS PARAMETERS (%)								
HYDROMETER-0.002MM	NA	2	NA	NA	0	NA	0	1
PERCENT CLAY	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT COARSE SAND	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT FINE SAND	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT GRAVEL	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT MEDIUM SAND	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD447-0006-AVG	GI-SD518-0006	GI-SD449-0006	GI-SD450-0006	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG	GI-SD519-0006
LOCATION ID	GI-SD447	GI-SD447	GI-SD449	GI-SD450	GI-SD508	GI-SD508	GI-SD508	GI-SD519
SAMPLE DATE	09/22/09	05/03/10	09/22/09	09/22/09	05/03/10	05/03/10	05/03/10	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM
PERCENT SILT	NA	NA	NA	NA	NA	NA	NA	NA
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 1"	NA	100	NA	NA	100	100	100	100
SIEVE 1/2"	NA	86	NA	NA	100	92	96	100
SIEVE 1-1/2"	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 2"	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3"	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE 3/4"	NA	93	NA	NA	100	100	100	100
SIEVE 3/8"	NA	84	NA	NA	99	88	93.5	100
SIEVE NO. 004	NA	71	NA	NA	93	83	88	98
SIEVE NO. 010	NA	58	NA	NA	89	80	84.5	95
SIEVE NO. 020	NA	48	NA	NA	82	73	77.5	89
SIEVE NO. 040	NA	40	NA	NA	59	52	55.5	72
SIEVE NO. 060	NA	33	NA	NA	24	21	22.5	39
SIEVE NO. 080	NA	NA	NA	NA	NA	NA	NA	NA
SIEVE NO. 100	NA	27	NA	NA	10	8	9	14
SIEVE NO. 200	NA	20	NA	NA	5	3	4	4
AVS/SEM (UMOLES/G)								
ACID VOLATILE SULFIDE	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	NA	NA	NA	NA	NA	NA	NA	NA
AVS/SEM (RATIO)								
SEM/AVS	NA	NA	NA	NA	NA	NA	NA	NA
LOW LEVEL VOLATILES (UG/KG)								
1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-TETRACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-TRICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DIBROMOETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD447-0006-AVG	GI-SD518-0006	GI-SD449-0006	GI-SD450-0006	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG	GI-SD519-0006
LOCATION ID	GI-SD447	GI-SD447	GI-SD449	GI-SD450	GI-SD508	GI-SD508	GI-SD508	GI-SD519
SAMPLE DATE	09/22/09	05/03/10	09/22/09	09/22/09	05/03/10	05/03/10	05/03/10	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM
1,2-DICHLOROPROPANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEXANONE	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYL-2-PENTANONE	NA	NA	NA	NA	NA	NA	NA	NA
ACETONE	NA	NA	NA	NA	NA	NA	NA	NA
BENZENE	NA	NA	NA	NA	NA	NA	NA	NA
BROMODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
BROMOFORM	NA	NA	NA	NA	NA	NA	NA	NA
BROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
BTEX	NA	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
CHLORODIBROMOMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROFORM	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA
CIS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA
P-XYLENE	NA	NA	NA	NA	NA	NA	NA	NA
STYRENE	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA
TOLUENE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL 1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED ETHENES	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.5
ANALYTICAL RESULTS - SUBTIDAL SEDIMENT
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD447-0006-AVG	GI-SD518-0006	GI-SD449-0006	GI-SD450-0006	GI-SD508-0006	GI-SD508-0006-D	GI-SD508-0006-AVG	GI-SD519-0006
LOCATION ID	GI-SD447	GI-SD447	GI-SD449	GI-SD450	GI-SD508	GI-SD508	GI-SD508	GI-SD519
SAMPLE DATE	09/22/09	05/03/10	09/22/09	09/22/09	05/03/10	05/03/10	05/03/10	05/04/10
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	AVG	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL
SUBMATRIX	ST	ST	ST	ST	ST	ST	ST	ST
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM
TRANS-1,3-DICHLOROPROPENE	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROETHENE	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
VINYL CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (MG/KG)								
EXTRACTABLE PETROLEUM HYDROCARBONS	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.6
ANALYTICAL RESULTS - REFERENCE SEDIMENT (JAMESTOWN)
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-JPC01-0006	GI-JPC01-0006-D	GI-JPC01-0006-AVG	GI-SD524-0006	GI-JPC02-0006	GI-SD525-0006	GI-JCC02-0006	GI-JCC04-0006	GI-SD526-0006	GI-JCC01-0006	GI-JPC03-0006
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	MCA-JCC-02	MCA-JCC-04	MCA-JCC-04	MCA-JCC-M-01	OFF-SD-JPC03
SAMPLE DATE	09/23/09	09/23/09	09/23/09	05/03/10	09/23/09	05/03/10	09/23/09	09/23/09	05/03/10	09/23/09	09/23/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)											
2-METHYLNAPHTHALENE	3.3 U	3.3 U	3.3 U	9.1 U	3.3 U	11 UJ	3.3 U	3.3 U	8.9 U	3.3 U	3.3 U
ACENAPHTHENE	3.3 U	3.3 U	3.3 U	9.1 U	3.3 U	3.9 J	3.3 U	3.3 U	8.9 U	3.3 U	3.3 U
ACENAPHTHYLENE	5.1	6.2	5.65	4.6 J	5	13 J	10	3.3 U	3.6 J	15	3.6
ANTHRACENE	5.3	7.5	6.4	4.1 J	7.9	15 J	11	4.4	5 J	18	3.3 U
BENZO(A)ANTHRACENE	20	20	20	22	19	61 J	33	9.8	15	55	9.9
BENZO(A)PYRENE	18	18	18	24	19	73 J	30	9.8	18	45	8.8
BENZO(B)FLUORANTHENE	22	22	22	19	24	58 J	34	11	15	52	12
BENZO(G,H,I)PERYLENE	13	13	13	20	13	48 J	21	7.1	14	31	7.1
BENZO(K)FLUORANTHENE	13	14	13.5	18	13	52 J	23	6.8	13	33	7.9
CHRYSENE	18	18	18	27	23	71 J	28	12	17	44	11
DIBENZO(A,H)ANTHRACENE	3.8	4	3.9	4.1 J	4.5	15 J	5.7	3.3 U	3.2 J	9.1	3.3 U
FLUORANTHENE	41	40	40.5	40	48	130 J	63	19	36	120	19
FLUORENE	3.3 U	3.3 U	3.3 U	2.3 J	3.8	6.7 J	4.2	3.3 U	1.8 J	7.2	3.3 U
HIGH MOLECULAR WEIGHT PAHS	195.8	199	197.4	229 J	217.5	673 J	314.7	101.5	173 J	517.1	99
INDENO(1,2,3-CD)PYRENE	11	11	11	15	12	45 J	18	6	12	28	6.3
LOW MOLECULAR WEIGHT PAHS	29.4	33.7	31.55	31 J	45.7	96.6 J	60.7	11.8	10.4 J	103.3	10.3
NAPHTHALENE	3.3 U	3.3 U	3.3 U	9.1 U	3.3 U	11 UJ	4.5	3.3 U	8.9 U	6.1	3.3 U
PHENANTHRENE	19	20	19.5	20	29	58 J	31	7.4	17 U	57	6.7
PYRENE	36	39	37.5	40	42	120 J	59	20	30	100	17
TOTAL CARCINOGENIC PAHS-HALFND	106	107	106	129 J	114	375 J	172	57	93.2 J	266	57.6
TOTAL CARCINOGENIC PAHS-POS	106	107	106	129 J	114	375 J	172	55.4	93.2 J	266	55.9
TOTAL PAHS	225.2	232.7	228.95	260 J	263.2	770 J	375.4	113.3	184 J	620.4	109.3
PESTICIDES/PCBS (UG/KG)											
AROCLOR-1016	33 U	33 U	33 U	NA	33 U	NA	33 U	33 U	NA	33 U	33 U
AROCLOR-1221	33 U	33 U	33 U	NA	33 U	NA	33 U	33 U	NA	33 U	33 U
AROCLOR-1232	33 U	33 U	33 U	NA	33 U	NA	33 U	33 U	NA	33 U	33 U
AROCLOR-1242	33 U	33 U	33 U	NA	33 U	NA	33 U	33 U	NA	33 U	33 U
AROCLOR-1248	33 U	33 U	33 U	NA	33 U	NA	33 U	33 U	NA	33 U	33 U
AROCLOR-1254	33 U	33 U	33 U	NA	33 U	NA	33 U	33 U	NA	33 U	33 U
AROCLOR-1260	33 U	33 U	33 U	NA	33 U	NA	33 U	33 U	NA	33 U	33 U
TOTAL AROCLOR	33 U	33 U	33 U	NA	33 U	NA	33 U	33 U	NA	33 U	33 U
PCB HOMOLOGS (UG/KG)											
DECACHLOROBIPHENYL	NA	NA	NA	1.1 U	NA	1.4 U	NA	NA	1.1 U	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	0.23 U	NA	0.28 U	NA	NA	0.23 U	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	0.58 U	NA	0.7 U	NA	NA	0.57 U	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	0.46 U	NA	0.55 U	NA	NA	0.45 U	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	0.23 U	NA	0.28 U	NA	NA	0.23 U	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.6
ANALYTICAL RESULTS - REFERENCE SEDIMENT (JAMESTOWN)
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-JPC01-0006	GI-JPC01-0006-D	GI-JPC01-0006-AVG	GI-SD524-0006	GI-JPC02-0006	GI-SD525-0006	GI-JCC02-0006	GI-JCC04-0006	GI-SD526-0006	GI-JCC01-0006	GI-JPC03-0006
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	MCA-JCC-02	MCA-JCC-04	MCA-JCC-04	MCA-JCC-M-01	OFF-SD-JPC03
SAMPLE DATE	09/23/09	09/23/09	09/23/09	05/03/10	09/23/09	05/03/10	09/23/09	09/23/09	05/03/10	09/23/09	09/23/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM
NONACHLOROBIPHENYLS	NA	NA	NA	1.1 U	NA	1.4 U	NA	NA	1.1 U	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	0.46 U	NA	0.55 U	NA	NA	0.45 U	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	0.46 U	NA	0.55 U	NA	NA	0.45 U	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	0.58 U	NA	0.7 U	NA	NA	0.57 U	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	0.543 U	NA	0.669 U	NA	NA	0.538 U	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	0.543 U	NA	0.669 U	NA	NA	0.538 U	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	0.23 U	NA	0.28 U	NA	NA	0.23 U	NA	NA
METALS (MG/KG)											
ALUMINUM	3860 E	3690 E	3775 E	4550	4890 E	6850	4880 E	5290 E	7460	4340 E	3500 E
ANTIMONY	0.13 BN	0.086 UN	0.108 BNN	0.68 UJ	0.2 BN	0.83 UJ	0.19 BN	0.082 UN	0.68 UJ	0.09 UN	0.17 BN
ARSENIC	1.7	1.6	1.65	0.273 J	2.7	1.6 J	2.5	1.5	0.423 J	2.3	1.1
BARIUM	8.7 E	8.4 E	8.55 E	9.7 J	11 E	15.7 J	8 E	6 E	7.7 J	8.3 E	7.2 E
BERYLLIUM	0.16 E	0.14 E	0.15 E	0.216 J	0.24 E	0.405	0.24 E	0.16 E	0.395	0.2 E	0.11 BE
CADMIUM	0.059 B	0.059 B	0.059 B	0.132 J	0.18	0.367 J	0.055 B	0.063 B	0.27 J	0.048 B	0.06 B
CALCIUM	1250 *	3800 *	2525 *	2490 J	12500 *	32500 J	2420 *	1420 *	4490 J	1860 *	633 *
CHROMIUM	9.7 E	9.6 E	9.65 E	11.1 J	13.5 E	19.8 J	12.7 E	11.2 E	16.5 J	11.6 E	7.8 E
COBALT	2.5 E	2.4 E	2.45 E	3.2 J	3.1 E	4.4 J	3.3 E	4.1 E	6 J	2.9 E	2.2 E
COPPER	6.4 E	6.5 E	6.45 E	6.2 J	11.3 E	15 J	7.9 E	7.2 E	9.9 J	7.5 E	4.4 E
IRON	8890	6840	7865	9200	12000	13500	12900	12500	16700	10600	6250
LEAD	8.3 E	7.9 E	8.1 E	9.2 J	13.7 E	20.6 J	9.6 E	8.7 E	10.6 J	8.9 E	5.4 E
MAGNESIUM	2230 E	2110 E	2170 E	2560 J	2820 E	3810 J	2800 E	2760 E	3610 J	2600 E	1980 E
MANGANESE	98.5 E	116 E	107.25 E	112 J	98.2 E	139 J	101 E	102 E	128 J	92.4 E	66.6 E
MERCURY	0.021 B	0.023 B	0.022 B	0.028	0.058	0.083	0.027 B	0.022 B	0.039	0.031 B	0.013 B
NICKEL	5.8 E	5.6 E	5.7 E	7 J	7.4 E	10.2 J	7.2 E	8.2 E	11.7 J	6.4 E	5.3 E
POTASSIUM	724	719	721.5	802	1150	1590	1050	690	990	958	566
SELENIUM	0.58 B	0.5 B	0.54 B	0.341 J	0.73 B	0.83 U	0.73	0.55 B	0.68 U	0.65 B	0.72 B
SILVER	0.037 U	0.038 U	0.0375 U	0.097 J	0.042 U	0.19 J	0.038 U	0.036 U	0.144 J	0.039 U	0.038 U
SODIUM	3680 E	3600 E	3640 E	3500	5440 E	6310	4550 E	3080 E	2880	4660 E	3360 E
THALLIUM	0.11 U	0.11 U	0.11 U	0.45 UJ	0.13 U	0.56 UJ	0.11 U	0.11 U	1.4 UJ	0.12 U	0.12 U
VANADIUM	8.8 E	8.5 E	8.65 E	10.3 J	13.3 E	20 J	11.7 E	11.3 E	17.8 J	10.8 E	7.2 E
ZINC	30.4 E	28.2 E	29.3 E	30.7 J	46 E	61.8 J	36.6 E	30.5 E	42.9 J	30.7 E	21.1 E
MISCELLANEOUS PARAMETERS (UNITLESS)											
ERM-Q	0.042634	0.041563	0.042099	0.035852	0.058289	0.071559	0.052152	0.046411	0.051824	0.051494	0.043519
MISCELLANEOUS PARAMETERS (%)											
HYDROMETER-0.001MM	0 U	0 U	0 U	NA	0 U	NA	0 U	0 U	NA	0 U	0 U
HYDROMETER-0.002MM	NA	NA	NA	4	NA	10	NA	NA	0	NA	NA
HYDROMETER-0.005MM	0 U	1.93	0.965	NA	0 U	NA	7.38	0 U	NA	0 U	2.08
HYDROMETER-0.074MM	16	15.8	15.9	NA	31.7	NA	22.9	13.4	NA	23.4	5.73

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.6
ANALYTICAL RESULTS - REFERENCE SEDIMENT (JAMESTOWN)
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-JPC01-0006	GI-JPC01-0006-D	GI-JPC01-0006-AVG	GI-SD524-0006	GI-JPC02-0006	GI-SD525-0006	GI-JCC02-0006	GI-JCC04-0006	GI-SD526-0006	GI-JCC01-0006	GI-JPC03-0006
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	MCA-JCC-02	MCA-JCC-04	MCA-JCC-04	MCA-JCC-M-01	OFF-SD-JPC03
SAMPLE DATE	09/23/09	09/23/09	09/23/09	05/03/10	09/23/09	05/03/10	09/23/09	09/23/09	05/03/10	09/23/09	09/23/09
TOP DEPTH	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	NM	NM
SIEVE 1"	NA	NA	NA	100	NA	100	NA	NA	100	NA	NA
SIEVE 1/2"	NA	NA	NA	100	NA	100	NA	NA	100	NA	NA
SIEVE 3/4"	100	100	100	100	87.9	100	100	100	100	100	100
SIEVE 3/8"	100	100	100	100	80.9	100	100	100	98	100	99.8
SIEVE NO. 004	100	99	99.5	99	79.4	96	100	100	97	96.8	99.5
SIEVE NO. 010	100	98.3	99.15	98	78.3	93	99.5	100	89	94.1	99.3
SIEVE NO. 020	99.5	97.7	98.6	97	76.6	90	94	90.7	78	91.2	98.2
SIEVE NO. 040	95.5	94.3	94.9	93	75.3	88	81.4	72.8	61	87.3	96.8
SIEVE NO. 060	78.3	78.5	78.4	76	72.2	85	62.7	40.4	39	81.6	92.7
SIEVE NO. 100	NA	NA	NA	60	NA	78	NA	NA	26	NA	NA
SIEVE NO. 140	33.8	33.2	33.5	NA	42.3	NA	36.8	14.9	NA	45.8	11.6
SIEVE NO. 200	17	17.4	17.2	20	32.6	41	25.1	11.8	13	27.8	5.97
MISCELLANEOUS PARAMETERS (MG/KG)											
TOTAL ORGANIC CARBON	NA	NA	NA	5900	NA	11600	NA	NA	8490	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-ET301-090205	G32-ET301-090205-D	G32-ET301-090205-AVG	G32-ET302-082905	G32-ET302F-090205	G32-ET303-090105	G32-ET304-082905	G32-ET304F-090205	G32-ET305-082905	G32-ET305-082905-D	G32-ET305-082905-AVG	G32-ET305F-090105	G32-ET306-090105
LOCATION ID	G32-SD301	G32-SD301	G32-SD301	G32-SD302	G32-SD302F	G32-SD303	G32-SD304	G32-SD304F	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306
SAMPLE DATE	09/02/05	09/02/05	09/02/05	08/29/05	09/02/05	09/01/05	08/29/05	09/02/05	08/29/05	08/29/05	08/29/05	09/01/05	09/01/05
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	CL	CL	CL	CL	MU	CL	CL	MU	CL	CL	CL	MU	CL
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
2,2'-OXYBIS(1-CHLOROPROPANE)	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
2,4,5-TRICHLOROPHENOL	3900 U	4000 U	3950 U	4000 U	4000 U	4000 U	3900 U	4000 U	4000 U	3900 U	3950 U	4000 U	3900 U
2,4,6-TRICHLOROPHENOL	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
2,4-DICHLOROPHENOL	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
2,4-DIMETHYLPHENOL	1900 UJ	2000 UJ	1950 UJ	2000 UJ	2000 UJ	2000 UJ	1900 UJ	2000 UJ	2000 UJ	1900 UJ	1950 UJ	2000 UJ	1900 UJ
2,4-DINITROPHENOL	3900 R	4000 R	3950 R	4000 UJ	4000 R	4000 R	3900 UJ	4000 R	4000 UJ	3900 UJ	3950 UJ	4000 R	3900 R
2,4-DINITROTOLUENE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
2,6-DINITROTOLUENE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
2-CHLORONAPHTHALENE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
2-CHLOROPHENOL	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
2-METHYLNAPHTHALENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
2-METHYLPHENOL	1900 U	2000 U	1950 U	2000 U	220 J	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	300 J	1900 U
2-NITROANILINE	3900 U	4000 U	3950 U	4000 U	4000 U	4000 U	3900 U	4000 U	4000 U	3900 U	3950 U	4000 U	3900 U
2-NITROPHENOL	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
3,3'-DICHLOROBENZIDINE	1900 U	2000 U	1950 U	2000 UJ	2000 U	2000 U	1900 UJ	2000 U	2000 UJ	1900 UJ	1950 UJ	2000 U	1900 U
3-NITROANILINE	3900 U	4000 U	3950 U	4000 UJ	4000 U	4000 U	3900 U	4000 U	4000 U	3900 U	3950 U	4000 U	3900 U
4,6-DINITRO-2-METHYLPHENOL	3900 UJ	4000 UJ	3950 UJ	4000 U	4000 UJ	4000 UJ	3900 U	4000 UJ	4000 U	3900 U	3950 U	4000 UJ	3900 UJ
4-BROMOPHENYL PHENYL ETHER	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
4-CHLORO-3-METHYLPHENOL	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
4-CHLOROANILINE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
4-CHLOROPHENYL PHENYL ETHER	1900 U	2000 U	1950 U	2000 UJ	2000 U	2000 U	1900 UJ	2000 U	2000 UJ	1900 UJ	1950 UJ	2000 U	1900 U
4-METHYLPHENOL	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
4-NITROANILINE	3900 U	4000 U	3950 U	4000 U	4000 U	4000 U	3900 U	4000 U	4000 U	3900 U	3950 U	4000 U	3900 U
4-NITROPHENOL	3900 U	4000 U	3950 U	4000 UJ	4000 U	4000 U	3900 UJ	4000 U	4000 UJ	3900 U	3950 UJ	4000 UJ	3900 UJ
ACENAPHTHENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
ACENAPHTHYLENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
ACETOPHENONE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
ANTHRACENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
ATRAZINE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
BENZALDEHYDE	8500 JEB	2700 JEB	5600 JEB	8700 JEB	2000 UJ	37000 JEB	5400 JEB	2000 UJ	1700 JEB	3400 JEB	2550 JEB	1400 JEB	17000 JEB
BENZO(A)ANTHRACENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
BENZO(A)PYRENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
BENZO(B)FLUORANTHENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
BENZO(G,H,I)PERYLENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
BENZO(K)FLUORANTHENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
BIS(2-CHLOROETHOXY)METHANE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
BIS(2-CHLOROETHYL)ETHER	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
BIS(2-ETHYLHEXYL)PHTHALATE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	210 J	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
BUTYL BENZYL PHTHALATE	1900 U	2000 U	1950 U	2000 UJ	2000 U	2000 U	1900 UJ	2000 U	2000 UJ	1900 UJ	1950 UJ	2000 U	1900 U
CAPROLACTAM	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-ET301-090205	G32-ET301-090205-D	G32-ET301-090205-AVG	G32-ET302-082905	G32-ET302F-090205	G32-ET303-090105	G32-ET304-082905	G32-ET304F-090205	G32-ET305-082905	G32-ET305-082905-D	G32-ET305-082905-AVG	G32-ET305F-090105	G32-ET306-090105
LOCATION ID	G32-SD301	G32-SD301	G32-SD301	G32-SD302	G32-SD302F	G32-SD303	G32-SD304	G32-SD304F	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306
SAMPLE DATE	09/02/05	09/02/05	09/02/05	08/29/05	09/02/05	09/01/05	08/29/05	09/02/05	08/29/05	08/29/05	08/29/05	09/01/05	09/01/05
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	CL	CL	CL	CL	MU	CL	CL	MU	CL	CL	CL	MU	CL
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
CARBAZOLE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
CHRYSENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
DIBENZO(A,H)ANTHRACENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
DIBENZOFURAN	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
DIETHYL PHTHALATE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
DIMETHYL PHTHALATE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
DI-N-BUTYL PHTHALATE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
DI-N-OCTYL PHTHALATE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
FLUORANTHENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	37	20 U	19 U	19.5 U	20 U	19 U
FLUORENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
HEXACHLOROBENZENE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
HEXACHLOROBUTADIENE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
HEXACHLOROCYCLOPENTADIENE	1900 U	2000 U	1950 U	2000 R	2000 U	2000 UJ	1900 UJ	2000 U	2000 UJ	1900 UJ	1950 UJ	2000 UJ	1900 UJ
HEXACHLOROETHANE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
HIGH MOLECULAR WEIGHT PAHS	19 U	20 U	19.5 U	20 U	20 U	20 UJ	19 U	83	20 U	19 U	19.5 U	20 UJ	19 UJ
INDENO(1,2,3-CD)PYRENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
ISOPHORONE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	230 J	2000 U	1900 U	1950 U	2000 U	1900 U
LOW MOLECULAR WEIGHT PAHS	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
NAPHTHALENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
NITROBENZENE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
N-NITROSO-DI-N-PROPYLAMINE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
N-NITROSODIPHENYLAMINE	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
PENTACHLOROPHENOL	3900 U	4000 U	3950 U	4000 U	4000 U	4000 U	3900 U	4000 U	4000 U	3900 U	3950 U	4000 U	3900 U
PHENANTHRENE	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
PHENOL	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
PYRENE	19 U	20 U	19.5 U	20 U	20 U	20 UJ	19 U	46	20 U	19 U	19.5 U	20 UJ	19 UJ
TOTAL CARCINOGENIC PAHS-HALFND	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
TOTAL CARCINOGENIC PAHS-POS	19 U	20 U	19.5 U	20 U	20 U	20 U	19 U	20 U	20 U	19 U	19.5 U	20 U	19 U
TOTAL CHLORINATED VOCS	1900 U	2000 U	1950 U	2000 U	2000 U	2000 U	1900 U	2000 U	2000 U	1900 U	1950 U	2000 U	1900 U
TOTAL PAHS	19 U	20 U	19.5 U	20 U	20 U	20 UJ	19 U	83	20 U	19 U	19.5 U	20 UJ	19 UJ
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	9.8 U	9.7 U	9.75 U	9.9 U	9.9 U	9.5 U	9.4 U	9.8 U	9.7 U	9.5 U	9.6 U	9.6 U	9.8 U
4,4'-DDE	9.8 U	9.7 U	9.75 U	9.9 U	9.9 U	9.5 U	9.4 U	9.8 U	9.7 U	9.5 U	9.6 U	9.6 U	9.8 U
4,4'-DDT	9.8 U	9.7 U	9.75 U	9.9 U	9.9 U	9.5 U	9.4 U	9.8 U	9.7 U	9.5 U	9.6 U	9.6 U	9.8 U
ALDRIN	5 U	5 U	5 U	5.1 U	5.1 U	4.9 U	4.8 U	5 U	5 U	4.9 U	4.95 U	5 U	5 U
ALPHA-BHC	5 U	5 U	5 U	5.1 U	5.1 U	4.9 U	4.8 U	5 U	5 U	4.9 U	4.95 U	5 U	5 U
ALPHA-CHLORDANE	5 U	5 U	5 U	5.1 U	5.1 U	4.9 U	4.8 UJ	5 U	5 U	4.9 U	4.95 U	5 U	5 U
AROCLOR-1016	98 U	97 U	97.5 U	99 U	99 U	95 U	94 U	98 U	97 U	95 U	96 U	96 U	98 U
AROCLOR-1221	98 U	97 U	97.5 U	99 U	99 U	95 U	94 U	98 U	97 U	95 U	96 U	96 U	98 U
AROCLOR-1232	98 U	97 U	97.5 U	99 U	99 U	95 U	94 U	98 U	97 U	95 U	96 U	96 U	98 U
AROCLOR-1242	98 U	97 U	97.5 U	99 U	99 U	95 U	94 U	98 U	97 U	95 U	96 U	96 U	98 U
AROCLOR-1248	98 U	97 U	97.5 U	99 U	99 U	95 U	94 U	98 U	97 U	95 U	96 U	96 U	98 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-ET301-090205	G32-ET301-090205-D	G32-ET301-090205-AVG	G32-ET302-082905	G32-ET302F-090205	G32-ET303-090105	G32-ET304-082905	G32-ET304F-090205	G32-ET305-082905	G32-ET305-082905-D	G32-ET305-082905-AVG	G32-ET305F-090105	G32-ET306-090105
LOCATION ID	G32-SD301	G32-SD301	G32-SD301	G32-SD302	G32-SD302F	G32-SD303	G32-SD304	G32-SD304F	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306
SAMPLE DATE	09/02/05	09/02/05	09/02/05	08/29/05	09/02/05	09/01/05	08/29/05	09/02/05	08/29/05	08/29/05	08/29/05	09/01/05	09/01/05
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	CL	CL	CL	CL	MU	CL	CL	MU	CL	CL	CL	MU	CL
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
AROCLOR-1254	98 U	97 U	97.5 U	99 U	99 U	95 U	94 U	98 U	97 U	95 U	96 U	96 U	98 U
AROCLOR-1260	98 U	97 U	97.5 U	99 U	99 U	95 U	170	160	97 U	95 U	96 U	98	98 U
BETA-BHC	5 U	5 U	5 U	5.1 U	8 R	4.9 U	6.6	5 U	5 U	4.9 U	4.95 U	5 U	5 U
DELTA-BHC	5 U	5 U	5 U	5.1 U	5.1 U	4.9 U	4.8 U	5 U	5 U	4.9 U	4.95 U	5 U	5 U
DIELDRIN	9.8 U	9.7 U	9.75 U	9.9 U	9.9 U	9.5 U	9.4 U	9.8 U	9.7 U	9.5 U	9.6 U	9.6 U	9.8 U
ENDOSULFAN I	5 U	5 U	5 U	5.1 U	5.1 U	4.9 U	4.8 U	5 U	5 U	4.9 U	4.95 U	5 U	5 U
ENDOSULFAN II	9.8 U	9.7 U	9.75 U	9.9 U	9.9 U	9.5 U	9.4 U	9.8 U	9.7 U	9.5 U	9.6 U	9.6 U	9.8 U
ENDOSULFAN SULFATE	9.8 U	9.7 U	9.75 U	9.9 U	9.9 U	9.5 U	9.4 U	9.8 U	9.7 U	9.5 U	9.6 U	9.6 U	9.8 U
ENDRIN	9.8 U	9.7 U	9.75 U	9.9 U	9.9 U	9.5 U	9.4 U	9.8 U	9.7 U	9.5 U	9.6 U	13 J	9.8 U
ENDRIN ALDEHYDE	9.8 U	9.7 U	9.75 U	9.9 U	9.9 U	9.5 U	9.4 U	9.8 U	9.7 U	9.5 U	9.6 U	9.6 U	9.8 U
ENDRIN KETONE	9.8 U	9.7 U	9.75 U	9.9 U	9.9 U	9.5 U	9.4 U	9.8 U	9.7 U	9.5 U	9.6 U	9.6 U	9.8 U
GAMMA-BHC (LINDANE)	5 U	5 U	5 U	5.1 U	5.1 U	4.9 U	2.5 J	5 U	5 U	4.9 U	4.95 U	5 U	5 U
GAMMA-CHLORDANE	5 U	5 U	5 U	5.1 U	5.1 U	4.9 U	4.8 UJ	5 U	5 U	4.9 U	4.95 U	5 U	5 U
HEPTACHLOR	5 U	5 U	5 U	5.1 U	5.1 U	4.9 U	4.8 U	5 U	5 U	4.9 U	4.95 U	5 U	5 U
HEPTACHLOR EPOXIDE	5 U	5 U	5 U	5.1 U	5.1 U	4.9 U	4.8 U	5 U	5 U	4.9 U	4.95 U	5 U	5 U
METHOXYCHLOR	50 UJ	50 UJ	50 UJ	51 U	51 UJ	49 UJ	48 U	50 UJ	50 U	49 U	49.5 U	50 UJ	50 UJ
TOTAL AROCLOR	98 U	97 U	97.5 U	99 U	99 U	95 U	170	160	97 U	95 U	96 U	98	98 U
TOTAL CHLORDANE	5 U	5 U	5 U	5.1 U	5.1 U	4.9 U	4.8 UJ	5 U	5 U	4.9 U	4.95 U	5 U	5 U
TOTAL DDD/DDE/DDT	9.8 U	9.7 U	9.75 U	9.9 U	9.9 U	9.5 U	9.4 U	9.8 U	9.7 U	9.5 U	9.6 U	9.6 U	9.8 U
TOXAPHENE	500 U	500 U	500 U	510 U	510 U	490 U	480 U	500 U	500 U	490 U	495 U	500 U	500 U
PCB HOMOLOGS (UG/KG)													
DECACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)													
ALUMINUM	0.5 UJ	0.3 U	0.4 UJ	2.4 U	8.4 U	0.91 U	1.5 U	8.2 U	1.4 U	0.53 UJ	0.965 UJ	1.3 U	1.2 U
ANTIMONY	0.34 UJ	0.44 UJ	0.39 UJ	0.074 UJ	0.39 UJ	0.58 UJ	0.23 U	0.32 UJ	0.12 U	0.047 U	0.0835 U	0.53 UJ	0.63 UJ
ARSENIC	1.5 J	1.3 J	1.4 J	4.2 J	1.9 J	3.3 J	2 J	1.7 J	2.9 J	1.3 J	2.1 J	1.3 J	1.7 J
BARIUM	0.72 U	0.65 U	0.685 U	0.8 UJ	0.51 U	2.1 U	0.31 UJ	0.51 U	0.9 UJ	0.5 UJ	0.7 UJ	0.93 U	0.67 U
BERYLLIUM	0.0053 U	0.0054 U	0.00535 U	0.0081	0.0056 J	0.0077 J	0.0055 J	0.005 U	0.0055 U	0.0051 U	0.0053 U	0.0057 U	0.0059 J
CADMIUM	0.056 J	0.22 J	0.138 J	0.12 J	0.2 J	0.15 J	0.14 J	0.062 J	0.23 J	0.081 UJ	0.135 J	0.097 J	0.026 UJ
CALCIUM	807 J	242 J	524 J	3450 J	291 J	760 J	357 J	1810 J	510 J	3870 J	2190 J	328 J	274 J
CHROMIUM	0.43 UJ	0.12 UJ	0.275 UJ	0.28 J	0.17 UJ	0.18 UJ	0.29 J	0.16 UJ	0.31 J	0.64 J	0.475 J	0.14 J	0.24 UJ

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-ET301-090205	G32-ET301-090205-D	G32-ET301-090205-AVG	G32-ET302-082905	G32-ET302F-090205	G32-ET303-090105	G32-ET304-082905	G32-ET304F-090205	G32-ET305-082905	G32-ET305-082905-D	G32-ET305-082905-AVG	G32-ET305F-090105	G32-ET306-090105
LOCATION ID	G32-SD301	G32-SD301	G32-SD301	G32-SD302	G32-SD302F	G32-SD303	G32-SD304	G32-SD304F	G32-SD305	G32-SD305	G32-SD305	G32-SD305F	G32-SD306
SAMPLE DATE	09/02/05	09/02/05	09/02/05	08/29/05	09/02/05	09/01/05	08/29/05	09/02/05	08/29/05	08/29/05	08/29/05	09/01/05	09/01/05
SACODE	ORIG	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	CL	CL	CL	CL	MU	CL	CL	MU	CL	CL	CL	MU	CL
QC TYPE	NM	FD	NM	NM	NM	NM	NM	NM	NM	FD	NM	NM	NM
COBALT	0.12 U	0.077 U	0.0985 U	0.21	0.055 U	0.16 U	0.17	0.071 U	0.19	0.092	0.141	0.056 U	0.16 U
COPPER	0.79 UJ	1.9 UJ	1.34 UJ	2.1 J	2.4 UJ	2.5 UJ	1.2 J	1.2 UJ	3 J	0.86 J	1.93 J	0.85 UJ	0.85 UJ
CYANIDE	0.14 U	0.1 U	0.12 U	0.15 UJ	0.11 U	0.15 UJ	0.18 UJ	0.16 UJ	0.1 UJ	0.43 UJ	0.265 UJ	0.14 UJ	0.12 U
IRON	26.8 U	24.9 U	25.8 U	19.9 J	43.3	29 U	12.8 UJ	73.7	40.1 J	13 UJ	23.3 J	33.5 U	26.1 U
LEAD	0.19 UJ	0.18 UJ	0.185 UJ	0.035 UJ	0.28 UJ	0.29 UJ	0.077 UJ	1.1 J	0.42 J	0.034 UJ	0.218 J	0.21 UJ	0.034 UJ
MAGNESIUM	804	507	656	659 J	620	668	756 J	650	741 J	678 J	710 J	678	778
MANGANESE	3.3 UJ	29.1 J	15.4 J	4.8 J	2.9 UJ	38.6 J	0.82 UJ	4.1 UJ	14.8 J	3.7 J	9.25 J	3.3 UJ	1.9 UJ
MERCURY	0.016 UJ	0.017 UJ	0.0165 UJ	0.011 J	0.013 UJ	0.012 UJ	0.0088 J	0.016 UJ	0.0073 J	0.0058 U	0.0051 J	0.016 UJ	0.0091 UJ
NICKEL	0.67 UJ	0.4 UJ	0.535 UJ	0.59	0.18 UJ	0.49 UJ	0.42	0.33 UJ	0.47	0.34	0.405	0.28 UJ	0.47 UJ
POTASSIUM	1940 J	2540 J	2240 J	2540	2830 J	2410 J	2220	2620 J	2300	2050	2180	2140 J	2900 J
SELENIUM	1.1 U	1.2 U	1.15 U	0.057 UJ	1.1 U	1.1 U	0.18 UJ	1.1 U	0.37 UJ	0.056 UJ	0.213 UJ	1.1 U	1.1 U
SILVER	0.016 UJ	0.11 UJ	0.063 UJ	0.016 UJ	0.016 UJ	1.4 UJ	0.016 UJ	0.015 UJ	0.017 UJ	0.016 UJ	0.0165 UJ	0.018 UJ	0.016 UJ
SODIUM	4830 J	2820 J	3820 J	3770 J	3650 J	3910 J	4700 J	3800 J	4240 J	3780 J	4010 J	4400 J	3080 J
THALLIUM	0.068 UJ	0.07 UJ	0.069 UJ	0.067 U	0.072 J	0.066 UJ	0.067 U	0.064 UJ	0.072 U	0.066 U	0.069 U	0.074 UJ	0.066 UJ
VANADIUM	0.1 UJ	0.076 UJ	0.088 UJ	0.92 J	0.13 UJ	1.2 J	0.11 J	0.38 J	0.35 J	0.19 J	0.27 J	0.16 J	0.13 J
ZINC	9.4	10.1	9.75	16.1 J	24.6	17.4	10.6 J	12.2	19.5 J	10.5 J	15 J	10.7	16.9
MISCELLANEOUS PARAMETERS (%)													
LIPIDS	0.1	0.2	0.15	0.8	0.5	1.1	0.5	0.4	0.6	0.8	0.7	1.5	0.9

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-ET306F-090105	G32-ET307-090105	G32-ET308-082905	G32-ET308F-090205	GI-ET520-0610	G32-ET309-090105	G32-ET309F-090105	G32-ET310-090105	G32-ET310F-090105	G32-ET311-090205	G32-ET312-082905	G32-ET313-082905	G32-ET313F-090205
LOCATION ID	G32-SD306F	G32-SD307	G32-SD308	G32-SD308F	G32-SD308F	G32-SD309	G32-SD309F	G32-SD310	G32-SD310F	G32-SD311	G32-SD312	G32-SD313	G32-SD313F
SAMPLE DATE	09/01/05	09/01/05	08/29/05	09/02/05	06/02/10	09/01/05	09/01/05	09/01/05	09/01/05	09/02/05	08/29/05	08/29/05	09/02/05
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	CL	CL	CL	MU	CL	CL	MU	CL	MU	CL	MU	CL	MU
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
2,2'-OXYBIS(1-CHLOROPROPANE)	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
2,4,5-TRICHLOROPHENOL	4000 U	4000 U	3900 U	3900 U	NA	4000 U	4000 U	3900 U	3900 U	4000 U	3800 U	3900 U	3800 U
2,4,6-TRICHLOROPHENOL	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
2,4-DICHLOROPHENOL	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
2,4-DIMETHYLPHENOL	2000 UJ	2000 UJ	1900 UJ	1900 UJ	NA	2000 UJ	2000 UJ	1900 UJ	1900 UJ	2000 J	1900 UJ	1900 UJ	1900 UJ
2,4-DINITROPHENOL	4000 R	4000 R	3900 UJ	3900 R	NA	4000 R	4000 R	3900 R	3900 R	4000 R	3800 UJ	3900 UJ	3800 R
2,4-DINITROTOLUENE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
2,6-DINITROTOLUENE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
2-CHLORONAPHTHALENE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
2-CHLOROPHENOL	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
2-METHYLNAPHTHALENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	19 U	19 U	19 U
2-METHYLPHENOL	2000 U	2000 U	1900 U	600 J	NA	2000 U	230 J	1900 U	330 J	2000 U	1900 U	1900 U	400 J
2-NITROANILINE	4000 U	4000 U	3900 U	3900 U	NA	4000 U	4000 U	3900 U	3900 U	4000 U	3800 U	3900 U	3800 U
2-NITROPHENOL	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
3,3'-DICHLOROBENZIDINE	2000 U	2000 UJ	1900 UJ	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 UJ	1900 UJ	1900 U
3-NITROANILINE	4000 U	4000 R	3900 U	3900 U	NA	4000 U	4000 U	3900 U	3900 U	4000 U	3800 U	3900 U	3800 U
4,6-DINITRO-2-METHYLPHENOL	4000 UJ	4000 UJ	3900 U	3900 UJ	NA	4000 UJ	4000 UJ	3900 UJ	3900 UJ	4000 UJ	3800 U	3900 U	3800 UJ
4-BROMOPHENYL PHENYL ETHER	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
4-CHLORO-3-METHYLPHENOL	2000 U	2000 U	1900 U	1900 U	NA	560 J	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
4-CHLOROANILINE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
4-CHLOROPHENYL PHENYL ETHER	2000 U	2000 U	1900 UJ	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 UJ	1900 UJ	1900 U
4-METHYLPHENOL	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
4-NITROANILINE	4000 U	4000 U	3900 U	3900 U	NA	4000 U	4000 U	3900 U	3900 U	4000 U	3800 U	3900 U	3800 U
4-NITROPHENOL	4000 UJ	4000 UJ	3900 UJ	3900 U	NA	4000 UJ	4000 UJ	3900 UJ	3900 UJ	4000 UJ	3800 UJ	3900 UJ	3800 U
ACENAPHTHENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	19 U	19 U	19 U
ACENAPHTHYLENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	19 U	19 U	19 U
ACETOPHENONE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
ANTHRACENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	27	19 U	19 U
ATRAZINE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
BENZALDEHYDE	18000 JEB	20000 JEB	4600 JEB	2400 JEB	NA	27000 JEB	1100 JEB	25000 JEB	2300 JEB	1900 JEB	820 JEB	4400 JEB	960 JEB
BENZO(A)ANTHRACENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	66	19 U	19 U
BENZO(A)PYRENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	33	19 U	19 U
BENZO(B)FLUORANTHENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	43	19 U	19 U
BENZO(G,H,I)PERYLENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	19 U	19 U	19 U
BENZO(K)FLUORANTHENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	19 U	19 U	19 U
BIS(2-CHLOROETHOXY)METHANE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
BIS(2-CHLOROETHYL)ETHER	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
BIS(2-ETHYLHEXYL)PHTHALATE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
BUTYL BENZYL PHTHALATE	2000 U	2000 U	1900 UJ	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 UJ	1900 UJ	1900 U
CAPROLACTAM	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-ET306F-090105	G32-ET307-090105	G32-ET308-082905	G32-ET308F-090205	GI-ET520-0610	G32-ET309-090105	G32-ET309F-090105	G32-ET310-090105	G32-ET310F-090105	G32-ET311-090205	G32-ET312-082905	G32-ET313-082905	G32-ET313F-090205
LOCATION ID	G32-SD306F	G32-SD307	G32-SD308	G32-SD308F	G32-SD308F	G32-SD309	G32-SD309F	G32-SD310	G32-SD310F	G32-SD311	G32-SD312	G32-SD313	G32-SD313F
SAMPLE DATE	09/01/05	09/01/05	08/29/05	09/02/05	06/02/10	09/01/05	09/01/05	09/01/05	09/01/05	09/02/05	08/29/05	08/29/05	09/02/05
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	CL	CL	CL	MU	CL	CL	MU	CL	MU	CL	MU	CL	MU
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
CARBAZOLE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
CHRYSENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	66	19 U	19 U
DIBENZO(A,H)ANTHRACENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	19 U	19 U	19 U
DIBENZOFURAN	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
DIETHYL PHTHALATE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
DIMETHYL PHTHALATE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
DI-N-BUTYL PHTHALATE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
DI-N-OCTYL PHTHALATE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
FLUORANTHENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	210	19 U	19 U
FLUORENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	19 U	19 U	19 U
HEXACHLOROBENZENE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
HEXACHLOROBUTADIENE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
HEXACHLOROCYCLOPENTADIENE	2000 UJ	2000 R	1900 UJ	1900 U	NA	2000 UJ	2000 UJ	1900 UJ	1900 UJ	2000 UJ	1900 UJ	1900 UJ	1900 U
HEXACHLOROETHANE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
HIGH MOLECULAR WEIGHT PAHS	20 UJ	20 UJ	19 U	19 U	NA	20 UJ	20 UJ	19 UJ	19 UJ	6.6 UJ	538	19 U	19 U
INDENO(1,2,3-CD)PYRENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	19 U	19 U	19 U
ISOPHORONE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
LOW MOLECULAR WEIGHT PAHS	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	73	19 U	19 U
NAPHTHALENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	19 U	19 U	19 U
NITROBENZENE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
N-NITROSO-DI-N-PROPYLAMINE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
N-NITROSODIPHENYLAMINE	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
PENTACHLOROPHENOL	4000 U	4000 U	3900 U	3900 U	NA	4000 U	4000 U	3900 U	3900 U	4000 U	3800 U	3900 U	3800 U
PHENANTHRENE	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	46	19 U	19 U
PHENOL	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
PYRENE	20 UJ	20 UJ	19 U	19 U	NA	20 UJ	20 UJ	19 UJ	19 UJ	6.6 UJ	120	19 U	19 U
TOTAL CARCINOGENIC PAHS-HALFND	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	236	19 U	19 U
TOTAL CARCINOGENIC PAHS-POS	20 U	20 U	19 U	19 U	NA	20 U	20 U	19 U	19 U	6.6 U	208	19 U	19 U
TOTAL CHLORINATED VOCS	2000 U	2000 U	1900 U	1900 U	NA	2000 U	2000 U	1900 U	1900 U	2000 U	1900 U	1900 U	1900 U
TOTAL PAHS	20 UJ	20 UJ	19 U	19 U	NA	20 UJ	20 UJ	19 UJ	19 UJ	6.6 UJ	611	19 U	19 U
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	9.5 U	9.7 U	9.8 U	9.9 U	NA	9.9 U	9.5 U	9.7 U	9.6 U	9.8 U	9.7 U	9.8 U	9.9 U
4,4'-DDE	9.5 U	9.7 U	9.8 U	9.9 U	NA	9.9 U	9.5 U	9.7 U	9.6 U	9.8 U	9.7 U	9.8 U	9.9 U
4,4'-DDT	9.5 U	9.7 U	9.8 U	9.9 U	NA	9.9 U	9.5 U	9.7 U	9.6 U	9.8 U	9.7 U	9.8 U	9.9 U
ALDRIN	4.9 U	5 U	5 U	5.1 U	NA	5.1 U	4.9 U	5 U	5 U	5 U	5 U	5 U	5.1 U
ALPHA-BHC	4.9 U	5 U	5 U	5.1 U	NA	5.1 U	4.9 U	5 U	5 U	5 U	5 U	5 U	5.1 U
ALPHA-CHLORDANE	4.9 U	5 UJ	5 U	5.1 U	NA	5.1 U	4.9 U	5 U	5 U	5 U	5 U	5 U	5.1 U
AROCLOR-1016	97 U	97 U	98 U	99 U	NA	99 U	95 U	97 U	96 U	98 U	97 U	98 U	99 U
AROCLOR-1221	97 U	97 U	98 U	99 U	NA	99 U	95 U	97 U	96 U	98 U	97 U	98 U	99 U
AROCLOR-1232	97 U	97 U	98 U	99 U	NA	99 U	95 U	97 U	96 U	98 U	97 U	98 U	99 U
AROCLOR-1242	97 U	97 U	98 U	99 U	NA	99 U	95 U	97 U	96 U	98 U	97 U	98 U	99 U
AROCLOR-1248	97 U	97 U	98 U	99 U	NA	99 U	95 U	97 U	96 U	98 U	97 U	98 U	99 U

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-ET306F-090105	G32-ET307-090105	G32-ET308-082905	G32-ET308F-090205	GI-ET520-0610	G32-ET309-090105	G32-ET309F-090105	G32-ET310-090105	G32-ET310F-090105	G32-ET311-090205	G32-ET312-082905	G32-ET313-082905	G32-ET313F-090205
LOCATION ID	G32-SD306F	G32-SD307	G32-SD308	G32-SD308F	G32-SD308F	G32-SD309	G32-SD309F	G32-SD310	G32-SD310F	G32-SD311	G32-SD312	G32-SD313	G32-SD313F
SAMPLE DATE	09/01/05	09/01/05	08/29/05	09/02/05	06/02/10	09/01/05	09/01/05	09/01/05	09/01/05	09/02/05	08/29/05	08/29/05	09/02/05
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	CL	CL	CL	MU	CL	CL	MU	CL	MU	CL	MU	CL	MU
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
AROCLOR-1254	97 U	97 U	98 U	99 U	NA	99 U	95 U	97 U	96 U	98 U	97 U	98 U	99 U
AROCLOR-1260	97 U	97 U	98 U	99 U	NA	99 U	95 U	97 U	96 U	98 U	440	98 U	99 U
BETA-BHC	4.9 U	5 U	5 U	5.1 U	NA	5.1 U	4.9 U	5 U	5 U	5 U	5 U	5 U	5.1 U
DELTA-BHC	4.9 U	5 U	5 U	5.1 U	NA	5.1 U	4.9 U	5 U	5 U	5 U	5 U	5 U	5.1 U
DIELDRIN	9.5 U	9.7 U	9.8 U	9.9 U	NA	9.9 U	9.5 U	9.7 U	9.6 U	9.8 U	9.7 U	9.8 U	9.9 U
ENDOSULFAN I	4.9 U	5 U	5 U	5.1 U	NA	5.1 U	4.9 U	5 U	5 U	5 U	5 U	5 U	5.1 U
ENDOSULFAN II	9.5 U	9.7 U	9.8 U	9.9 U	NA	9.9 U	9.5 U	9.7 U	9.6 U	9.8 U	9.7 U	9.8 U	9.9 U
ENDOSULFAN SULFATE	9.5 U	9.7 U	9.8 U	9.9 U	NA	9.9 U	9.5 U	9.7 U	9.6 U	9.8 U	9.7 U	9.8 U	9.9 U
ENDRIN	9.5 U	9.7 U	9.8 U	9.9 U	NA	9.9 U	9.5 U	9.7 U	9.6 U	9.8 U	9.7 U	9.8 U	9.9 U
ENDRIN ALDEHYDE	9.5 U	9.7 U	9.8 U	9.9 U	NA	9.9 U	9.5 U	13 J	9.6 U	9.8 U	9.7 U	9.8 U	9.9 U
ENDRIN KETONE	9.5 U	9.7 U	9.8 U	9.9 U	NA	9.9 U	9.5 U	9.7 U	9.6 U	9.8 U	9.7 U	9.8 U	9.9 U
GAMMA-BHC (LINDANE)	4.9 U	5 U	5 U	5.1 U	NA	5.1 U	4.9 U	5 U	5 U	5 U	5 U	5 U	5.1 U
GAMMA-CHLORDANE	4.9 U	5 UJ	5 U	5.1 U	NA	5.1 U	4.9 U	5 U	5 U	5 U	8 J	5 U	5.1 U
HEPTACHLOR	4.9 U	5 U	5 U	5.1 U	NA	5.1 U	4.9 U	5 U	5 U	5 U	5 U	5 U	5.1 U
HEPTACHLOR EPOXIDE	4.9 U	5 U	5 U	5.1 U	NA	5.1 U	4.9 U	5 U	3.3 R	5 U	5 U	5 U	5.1 U
METHOXYCHLOR	49 UJ	50 UJ	50 U	51 UJ	NA	51 UJ	49 UJ	50 UJ	50 UJ	50 UJ	50 U	50 U	51 UJ
TOTAL AROCLOR	97 U	97 U	98 U	99 U	NA	99 U	95 U	97 U	96 U	98 U	440	98 U	99 U
TOTAL CHLORDANE	4.9 U	5 UJ	5 U	5.1 U	NA	5.1 U	4.9 U	5 U	5 U	5 U	8 J	5 U	5.1 U
TOTAL DDD/DDE/DDT	9.5 U	9.7 U	9.8 U	9.9 U	NA	9.9 U	9.5 U	9.7 U	9.6 U	9.8 U	9.7 U	9.8 U	9.9 U
TOXAPHENE	490 U	500 U	500 U	510 U	NA	510 U	490 U	500 U	500 U	500 U	500 U	500 U	510 U
PCB HOMOLOGS (UG/KG)													
DECACHLOROBIPHENYL	NA	NA	NA	NA	2.5 U	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROBIPHENYLS	NA	NA	NA	NA	0.51 U	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOROBIPHENYLS	NA	NA	NA	NA	1.3 U	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBIPHENYL	NA	NA	NA	NA	6.9	NA	NA	NA	NA	NA	NA	NA	NA
MONOCHLOROBIPHENYLS	NA	NA	NA	NA	0.51 U	NA	NA	NA	NA	NA	NA	NA	NA
NONACHLOROBIPHENYLS	NA	NA	NA	NA	2.5 U	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROBIPHENYLS	NA	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA	NA	NA
TETRACHLOROBIPHENYLS	NA	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL OCTACHLOROBIPHENYLS	NA	NA	NA	NA	1.3 U	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS	NA	NA	NA	NA	6.9	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PCB HOMOLOGS-HALFND	NA	NA	NA	NA	12.5	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL TRICHLOROBIPHENYLS	NA	NA	NA	NA	0.51 U	NA	NA	NA	NA	NA	NA	NA	NA
METALS (MG/KG)													
ALUMINUM	1.8 U	4.4 U	1.3 U	2.1 U	7.6 J	0.71 U	11.9 U	0.32 U	2 U	0.28 U	0.95 U	0.68 U	2.5 U
ANTIMONY	0.47 UJ	1.1 UJ	0.052 U	0.45 UJ	0.99 U	0.58 UJ	0.52 UJ	0.52 UJ	0.23 UJ	0.44 UJ	0.13 U	0.084 UJ	0.48 UJ
ARSENIC	1.1 J	3.9 J	0.75 J	2.4 J	3.8	2.9 J	2.6 J	1.5 J	1.7 J	1.3 J	1.8 J	1.8 J	1.9 J
BARIUM	0.85 U	1.1 U	0.25 UJ	0.58 U	0.701	0.81 U	0.78 U	1 U	0.74 U	0.64 U	0.15 UJ	0.38 UJ	0.52 U
BERYLLIUM	0.0051 U	0.012 J	0.0057 U	0.0058 U	0.099 UJ	0.006 J	0.0058 U	0.0078 J	0.0054 U	0.005 U	0.0057 U	0.0052 U	0.0051 U
CADMIUM	0.087 J	0.73 J	0.06 UJ	0.22 J	0.194	0.03 UJ	0.17 J	0.043 UJ	0.22 J	0.027 UJ	0.087 UJ	0.21 J	0.08 J
CALCIUM	8140 J	303 J	490 J	470 J	4540 J	295 J	366 J	188 J	251 J	299 J	322 J	1850 J	1800 J
CHROMIUM	2.9 J	0.35 UJ	6.1 J	0.12 UJ	0.29	0.16 UJ	0.18 UJ	0.14 UJ	0.18 UJ	0.59 J	0.29 J	0.29 J	0.11 UJ

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-ET306F-090105	G32-ET307-090105	G32-ET308-082905	G32-ET308F-090205	GI-ET520-0610	G32-ET309-090105	G32-ET309F-090105	G32-ET310-090105	G32-ET310F-090105	G32-ET311-090205	G32-ET312-082905	G32-ET313-082905	G32-ET313F-090205
LOCATION ID	G32-SD306F	G32-SD307	G32-SD308	G32-SD308F	G32-SD308F	G32-SD309	G32-SD309F	G32-SD310	G32-SD310F	G32-SD311	G32-SD312	G32-SD313	G32-SD313F
SAMPLE DATE	09/01/05	09/01/05	08/29/05	09/02/05	06/02/10	09/01/05	09/01/05	09/01/05	09/01/05	09/02/05	08/29/05	08/29/05	09/02/05
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	CL	CL	CL	MU	CL	CL	MU	CL	MU	CL	MU	CL	MU
QC TYPE	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
COBALT	0.084 U	0.21 U	0.12	0.082 U	0.124 J	0.11 U	0.11 U	0.2 U	0.11 U	0.074 U	0.032 J	0.11	0.063 U
COPPER	0.89 UJ	6.8 UJ	0.59 J	1.4 UJ	2.4	0.68 UJ	1.5 UJ	1.8 UJ	1.2 UJ	0.85 UJ	0.95 J	1.7 J	1.2 UJ
CYANIDE	0.13 UJ	0.1 U	0.46 UJ	0.16 UJ	NA	0.11 U	0.18 UJ	0.32 U	0.11 UJ	0.12 U	0.33 UJ	0.37 UJ	0.11 UJ
IRON	47.2	35.1 U	51.9 J	31.8 U	26 J	21.9 U	67.7	25.1 U	35.9 U	28.8 U	16.5 UJ	15.8 UJ	29.4 U
LEAD	0.21 UJ	0.32 UJ	0.043 UJ	0.29 UJ	0.216	0.039 UJ	0.44 UJ	0.073 UJ	0.43 UJ	0.051 UJ	0.049 UJ	0.035 UJ	0.091 UJ
MAGNESIUM	619	484	799 J	649	742	464	731	532	679	716	733 J	670 J	724
MANGANESE	6.3 UJ	12.5 J	4.4 J	4.6 UJ	12	2.8 UJ	4.5 UJ	2.3 UJ	4.2 UJ	2.8 UJ	1.5 J	6.2 J	5.3 UJ
MERCURY	0.022 UJ	0.01 UJ	0.0059 U	0.014 UJ	0.015 J	0.0082 UJ	0.015 UJ	0.0068 U	0.023 U	0.011 UJ	0.022	0.01 J	0.012 UJ
NICKEL	0.41 UJ	0.51 UJ	0.46	0.3 UJ	0.348 J	0.35 UJ	0.52 UJ	0.52 UJ	0.35 UJ	0.39 UJ	0.1 U	0.5	0.26 UJ
POTASSIUM	2070 J	2820 J	1760	2270 J	2490	2470 J	2500 J	2470 J	2290 J	2620 J	2120	1840	1870 J
SELENIUM	1.3 U	1.3 U	0.19 UJ	1.2 U	0.67	1 U	1.2 U	0.97 U	1 U	0.72 U	0.3 UJ	0.18 UJ	1.1 U
SILVER	0.016 UJ	0.28 UJ	0.018 UJ	0.018 UJ	0.241	0.018 UJ	0.018 UJ	0.018 UJ	0.017 UJ	0.016 UJ	0.018 UJ	0.016 UJ	0.016 UJ
SODIUM	4120 J	2920 J	4840 J	4030 J	4470	2610 J	4470 J	2810 J	4200 J	3930 J	4870 J	4210 J	4110 J
THALLIUM	0.18 J	0.072 UJ	0.074 U	0.075 UJ	3.2 U	0.073 UJ	0.075 UJ	0.075 UJ	0.07 UJ	0.065 UJ	0.074 U	0.067 U	0.066 UJ
VANADIUM	0.12 U	0.25 J	0.17 J	0.25 J	0.226 J	0.17 J	0.65 J	0.14 UJ	0.3 J	0.099 UJ	0.24 J	0.2 J	0.14 J
ZINC	9.2	13.6	10.6 J	36.1	15.5	7.1	21	13.2	24.3	11	9.1 J	10.5 J	12.4
MISCELLANEOUS PARAMETERS (%)													
LIPIDS	0.2	0.5	0.6	0.4	5.43	0.6	0.3	1.1	1.6	0.1	1.2	0.7	0.3

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET523-0610	GI-ET529-0610	GI-ET530-0510	GI-ET502-0510	GI-ET505-0510	GI-ET505-0510-D	GI-ET505-0510-AVG	GI-ET507-0610	GI-ET509-0610	GI-ET509-0610-D	GI-ET509-0610-AVG	GI-ET504-0510	GI-ET527-0610
LOCATION ID	G32-SD313F	G32-SD314	G32-SD317	GI-SD402	GI-SD404	GI-SD404	GI-SD404	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD413	GI-SD414
SAMPLE DATE	06/04/10	06/02/10	05/26/10	05/26/10	05/26/10	05/26/10	05/26/10	06/04/10	06/04/10	06/04/10	06/04/10	05/26/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	GC	CL	MU	MU	MU	MU	MU	SC	SC	SC	SC	CL	SC
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	FD	NM	NM	NM
SEMIVOLATILES (UG/KG)													
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(B)FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(G,H,I)PERYLENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(K)FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET523-0610	GI-ET529-0610	GI-ET530-0510	GI-ET502-0510	GI-ET505-0510	GI-ET505-0510-D	GI-ET505-0510-AVG	GI-ET507-0610	GI-ET509-0610	GI-ET509-0610-D	GI-ET509-0610-AVG	GI-ET504-0510	GI-ET527-0610
LOCATION ID	G32-SD313F	G32-SD314	G32-SD317	GI-SD402	GI-SD404	GI-SD404	GI-SD404	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD413	GI-SD414
SAMPLE DATE	06/04/10	06/02/10	05/26/10	05/26/10	05/26/10	05/26/10	05/26/10	06/04/10	06/04/10	06/04/10	06/04/10	05/26/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	GC	CL	MU	MU	MU	MU	MU	SC	SC	SC	SC	CL	SC
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	FD	NM	NM	NM
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIBENZO(A,H)ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CARCINOGENIC PAHS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CARCINOGENIC PAHS-POS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PESTICIDES/PCBS (UG/KG)													
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET523-0610	GI-ET529-0610	GI-ET530-0510	GI-ET502-0510	GI-ET505-0510	GI-ET505-0510-D	GI-ET505-0510-AVG	GI-ET507-0610	GI-ET509-0610	GI-ET509-0610-D	GI-ET509-0610-AVG	GI-ET504-0510	GI-ET527-0610
LOCATION ID	G32-SD313F	G32-SD314	G32-SD317	GI-SD402	GI-SD404	GI-SD404	GI-SD404	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD413	GI-SD414
SAMPLE DATE	06/04/10	06/02/10	05/26/10	05/26/10	05/26/10	05/26/10	05/26/10	06/04/10	06/04/10	06/04/10	06/04/10	05/26/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	GC	CL	MU	MU	MU	MU	MU	SC	SC	SC	SC	CL	SC
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	FD	NM	NM	NM
AROCLOR-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)													
DECACHLOROBIPHENYL	4.9 U	2.5 UJ	7.5 U	25 U	7.5 U	10 U	8.75 U	7.4 U	7.3 U	7.4 U	7.35 U	7.5 U	7.4 U
DICHLOROBIPHENYLS	1 U	0.51 UJ	2.1 J	5.1 UJ	1.5 U	2 U	1.75 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
HEPTACHLOROBIPHENYLS	9.5 J	4.7 J	3.8 U	13 U	11 J	5 U	6.75 J	18	23	18	20.5	15 J	18
HEXACHLOROBIPHENYL	61	7.1 J	21	81	35	43	39	35	80 J	46 J	63 J	25	45
MONOCHLOROBIPHENYLS	1 U	0.51 UJ	1.5 U	5.1 UJ	1.5 U	2 U	1.75 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
NONACHLOROBIPHENYLS	4.9 U	2.5 UJ	7.5 UJ	25 U	7.5 UJ	10 UJ	8.75 UJ	7.4 U	7.3 U	7.4 U	7.35 U	7.5 UJ	7.4 U
PENTACHLOROBIPHENYLS	50	4 J	14 J	9.9 U	17 J	16 J	16.5 J	20	32	22	27	3 U	11 J
TETRACHLOROBIPHENYLS	2 U	1.1 J	5.7 J	9.9 U	3 U	4 U	3.5 U	2.9 U	2.9 U	2.9 U	2.9 U	3 U	2.9 U
TOTAL OCTACHLOROBIPHENYLS	2.5 U	1.3 UJ	3.8 U	13 U	3.8 U	5 U	4.4 U	3.7 U	3.7 U	3.8 U	3.75 U	3.8 U	3.7 U
TOTAL PCB HOMOLOGS	120 J	16.9 J	42.8 J	81 J	63 J	59 J	61 J	73	135 J	86 J	110 J	40 J	74 J
TOTAL PCB HOMOLOGS-HALFND	129 J	20.8 J	55.6 J	137 J	76.2 J	79 J	77.6 J	86	148 J	99 J	124 J	54.6 J	87 J
TOTAL TRICHLOROBIPHENYLS	1 U	0.51 UJ	1.5 U	5.1 U	1.5 U	2 U	1.75 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
METALS (MG/KG)													
ALUMINUM	91.6	15.9 J	18.7 J	26.9 J	27.8	17.3	22.6	386	435	502	468	32.2 J	411
ANTIMONY	1.7 UJ	1 U	0.98 U	0.962 U	1 U	1.1 U	1.05 U	1.9 UJ	2 UJ	1.9 UJ	1.95 UJ	0.743 U	1.9 UJ
ARSENIC	7.8 J	3.5	2.4	2.1	2.6	2.4	2.5	8.9 J	7.6 J	9 J	8.3 J	3.2	8.5 J
BARIUM	3.8	0.535	0.086 UJ	0.255 J	0.166 UJ	0.493 UJ	0.33 UJ	5.8	6.3	6	6.15	0.754	5.9
BERYLLIUM	0.026 UJ	0.1 UJ	0.098 U	0.096 U	0.101 U	0.049 U	0.075 U	0.195 UJ	0.2 UJ	0.044 J	0.072 J	0.074 UJ	0.04 UJ
CADMIUM	0.289	0.156	0.171	0.153	0.191	0.146	0.168	0.052 J	0.047 J	0.054 J	0.0505 J	0.18	0.052 J
CALCIUM	78400 J	2510 J	751 J	2060 J	1350	1550	1450	42900 J	59300 J	56300 J	57800 J	1460 J	68200 J
CHROMIUM	0.49 U	0.181 J	0.174 J	0.215	0.193 J	0.175 J	0.184 J	1.5	2.1	2.6	2.35	0.275	1.8

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET523-0610	GI-ET529-0610	GI-ET530-0510	GI-ET502-0510	GI-ET505-0510	GI-ET505-0510-D	GI-ET505-0510-AVG	GI-ET507-0610	GI-ET509-0610	GI-ET509-0610-D	GI-ET509-0610-AVG	GI-ET504-0510	GI-ET527-0610
LOCATION ID	G32-SD313F	G32-SD314	G32-SD317	GI-SD402	GI-SD404	GI-SD404	GI-SD404	GI-SD410	GI-SD411	GI-SD411	GI-SD411	GI-SD413	GI-SD414
SAMPLE DATE	06/04/10	06/02/10	05/26/10	05/26/10	05/26/10	05/26/10	05/26/10	06/04/10	06/04/10	06/04/10	06/04/10	05/26/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG	NORMAL	ORIG	DUP	AVG	NORMAL	NORMAL
SUBMATRIX	GC	CL	MU	MU	MU	MU	MU	SC	SC	SC	SC	CL	SC
QC TYPE	NM	NM	NM	NM	NM	FD	NM	NM	NM	FD	NM	NM	NM
COBALT	0.168 J	0.1 J	0.091 J	0.087 J	0.104 J	0.099 J	0.102 J	0.365 J	0.341 J	0.425 J	0.383 J	0.147 J	0.337 J
COPPER	31.6	2.7	1.4	1.4	1.8	1.6	1.7	31.2	37.2	35.9	36.6	1.9	31.2
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON	197	36.4 J	99.6 J	58.3 J	54.1 J	41.6 J	47.8 J	812	846	915	880	81.1 J	790
LEAD	0.763 J	0.245	0.291	0.287	0.333	0.315	0.324	2 J	2.4 J	2.3 J	2.35 J	1.4	1.8 J
MAGNESIUM	3280	609	614	680	654	627	640	5050	5610	4970	5290	838	4990
MANGANESE	32.3	12.1	3	3	3.2	3.4	3.3	112	101	103	102	6.7	108
MERCURY	0.043	0.012 J	0.015 J	0.014 J	0.014 J	0.018 J	0.016 J	0.066 J	0.049 J	0.047 J	0.048 J	0.016	0.032 J
NICKEL	0.978 J	0.291 J	0.269 J	0.272 J	0.298 J	0.323 J	0.31 J	1.8	3	2.6	2.8	0.546 J	2.2
POTASSIUM	2120 J	2710	2530	2160	2620	2530	2580	2100 J	1860 J	1980 J	1920 J	2250	2040 J
SELENIUM	1.2 J	0.69	0.806	0.863	0.938	0.947	0.942	1.3 J	0.958 J	1.4 J	1.18 J	0.713	1.2 J
SILVER	0.296 J	0.48	0.012 J	0.022 J	0.018 J	0.018 J	0.018 J	0.224 J	0.127 J	0.34 J	0.234 J	0.213	0.246 J
SODIUM	5620 J	3510	3790	4210	4210	3900	4060	4660 J	4620 J	5020 J	4820 J	5560	5000 J
THALLIUM	5.9 U	3.4 U	3.4 U	3.3 U	3.5 U	3.3 U	3.4 U	6.8 U	6.1 U	6.4 U	6.25 U	2.5 U	5.7 U
VANADIUM	0.598 J	0.195 J	0.235 J	0.199 J	0.257 J	0.208 J	0.232 J	1.7 J	1.8 J	2 J	1.9 J	0.208 J	1.7 J
ZINC	37.4	15.2	15.8	16.2	20.8	16.1	18.4	34.8	36.4	38.6	37.5	15.2	35
MISCELLANEOUS PARAMETERS (%)													
LIPIDS	0.5 U	4.02	0.884	1.06	0.641	0.757	0.699	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET514-0610	GI-ET515-0610	GI-ET566-0510-A	GI-ET566-0510-B	GI-ET517-0510	GI-ET518-0510	GI-ET518-0510-D	GI-ET518-0510-AVG
LOCATION ID	GI-SD432	GI-SD434	GI-SD435	GI-SD435	GI-SD437	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	06/04/10	06/04/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SC	SC	CL	CL	MU	MU	MU	MU
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM
SEMIVOLATILES (UG/KG)								
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	NA	NA	NA	NA	NA	NA	NA	NA
ACENAPHTHYLENE	NA	NA	NA	NA	NA	NA	NA	NA
ACETOPHENONE	NA	NA	NA	NA	NA	NA	NA	NA
ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA
ATRAZINE	NA	NA	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(A)PYRENE	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(B)FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(G,H,I)PERYLENE	NA	NA	NA	NA	NA	NA	NA	NA
BENZO(K)FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA	NA	NA

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET514-0610	GI-ET515-0610	GI-ET566-0510-A	GI-ET566-0510-B	GI-ET517-0510	GI-ET518-0510	GI-ET518-0510-D	GI-ET518-0510-AVG
LOCATION ID	GI-SD432	GI-SD434	GI-SD435	GI-SD435	GI-SD437	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	06/04/10	06/04/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SC	SC	CL	CL	MU	MU	MU	MU
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM
CARBAZOLE	NA	NA	NA	NA	NA	NA	NA	NA
CHRYSENE	NA	NA	NA	NA	NA	NA	NA	NA
DIBENZO(A,H)ANTHRACENE	NA	NA	NA	NA	NA	NA	NA	NA
DIBENZOFURAN	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA	NA	NA
FLUORANTHENE	NA	NA	NA	NA	NA	NA	NA	NA
FLUORENE	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	NA	NA	NA	NA	NA
ISOPHORONE	NA	NA	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA	NA	NA
NAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA
NITROBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA	NA	NA
PHENANTHRENE	NA	NA	NA	NA	NA	NA	NA	NA
PHENOL	NA	NA	NA	NA	NA	NA	NA	NA
PYRENE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CARCINOGENIC PAHS-HALFND	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CARCINOGENIC PAHS-POS	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHS	NA	NA	NA	NA	NA	NA	NA	NA
PESTICIDES/PCBS (UG/KG)								
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1221	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1232	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1242	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1248	NA	NA	NA	NA	NA	NA	NA	NA

TABLE D-4.7
ANALYTICAL RESULTS - TISSUE
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET514-0610	GI-ET515-0610	GI-ET566-0510-A	GI-ET566-0510-B	GI-ET517-0510	GI-ET518-0510	GI-ET518-0510-D	GI-ET518-0510-AVG
LOCATION ID	GI-SD432	GI-SD434	GI-SD435	GI-SD435	GI-SD437	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	06/04/10	06/04/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SC	SC	CL	CL	MU	MU	MU	MU
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM
AROCLOR-1254	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1260	NA	NA	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)								
DECACHLOROBIPHENYL	7.3 U	7.4 U	5 UJ	2.5 U	7.5 U	5 U	7.5 U	6.25 U
DICHLOROBIPHENYLS	2.4 J	1.5 U	1 UJ	0.51 UJ	1.5 U	1 UJ	1.5 U	1.25 UJ
HEPTACHLOROBIPHENYLS	8 J	13 J	21 J	8.8	9.3 J	9.8 J	3.8 U	5.85 J
HEXACHLOROBIPHENYL	24	31	19 J	16	34	36	32	34
MONOCHLOROBIPHENYLS	1.5 U	1.5 U	1 UJ	0.51 UJ	1.5 UJ	1 UJ	1.5 U	1.25 UJ
NONACHLOROBIPHENYLS	7.3 U	7.4 U	5 UJ	2.5 U	7.5 UJ	5 U	7.5 U	6.25 U
PENTACHLOROBIPHENYLS	16 J	3 U	2 UJ	5 J	14 J	29 J	11 J	20 J
TETRACHLOROBIPHENYLS	2.9 U	3 U	2 UJ	1 U	3 U	2.8 J	3.3 J	3.05 J
TOTAL OCTACHLOROBIPHENYLS	3.7 U	3.8 U	2.5 UJ	1.3 U	3.8 U	2.5 U	3.8 U	3.15 U
TOTAL PCB HOMOLOGS	50.4 J	44 J	40 J	29.8 J	57.3 J	77.6 J	46.3 J	62 J
TOTAL PCB HOMOLOGS-HALFND	62.5 J	58.6 J	49.8 J	34.2 J	70.4 J	85.4 J	59.8 J	72.6 J
TOTAL TRICHLOROBIPHENYLS	1.5 U	1.5 U	1 UJ	0.51 U	1.5 U	1 U	1.5 U	1.25 U
METALS (MG/KG)								
ALUMINUM	345	429	35.5 J	13.1 J	38.8 J	25.2 J	59.9 J	42.6 J
ANTIMONY	1.7 UJ	1.8 UJ	0.974 U	1.2 U	1.1 U	1.2 U	1.1 U	1.15 U
ARSENIC	7.3 J	6.3 J	3.5	3.7	2.5	2.5	2.8	2.65
BARIUM	6.2	5.2	0.754	0.44 J	0.181 UJ	0.547 UJ	0.307 J	0.29 J
BERYLLIUM	0.168 UJ	0.179 UJ	0.097 UJ	0.097 UJ	0.106 U	0.117 U	0.109 UJ	0.113 UJ
CADMIUM	0.052 J	0.082 J	0.195	0.123	0.198	0.174	0.226	0.2
CALCIUM	56300 J	87500 J	3580 J	3240 J	1240 J	801 J	1900 J	1350 J
CHROMIUM	2.3	3.4	0.457	0.533	0.321	0.229 J	0.626	0.428 J

SHADING - DETECTED; U - NOT DETECTED; J - QUANTITATION APPROXIMATE; R - REJECTED; NA - NOT ANALYZED

SAMPLE ID	GI-ET514-0610	GI-ET515-0610	GI-ET566-0510-A	GI-ET566-0510-B	GI-ET517-0510	GI-ET518-0510	GI-ET518-0510-D	GI-ET518-0510-AVG
LOCATION ID	GI-SD432	GI-SD434	GI-SD435	GI-SD435	GI-SD437	GI-SD447	GI-SD447	GI-SD447
SAMPLE DATE	06/04/10	06/04/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10	05/27/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	ORIG	DUP	AVG
SUBMATRIX	SC	SC	CL	CL	MU	MU	MU	MU
QC TYPE	NM	NM	NM	NM	NM	NM	FD	NM
COBALT	0.347 J	0.325 J	0.176 J	0.163 J	0.124 J	0.088 J	0.128 J	0.108 J
COPPER	26.6	30.6	2.3	2.1	1.7	1.7	1.8	1.75
CYANIDE	NA	NA	NA	NA	NA	NA	NA	NA
IRON	800	762	84.7 J	38.8 J	92.2 J	60.5 J	143 J	102 J
LEAD	1.7 J	1.9 J	0.549	0.251	0.705	0.322	0.474	0.398
MAGNESIUM	5340	4170	694	784	668	656	737	696
MANGANESE	133	97.3	6.9	9.3	3.7	2.8	4.9	3.85
MERCURY	0.027	0.037	0.006 J	0.012 J	0.013 J	0.015 J	0.017 J	0.016 J
NICKEL	2.4	4.5	0.59 J	0.544 J	0.329 J	0.3 J	0.465 J	0.382 J
POTASSIUM	1540 J	1200 J	2650	3120	2610	2670	2830	2750
SELENIUM	0.859 J	1.1 J	0.748	0.782	0.876	0.78	0.987	0.884
SILVER	0.246 J	0.169 J	0.407	0.247	0.014 J	0.016 J	0.011 J	0.0135 J
SODIUM	3690 J	3620 J	3990	4450	4190	3980	4600	4290
THALLIUM	0.004 J	6 U	3.5 U	4.1 U	3.7 U	3.7 U	0.002 J	0.926 J
VANADIUM	1.5 J	1.6 J	0.294 J	0.19 J	0.234 J	0.17 J	0.263 J	0.216 J
ZINC	26.8	32.4	15.1	18.4	19.5	16.6	20.7	18.6
MISCELLANEOUS PARAMETERS (%)								
LIPIDS	0.5 U	0.5 U	0.5 U	0.5 U	0.702	1.2	0.582	0.891

TABLE D-4.8
ANALYTICAL RESULTS: REFERENCE TISSUE SAMPLES
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET524-0610_2010604	GI-ET525-0610	GI-ET525-0610_20100604	GI-ET526-0610	GI-ET526-0610_2010604
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	06/02/10	06/04/10	06/02/10	06/04/10	06/02/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	CL	SC	CL	GC	CL	SC
QC TYPE	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)						
1,1-BIPHENYL	NA	NA	NA	NA	NA	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA
2,4,6-TRICHLOROPHENOL	NA	NA	NA	NA	NA	NA
2,4-DICHLOROPHENOL	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	NA	NA
2,4-DINITROPHENOL	NA	NA	NA	NA	NA	NA
2,4-DINITROTOLUENE	NA	NA	NA	NA	NA	NA
2,6-DINITROTOLUENE	NA	NA	NA	NA	NA	NA
2-CHLORONAPHTHALENE	NA	NA	NA	NA	NA	NA
2-CHLOROPHENOL	NA	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	NA
2-METHYLPHENOL	NA	NA	NA	NA	NA	NA
2-NITROANILINE	NA	NA	NA	NA	NA	NA
2-NITROPHENOL	NA	NA	NA	NA	NA	NA
3,3'-DICHLOROBENZIDINE	NA	NA	NA	NA	NA	NA
3-NITROANILINE	NA	NA	NA	NA	NA	NA
4,6-DINITRO-2-METHYLPHENOL	NA	NA	NA	NA	NA	NA
4-BROMOPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA
4-CHLORO-3-METHYLPHENOL	NA	NA	NA	NA	NA	NA
4-CHLOROANILINE	NA	NA	NA	NA	NA	NA
4-CHLOROPHENYL PHENYL ETHER	NA	NA	NA	NA	NA	NA
4-METHYLPHENOL	NA	NA	NA	NA	NA	NA
4-NITROANILINE	NA	NA	NA	NA	NA	NA
4-NITROPHENOL	NA	NA	NA	NA	NA	NA
ACENAPHTHENE	NA	NA	NA	NA	NA	NA
ACENAPHTHYLENE	NA	NA	NA	NA	NA	NA
ACETOPHENONE	NA	NA	NA	NA	NA	NA
ANTHRACENE	NA	NA	NA	NA	NA	NA
ATRAZINE	NA	NA	NA	NA	NA	NA
BENZALDEHYDE	NA	NA	NA	NA	NA	NA
BENZO(A)ANTHRACENE	NA	NA	NA	NA	NA	NA
BENZO(A)PYRENE	NA	NA	NA	NA	NA	NA
BENZO(B)FLUORANTHENE	NA	NA	NA	NA	NA	NA
BENZO(G,H,I)PERYLENE	NA	NA	NA	NA	NA	NA
BENZO(K)FLUORANTHENE	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHOXY)METHANE	NA	NA	NA	NA	NA	NA
BIS(2-CHLOROETHYL)ETHER	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	NA	NA
BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA
CAPROLACTAM	NA	NA	NA	NA	NA	NA
CARBAZOLE	NA	NA	NA	NA	NA	NA
CHRYSENE	NA	NA	NA	NA	NA	NA
DIBENZO(A,H)ANTHRACENE	NA	NA	NA	NA	NA	NA
DIBENZOFURAN	NA	NA	NA	NA	NA	NA

TABLE D-4.8
ANALYTICAL RESULTS: REFERENCE TISSUE SAMPLES
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET524-0610_2010604	GI-ET525-0610	GI-ET525-0610_20100604	GI-ET526-0610	GI-ET526-0610_2010604
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	06/02/10	06/04/10	06/02/10	06/04/10	06/02/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	CL	SC	CL	GC	CL	SC
QC TYPE	NM	NM	NM	NM	NM	NM
DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	NA	NA
DI-N-OCTYL PHTHALATE	NA	NA	NA	NA	NA	NA
FLUORANTHENE	NA	NA	NA	NA	NA	NA
FLUORENE	NA	NA	NA	NA	NA	NA
HEXACHLOROBENZENE	NA	NA	NA	NA	NA	NA
HEXACHLOROBUTADIENE	NA	NA	NA	NA	NA	NA
HEXACHLOROCYCLOPENTADIENE	NA	NA	NA	NA	NA	NA
HEXACHLOROETHANE	NA	NA	NA	NA	NA	NA
HIGH MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	NA	NA	NA
ISOPHORONE	NA	NA	NA	NA	NA	NA
LOW MOLECULAR WEIGHT PAHS	NA	NA	NA	NA	NA	NA
NAPHTHALENE	NA	NA	NA	NA	NA	NA
NITROBENZENE	NA	NA	NA	NA	NA	NA
N-NITROSO-DI-N-PROPYLAMINE	NA	NA	NA	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	NA	NA
PENTACHLOROPHENOL	NA	NA	NA	NA	NA	NA
PHENANTHRENE	NA	NA	NA	NA	NA	NA
PHENOL	NA	NA	NA	NA	NA	NA
PYRENE	NA	NA	NA	NA	NA	NA
TOTAL CARCINOGENIC PAHS-HALFND	NA	NA	NA	NA	NA	NA
TOTAL CARCINOGENIC PAHS-POS	NA	NA	NA	NA	NA	NA
TOTAL CHLORINATED VOCS	NA	NA	NA	NA	NA	NA
TOTAL PAHS	NA	NA	NA	NA	NA	NA
PESTICIDES/PCBS (UG/KG)						
4,4'-DDD	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA
AROCLOR-1016	NA	NA	NA	NA	NA	NA
AROCLOR-1221	NA	NA	NA	NA	NA	NA
AROCLOR-1232	NA	NA	NA	NA	NA	NA
AROCLOR-1242	NA	NA	NA	NA	NA	NA
AROCLOR-1248	NA	NA	NA	NA	NA	NA
AROCLOR-1254	NA	NA	NA	NA	NA	NA
AROCLOR-1260	NA	NA	NA	NA	NA	NA
BETA-BHC	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA

TABLE D-4.8
ANALYTICAL RESULTS: REFERENCE TISSUE SAMPLES
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET524-0610_2010604	GI-ET525-0610	GI-ET525-0610_20100604	GI-ET526-0610	GI-ET526-0610_2010604
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	06/02/10	06/04/10	06/02/10	06/04/10	06/02/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	CL	SC	CL	GC	CL	SC
QC TYPE	NM	NM	NM	NM	NM	NM
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA
TOTAL AROCLOR	NA	NA	NA	NA	NA	NA
TOTAL CHLORDANE	NA	NA	NA	NA	NA	NA
TOTAL DDD/DDE/DDT	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA
PCB HOMOLOGS (UG/KG)						
DECACHLOROBIPHENYL	2.5 U	2.4 U	2.5 UJ	4.6 U	5 U	7.3 U
DICHLOROBIPHENYLS	0.51 U	0.5 U	0.51 UJ	0.95 U	1 U	1.5 U
HEPTACHLOROBIPHENYLS	1.3 U	2.9 J	1.3 UJ	2.3 U	2.5 U	3.7 U
HEXACHLOROBIPHENYL	2.2 J	15	5.2 J	14	6.2 J	22
MONOCHLOROBIPHENYLS	0.51 U	0.5 U	0.51 UJ	0.95 U	1 U	1.5 U
NONACHLOROBIPHENYLS	2.5 U	2.4 U	2.5 UJ	4.6 U	5 U	7.3 U
PENTACHLOROBIPHENYLS	1 U	14	1 UJ	15	2 U	2.9 U
TETRACHLOROBIPHENYLS	1 U	1 U	1 UJ	1.8 U	2 U	2.9 U
TOTAL OCTACHLOROBIPHENYLS	1.3 U	1.2 U	1.3 UJ	2.3 U	2.5 U	3.7 U
TOTAL PCB HOMOLOGS	2.2 J	31.9 J	5.2 J	29	6.2 J	22
TOTAL PCB HOMOLOGS-HALFND	7.76 J	36.2 J	10.8 J	38.2	17.2 J	38.2
TOTAL TRICHLOROBIPHENYLS	0.51 U	0.5 U	0.51 UJ	0.95 U	1 U	1.5 U
METALS (MG/KG)						
ALUMINUM	34.1 J	697	20.9 J	85.7	46.7 J	601
ANTIMONY	0.97 U	2 UJ	1.1 U	1.6 UJ	0.968 U	2 UJ
ARSENIC	7.2	7.1 J	6	8 J	3.6	9.9 J
BARIUM	1.5	5.5	0.783	4.3	0.982	6.5
BERYLLIUM	0.097 UJ	0.063 J	0.106 UJ	0.159 UJ	0.097 UJ	0.05 J
CADMIUM	0.23	0.128 J	0.157	0.155 J	0.183	0.064 J
CALCIUM	1360 J	61100 J	2890 J	75600 J	3690 J	44400 J
CHROMIUM	0.546	6	0.367	0.508 U	0.303	8.2
COBALT	0.225 J	0.471 J	0.235 J	0.362 J	0.202 J	0.566 J
COPPER	4	56.6	3.4	28.4	2.5	47.5
CYANIDE	NA	NA	NA	NA	NA	NA
IRON	62.9 J	992	41.5 J	290	107 J	1030
LEAD	0.574	6.1 J	0.265	1.2 J	1.1	2.5 J
MAGNESIUM	828	5560	726	3530	705	5340
MANGANESE	5.9	65.9	7	53.1	20.6	143
MERCURY	0.042	0.049 J	0.026	0.082	0.016 J	0.05 J
NICKEL	0.86	7.1	0.559 J	0.637 J	0.464 J	10.4
POTASSIUM	3050	2280 J	3110	1370 J	2510	2470 J
SELENIUM	1.2	1.1 J	0.937	1.1 J	0.764	1.4 J

TABLE D-4.8
ANALYTICAL RESULTS: REFERENCE TISSUE SAMPLES
GOULD ISLAND, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-ET524-0610	GI-ET524-0610_2010604	GI-ET525-0610	GI-ET525-0610_20100604	GI-ET526-0610	GI-ET526-0610_2010604
LOCATION ID	DSY-JPC-01	DSY-JPC-01	DSY-JPC-02	DSY-JPC-02	MCA-JCC-04	MCA-JCC-04
SAMPLE DATE	06/02/10	06/04/10	06/02/10	06/04/10	06/02/10	06/04/10
SACODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
SUBMATRIX	CL	SC	CL	GC	CL	SC
QC TYPE	NM	NM	NM	NM	NM	NM
SILVER	0.358	0.216 J	0.817	0.145 J	0.58	0.194 J
SODIUM	4860	5710 J	4070	4530 J	4100	5680 J
THALLIUM	3 U	0.005 J	3.7 U	5.2 U	3.2 U	0.004 J
VANADIUM	0.58 J	2.1 J	0.408 J	0.841 J	0.315 J	2.2
ZINC	17	50.5	16.7	32	18.5	47.1
MISCELLANEOUS PARAMETERS (%)						
LIPIDS	4.23	0.687	2.99	0.5 U	3.32	0.5 U

APPENDIX E

ECOLOGICAL CHARACTERIZATION

E-1 SOIL DATA VALIDATION MEMORANDA

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-08-10-3822W

Date: August 30, 2010

c: File G00949-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Organic Data Validation, SDG J1123
Mitkem Laboratories
CTO 458, Phase 2, Site 17, Gould Island, Naval Station Newport,
Jamestown, Rhode Island

GROPAH/ExTPH:

8/Soils/	GI-SB406-2430	GI-SB406-4248
	GI-SB409-0006	GI-SB409-1218
	GI-SB409-2430	GI-SB409-4854
	GI-SB-DUP02-052810	GI-SB-DUP03-060110

(Field Duplicate pairs: GI-SB409-4854/ GI-SB-DUP02-052810, and GI-SB406-4248/GI-SB-DUP03-060110)

GRO:

2/Trip Blanks/	GI-SB-TB01-052810	GI-SB-TB02-060110

PAH/PCB:

12/Soils/	GI-SB410-0012	GI-SB410-6072
	GI-SB411-0012	GI-SB411-6072
	GI-SB412-0012	GI-SB412-7296
	GI-SB412-144156	GI-SB-DUP01-052710
	GI-SB413-0012	GI-SB413-7296

(Field Duplicate pair: GI-SB413-0012/GI-SB-DUP01-052710)

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the gasoline range organic (GRO), polynuclear aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), and total extractable petroleum hydrocarbons (ExTPH; C_9-C_{36}) analytical data for the soil samples in this SDG. The samples were collected at the Site 17, Gould Island from May 27 through June 1, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment, Site 17 Gould Island, Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The PAH analysis was performed according to USEPA SW-846 Method 8270D. The PCB analysis was performed according to USEPA SW-846 Method 8082A. The GRO and ExTPH analyses were performed by the purgable and extractable organics options of USEPA SW-846 Method 8015D, respectively. The diesel range organic (DRO) is labeled as ExTPH in this data package.

The project specific criteria listed in the site SAP were applied for data validation. The PAH, GRO, and ExTPH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The PCB validation was performed in accordance with the Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part III, February 2004.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed. The data summary table with the header which identifies the fraction as "PET" includes the GRO and ExTPH results.

The data were evaluated based on the following parameters:

- Data Completeness
- * Preservation and Technical Holding Times
- * GC/MS Instrument Performance Check (Tuning)
- Initial and Continuing Calibrations
- * Blanks
- * Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- * Laboratory Control Sample/Laboratory Control Sample Duplicate
- * Field Duplicates
- Compound Identification/Quantitation
- * Percent Solids
- Reporting Limits

* All criteria were met for this parameter.

Data Completeness

On June 4, 2010, the sampler Brian Geringer instructed the laboratory to delete the PCB analysis and to change the identification listed on the chain-of-custody form for the samples received on May 28, 2010. The ID for samples GI-S**D**409-0012 through GI-S**D**-TB01-052810 was to be changed to GI-S**B**409-0012 through GI-S**B**-TB01-052810. The laboratory was also instructed to analyzed sample GI-SB-TB01-052810 only for GRO.

On August 2, 2010 the laboratory submitted Form Is with sample specific QLs, LODs and MDLs in addition to the sample results.

PAHs

The Sampling and Analysis Plan requires the use of benzo(e)pyrene-d12 as a surrogate standard. The laboratory used the Method 8270D full scan surrogates. No action taken.

On August 3, 2010 the laboratory submitted the summary form (IV) for the method blank extracted on June 7, 2010 missing from the original data package.

GRO

Mitkem uses the LCS as an initial calibration verification source standard for this analysis. No action taken since LCS recoveries were within limits.

Initial and Continuing Calibrations

PAHs

The following table summarizes the PAHs that failed to meet the initial calibration (IC) criterion of %RSD <20% or the continuing calibration (CC) criterion of %D <20%:

Compound	%RSD or %D	Action		Affected Samples
		(+)	NDs	
Benzo(b)fluoranthene	22.6 -32.7	J	UJ	GI-SB410-0012, GI-SB410-6072, GI-SB411-6072, GI-SB412-7296, GI-SB412-144156, GI-SB-DUP01-052710, GI-SB413-0012, GI-SB413-7296
Benzo(a) anthracene	-25.7	J	UJ	
Naphthalene	24.5	J	UJ	GI-SB409-0006, GI-SB409-1218, GI-SB409-2430, GI-SB409-4854, GI-SB-DUP02-052810, GI-SB411-0012
Dibenzo(a,h)anthracene	21.7	J	UJ	GI-SB410-0012, GI-SB410-6072, GI-SB411-6072, GI-SB412-0012, GI-SB412-7296, GI-SB412-144156, GI-SB-DUP01-052710, GI-SB413-0012,GI-SB413-7296
Benzo(k)fluoranthene	27.8	J	UJ	

The % RSD was above the QC limits for dibenzo(a,h)anthracene in affected samples; therefore, the project accuracy goals may be impacted. The positive and non-detected results for dibenzo(a,h)anthracene in the affected samples are usable as estimated values and estimated quantitation limits.

Although the RSD and/or %D were above the QC limits for benzo(b)fluoranthene, benzo(a)anthracene, naphthalene, and benzo(k)fluoranthene; the project accuracy goals are not impacted since the affected sample results are much lower than the project action limits. The results for benzo(b)fluoranthene, benzo(a)anthracene, naphthalene, and benzo(k)fluoranthene in the affected samples are usable as estimated values and estimated quantitation limits.

Internal Standards

PAHs

The following samples had internal standard areas that were not within the QC criteria:

	Sample	Area	QC Limits	Action

Internal standard				(+)	NDs
Chrysene-d12	GI-SB412-0012	1384963	282697-1130786	J	
Pyrene-d12	GI-SB412-0012	970699	191085-764338	J	

The internal standard area was above the QC limits for perylene-d12; therefore, the project accuracy goals for dibenzo(a,h)anthracene (associated with this internal standard) may be impacted. The positive dibenzo(a,h)anthracene result in sample GI-SB412-0012 is usable as an estimated value.

Although the internal standard areas were above QC limits chrysene-d12 and perylene-d12 the project accuracy goals for benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, and benzo(g,h,i)perylene (associated with these internal standards) are not affected since the affected sample results are much lower than the project action limits. The positive benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, and benzo(g,h,i)perylene results in sample GI-SB412-0012 are usable as estimated values.

Matrix Spike/Matrix Spike Duplicate

PAHs

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed on sample GI-SB-412-0012. The majority of the spiked target compounds recovered above the statistically derived laboratory QC limits or the relative percent difference (RPD) QC limits were exceeded; therefore, professional judgment was used to qualify all positive PAH results for sample GI-SB-412-0012. The positive results results for 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, fluorene, indeno(1,2,3-cd)pyrene, and naphthalene in sample GI-SB-412-0012 were qualified as estimated (J).

Although the MS/MSD recovery and or the RPD criteria were not met for 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, benzo(k)fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, and naphthalene, the project accuracy or precision goals are not impacted since the affected sample results are much lower than the project action limits. The positive results for 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, benzo(k)fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, and naphthalene in sample GI-SB412-0012 are usable as estimated values for which may be biased high.

The MS/MSD percent recovery and/ or the RPD criteria were not met for dibenzo(a,h)anthracene; therefore, the project precision and acuuracy goals may be impacted. The positive result for dibenzo(a,h)anthracene in sample GI-SB412-0012 is usable as estimated value which may be biased high.

Compound Identification/Quantitation

PCBs

The %RPD between the results of analytical columns 1 and 2 exceeded the 40% RPD QC criterion in the following samples:

Sample	Compound	%RPD	Action (+)
GI-SB-412-0012DL	Aroclor 1248	62	J

Although the RPD for Aroclor 1248 exceeded the 40% RPD QC criterion for the dilution analysis of sample GI-SB412-0012, project accuracy goals are not affected due to analytical interferences detected in the dual column analysis since the affected sample result is much lower than the project action limit. The positive Aroclor 1248 result in the diluted sample GI-SB412-0012 is usable as an estimated value.

Reporting Limits

The laboratory reported all PCBs, GRO and ExTPH non-detected results down to the quantitation limit (QL). The positive PAH results below the QL and above the method detection limit (MDL) are estimated (J) due to uncertainty below the QL. (J Flags were not utilized for the PCB, GRO, and ExTPH fractions.

The GRO, PAH, PCBs, and ExTPH results meet the QL listed in worksheet 15a of the SAP.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

GRO

The project goals with respect to accuracy, precision, sensitivity, and completeness were met for the GRO data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and completeness.

PAHs

The project goals with respect to accuracy were met for the PAH data set with the following exceptions. The results for dibenzo(a,h)anthracene in affected samples were qualified as estimated due to instrument calibration variability; and in sample GI-SB412-0012, due to high MS/MSD recoveries and high internal standard areas. Although specific method criteria were not met in these instances, the affected positive and non-detected dibenzo(a,h)anthracene results are usable as estimated values and estimated quantitation limits which may have a minor impact on data usability. In addition, the results for benzo(b)fluoranthene, benzo(a)anthracene, naphthalene, and benzo(k)fluoranthene in select samples were qualified as estimated due to calibration nonconformances. The positive benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, and benzo(g,h,i)perylene results in sample GI-SB412-0012 were qualified as

estimated due to internal standard non-compliances. The positive results for 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, benzo(k)fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, and naphthalene were qualified as estimated in sample GI-SB412-0012 due to high MS/MSD recoveries; results may be biased high. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive results are usable as estimated values.

The project goal with respect to precision were met for the PAH data set. The positive results for 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, benzo(k)fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, and naphthalene in sample GI-SB412-0012 were qualified as estimated due to poor MS and MSD precision. Although specific method criteria were not met in this instance, data usability is not impacted and the affected positive results in sample GI-SB412-0012 are usable as estimated values.

The project goals with respect to sensitivity and completeness were met for the PAH data set. Data usability was not impacted with regards to sensitivity and completeness.

PCBs

The project goals with respect to accuracy were met for the PCBs data. The Aroclor 1248 result in sample GI-SB412-0006 was qualified as estimated due to analytical interferences detected in the dual column analysis. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive result is usable as an estimated value.

The project goals with respect to precision, sensitivity, and completeness were met for the PCBs data set. Data usability was not impacted with regards to accuracy, precision, and completeness.

ExTPH

The project goals with respect to accuracy, precision, sensitivity, and completeness were met for the ExTPH data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and completeness.

Tables: Data Summary Tables
Data Validation Qualifiers and Codes

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-SB406-2430			GI-SB406-4248			GI-SB409-0006			GI-SB409-1218		
SDG: J1123	LAB_ID	J1123-17A			J1123-18A			J1123-11A			J1123-12A		
FRACTION: PAH	SAMP_DATE	6/1/2010			6/1/2010			5/28/2010			5/28/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	92.0			91.0			91.0			93.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		72	U		73	U		72	U		70	U	
ACENAPHTHENE		72	U		73	U		72	U		70	U	
ACENAPHTHYLENE		72	U		73	U		72	U		70	U	
ANTHRACENE		72	U		73	U		72	U		70	U	
BENZO(A)ANTHRACENE		72	U		73	U		140	J	P	70	U	
BENZO(A)PYRENE		72	U		73	U		120	J	P	70	U	
BENZO(B)FLUORANTHENE		72	U		73	U		150	J	P	70	U	
BENZO(G,H,I)PERYLENE		72	U		73	U		69	J	P	70	U	
BENZO(K)FLUORANTHENE		72	U		73	U		97	J	P	70	U	
CHRYSENE		72	U		73	U		150	J	P	70	U	
DIBENZO(A,H)ANTHRACENE		72	U		73	U		72	U		70	U	
FLUORANTHENE		72	U		73	U		300	J	P	70	U	
FLUORENE		72	U		73	U		72	U		70	U	
INDENO(1,2,3-CD)PYRENE		72	U		73	U		75	J	P	70	U	
NAPHTHALENE		72	U		73	U		72	UJ	C	70	UJ	C
PHENANTHRENE		72	U		73	U		130	J	P	70	U	
PYRENE		72	U		73	U		250	J	P	70	U	

PROJ_NO: 00949	NSAMPLE	GI-SB409-2430			GI-SB409-4854			GI-SB410-0012			GI-SB410-6072		
SDG: J1123	LAB_ID	J1123-13A			J1123-14A			J1123-09A			J1123-10A		
FRACTION: PAH	SAMP_DATE	5/28/2010			5/28/2010			5/28/2010			5/28/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	92.0			92.0			94.0			96.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		71	U		71	U		70	U		69	U	
ACENAPHTHENE		71	U		71	U		100	J	P	69	U	
ACENAPHTHYLENE		71	U		71	U		70	U		69	U	
ANTHRACENE		71	U		71	U		290	J	P	82	J	P
BENZO(A)ANTHRACENE		71	U		71	U		960	J	C	260	J	CP
BENZO(A)PYRENE		71	U		71	U		930			180	J	P
BENZO(B)FLUORANTHENE		71	U		71	U		980	J	C	240	J	CP
BENZO(G,H,I)PERYLENE		71	U		71	U		530			120	J	P
BENZO(K)FLUORANTHENE		71	U		71	U		710	J	C	150	J	CP
CHRYSENE		71	U		71	U		1200			350		
DIBENZO(A,H)ANTHRACENE		71	U		71	U		130	J	CP	69	UJ	C
FLUORANTHENE		71	U		71	U		1700			760		
FLUORENE		71	U		71	U		81	J	P	69	U	
INDENO(1,2,3-CD)PYRENE		71	U		71	U		410			85	J	P
NAPHTHALENE		71	UJ	C	71	UJ	C	70	U		69	U	
PHENANTHRENE		71	U		71	U		930			350		
PYRENE		71	U		71	U		1800			880		

PROJ_NO: 00949	NSAMPLE	GI-SB411-0012			GI-SB411-6072			GI-SB412-0012			GI-SB412-0012DL		
SDG: J1123	LAB_ID	J1123-07A			J1123-08A			J1123-03A			J1123-03ADL		
FRACTION: PAH	SAMP_DATE	5/28/2010			5/28/2010			5/27/2010			5/27/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	93.0			93.0			95.0			95.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		70	U		70	U		330	J	DP			
ACENAPHTHENE		37	J	P	70	U		2500	J	D			
ACENAPHTHYLENE		70	U		70	U		260	J	DP			
ANTHRACENE		100	J	P	70	U		5200	J	D			
BENZO(A)ANTHRACENE		290	J	P	43	J	CP				8400		
BENZO(A)PYRENE		220	J	P	70	U					6700		
BENZO(B)FLUORANTHENE		330	J	P	49	J	CP				8200		
BENZO(G,H,I)PERYLENE		130	J	P	70	U		4700	J	DN			
BENZO(K)FLUORANTHENE		140	J	P	70	UJ	C	4600	J	CDN			
CHRYSENE		300	J	P	70	U					8100		
DIBENZO(A,H)ANTHRACENE		39	J	P	70	UJ	C	2000	J	CDN			
FLUORANTHENE		680			69	J	P				17000		
FLUORENE		41	J	P	70	U		2400	J	D			
INDENO(1,2,3-CD)PYRENE		120	J	P	70	U		4600	J	DN			
NAPHTHALENE		70	UJ	C	70	U		730	J	D			
PHENANTHRENE		360			70	U					13000		
PYRENE		570			97	J	P				15000		

PROJ_NO: 00949	NSAMPLE	GI-SB412-144156			GI-SB412-7296			GI-SB413-0012			GI-SB413-7296		
SDG: J1123	LAB_ID	J1123-05A			J1123-04A			J1123-01A			J1123-02A		
FRACTION: PAH	SAMP_DATE	5/27/2010			5/27/2010			5/27/2010			5/27/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	86.0			88.0			86.0			89.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		76	U		75	U		76	U		74	U	
ACENAPHTHENE		76	U		75	U		76	U		74	U	
ACENAPHTHYLENE		76	U		75	U		76	U		74	U	
ANTHRACENE		76	U		75	U		76	U		74	U	
BENZO(A)ANTHRACENE		76	UJ	C	60	J	CP	76	UJ	C	74	UJ	C
BENZO(A)PYRENE		76	U		75	U		76	U		74	U	
BENZO(B)FLUORANTHENE		76	UJ	C	52	J	CP	76	UJ	C	74	UJ	C
BENZO(G,H,I)PERYLENE		76	U		75	U		76	U		74	U	
BENZO(K)FLUORANTHENE		76	UJ	C	43	J	CP	76	UJ	C	74	UJ	C
CHRYSENE		76	U		73	J	P	76	U		74	U	
DIBENZO(A,H)ANTHRACENE		76	UJ	C	75	UJ	C	76	UJ	C	74	UJ	C
FLUORANTHENE		76	U		110	J	P	39	J	P	74	U	
FLUORENE		76	U		75	U		76	U		74	U	
INDENO(1,2,3-CD)PYRENE		76	U		75	U		76	U		74	U	
NAPHTHALENE		76	U		75	U		76	U		74	U	
PHENANTHRENE		76	U		78	J	P	76	U		74	U	
PYRENE		42	J	P	130	J	P	62	J	P	74	U	

PROJ_NO: 00949	NSAMPLE	GI-SB-DUP01-052710			GI-SB-DUP02-052810			GI-SB-DUP03-060110		
SDG: J1123	LAB_ID	J1123-06A			J1123-15A			J1123-19A		
FRACTION: PAH	SAMP_DATE	5/27/2010			5/28/2010			6/1/2010		
MEDIA: SOIL	QC_TYPE	FD			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	94.0			92.0			91.0		
	DUP_OF	GI-SB413-0012			GI-SB409-4854			GI-SB406-4248		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		70	U		71	U		73	U	
ACENAPHTHENE		70	U		71	U		73	U	
ACENAPHTHYLENE		70	U		71	U		73	U	
ANTHRACENE		70	U		71	U		73	U	
BENZO(A)ANTHRACENE		70	UJ	C	71	U		73	U	
BENZO(A)PYRENE		70	U		71	U		73	U	
BENZO(B)FLUORANTHENE		70	UJ	C	71	U		73	U	
BENZO(G,H,I)PERYLENE		70	U		71	U		73	U	
BENZO(K)FLUORANTHENE		70	UJ	C	71	U		73	U	
CHRYSENE		70	U		71	U		73	U	
DIBENZO(A,H)ANTHRACENE		70	UJ	C	71	U		73	U	
FLUORANTHENE		46	J	P	71	U		73	U	
FLUORENE		70	U		71	U		73	U	
INDENO(1,2,3-CD)PYRENE		70	U		71	U		73	U	
NAPHTHALENE		70	U		71	UJ	C	73	U	
PHENANTHRENE		70	U		71	U		73	U	
PYRENE		49	J	P	71	U		73	U	

PROJ_NO: 00949	NSAMPLE	GI-SB410-0012			GI-SB410-6072			GI-SB411-0012			GI-SB411-6072		
SDG: J1123	LAB_ID	J1123-09A			J1123-10A			J1123-07A			J1123-08A		
FRACTION: PCB	SAMP_DATE	5/28/2010			5/28/2010			5/28/2010			5/28/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	94.0			96.0			93.0			93.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		8.8	U		8.6	U		8.7	U		8.7	U	
AROCLOR-1221		18	U		17	U		17	U		17	U	
AROCLOR-1232		8.8	U		8.6	U		8.7	U		8.7	U	
AROCLOR-1242		8.8	U		8.6	U		8.7	U		8.7	U	
AROCLOR-1248		8.8	U		8.6	U		8.7	U		8.7	U	
AROCLOR-1254		8.8	U		8.6	U		8.7	U		8.7	U	
AROCLOR-1260		110			82			87			8.7	U	

PROJ_NO: 00949	NSAMPLE	GI-SB412-0012			GI-SB412-0012DL			GI-SB412-144156			GI-SB412-7296		
SDG: J1123	LAB_ID	J1123-03A			J1123-03ADL			J1123-05A			J1123-04A		
FRACTION: PCB	SAMP_DATE	5/27/2010			5/27/2010			5/27/2010			5/27/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	95.0			95.0			86.0			88.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		8.7	U					9.5	U		9.2	U	
AROCLOR-1221		17	U					19	U		18	U	
AROCLOR-1232		8.7	U					9.5	U		9.2	U	
AROCLOR-1242		8.7	U					9.5	U		9.2	U	
AROCLOR-1248					1200	J	U	9.5	U		9.2	U	
AROCLOR-1254					640			9.5	U		9.2	U	
AROCLOR-1260		8.7	U					9.5	U		9.2	U	

PROJ_NO: 00949	NSAMPLE	GI-SB413-0012			GI-SB413-7296			GI-SB-DUP01-052710		
SDG: J1123	LAB_ID	J1123-01A			J1123-02A			J1123-06A		
FRACTION: PCB	SAMP_DATE	5/27/2010			5/27/2010			5/27/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			FD		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	86.0			89.0			94.0		
	DUP_OF							GI-SB413-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		9.5	U		9.1	U		8.8	U	
AROCLOR-1221		19	U		18	U		18	U	
AROCLOR-1232		9.5	U		9.1	U		8.8	U	
AROCLOR-1242		9.5	U		9.1	U		8.8	U	
AROCLOR-1248		9.5	U		9.1	U		8.8	U	
AROCLOR-1254		9.5	U		9.1	U		8.8	U	
AROCLOR-1260		9.5	U		9.1	U		8.8	U	

PROJ_NO: 00949	NSAMPLE	GI-SB406-2430						GI-SB406-4248					
SDG: J1123	LAB_ID	J1123-17A						J1123-18A					
FRACTION: PET	SAMP_DATE	6/1/2010						6/1/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	92.0			92.0			91.0			91.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2300	U					2500	U	
TOTAL PETROLEUM HYDROCARBONS		26	U					26	U				

PROJ_NO: 00949	NSAMPLE	GI-SB409-0006						GI-SB409-1218					
SDG: J1123	LAB_ID	J1123-11A						J1123-12A					
FRACTION: PET	SAMP_DATE	5/28/2010						5/28/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	91.0			91.0			93.0			93.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2300	U					2300	U	
TOTAL PETROLEUM HYDROCARBONS		52						25	U				

PROJ_NO: 00949	NSAMPLE	GI-SB409-2430						GI-SB409-4854					
SDG: J1123	LAB_ID	J1123-13A						J1123-14A					
FRACTION: PET	SAMP_DATE	5/28/2010						5/28/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	92.0			92.0			92.0			92.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2700	U					2400	U	
TOTAL PETROLEUM HYDROCARBONS		26	U					26	U				

PROJ_NO: 00949	NSAMPLE	GI-SB-DUP02-052810						GI-SB-DUP03-060110					
SDG: J1123	LAB_ID	J1123-15A						J1123-19A					
FRACTION: PET	SAMP_DATE	5/28/2010						6/1/2010					
MEDIA: SOIL	QC_TYPE	FB						FD					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	92.0			92.0			91.0			91.0		
	DUP_OF	GI-SB409-4854			GI-SB409-4854			GI-SB406-2430			GI-SB406-2430		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2600	U					2400	U	
TOTAL PETROLEUM HYDROCARBONS		26	U					26	U				

PROJ_NO: 00949	NSAMPLE	GI-SB-TB02-060110		
SDG: J1123	LAB_ID	J1123-20A		
FRACTION: PET	SAMP_DATE	6/1/2010		
MEDIA: SOIL	QC_TYPE	TB		
	UNITS	UG/KG		
	PCT_SOLIDS	100.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS		2500	U	
TOTAL PETROLEUM HYDROCARBONS				

PROJ_NO: 00949	NSAMPLE	GI-SB-TB01-052810		
SDG: J1123	LAB_ID	J1123-16A		
FRACTION: PET	SAMP_DATE	5/28/2010		
MEDIA: WATER	QC_TYPE	TB		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS		50	U	

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-08-10-3811W

Date: September 7, 2010

c: File G00949-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Ann L. Franke (no copy) AF

Subject: Tier II Inorganic Data Validation, SDG J1123
Mitkem Laboratories
CTO 458, Phase 2, Site 17, Gould Island, Naval Station Newport
Jamestown, Rhode Island

TAL Metals:
18/Soils/

GI-SB406-2430	GI-SB406-4248
GI-SB409-0006	GI-SB409-1218
GI-SB409-2430	GI-SB409-4854
GI-SB410-0012	GI-SB410-6072
GI-SB411-0012	GI-SB411-6072
GI-SB412-0012	GI-SB412-7296
GI-SB412-144156	GI-SB413-0012
GI-SB413-7296	GI-SB-DUP01-052710
GI-SB-DUP02-052810	GI-SB-DUP03-060110

(Field Duplicate pairs:
GI-SB413-0012/GI-SB-DUP01-052710
GI-SB409-4854/ GI-SB-DUP02-052810
GI-SB406-4248/GI-SB-DUP03-060110)

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the Target Analyte List (TAL) metals analytical data for the soil samples in this SDG. The samples were collected at Site 17, Gould Island from May 27 to June 1, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan (SAP) for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment, Site 17 Gould Island, Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The metals analysis was performed according to USEPA SW-846 Methods 6010C/7471B. The project specific criteria listed in the site SAP were applied for data validation of the metals data. The Tier II data validation was performed according to the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The analytical data from this SDG were evaluated based on the following parameters:

- Data Completeness
- * Holding Times
- * Calibration Verification

- Laboratory Blank Analyses
- ICP Interference Check Sample Results
- Matrix Spike Recoveries
- Laboratory Duplicate Results
- * Laboratory Control Sample Results
- Field Duplicate Precision
- ICP Serial Dilution Results
- * Percent Solids
- Reporting Limits

* All quality control criteria were met for this parameter.

Data Completeness

On June 4, 2010, the sampler Brian Geringer instructed the laboratory to change the identification listed on the chain-of-custody form for the samples received on May 28, 2010. The IDs for samples GI-S**D**409-0012 through GI-S**D**-DUP02-052810 were to be changed to GI-S**B**409-0012 through GI-S**B**-DUP02-052810.

On July 29, 2010, the laboratory resubmitted the Form XIII (Preparation Log) to add samples that were missing on the form. The laboratory also identified which of each of the two preparation logs was applicable for which samples.

On July 30, 2010, the laboratory resubmitted the Form X (Method Detection Limits) and the Form XII (ICP Linear Ranges) to include forms that were missing for one of the ICP instruments.

On August 3, 2010, at the request of TtNUS, the laboratory submitted Form Is presenting the laboratory's sample-specific Practical Quantitation Limits (PQLs) (equivalent to Limits of Quantitation [LOQs], Limits of Detection (LODs), and Method Detection Limits (MDLs) (equivalent to Detection Limits [DLs]) for all analytes, in addition to presenting the sample results. The form for sample GI-SB406-2430 incorrectly showed 0.0% solids; the laboratory resubmitted that form on August 6, 2010.

On August 3, 2010, the laboratory explained that aluminum, calcium, iron, magnesium, manganese, sodium, and potassium were not included in the matrix spike analysis because these metals are present in soil at high concentrations, which typically obscures the spike recovery. The laboratory was asked to resubmit the Form 5a (spike sample recovery) for all metals that were spiked. On August 27, 2010, the laboratory resubmitted the Form 5a for all metals except potassium and sodium, which were not spiked.

On August 6, 2010, the laboratory provided a list of the nominal (unadjusted for sample-specific preparation factors) LODs.

Laboratory Blank Analysis

The following table summarizes the levels of blank contamination detected in the laboratory blanks associated with the soil samples in this SDG:

Analyte	Maximum Concentration	Action Level*	Affected Samples
Antimony	0.993 mg/kg	5.0 mg/kg	All samples except GI-SB406-2430, GI-SB406-4248, and GI-SB-DUP03-060110
Selenium	10.3 µg/L	2.6 mg/kg	GI-SB411-0012, GI-SB413-0012

* Sample-specific action limits are adjusted for sample preparation factors.

The positive antimony results below the blank action level and above or equal to the LOD in the affected samples are changed to non-detected values (U) due to laboratory blank contamination. The positive selenium results below the blank action level and below the LOD in the affected samples are changed to non-detected values (U) at the LOD due to laboratory blank contamination.

Although antimony and selenium contamination was found in the laboratory blanks, the project sensitivity goals are not impacted since the non-detected antimony and selenium values did not exceed the project action limits for these analytes. The antimony and selenium results are usable as non-detected values at elevated reporting limits or at the LOD.

ICP Interference Check Sample Results

The following results were qualified in the affected samples due to ICP interference attributed to the high concentration of iron and/or calcium and aluminum in the samples:

Analyte	Action		Bias	Interferent	Affected Samples
	(+)	ND			
Arsenic	J		Low	Fe	All samples except GI-SB409-0006
Barium	J		Low	Fe	GI-SB-DUP03-060110
Cadmium	J	UJ	Low	Fe and/or Ca and Al	All samples except GI-SB406-2430, GI-SB406-4248, and GI-SB-DUP03-060110
Cadmium	UJ		High	Fe	GI-SB406-2430, GI-SB406-4248, GI-SB-DUP03-060110
Silver		UJ	Low	Fe	

The positive results for arsenic and barium are estimated (J), and the non-detected results for silver are estimated (UJ), in the affected samples due to negative ICP interference attributed to iron. The affected arsenic, barium, and silver results may be biased low.

The positive and non-detected cadmium results are estimated (J, UJ) in the affected samples due to negative ICP interferences attributed to iron and/or calcium and aluminum. The affected cadmium results may be biased low.

Professional judgement was used to change the positive cadmium results to estimated, non-detected results (UJ) in the affected samples because the reported concentrations may be due entirely (≥ 90%) to positive iron ICP interference. The results may be false positive.

There were negative ICP interferences attributed to the high concentration of iron that resulted in estimating the results for arsenic in all samples except GI-SB409-0006; therefore, the project accuracy goals may be impacted. The positive arsenic results in the affected samples are usable as estimated values which may be biased low.

Although there were negative ICP interferences attributed to the high concentration of iron and/or calcium and aluminum that resulted in estimating the results for barium, silver, and cadmium in the samples listed above, the project accuracy goals are not impacted since the project action limits for these analytes are much higher than the affected sample results. The positive and non-detected results for barium, silver, and cadmium in the affected samples are usable as estimated values and estimated reporting limits which may be biased low.

Although there were positive ICP interferences attributed to the high concentration of iron that resulted in raising the reporting limits for cadmium in the samples listed above, the project accuracy goals are not impacted because the project action limit for cadmium is much higher than the elevated reporting limits. The cadmium results in the affected samples are usable as estimated, non-detected values which may be false positive.

Matrix Spike Recoveries

The following table summarizes the analytes that recovered outside of the 75-125% recovery SAP QC criteria in the matrix spike (MS) analysis of sample GI-SB412-0012:

Analyte	%Recovery	Action	
		(+)	NDs
Antimony	52	J	UJ
Zinc	60	J	
Mercury	38	J	UJ

The positive and non-detected antimony, zinc, and mercury results are estimated (J, UJ) in all soil samples due to low MS recoveries.

Although the percent recovery criteria were not met for antimony, zinc, and mercury, the project accuracy goals are not impacted because the project action limits are much higher than the affected sample results. The positive and non-detected antimony, zinc, and mercury results in all soil samples are usable as estimated values and estimated reporting limits which may be biased low.

Laboratory Duplicate Results

The following table summarizes the analytes for which the relative percent difference (RPD) exceeded the 35% SAP QC criterion in the laboratory duplicate analysis of sample GI-SB412-0012:

Analyte	Sample Result	Duplicate Result	RPD	Action*	
	mg/kg	mg/kg		(+)	NDs
Sodium	376	128	98.3	J	
Mercury	0.0491	0.175	112.4	J	UJ

In addition, the absolute difference for sodium and mercury exceeded the 2x LOQ SAP QC criterion for sample results below 5x LOQ.

The positive and non-detected sodium and mercury results are qualified as estimated (J) in all soil samples due to poor laboratory duplicate precision.

Although the results of the laboratory duplicate analysis exceeded the QC limit for sodium and mercury, the project precision goals are not impacted because the project action limit for mercury is much higher than the affected sample mercury results, and because there is no project action limit established for sodium. The positive and non-detected sodium and mercury results in affected samples are usable as estimated values and estimated reporting limits for which the bias is indeterminate.

Field Duplicate Precision

The following table summarizes the analytes for which the relative percent difference (RPD) exceeded the 50% SAP QC criterion in the analysis of field duplicate pair GI-SB413-0012/GI-SB-DUP01-052710:

Analyte	Sample Result	Duplicate Result	RPD	Action*	
	mg/kg	mg/kg		(+)	NDs
Calcium	2740	9290	108.9	J	

The positive calcium results are estimated (J) in all samples due to poor field duplicate precision.

Although the results of the field duplicate analysis exceeded the QC limit for calcium, the project precision goals are not impacted since there is no project action limit established for calcium. The positive results for calcium in all samples are usable as estimated values for which the bias is indeterminate.

ICP Serial Dilution Results

The following table summarizes the analytes for which the percent difference between the initial and diluted results in the ICP serial dilution analysis of sample GI-SB412-0012 was above the 15% SAP QC criterion when the initial sample result was above 50 times the MDL:

Analyte	% Difference	Bias	Action*	
			(+)	NDs
Lead	16	Low	J	
Nickel	16	Low	J	
Zinc	18	Low	J	

The positive results for lead, nickel, and zinc in all soil samples are estimated (J). Since the initial sample result was lower than the diluted result, the affected results may be biased low.

Although a matrix suppressing effect for lead, nickel, and zinc was detected in the ICP serial dilution analysis, the project accuracy goals are not impacted since project action limits for these analytes are much higher than the affected sample results. The positive lead, nickel, and zinc results in the affected samples are usable as estimated values which may be biased low.

Reporting Limits

The laboratory reported non-detected metals results down to the LOD. The positive results below the laboratory's LOQ and above the DL are estimated (J) due to uncertainty below the LOQ.

The laboratory-specific quantitation limits (QLs) listed in SAP worksheet 15a were met by the sample-specific (adjusted for sample preparation factors) laboratory LOQs reported for this data set except for arsenic and chromium in one sample (GI-SB411-6072) due to percent moisture; calcium and iron in select samples due to dilution; and manganese and silver in select samples due to a slightly higher

nominal (unadjusted) LOQ than the QL presented in the SAP. All project action limits were achieved by the laboratory sample-specific LOQs and LODs.

As discussed above in the Laboratory Blank Analyses section, reporting limits were raised for antimony and selenium results were changed to non-detected values at the LOD in select samples due to laboratory blank contamination. Data usability is not impacted. Also, as discussed above in the ICP Interference Check Sample Results section, the reporting limit for cadmium was raised in select samples due to ICP interference attributed to iron. Data usability is not impacted.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

Metals

The project goals with respect to accuracy were met for the metals data set with the following exception. Arsenic was qualified as estimated in all samples except GI-SB409-0006 due to negative ICP interferences attributed to the high concentration of iron; results may be biased low. Additionally, barium, silver, and cadmium were qualified as estimated in select samples due to negative ICP interferences attributed to the high concentration of iron and/or calcium and aluminum; results may be biased low. Antimony, zinc, and mercury were estimated in all samples due to low matrix spike recoveries; results may be biased low. Lead, nickel, and zinc were estimated in all samples due to a sample matrix suppressing effect detected in the ICP serial dilution; the affected results may be biased low. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The project goals with respect to precision were met for the metals data set. Sodium and mercury were estimated in all samples due to poor laboratory duplicate precision. Calcium was estimated in all samples due to poor field duplicate precision. Although specific method/QC criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The project goals with respect to sensitivity were met for the metals data set with the following exceptions. The laboratory-specific quantitation limits (QLs) listed in SAP worksheet 15a were met by the sample-specific (adjusted for sample preparation factors) laboratory LOQs reported for this data set except for arsenic and chromium in one sample (GI-SB411-6072) due to percent moisture; calcium and iron in select samples due to dilution; and manganese and silver in select samples due to a slightly higher nominal (unadjusted) LOQ than the QL presented in the SAP. All project action limits were achieved by the laboratory sample-specific LOQs and LODs.

The project goals with respect to completeness were met for the metals data set. Data usability is not impacted with regards to completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-SB406-2430			GI-SB406-4248			GI-SB409-0006			GI-SB409-1218		
SDG: J1123	LAB_ID	J1123-17A			J1123-18A			J1123-11A			J1123-12A		
FRACTION: M	SAMP_DATE	6/1/2010			6/1/2010			5/28/2010			5/28/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	92.0			91.0			91.0			93.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		5660			5340			6190			9490		
ANTIMONY		0.28	UJ	D	0.21	UJ	D	2.2	UJ	AD	0.41	UJ	ADP
ARSENIC		0.93	J	K	0.81	J	K	11.4			2.1	J	K
BARIUM		14.4			10.5			27.7			31.4		
BERYLLIUM		0.12	J	P	0.12	J	P	0.44			0.3		
CADMIUM		0.15	UJ	KP	0.14	UJ	KP	0.023	UJ	K	0.019	UJ	K
CALCIUM		748	J	G	786	J	G	2030	J	G	1090	J	G
CHROMIUM		10.5			6.6			8.2			11		
COBALT		4			3.8			6.1			8.1		
COPPER		8.2			9			18.7			16.6		
IRON		15100			13100			20200			19300		
LEAD		4.8	J	I	4.5	J	I	23.2	J	I	6.5	J	I
MAGNESIUM		2150			2100			1590			3320		
MANGANESE		139			130			440			242		
MERCURY		0.023	UJ	DF	0.023	UJ	DF	0.067	J	DF	0.021	J	DFP
NICKEL		7.1	J	I	6	J	I	9.8	J	I	12.2	J	I
POTASSIUM		644			468			458			1110		
SELENIUM		1	U		0.74	U		1.1	U		0.96	U	
SILVER		0.16	UJ	K	0.12	UJ	K	0.15	U		0.17	U	
SODIUM		27.8	J	FP	25.8	J	FP	34.6	J	FP	31.2	J	FP
THALLIUM		0.4	U		0.3	U		0.46	U		0.38	U	
VANADIUM		11.7			10.4			10.8			15.1		
ZINC		19	J	DI	17.2	J	DI	67.1	J	DI	30.2	J	DI

PROJ_NO: 00949	NSAMPLE	GI-SB409-2430			GI-SB409-4854			GI-SB410-0012			GI-SB410-6072		
SDG: J1123	LAB_ID	J1123-13A			J1123-14A			J1123-09A			J1123-10A		
FRACTION: M	SAMP_DATE	5/28/2010			5/28/2010			5/28/2010			5/28/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	92.0			92.0			94.0			96.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		8060			10700			6950			6290		
ANTIMONY		0.3	UJ	ADP	0.6	UJ	ADP	0.9	UJ	AD	1.1	UJ	AD
ARSENIC		1.9	J	K	1.9	J	K	6.6	J	K	10.1	J	K
BARIUM		31.6			40.5			40.5			32.8		
BERYLLIUM		0.29			0.27			0.29			0.35		
CADMIUM		0.021	UJ	K	0.026	UJ	K	0.47	J	K	0.21	J	KP
CALCIUM		908	J	G	1100	J	G	21500	J	G	7260	J	G
CHROMIUM		11.4			14.7			10.7			9.1		
COBALT		6.7			6.3			5.1			6.3		
COPPER		14.3			15.5			20			17.9		
IRON		19000			22500			18000			22300		
LEAD		6.6	J	I	7	J	I	26.8	J	I	22.9	J	I
MAGNESIUM		3090			4200			2900			2100		
MANGANESE		186			195			331			411		
MERCURY		0.0075	J	DFP	0.0064	J	DFP	0.046	J	DF	0.031	J	DFP
NICKEL		10.1	J	I	13.2	J	I	10.3	J	I	12.5	J	I
POTASSIUM		1190			1910			511			617		
SELENIUM		1.1	U		1.3	U		1	U		1.1	U	
SILVER		0.14	U		0.15	U		0.17	U		0.17	U	
SODIUM		29.6	J	FP	43.6	J	FP	158	J	F	150	J	F
THALLIUM		0.42	U		0.52	U		0.4	U		0.43	U	
VANADIUM		16.6			19.7			10.9			10.6		
ZINC		27.3	J	DI	34.6	J	DI	76.9	J	DI	65	J	DI

PROJ_NO: 00949	NSAMPLE	GI-SB411-0012			GI-SB411-6072			GI-SB412-0012			GI-SB412-144156		
SDG: J1123	LAB_ID	J1123-07A			J1123-08A			J1123-03A			J1123-05A		
FRACTION: M	SAMP_DATE	5/28/2010			5/28/2010			5/27/2010			5/27/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	93.0			93.0			95.0			86.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		8070			8280			6520			5140		
ANTIMONY		1.5	UJ	AD	0.44	UJ	ADP	2.3	UJ	AD	0.5	UJ	ADP
ARSENIC		5.2	J	K	2.8	J	K	3.8	J	K	1.7	J	K
BARIUM		41.9			37.1			50.5			13.1		
BERYLLIUM		0.35			0.33			0.28			0.16	J	P
CADMIUM		0.25	J	K	0.027	UJ	K	1.4	J	K	0.024	UJ	K
CALCIUM		1590	J	G	1260	J	G	15100	J	G	2810	J	G
CHROMIUM		12			14			11.1			8.3		
COBALT		6.1			6.2			4			3.6		
COPPER		28.8			16.2			31.3			7.1		
IRON		22500			20500			18500			12400		
LEAD		28.7	J	I	11.6	J	I	115	J	I	7	J	I
MAGNESIUM		2560			3160			2270			2250		
MANGANESE		341			296			263			112		
MERCURY		0.097	J	DF	0.037	J	DF	0.049	J	DF	0.014	J	DFP
NICKEL		14.2	J	I	11.6	J	I	10.2	J	I	7.8	J	I
POTASSIUM		705			1390			585			654		
SELENIUM		1.2	UJ	AP	1.3	U		0.94	U		1.2	U	
SILVER		0.2	U		0.13	U		0.11	U		0.2	U	
SODIUM		168	J	F	154	J	F	376	J	F	75.1	J	F
THALLIUM		0.5	U		0.53	U		0.38	U		0.49	U	
VANADIUM		15.2			16.5			11.4			10.7		
ZINC		73.6	J	DI	46.2	J	DI	234	J	DI	24.5	J	DI

PROJ_NO: 00949	NSAMPLE	GI-SB412-7296			GI-SB413-0012			GI-SB413-7296			GI-SB-DUP01-052710		
SDG: J1123	LAB_ID	J1123-04A			J1123-01A			J1123-02A			J1123-06A		
FRACTION: M	SAMP_DATE	5/27/2010			5/27/2010			5/27/2010			5/27/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			FD		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	88.0			86.0			89.0			94.0		
	DUP_OF										GI-SB413-0012		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		7100			6730			7350			8090		
ANTIMONY		0.59	UJ	ADP	0.96	UJ	AD	0.52	UJ	ADP	0.89	UJ	AD
ARSENIC		1.8	J	K	2.4	J	K	2.1	J	K	2.7	J	K
BARIUM		23			28.5			27			48.6		
BERYLLIUM		0.22	J	P	0.21			0.16	J	P	0.23		
CADMIUM		0.022	UJ	K	0.02	UJ	K	0.021	UJ	K	0.24	J	K
CALCIUM		1160	J	G	2740	J	G	1030	J	G	9290	J	G
CHROMIUM		9.8			11.1			18.8			11.4		
COBALT		5.7			3.8			5.6			4.7		
COPPER		13.3			11.9			13.3			16.1		
IRON		16700			16000			18000			18200		
LEAD		7	J	I	10.9	J	I	7.4	J	I	16.8	J	I
MAGNESIUM		2850			2450			3570			3470		
MANGANESE		179			204			145			225		
MERCURY		0.019	J	DFP	0.036	J	DFP	0.018	J	DFP	0.024	J	DFP
NICKEL		9.9	J	I	7.7	J	I	9.8	J	I	9.8	J	I
POTASSIUM		952			808			1300			1040		
SELENIUM		1.1	U		1	UJ	AP	1	U		1.1	U	
SILVER		0.13	U		0.12	U		0.13	U		0.2	U	
SODIUM		544	J	F	199	J	F	506	J	F	344	J	F
THALLIUM		0.44	U		0.4	U		0.42	U		0.42	U	
VANADIUM		12.2			11.9			24			15.8		
ZINC		27.3	J	DI	32.8	J	DI	24.8	J	DI	49.1	J	DI

PROJ_NO: 00949	NSAMPLE	GI-SB-DUP02-052810			GI-SB-DUP03-060110		
SDG: J1123	LAB_ID	J1123-15A			J1123-19A		
FRACTION: M	SAMP_DATE	5/28/2010			6/1/2010		
MEDIA: SOIL	QC_TYPE	FD			FD		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS	92.0			91.0		
	DUP_OF	GI-SB409-4854			GI-SB406-4248		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		10100			6220		
ANTIMONY		0.47	UJ	ADP	0.28	UJ	D
ARSENIC		2.7	J	K	0.92	J	K
BARIUM		37.7			10.7	J	K
BERYLLIUM		0.3			0.1	J	P
CADMIUM		0.018	UJ	K	0.15	UJ	KP
CALCIUM		1220	J	G	862	J	G
CHROMIUM		14			8.7		
COBALT		7.2			5.5		
COPPER		17.7			11.2		
IRON		23500			15600		
LEAD		8.2	J	I	5.3	J	I
MAGNESIUM		4080			2660		
MANGANESE		208			133		
MERCURY		0.024	UJ	DF	0.023	UJ	DF
NICKEL		12.2	J	I	8.3	J	I
POTASSIUM		1910			551		
SELENIUM		0.92	U		1	U	
SILVER		0.18	U		0.16	UJ	K
SODIUM		39	J	F	24.7	J	FP
THALLIUM		0.37	U		0.4	U	
VANADIUM		19.1			15.3		
ZINC		33.7	J	DI	19.2	J	DI

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-08-10-3823W

Date: August 30, 2010

c: File G00949-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Organic Data Validation, SDG J1146
Mitkem Laboratories
CTO 458, Phase 2, Site 17, Gould Island, Naval Station Newport, Jamestown, Rhode Island

GROPAH/ExTPH:

20/Soils/	GI-SB401-0006	GI-SB401-1218
	GI-SB401-2430	GI-SB401-4248
	GI-SB402-0006	GI-SB402-1218
	GI-SB402-2430	GI-SB401-4248
	GI-SB403-0006	GI-SB403-1218
	GI-SB406-0006	GI-SB406-1218
	GI-SB407-0006	GI-SB407-1218
	GI-SB407-2430	GI-SB407-4248
	GI-SB408-0006	GI-SB408-1218
	GI-SB408-2430	GI-SB408-4248

Field Duplicate pair: GI-SB403-1218/ GI-SB-DUP04-060210 reported in SDG J1154)

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the gasoline range organic (GRO), polynuclear aromatic hydrocarbons (PAH), and total extractable petroleum hydrocarbons (ExTPH; C_9-C_{36}) analytical data for the soil samples in this SDG. The samples were collected at the Site 17, Gould Island on June 1 and 2, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment, Site 17 Gould Island, Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The PAH analysis was performed according to USEPA SW-846 Method 8270D. The GRO and ExTPH analyses were performed by the purgable and extractable organics options of USEPA SW-846 Method 8015D, respectively. The diesel range organic (DRO) is labeled as ExTPH in this data package.

The project specific criteria listed in the site SAP were applied for data validation. The PAH, GRO, and ExTPH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers,

is enclosed. The data summary table with the header which identifies the fraction as "PET" includes the GRO and ExTPH results.

The data were evaluated based on the following parameters:

	• Data Completeness
*	• Preservation and Technical Holding Times
*	• GC/MS Instrument Performance Check (Tuning)
	• Initial and Continuing Calibrations
*	• Blanks
	• Surrogate Compounds
*	• Internal Standards
*	• Matrix Spike/Matrix Spike Duplicate
*	• Laboratory Control Sample/Laboratory Control Sample Duplicate
*	• Field Duplicates
*	• Percent Solids
	• Reporting Limits

* All criteria were met for this parameter.

Data Completeness

PAHs

The Sampling and Analysis Plan (SAP) requires the use of benzo(e)pyrene-d12 as a surrogate standard. The laboratory used the Method 8270D full scan surrogates. No action taken.

On August 2, 2010 the laboratory submitted Form Is with sample specific QLs, LODs and MDLs in addition to the sample results.

GRO

Mitkem uses the LCS as initial calibration verification standard for this analysis. No action taken since LCS recoveries were within limits.

Initial and Continuing Calibrations

PAHs

The following table summarizes the PAH compounds that failed to meet the initial calibration verification recovery of 80-120%:

Compound	%R	Action		Affected Samples
		(+)	NDs	
Benzo(b)fluoranthene	124	J		GI-SB401-0006, GI-SB401-1218, GI-SB402-0006, GI-SB402-2430, GI-SB401-4248, GI-SB403-0006,

Compound	%R	Action		Affected Samples
		(+)	NDs	
Benzo(b)fluoranthene	124	J		GI-SB407-0006, GI-SB407-1218, GI-SB407-2430, GI-SB407-4248,GI-SB408-0006, GI-SB408-1218

Although the percent recovery was above the QC limits for benzo(k)fluoranthene; the project accuracy goals are not impacted since the affected sample results are much lower than the project action limits. The results for benzo(k)fluoranthene in the affected samples are usable as estimated values, which may be biased high.

Surrogate Compounds

ExTPH

The following sample had a surrogate spike recovery outside of the recovery limits:

Sample	Surrogate	% Recovery	QC Limits	Action	
				(+)	NDs
GI-SB408-4248	5a-Andtrostane	56	58-115		UJ

Although the surrogate recovery QC criteria were not met for 5a-androstane, the project accuracy goals are not impacted for the affected ExTPH result since the result is much lower than the project action limit. The non-detected ExTPH result in the affected sample is usable as an estimated quantitation limit which may be biased low.

Reporting Limits

The laboratory reported all GRO and ExTPH non-detected results down to the quantitation limit (QL). The positive PAH results below the QL and above the method detection limit (MDL) are estimated (J) due to uncertainty below the QL. (J Flags were not utilized for the GRO or ExTPH fractions).

The GRO, PAH and ExTPH results meet the QL listed in worksheet 15a of the SAP.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

GRO

The project goals with respect to accuracy, precision, sensitivity, and completeness were met for the GRO data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and completeness.

PAHs

The project goals with respect to accuracy were met for the PAH data set. The positive results for benzo(k)fluoranthene in select samples were qualified as estimated due to the high initial calibration verification recovery. Although specific method criteria were not met in this instance, data usability is not impacted and the affected positive results are usable as estimated values.

The project goals with respect to precision, sensitivity, and completeness were met for the PAH data set. Data usability was not impacted with regards to precision, sensitivity, and completeness.

ExTPH

The project goals with respect to accuracy were met for the ExTPH data set. The non-detected ExTPH result in sample GI-SB408-4248 was qualified as estimated due to the low surrogate recovery. Although specific method criteria were not met in this instance, data usability is not impacted and the affected non-detected result is usable as an estimated quantitation limit.

The project goals with respect to precision, sensitivity, and completeness were met for the ExTPH data set. Data usability was not impacted with regards to precision, sensitivity, and completeness.

Tables: Data Summary Tables
Data Validation Qualifiers and Codes

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-SB401-0006			GI-SB401-1218			GI-SB401-2430			GI-SB401-4248		
SDG: J1146	LAB_ID	J1146-11A			J1146-12A			J1146-13A			J1146-14A		
FRACTION: PAH	SAMP_DATE	6/2/2010			6/2/2010			6/2/2010			6/2/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	81.0			90.0			92.0			89.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		81	U		73	U		71	U		73	U	
ACENAPHTHENE		81	U		40	J	P	71	U		73	U	
ACENAPHTHYLENE		81	U		73	U		71	U		73	U	
ANTHRACENE		81	U		92	J	P	71	U		73	U	
BENZO(A)ANTHRACENE		160	J	P	310	J	P	71	U		73	U	
BENZO(A)PYRENE		140	J	P	190	J	P	71	U		73	U	
BENZO(B)FLUORANTHENE		170	J	P	300	J	P	71	U		73	U	
BENZO(G,H,I)PERYLENE		130	J	P	110	J	P	71	U		73	U	
BENZO(K)FLUORANTHENE		120	J	CP	110	J	CP	71	U		73	U	
CHRYSENE		190	J	P	280	J	P	71	U		73	U	
DIBENZO(A,H)ANTHRACENE		81	U		73	U		71	U		73	U	
FLUORANTHENE		300	J	P	610			71	U		73	U	
FLUORENE		81	U		42	J	P	71	U		73	U	
INDENO(1,2,3-CD)PYRENE		100	J	P	98	J	P	71	U		73	U	
NAPHTHALENE		81	U		73	U		71	U		73	U	
PHENANTHRENE		190	J	P	400			71	U		73	U	
PYRENE		310	J	P	570			71	U		73	U	

PROJ_NO: 00949	NSAMPLE	GI-SB402-0006			GI-SB402-1218			GI-SB402-2430			GI-SB402-4248		
SDG: J1146	LAB_ID	J1146-15A			J1146-16A			J1146-17A			J1146-18A		
FRACTION: PAH	SAMP_DATE	6/2/2010			6/2/2010			6/2/2010			6/2/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	83.0			90.0			86.0			88.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		78	U		72	U		76	U		75	U	
ACENAPHTHENE		78	U		72	U		76	U		200	J	P
ACENAPHTHYLENE		78	U		72	U		76	U		75	U	
ANTHRACENE		61	J	P	72	U		76	U		88	J	P
BENZO(A)ANTHRACENE		220	J	P	40	J	P	140	J	P	110	J	P
BENZO(A)PYRENE		180	J	P	72	U		110	J	P	75	U	
BENZO(B)FLUORANTHENE		240	J	P	52	J	P	130	J	P	66	J	P
BENZO(G,H,I)PERYLENE		120	J	P	72	U		50	J	P	75	U	
BENZO(K)FLUORANTHENE		170	J	CP	72	U		57	J	CP	71	J	CP
CHRYSENE		250	J	P	48	J	P	150	J	P	110	J	P
DIBENZO(A,H)ANTHRACENE		78	U		72	U		76	U		75	U	
FLUORANTHENE		430			60	J	P	280	J	P	360	J	P
FLUORENE		78	U		72	U		76	U		400		
INDENO(1,2,3-CD)PYRENE		120	J	P	72	U		47	J	P	75	U	
NAPHTHALENE		78	U		72	U		76	U		250	J	P
PHENANTHRENE		370	J	P	37	J	P	140	J	P	490		
PYRENE		480			76	J	P	260	J	P	250	J	P

PROJ_NO: 00949	NSAMPLE	GI-SB403-0006			GI-SB403-1218			GI-SB406-0006			GI-SB406-1218		
SDG: J1146	LAB_ID	J1146-19A			J1146-20A			J1146-09A			J1146-10A		
FRACTION: PAH	SAMP_DATE	6/2/2010			6/2/2010			6/1/2010			6/1/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	86.0			88.0			94.0			92.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		76	U		74	U		70	U		72	U	
ACENAPHTHENE		76	U		74	U		70	U		72	U	
ACENAPHTHYLENE		76	U		74	U		70	U		72	U	
ANTHRACENE		46	J	P	74	U		70	U		72	U	
BENZO(A)ANTHRACENE		220	J	P	74	U		36	J	P	72	U	
BENZO(A)PYRENE		170	J	P	74	U		70	U		72	U	
BENZO(B)FLUORANTHENE		220	J	P	74	U		70	U		72	U	
BENZO(G,H,I)PERYLENE		99	J	P	74	U		70	U		72	U	
BENZO(K)FLUORANTHENE		130	J	CP	74	U		70	U		72	U	
CHRYSENE		250	J	P	74	U		41	J	P	72	U	
DIBENZO(A,H)ANTHRACENE		76	U		74	U		70	U		72	U	
FLUORANTHENE		380			74	U		57	J	P	72	U	
FLUORENE		76	U		74	U		70	U		72	U	
INDENO(1,2,3-CD)PYRENE		110	J	P	74	U		70	U		72	U	
NAPHTHALENE		76	U		74	U		70	U		72	U	
PHENANTHRENE		250	J	P	74	U		40	J	P	72	U	
PYRENE		450			74	U		53	J	P	72	U	

PROJ_NO: 00949	NSAMPLE	GI-SB407-0006			GI-SB407-1218			GI-SB407-2430			GI-SB407-4248		
SDG: J1146	LAB_ID	J1146-01A			J1146-02A			J1146-03A			J1146-04A		
FRACTION: PAH	SAMP_DATE	6/1/2010			6/1/2010			6/1/2010			6/1/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	93.0			92.0			92.0			93.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		98	J	P	71	U		72	U		70	U	
ACENAPHTHENE		490			71	U		54	J	P	70	U	
ACENAPHTHYLENE		70	U		71	U		72	U		70	U	
ANTHRACENE		610			71	U		73	J	P	70	U	
BENZO(A)ANTHRACENE		1300			60	J	P	310	J	P	71	J	P
BENZO(A)PYRENE		930			42	J	P	300	J	P	47	J	P
BENZO(B)FLUORANTHENE		1200			71	U		360	J	P	65	J	P
BENZO(G,H,I)PERYLENE		580			71	U		180	J	P	70	U	
BENZO(K)FLUORANTHENE		520	J	C	36	J	CP	230	J	CP	37	J	CP
CHRYSENE		1100			56	J	P	370			70	J	P
DIBENZO(A,H)ANTHRACENE		140	J	P	71	U		72	U		70	U	
FLUORANTHENE		3100			95	J	P	630			140	J	P
FLUORENE		260	J	P	71	U		72	U		70	U	
INDENO(1,2,3-CD)PYRENE		520			71	U		150	J	P	70	U	
NAPHTHALENE		270	J	P	71	U		72	U		70	U	
PHENANTHRENE		2800			48	J	P	400			75	J	P
PYRENE		2500			90	J	P	620			110	J	P

PROJ_NO: 00949	NSAMPLE	GI-SB408-0006			GI-SB408-1218			GI-SB408-2430			GI-SB408-4248		
SDG: J1146	LAB_ID	J1146-05A			J1146-06A			J1146-07A			J1146-08A		
FRACTION: PAH	SAMP_DATE	6/1/2010			6/1/2010			6/1/2010			6/1/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	92.0			93.0			93.0			92.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		72	U		71	U		70	U		72	U	
ACENAPHTHENE		72	U		71	U		70	U		72	U	
ACENAPHTHYLENE		72	U		71	U		70	U		72	U	
ANTHRACENE		72	U		71	U		70	U		72	U	
BENZO(A)ANTHRACENE		80	J	P	72	J	P	70	U		72	U	
BENZO(A)PYRENE		94	J	P	71	U		70	U		72	U	
BENZO(B)FLUORANTHENE		120	J	P	66	J	P	70	U		72	U	
BENZO(G,H,I)PERYLENE		55	J	P	40	J	P	70	U		72	U	
BENZO(K)FLUORANTHENE		44	J	CP	39	J	CP	70	U		72	U	
CHRYSENE		91	J	P	70	J	P	70	U		72	U	
DIBENZO(A,H)ANTHRACENE		72	U		71	U		70	U		72	U	
FLUORANTHENE		120	J	P	100	J	P	70	U		72	U	
FLUORENE		72	U		71	U		70	U		72	U	
INDENO(1,2,3-CD)PYRENE		72	J	P	71	U		70	U		72	U	
NAPHTHALENE		72	U		71	U		70	U		72	U	
PHENANTHRENE		87	J	P	74	J	P	70	U		72	U	
PYRENE		140	J	P	120	J	P	70	U		72	U	

PROJ_NO: 00949	NSAMPLE	GI-SB401-0006						GI-SB401-1218					
SDG: J1146	LAB_ID	J1146-11A						J1146-12A					
FRACTION: PET	SAMP_DATE	6/2/2010						6/2/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	81.0			81.0			90.0			90.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2700	U					2200	U	
TOTAL PETROLEUM HYDROCARBONS		60						26	U				

PROJ_NO: 00949	NSAMPLE	GI-SB401-2430						GI-SB401-4248					
SDG: J1146	LAB_ID	J1146-13A						J1146-14A					
FRACTION: PET	SAMP_DATE	6/2/2010						6/2/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	92.0			92.0			89.0			89.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2100	U					2100	U	
TOTAL PETROLEUM HYDROCARBONS		25	U					27	U				

PROJ_NO: 00949	NSAMPLE	GI-SB402-0006						GI-SB402-1218					
SDG: J1146	LAB_ID	J1146-15A						J1146-16A					
FRACTION: PET	SAMP_DATE	6/2/2010						6/2/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	83.0			83.0			90.0			90.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2800	U					2400	U	
TOTAL PETROLEUM HYDROCARBONS		55						26	U				

PROJ_NO: 00949	NSAMPLE	GI-SB402-2430						GI-SB402-4248					
SDG: J1146	LAB_ID	J1146-17A						J1146-18A					
FRACTION: PET	SAMP_DATE	6/2/2010						6/2/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	86.0			86.0			88.0			88.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2400	U					9800		
TOTAL PETROLEUM HYDROCARBONS		37						1100					

PROJ_NO: 00949	NSAMPLE	GI-SB403-0006						GI-SB403-1218					
SDG: J1146	LAB_ID	J1146-19A						J1146-20A					
FRACTION: PET	SAMP_DATE	6/2/2010						6/2/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	86.0			86.0			88.0			88.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2900	U					2100	U	
TOTAL PETROLEUM HYDROCARBONS		54						27	U				

PROJ_NO: 00949	NSAMPLE	GI-SB406-0006						GI-SB406-1218					
SDG: J1146	LAB_ID	J1146-09A						J1146-10A					
FRACTION: PET	SAMP_DATE	6/1/2010						6/1/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	94.0			94.0			92.0			92.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					3300	U					3600	U	
TOTAL PETROLEUM HYDROCARBONS		25						26	U				

PROJ_NO: 00949	NSAMPLE	GI-SB407-0006						GI-SB407-1218					
SDG: J1146	LAB_ID	J1146-01A						J1146-02A					
FRACTION: PET	SAMP_DATE	6/1/2010						6/1/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	93.0			93.0			92.0			92.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2400	U					2200	U	
TOTAL PETROLEUM HYDROCARBONS		34						26	U				

PROJ_NO: 00949	NSAMPLE	GI-SB407-2430						GI-SB407-4248					
SDG: J1146	LAB_ID	J1146-03A						J1146-04A					
FRACTION: PET	SAMP_DATE	6/1/2010						6/1/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	92.0			92.0			93.0			93.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2600	U					2000	U	
TOTAL PETROLEUM HYDROCARBONS		56						25	U				

PROJ_NO: 00949	NSAMPLE	GI-SB408-0006						GI-SB408-1218					
SDG: J1146	LAB_ID	J1146-05A						J1146-06A					
FRACTION: PET	SAMP_DATE	6/1/2010						6/1/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	92.0			92.0			93.0			93.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					3500	U					2400	U	
TOTAL PETROLEUM HYDROCARBONS		45						25	U				

PROJ_NO: 00949	NSAMPLE	GI-SB408-2430						GI-SB408-4248					
SDG: J1146	LAB_ID	J1146-07A						J1146-08A					
FRACTION: PET	SAMP_DATE	6/1/2010						6/1/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	93.0			93.0			92.0			92.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2400	U					2200	U	
TOTAL PETROLEUM HYDROCARBONS		26	U					25	UJ	R			

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-09-10-3830W

Date: September 7, 2010

c: File G00949-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Ann L. Franke (no copy) ALF

Subject: Tier II Inorganic Data Validation, SDG J1146
Mitkem Laboratories
CTO 458, Phase 2, Site 17, Gould Island, Naval Station Newport
Jamestown, Rhode Island

TAL Metals:

20/Soils/	GI-SB401-0006	GI-SB401-1218
	GI-SB401-2430	GI-SB401-4248
	GI-SB402-0006	GI-SB402-1218
	GI-SB402-2430	GI-SB402-4248
	GI-SB403-0006	GI-SB403-1218
	GI-SB406-0006	GI-SB406-1218
	GI-SB407-0006	GI-SB407-1218
	GI-SB407-2430	GI-SB407-4248
	GI-SB408-0006	GI-SB408-1218
	GI-SB408-2430	GI-SB408-4248

Field Duplicate pair: GI-SB403-1218/GI-SB-DUP04-060210 (reported in SDG J1154)

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the Target Analyte List (TAL) metals analytical data for the soil samples in this SDG. The samples were collected at Site 17, Gould Island on June 1 and 2, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan (SAP) for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment, Site 17 Gould Island, Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The metals analysis was performed according to USEPA SW-846 Methods 6010C/7471B. The project specific criteria listed in the site SAP were applied for data validation of the metals data. The Tier II data validation was performed according to the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The analytical data from this SDG were evaluated based on the following parameters:

- Data Completeness
- * Holding Times
- * Calibration Verification
- Laboratory Blank Analyses

- ICP Interference Check Sample Results
- Matrix Spike Recoveries
- Laboratory Duplicate Results
- * Laboratory Control Sample Results
- * Field Duplicate Precision
- ICP Serial Dilution Results
- * Percent Solids
- Reporting Limits

* All quality control criteria were met for this parameter.

Data Completeness

On August 3, 2010, at the request of TtNUS, the laboratory submitted Form Is presenting the laboratory's sample-specific Practical Quantitation Limits (PQLs) (equivalent to Limits of Quantitation [LOQs], Limits of Detection (LODs), and Method Detection Limits (MDLs) (equivalent to Detection Limits [DLs]) for all analytes, in addition to presenting the sample results. However, the resubmitted forms presented the non-detected sample results with an associated value of the MDL. On August 27, 2010, the laboratory resubmitted the Form Is with the LOD as the associated value for non-detected results.

On August 3, 2010, the laboratory explained that aluminum, calcium, iron, magnesium, manganese, sodium, and potassium were not included in the matrix spike analysis because these metals are present in soil at high concentrations, which typically obscures the spike recovery. The laboratory was asked to resubmit the Form 5a (spike sample recovery) for all metals that were spiked. On August 27, 2010, the laboratory resubmitted the Form 5a for all metals except potassium and sodium, which were not spiked. Based on the resubmitted form, a resubmittal was needed of the Form 5b (post-digestion spike sample recovery); the laboratory provided this form on August 31, 2010.

On August 6, 2010, the laboratory provided a list of the nominal (unadjusted for sample-specific preparation factors) LODs.

Laboratory Blank Analysis

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the soil samples in this SDG:

Analyte	Maximum Concentration	Action Level*	Affected Samples
Antimony	7.0 µg/L	1.75 mg/kg	All samples except GI-SB408-0006

* Sample-specific action limits are adjusted for sample preparation factors.

The positive antimony results below the blank action level and above the LOD in the affected samples are changed to non-detected values (U) due to laboratory blank contamination.

Although antimony contamination was found in the laboratory blanks, the project sensitivity goals are not impacted since the non-detected values did not exceed the project action limit for antimony. The antimony results are usable as non-detected values at elevated reporting limits.

ICP Interference Check Sample Results

The following results were qualified in the affected samples due to ICP interference attributed to the high concentration of iron and/or aluminum in the samples:

Analyte	Action (+)	Action ND	Bias	Interferent	Affected Samples
Antimony	J		High	Fe	GI-SB401-0006, GI-SB402-0006, GI-SB402-1218, GI-SB403-0006, GI-SB406-0006, GI-SB407-2430, GI-SB408-0006, GI-SB408-1218,
	UJ			Fe and/or Al	GI-SB401-1218, GI-SB401-2430, GI-SB401-4248, GI-SB402-2430, GI-SB402-4248, GI-SB403-1218, GI-SB406-1218, GI-SB407-0006, GI-SB407-1218, GI-SB407-4248, GI-SB408-2430, GI-SB408-4248
Cadmium	J	UJ	Low	Fe and/or Al	All samples except GI-SB402-0006, GI-SB403-0006, and GI-SB403-1218
Cobalt	J		Low	Fe and/or Al	GI-SB401-0006, GI-SB403-0006, GI-SB403-1218
Selenium		UJ	Low	Fe and/or Al	All samples
Silver	J	UJ	Low	Fe and/or Al	All samples
Sodium	J		High	Fe and/or Al	All samples except GI-SB402-0006

The positive and non-detected results for cadmium, cobalt, selenium, and silver are estimated (J, UJ) in the affected samples due to negative ICP interference attributed to iron and/or aluminum. The affected cadmium, cobalt, selenium, and silver results may be biased low.

The positive results for antimony and sodium are estimated (J) in the affected samples due to positive ICP interference attributed to iron and/or aluminum. The affected antimony and sodium results may be biased high.

Professional judgement was used to change the positive antimony results to estimated, non-detected results in the affected samples because the reported concentrations may be due entirely (≥ 90%) to positive iron and/or aluminum ICP interference. The results may be false positive.

Although there were positive and negative ICP interferences attributed to the high concentration of iron and/or aluminum that resulted in estimating the results for antimony, cadmium, cobalt, selenium, silver, and sodium in the samples listed above, the project accuracy goals are not impacted because the project action limits for antimony, cadmium, selenium, and silver are much higher than the affected sample results, and because there are no project action limits established for cobalt and sodium for the soil samples. The positive and non-detected results for cadmium, cobalt, selenium, and silver in the affected samples are usable as estimated values and estimated reporting limits which may be biased low. The positive antimony and sodium results in the affected samples are usable as estimated values which may be biased high.

Although there were positive ICP interferences attributed to the high concentration of iron and/or aluminum that resulted in raising the reporting limits for antimony in the samples listed above, the project sensitivity goals are not impacted because the project action limit for antimony is much higher than the elevated reporting limits. The antimony results in the affected samples are usable as estimated, non-detected values which may be false positive.

Matrix Spike Recoveries

The following table summarizes the analytes that recovered outside of the 75-125% recovery SAP QC criteria in the matrix spike (MS) analysis of sample GI-SB407-2430:

Analyte	%Recovery	Action	
		(+)	NDs
Antimony	31	J	
Lead	209	J	
Magnesium	30	J	

The positive antimony, lead, and magnesium results are estimated (J, UJ) in all soil samples due to MS recoveries outside the QC critiera.

Although the percent recovery criteria were not met for antimony, lead, and magnesium, the project accuracy goals are not impacted because the project action limits for antimony and lead are much higher than the affected sample results and because there is no project action limit established for magnesium for the soil samples. The positive antimony, lead, and magnesium results in all soil samples are usable as estimated values; the lead results may be biased high, and the antimony and magnesium results may be biased low.

Laboratory Duplicate Results

The following table summarizes the analytes for which the relative percent difference (RPD) exceeded the 35% SAP QC criterion in the laboratory duplicate analysis of sample GI-SB407-2430:

Analyte	Sample Result	Duplicate Result	RPD	Action*	
	mg/kg	mg/kg		(+)	NDs
Copper	12.87	22.35	53.8	J	
Potassium	2242	884	86.9	J	

The positive copper and potassium results are qualified as estimated (J) in all soil samples due to poor laboratory duplicate precision.

Although the results of the laboratory duplicate analysis exceeded the QC limit for copper and potassium, the project precision goals are not impacted because the project action limit for copper is much higher than the affected sample results, and because there is no project action limit established for potassium for the soil samples. The positive and non-detected copper and potassium results in affected samples are usable as estimated values for which the bias is indeterminate.

ICP Serial Dilution Results

The following table summarizes the analytes for which the percent difference between the initial and diluted results in the ICP serial dilution analysis of sample GI-SB407-2430 was above the 15% SAP QC criterion when the initial sample result was above 50 times the MDL:

Analyte	% Difference	Bias	Action	
			(+)	NDs
Cobalt	16	Low	J	
Nickel	16	Low	J	

The positive results for cobalt and nickel in all soil samples are estimated (J). Since the initial sample result was lower than the diluted result, the affected results may be biased low.

Although a matrix suppressing effect for cobalt and nickel was detected in the ICP serial dilution analysis, the project accuracy goals are not impacted since the project action limits for these analytes are much higher than the affected sample results. The positive cobalt and nickel results in the affected samples are usable as estimated values which may be biased low.

Reporting Limits

The laboratory reported non-detected metals results down to the LOD. The positive results below the laboratory's LOQ and above the DL are estimated (J) due to uncertainty below the LOQ.

The laboratory-specific quantitation limits (QLs) listed in SAP worksheet 15a were met by the sample-specific (adjusted for sample preparation factors) laboratory LOQs reported for this data set except for iron in select samples due to dilution, and manganese and silver in select samples due to a higher nominal (unadjusted) LOQ than the QL listed in the SAP. All project action limits were achieved by the laboratory sample-specific LOQs and LODs.

As discussed above in the Laboratory Blank Analyses section, reporting limits were raised for antimony in all samples except GI-SB408-0006 due to laboratory blank contamination. Data usability is not impacted. Also, as discussed above in the ICP Interference Check Sample Results section, the reporting limit for antimony was raised in select samples due to ICP interference attributed to iron and/or aluminum. Data usability is not impacted.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

Metals

The project goals with respect to accuracy were met for the metals data set. Antimony, cadmium, cobalt, selenium, silver, and sodium were qualified as estimated in select samples due to positive or negative ICP interferences attributed to the high concentration of iron and/or aluminum; the cadmium, cobalt, selenium, and silver results may be biased low, and the antimony and sodium results may be biased high. Antimony, lead, and magnesium were estimated in all samples due to high or low matrix spike recoveries; the lead results may be biased high, and the antimony and magnesium results may be biased low. Cobalt and nickel were estimated in all samples due to a sample matrix suppressing effect detected in the ICP serial dilution; the affected results may be biased low. Although specific method/QC criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The project goals with respect to precision were met for the metals data set. Copper and potassium were estimated in all samples due to poor laboratory duplicate precision. Although specific method/QC criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The project goals with respect to sensitivity were met for the metals data set with the following exceptions. The laboratory-specific QLs listed in SAP worksheet 15a were met by the sample-specific (adjusted for sample preparation factors) laboratory LOQs reported for this data set except for iron in select samples due to dilution, and manganese and silver in select samples due to a higher nominal (unadjusted) LOQ than the QL listed in the SAP. All project action limits were achieved by the laboratory sample-specific LOQs and LODs.

The project goals with respect to completeness were met for the metals data set. Data usability is not impacted with regards to completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-SB401-0006			GI-SB401-1218			GI-SB401-2430			GI-SB401-4248		
SDG: J1146	LAB_ID	J1146-11A			J1146-12A			J1146-13A			J1146-14A		
FRACTION: M	SAMP_DATE	6/2/2010			6/2/2010			6/2/2010			6/2/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	81.0			90.0			92.0			89.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		5800			5830			6300			5040		
ANTIMONY		0.9	UJ	ADK	0.52	UJ	ADKP	0.73	UJ	ADK	0.5	UJ	ADKP
ARSENIC		2.4			1.6			1.7			1.2		
BARIUM		19.7			21.6			13.6			11.6		
BERYLLIUM		0.2			0.16	J	P	0.18	J	P	0.15	J	P
CADMIUM		0.15	J	KP	0.33	J	K	0.018	UJ	K	0.022	UJ	K
CALCIUM		1000			1070			682			667		
CHROMIUM		5.8			10.9			10.7			8.4		
COBALT		1.8	J	IKP	3.8	J	I	4.4	J	I	3.3	J	I
COPPER		5.3	J	F	11.9	J	F	15.6	J	F	9.7	J	F
IRON		10100			12500			16600			11000		
LEAD		10.6	J	D	14.9	J	D	5.8	J	D	4.8	J	D
MAGNESIUM		1240	J	D	2310	J	D	2500	J	D	1960	J	D
MANGANESE		146			159			131			105		
MERCURY		0.013	J	P	0.024	U		0.026	U		0.027	U	
NICKEL		3.6	J	I	9.9	J	I	10.9	J	I	9.1	J	I
POTASSIUM		541	J	F	823	J	F	614	J	F	509	J	F
SELENIUM		0.93	UJ	K	1.1	UJ	K	0.91	UJ	K	1.1	UJ	K
SILVER		0.15	UJ	K	0.17	UJ	K	0.14	UJ	K	0.17	UJ	K
SODIUM		40.3	J	K	30.9	J	KP	30.4	J	KP	30.5	J	KP
THALLIUM		0.37	U		0.42	U		0.36	U		0.43	U	
VANADIUM		9.2			13.2			12.9			9.4		
ZINC		44			45.7			25.9			21.8		

PROJ_NO: 00949	NSAMPLE	GI-SB402-0006			GI-SB402-1218			GI-SB402-2430			GI-SB402-4248		
SDG: J1146	LAB_ID	J1146-15A			J1146-16A			J1146-17A			J1146-18A		
FRACTION: M	SAMP_DATE	6/2/2010			6/2/2010			6/2/2010			6/2/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	83.0			90.0			86.0			88.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		3370			3610			8630			8270		
ANTIMONY		0.54	UJ	ADKP	0.48	UJ	ADKP	0.85	UJ	ADK	0.62	UJ	ADK
ARSENIC		3.3			3.7			2.4			2.5		
BARIUM		14.4			12.9			28.2			28.1		
BERYLLIUM		0.22			0.27			0.68			0.71		
CADMIUM		1.4			0.35	J	K	0.47	J	K	0.48	J	K
CALCIUM		1070			698			761			652		
CHROMIUM		5.1			3.9			10.5			9.6		
COBALT		2.3	J	I	5.3	J	I	12.3	J	I	8.1	J	I
COPPER		7.8	J	F	5.8	J	F	23.6	J	F	21.8	J	F
IRON		7440			8470			19200			15900		
LEAD		13	J	D	9	J	D	23.1	J	D	7.4	J	D
MAGNESIUM		1120	J	D	1130	J	D	3250	J	D	2540	J	D
MANGANESE		259			318			246			160		
MERCURY		0.0091	J	P	0.0065	J	P	0.028	U		0.026	U	
NICKEL		4.6	J	I	5.6	J	I	22.2	J	I	18.3	J	I
POTASSIUM		469	J	F	423	J	F	1760	J	F	598	J	F
SELENIUM		1	UJ	K	0.9	UJ	K	0.82	UJ	K	0.74	UJ	K
SILVER		0.16	UJ	K	0.14	UJ	K	0.13	UJ	K	0.12	UJ	K
SODIUM		60.2			28.8	J	KP	27	J	KP	29.2	J	KP
THALLIUM		0.28	J	P	0.58	J	P	0.3	J	P	0.3	U	
VANADIUM		6.7			5.7			18.3			12.8		
ZINC		41.3			31.2			48.7			48.7		

PROJ_NO: 00949	NSAMPLE	GI-SB403-0006			GI-SB403-1218			GI-SB406-0006			GI-SB406-1218		
SDG: J1146	LAB_ID	J1146-19A			J1146-20A			J1146-09A			J1146-10A		
FRACTION: M	SAMP_DATE	6/2/2010			6/2/2010			6/1/2010			6/1/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	86.0			88.0			94.0			92.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		6550			8280			5070			6660		
ANTIMONY		1.4	UJ	ADK	0.75	UJ	ADK	0.62	UJ	ADKP	0.73	UJ	ADKP
ARSENIC		4.1			3			2.9			2.9		
BARIUM		27.8			18.4			16.4			21.3		
BERYLLIUM		0.16	J	P	0.18			0.17	J	P	0.24		
CADMIUM		31.5			8.8			0.071	J	KP	0.02	UJ	K
CALCIUM		698			551			1000			838		
CHROMIUM		20.4			12.7			6.1			9.1		
COBALT		4.2	J	IK	3.8	J	IK	2.5	J	I	4.7	J	I
COPPER		34.3	J	F	19.3	J	F	8.1	J	F	12	J	F
IRON		22100			19600			9790			16700		
LEAD		194	J	D	12.6	J	D	7	J	D	6.2	J	D
MAGNESIUM		2630	J	D	3040	J	D	1660	J	D	2520	J	D
MANGANESE		197			148			203			178		
MERCURY		0.015	J	P	0.024	U		0.026	U		0.022	U	
NICKEL		12.5	J	I	12.2	J	I	5.2	J	I	9.7	J	I
POTASSIUM		550	J	F	698	J	F	550	J	F	785	J	F
SELENIUM		1	UJ	K	0.81	UJ	K	0.98	UJ	K	1	UJ	K
SILVER		0.1	J	KP	0.13	UJ	K	0.16	UJ	K	0.16	UJ	K
SODIUM		53.8	J	K	44.4	J	K	22.6	J	KP	26.2	J	KP
THALLIUM		0.32	J	P	0.15	J	P	0.39	U		0.41	U	
VANADIUM		21.9			15.4			8.6			12.8		
ZINC		97.3			37.7			30.3			29.8		

PROJ_NO: 00949	NSAMPLE	GI-SB407-0006			GI-SB407-1218			GI-SB407-2430			GI-SB407-4248		
SDG: J1146	LAB_ID	J1146-01A			J1146-02A			J1146-03A			J1146-04A		
FRACTION: M	SAMP_DATE	6/1/2010			6/1/2010			6/1/2010			6/1/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	93.0			92.0			92.0			93.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		6820			7200			7410			6900		
ANTIMONY		0.7	UJ	ADK	0.59	UJ	ADKP	0.88	UJ	ADKP	0.82	UJ	ADK
ARSENIC		2			2			1.4			2.1		
BARIUM		27.6			27.4			37.5			30		
BERYLLIUM		0.2			0.21			0.15	J	P	0.19	J	P
CADMIUM		0.14	J	K	0.26	J	K	0.39	J	K	0.11	J	KP
CALCIUM		1550			1120			1740			1050		
CHROMIUM		10			11.7			14.8			9.9		
COBALT		4.2	J	I	4.7	J	I	5.6	J	I	3.8	J	I
COPPER		15.9	J	F	14.3	J	F	12.9	J	F	10.9	J	F
IRON		16900			18200			17500			17200		
LEAD		19	J	D	10.7	J	D	26.7	J	D	9.2	J	D
MAGNESIUM		2640	J	D	2780	J	D	3520	J	D	2910	J	D
MANGANESE		152			154			149			145		
MERCURY		0.0068	J	P	0.022	U		0.01	J	P	0.022	U	
NICKEL		9.6	J	I	10.5	J	I	11.8	J	I	8.3	J	I
POTASSIUM		746	J	F	1190	J	F	2240	J	F	1540	J	F
SELENIUM		0.7	UJ	K	0.85	UJ	K	1.2	UJ	K	0.93	UJ	K
SILVER		0.11	UJ	K	0.14	UJ	K	0.18	UJ	K	0.15	UJ	K
SODIUM		35.5	J	K	34	J	K	47.2	J	K	39.4	J	K
THALLIUM		0.15	J	P	0.18	J	P	0.46	U		0.37	U	
VANADIUM		12.6			14.4			18			13.4		
ZINC		39.3			30.2			56.3			28		

PROJ_NO: 00949	NSAMPLE	GI-SB408-0006			GI-SB408-1218			GI-SB408-2430			GI-SB408-4248		
SDG: J1146	LAB_ID	J1146-05A			J1146-06A			J1146-07A			J1146-08A		
FRACTION: M	SAMP_DATE	6/1/2010			6/1/2010			6/1/2010			6/1/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	92.0			93.0			93.0			92.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		6210			4300			6790			5820		
ANTIMONY		1.7	J	DK	0.67	UJ	ADKP	0.65	UJ	ADKP	0.67	UJ	ADKP
ARSENIC		3.8			1.5			1.7			1.6		
BARIUM		30.3			18.7			20.7			16.9		
BERYLLIUM		0.43			0.18	J	P	0.18	J	P	0.17	J	P
CADMIUM		0.16	J	KP	0.39	J	K	0.024	UJ	K	0.018	UJ	K
CALCIUM		2150			922			961			691		
CHROMIUM		7.4			7.2			9.9			8.1		
COBALT		3.3	J	I	3.2	J	I	4.2	J	I	4.7	J	I
COPPER		13.2	J	F	10.7	J	F	11.3	J	F	11.2	J	F
IRON		16100			11200			14600			15400		
LEAD		17.7	J	D	9.7	J	D	6.5	J	D	5.8	J	D
MAGNESIUM		1480	J	D	1640	J	D	2750	J	D	2230	J	D
MANGANESE		350			120			176			129		
MERCURY		0.013	J	P	0.026	U		0.022	U		0.022	U	
NICKEL		5.5	J	I	6.3	J	I	8.5	J	I	9.8	J	I
POTASSIUM		559	J	F	457	J	F	1020	J	F	615	J	F
SELENIUM		0.94	UJ	K	1.1	UJ	K	1.2	UJ	K	0.92	UJ	K
SILVER		0.15	UJ	K	0.18	UJ	K	0.2	UJ	K	0.15	UJ	K
SODIUM		33.6	J	KP	17.4	J	KP	23.5	J	KP	17.8	J	KP
THALLIUM		0.37	U		0.44	U		0.49	U		0.37	U	
VANADIUM		11.6			9.9			11.7			10.2		
ZINC		59.1			27.6			27			20.5		

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-08-10-3824W

Date: August 30, 2010

c: File G00949-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Lucy Guzman (no copy)

Subject: Tier II Organic Data Validation, SDG J1154
Mitkem Laboratories
CTO 458, Phase 2, Site 17, Gould Island, Naval Station Newport,
Jamestown, Rhode Island

GROPAH/ExTPH:

12/Soils/	GI-SB403-2430	GI-SB403-4248
	GI-SB-DUP04-060210	GI-SB404-0006
	GI-SB404-1218	GI-SB404-2430
	GI-SB404-4248	GI-SB405-0006
	GI-SB405-1218	GI-SB405-2430
	GI-SB405-4248	GI-SB-DUP05-060310

(Field Duplicate pairs:
GI-SB403-1218 (in SDG J1146)/ GI-SB-DUP04-060110,
and GI-SB404-1218/GI-SB-DUP05-060310)

GRO:

1/Trip Blank/	GI-SB-TB03-06010

GRO/PAH/PCB/ExTPH:

3/Rinsate Blanks/	GI-SB-RB01-060310	GI-SB-RB02-060310
	GI-SB-RB03-060310	
1/Field Blank/	GI-SB-FB01-060310	

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the gasoline range organic (GRO), polynuclear aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), and total extractable petroleum hydrocarbons (ExTPH; C_9-C_{36}) analytical data for the soil samples in this SDG. The samples were collected at Site 17, Gould Island on June 2 and 3, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment, Site 17 Gould Island, Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The PAH analysis was performed according to USEPA SW-846 Method 8270D. The PCB analysis was performed according to USEPA SW-846 Method 8082A. The GRO and ExTPH analyses were performed by the purgable and extractable organics options of USEPA SW-846 Method 8015D, respectively. The diesel range organic (DRO) is labeled as ExTPH in this data package.

The project specific criteria listed in the site SAP were applied for data validation. The PAH, GRO, and ExTPH data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996. The PCB validation was performed in accordance with the Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part III, February 2004.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed. The data summary table with the header which identifies the fraction as "PET" includes the GRO and ExTPH results.

The data were evaluated based on the following parameters:

	• Data Completeness
*	• Preservation and Technical Holding Times
*	• GC/MS Instrument Performance Check (Tuning)
	• Initial and Continuing Calibrations
*	• Blanks
*	• Surrogate Compounds
*	• Internal Standards
	• Matrix Spike/Matrix Spike Duplicate
	• Laboratory Control Sample/Laboratory Control Sample Duplicate
*	• Field Duplicates
*	• Compound Identification/Quantitation
*	• Percent Solids
	• Reporting Limits

* All criteria were met for this parameter.

Data Completeness

On August 2, 2010 the laboratory submitted Form Is with sample specific QLs, LODs and MDLs in addition to the sample results.

PAHs

The Sampling and Analysis Plan requires the use of benzo(e)pyrene-d12 as a surrogate standard. The laboratory used the Method 8270D full scan surrogates. No action taken.

GRO

Mitkem uses the LCS as initial calibration verification standard for this analysis. No action taken since LCS recoveries were within limits.

Initial and Continuing Calibrations

PAHs

The following table summarizes the PAHs that failed to meet the initial calibration (IC) criterion of %RSD <20% or the continuing calibration (CC) criterion of %D <20%:

Compound	%RSD or %D	Action		Affected Samples
		(+)	NDs	
Naphthalene	24.5		UJ	All soil samples except GI-SB-DUP05-060310

Although the RSD was above the QC limits for naphthalene the project accuracy goals are not impacted since the affected sample results are much lower than the project action limits. The non-detected results for naphthalene in the affected samples are usable as estimated quantitation limits.

Matrix Spike/Matrix Spike Duplicate

PAHs

The following table summarizes the PAH matrix spiking recoveries and relative percent differences (RPDs) that did not meet the statistically derived laboratory QC limits in the matrix spike and matrix spike duplicate (MS/MSD) analyses and the qualifications which apply to sample GI-SB405-0006:

Compound	MS/MSD %REC	QC Limits %REC	Action	
			(+)	ND
Phenanthrene	-/136	50-110	J	
Anthracene	-/108	55-105	J	
Fluoranthene	-/136	55-115	J	
Pyrene	-/130	45-125	J	
Benzo(a)anthracene	-/115	50-110	J	
Chrysene	-/112	55-110	J	

-Criterion met

Although the percent recoveries for the MSD analysis of sample GI-SB405-0 did not meet criteria, project accuracy goals are not impacted since the affected sample results are much lower than the project action limits. The positive results for phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, and chrysene in sample GI-SB405-0006 are usable as estimated values which may be biased high.

Laboratory Control Samples

PAHs

The following table summarizes the compounds that failed to meet the statistically derived laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recovery QC limits:

Compound	% Rec.	% Rec. QC Limits	RPD	RPD QC Limit	Action		Affected Samples
					(+)	NDs	
Benzo(a)pyrene	31	55-110	87	40		UJ	GI-SB-RB01-060310, GI-SB-RB02-060310 GI-SB-RB03-060310 GI-SB-FB01-060310
Acenaphthylene	6	50-105	168	40		UJ	
Pyrene	-	-	42	40		UJ	
Indeno(1,2,3-cd)pyrene	-	-	43	40		UJ	
Benzo(g,h,i)perylene	-	-	62	40		UJ	

- Criterion met

Although the LCS/LCSD recovery criteria were not met for the compounds listed above, the project accuracy goals are not impacted since no project action limits are established for the field blank samples. The non-detected results for benzo(a)pyrene and acenaphthylene are usable as estimated quantitation limits.

Although the LCS/LCSD RPD criteria were not met for the compounds listed above, the project precision goals are not impacted since no project action limits are established for the field blank samples. The non-detected results for benzo(a)pyrene, acenaphthylene, pyrene, indeno(1,2,3-cd)pyrene, and benzo(g,h,i)perylene are usable as estimated quantitation limits.

Reporting Limits

The laboratory reported all PCBs, GRO and ExTPH non-detected results down to the quantitation limit (QL). The positive PAH results below the QL and above the method detection limit (MDL) are estimated (J) due to uncertainty below the QL. (J Flags were not utilized for the PCB, GRO, and ExTPH fractions).

The GRO, PAH, PCBs, and ExTPH results meet the QLs listed in worksheet 15 of the SAP.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

GRO

The project goals with respect to accuracy, precision, sensitivity, and completeness were met for the GRO data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and completeness.

PAHs

The project goals with respect to accuracy were met for the PAH data set. The non-detected results for naphthalene in affected samples are estimated due to instrument calibration variability. The positive results for phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, and chrysene are estimated in sample GI-SB405-0006 due to the high matrix spike recoveries; results may be biased high. The non-detected results for benzo(a)pyrene and acenaphthylene are estimated in the rinsate and field blank samples due to low LCS recovery. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated quantitation limits.

The project goals with respect to precision were met for the PAH data set. The non-detected results for benzo(a)pyrene, acenaphthylene, pyrene, indeno(1,2,3-cd)pyrene, and benzo(g,h,i)perylene are estimated in the rinsate and field blank samples due to exceeded RPD criteria for the LCS/LCSD analyses. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated quantitation limits.

The project goals with respect sensitivity and completeness were met for the PAH data set. Data usability was not impacted with regards to sensitivity or completeness.

PCBs

The project goals with respect to accuracy, precision, sensitivity, and completeness were met for the PCBs data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and completeness.

ExTPH

The project goals with respect to accuracy, precision, sensitivity, and completeness were met for the ExTPH data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and completeness.

Tables: Data Summary Tables
Data Validation Qualifiers and Codes

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-SB403-2430			GI-SB403-4248			GI-SB404-0006			GI-SB404-1218		
SDG: J1154	LAB_ID	J1154-01A			J1154-02A			J1154-05A			J1154-06A		
FRACTION: PAH	SAMP_DATE	6/2/2010			6/2/2010			6/3/2010			6/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	89.0			92.0			88.0			89.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		73	U		71	U		74	U		74	U	
ACENAPHTHENE		73	U		71	U		74	U		74	U	
ACENAPHTHYLENE		73	U		71	U		74	U		74	U	
ANTHRACENE		73	U		71	U		74	U		74	U	
BENZO(A)ANTHRACENE		73	U		71	U		89	J	P	74	U	
BENZO(A)PYRENE		73	U		71	U		65	J	P	74	U	
BENZO(B)FLUORANTHENE		73	U		71	U		100	J	P	74	U	
BENZO(G,H,I)PERYLENE		73	U		71	U		74	U		74	U	
BENZO(K)FLUORANTHENE		73	U		71	U		44	J	P	74	U	
CHRYSENE		73	U		71	U		110	J	P	74	U	
DIBENZO(A,H)ANTHRACENE		73	U		71	U		74	U		74	U	
FLUORANTHENE		39	J	P	71	U		170	J	P	74	U	
FLUORENE		73	U		71	U		74	U		74	U	
INDENO(1,2,3-CD)PYRENE		73	U		71	U		74	U		74	U	
NAPHTHALENE		73	UJ	C	71	UJ	C	74	UJ	C	74	UJ	C
PHENANTHRENE		73	U		71	U		86	J	P	74	U	
PYRENE		73	U		71	U		140	J	P	74	U	

PROJ_NO: 00949	NSAMPLE	GI-SB404-2430			GI-SB404-4248			GI-SB405-0006			GI-SB405-1218		
SDG: J1154	LAB_ID	J1154-07A			J1154-08A			J1154-09A			J1154-10A		
FRACTION: PAH	SAMP_DATE	6/3/2010			6/3/2010			6/3/2010			6/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	87.0			86.0			82.0			91.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		76	U		76	U		80	U		73	U	
ACENAPHTHENE		76	U		130	J	P	80	U		73	U	
ACENAPHTHYLENE		76	U		76	U		80	U		73	U	
ANTHRACENE		76	U		120	J	P	89	J	DP	73	U	
BENZO(A)ANTHRACENE		95	J	P	250	J	P	330	J	DP	73	U	
BENZO(A)PYRENE		81	J	P	190	J	P	250	J	P	73	U	
BENZO(B)FLUORANTHENE		110	J	P	230	J	P	370	J	P	73	U	
BENZO(G,H,I)PERYLENE		48	J	P	97	J	P	140	J	P	73	U	
BENZO(K)FLUORANTHENE		50	J	P	120	J	P	120	J	P	73	U	
CHRYSENE		110	J	P	230	J	P	340	J	DP	73	U	
DIBENZO(A,H)ANTHRACENE		76	U		76	U		41	J	P	73	U	
FLUORANTHENE		200	J	P	540			660	J	D	56	J	P
FLUORENE		76	U		150	J	P	80	U		73	U	
INDENO(1,2,3-CD)PYRENE		44	J	P	85	J	P	120	J	P	73	U	
NAPHTHALENE		76	UJ	C	76	UJ	C	80	UJ	C	73	UJ	C
PHENANTHRENE		120	J	P	440			410	J	D	41	J	P
PYRENE		200	J	P	440			560	J	D	48	J	P

PROJ_NO: 00949	NSAMPLE	GI-SB405-2430			GI-SB405-4248			GI-SB-DUP04-060210			GI-SB-DUP05-060310		
SDG: J1154	LAB_ID	J1154-11A			J1154-12A			J1154-03A			J1154-13A		
FRACTION: PAH	SAMP_DATE	6/3/2010			6/3/2010			6/2/2010			6/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	89.0			90.0			89.0			88.0		
	DUP_OF							GI-SB403-1218			GI-SB404-1218		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		74	U		73	U		74	U		74	U	
ACENAPHTHENE		74	U		73	U		74	U		74	U	
ACENAPHTHYLENE		74	U		73	U		74	U		74	U	
ANTHRACENE		74	U		73	U		74	U		74	U	
BENZO(A)ANTHRACENE		74	U		41	J	P	48	J	P	74	U	
BENZO(A)PYRENE		74	U		73	U		74	U		74	U	
BENZO(B)FLUORANTHENE		74	U		73	U		74	U		74	U	
BENZO(G,H,I)PERYLENE		74	U		73	U		74	U		74	U	
BENZO(K)FLUORANTHENE		74	U		73	U		74	U		74	U	
CHRYSENE		74	U		46	J	P	49	J	P	74	U	
DIBENZO(A,H)ANTHRACENE		74	U		73	U		74	U		74	U	
FLUORANTHENE		45	J	P	79	J	P	110	J	P	74	U	
FLUORENE		74	U		73	U		74	U		74	U	
INDENO(1,2,3-CD)PYRENE		74	U		73	U		74	U		74	U	
NAPHTHALENE		74	UJ	C	73	UJ	C	74	UJ	C	74	U	
PHENANTHRENE		74	U		44	J	P	78	J	P	74	U	
PYRENE		74	U		69	J	P	94	J	P	74	U	

PROJ_NO: 00949	NSAMPLE	GI-SB-FB01-060310			GI-SB-RB01-060310			GI-SB-RB02-060310			GI-SB-RB03-060310		
SDG: J1154	LAB_ID	J1154-17B			J1154-14B			J1154-15B			J1154-16B		
FRACTION: PAH	SAMP_DATE	6/3/2010			6/3/2010			6/3/2010			6/3/2010		
MEDIA: WATER	QC_TYPE	FB			RB			RB			RB		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		2	U		2	U		2	U		2	U	
ACENAPHTHENE		2	U		2	U		2	U		2	U	
ACENAPHTHYLENE		2	UJ	E	2	UJ	E	2	UJ	E	2	UJ	E
ANTHRACENE		2	U		2	U		2	U		2	U	
BENZO(A)ANTHRACENE		2	U		2	U		2	U		2	U	
BENZO(A)PYRENE		2	UJ	E	2	UJ	E	2	UJ	E	2	UJ	E
BENZO(B)FLUORANTHENE		2	U		2	U		2	U		2	U	
BENZO(G,H,I)PERYLENE		2	UJ	E	2	UJ	E	2	UJ	E	2	UJ	E
BENZO(K)FLUORANTHENE		2	U		2	U		2	U		2	U	
CHRYSENE		5	U		5	U		5	U		5	U	
DIBENZO(A,H)ANTHRACENE		2	U		2	U		2	U		2	U	
FLUORANTHENE		2	U		2	U		2	U		2	U	
FLUORENE		2	U		2	U		2	U		2	U	
INDENO(1,2,3-CD)PYRENE		2	UJ	E	2	UJ	E	2	UJ	E	2	UJ	E
NAPHTHALENE		2	U		2	U		2	U		2	U	
PHENANTHRENE		2	U		2	U		2	U		2	U	
PYRENE		2	UJ	E	2	UJ	E	2	UJ	E	2	UJ	E

PROJ_NO: 00949	NSAMPLE	GI-SB-FB01-060310			GI-SB-RB01-060310		
SDG: J1154	LAB_ID	J1154-17B			J1154-14B		
FRACTION: PCB	SAMP_DATE	6/3/2010			6/3/2010		
MEDIA: WATER	QC_TYPE	FB			RB		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.25	U		0.25	U	
AROCLOR-1221		0.5	U		0.5	U	
AROCLOR-1232		0.25	U		0.25	U	
AROCLOR-1242		0.25	U		0.25	U	
AROCLOR-1248		0.25	U		0.25	U	
AROCLOR-1254		0.25	U		0.25	U	
AROCLOR-1260		0.25	U		0.25	U	

PROJ_NO: 00949	NSAMPLE	GI-SB403-2430						GI-SB403-4248					
SDG: J1154	LAB_ID	J1154-01A						J1154-02A					
FRACTION: PET	SAMP_DATE	6/2/2010						6/2/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	89.0			89.0			92.0			92.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					3000	U					2300	U	
TOTAL PETROLEUM HYDROCARBONS		27	U					25	U				

PROJ_NO: 00949	NSAMPLE	GI-SB404-0006						GI-SB404-1218					
SDG: J1154	LAB_ID	J1154-05A						J1154-06A					
FRACTION: PET	SAMP_DATE	6/3/2010						6/3/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	88.0			88.0			89.0			89.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					3000	U					2500	U	
TOTAL PETROLEUM HYDROCARBONS		60						64					

PROJ_NO: 00949	NSAMPLE	GI-SB404-2430						GI-SB404-4248					
SDG: J1154	LAB_ID	J1154-07A						J1154-08A					
FRACTION: PET	SAMP_DATE	6/3/2010						6/3/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	87.0			87.0			86.0			86.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					13000						83000		
TOTAL PETROLEUM HYDROCARBONS		530						1200					

PROJ_NO: 00949	NSAMPLE	GI-SB405-0006						GI-SB405-1218					
SDG: J1154	LAB_ID	J1154-09A						J1154-10A					
FRACTION: PET	SAMP_DATE	6/3/2010						6/3/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	82.0			82.0			91.0			91.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					3000	U					2300	U	
TOTAL PETROLEUM HYDROCARBONS		88						26	U				

PROJ_NO: 00949	NSAMPLE	GI-SB405-2430						GI-SB405-4248					
SDG: J1154	LAB_ID	J1154-11A						J1154-12A					
FRACTION: PET	SAMP_DATE	6/3/2010						6/3/2010					
MEDIA: SOIL	QC_TYPE	NM						NM					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	89.0			89.0			90.0			90.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2500	U					2900	U	
TOTAL PETROLEUM HYDROCARBONS		32						49					

PROJ_NO: 00949	NSAMPLE	GI-SB-DUP04-060210						GI-SB-DUP05-060310					
SDG: J1154	LAB_ID	J1154-03A						J1154-13A					
FRACTION: PET	SAMP_DATE	6/2/2010						6/3/2010					
MEDIA: SOIL	QC_TYPE	FD						FD					
	UNITS	MG/KG			UG/KG			MG/KG			UG/KG		
	PCT_SOLIDS	89.0			89.0			88.0			88.0		
	DUP_OF	GI-SB403-1218			GI-SB403-1218			GI-SB404-1218			GI-SB404-1218		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					2600	U					2700	U	
TOTAL PETROLEUM HYDROCARBONS		27	U					56					

PROJ_NO: 00949	NSAMPLE	GI-SB-TB03-060210		
SDG: J1154	LAB_ID	J1154-04A		
FRACTION: PET	SAMP_DATE	6/2/2010		
MEDIA: SOIL	QC_TYPE	TB		
	UNITS	UG/KG		
	PCT_SOLIDS	100.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS		2500	U	
TOTAL PETROLEUM HYDROCARBONS				

PROJ_NO: 00949	NSAMPLE	GI-SB-FB01-060310						GI-SB-RB01-060310					
SDG: J1154	LAB_ID	J1154-17A						J1154-14A					
FRACTION: PET	SAMP_DATE	6/3/2010						6/3/2010					
MEDIA: WATER	QC_TYPE	FB						RB					
	UNITS	MG/L			UG/L			MG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					50	U					50	U	
TOTAL PETROLEUM HYDROCARBONS		0.35	U					0.35	U				

PROJ_NO: 00949	NSAMPLE	GI-SB-RB02-060310						GI-SB-RB03-060310					
SDG: J1154	LAB_ID	J1154-15A						J1154-16A					
FRACTION: PET	SAMP_DATE	6/3/2010						6/3/2010					
MEDIA: WATER	QC_TYPE	RB						RB					
	UNITS	MG/L			UG/L			MG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
GASOLINE RANGE ORGANICS					50	U					50	U	
TOTAL PETROLEUM HYDROCARBONS		0.35	U					0.35	U				

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-09-10-3831W

Date: September 7, 2010

c: File G00949-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Ann L. Franke (no copy) ALF

Subject: Tier II Inorganic Data Validation, SDG J1154
Mitkem Laboratories
CTO 458, Phase 2, Site 17, Gould Island, Naval Station Newport
Jamestown, Rhode Island

TAL Metals:

12/Soils/	GI-SB403-2430	GI-SB403-4248
	GI-SB404-0006	GI-SB404-1218
	GI-SB404-2430	GI-SB404-4248
	GI-SB405-0006	GI-SB405-1218
	GI-SB405-2430	GI-SB405-4248
	GI-SB-DUP04-060210	GI-SB-DUP05-060310
	(Field Duplicate pairs: GI-SB403-1218 (in SDG J1146)/ GI-SB-DUP04-060210 and GI-SB404-1218/GI-SB-DUP05-060310)	
3/Rinsate Blanks/	GI-SB-RB01-060310	GI-SB-RB02-060310
	GI-SB-RB03-060310	
1/Field Blank/	GI-SB-FB01-060310	

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the Target Analyte List (TAL) metals analytical data for the soil samples in this SDG. The samples were collected at Site 17, Gould Island on June 2 and 3, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan (SAP) for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment, Site 17 Gould Island, Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The metals analysis was performed according to USEPA SW-846 Methods 6010C/7470A/7471B. The project specific criteria listed in the site SAP were applied for data validation of the metals data. The Tier II data validation was performed according to the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The analytical data from this SDG were evaluated based on the following parameters:

- Data Completeness

*	•	Holding Times
*	•	Calibration Verification
	•	Laboratory Blank Analyses
	•	ICP Interference Check Sample Results
	•	Matrix Spike Recoveries
*	•	Laboratory Duplicate Results
*	•	Laboratory Control Sample Results
*	•	Field Duplicate Precision
	•	ICP Serial Dilution Results
*	•	Percent Solids
	•	Reporting Limits

* All quality control criteria were met for this parameter.

Data Completeness

On August 3, 2010, at the request of TtNUS, the laboratory submitted Form Is presenting the laboratory's sample-specific Practical Quantitation Limits (PQLs) (equivalent to Limits of Quantitation [LOQs], Limits of Detection (LODs), and Method Detection Limits (MDLs) (equivalent to Detection Limits [DLs]) for all analytes, in addition to presenting the sample results. However, the resubmitted forms presented the non-detected sample results with an associated value of the MDL. On August 27, 2010, the laboratory resubmitted the Form Is with the LOD as the associated value for non-detected results.

On August 3, 2010, the laboratory explained that aluminum, calcium, iron, magnesium, manganese, sodium, and potassium were not included in the matrix spike analysis because these metals are present in soil at high concentrations, which typically obscures the spike recovery. The laboratory was asked to resubmit the Form 5a (spike sample recovery) for all metals that were spiked. On August 27, 2010, the laboratory resubmitted the Form 5a for all metals except potassium and sodium, which were not spiked. Based on the resubmitted form, a resubmittal was needed of the Form 5b (post-digestion spike sample recovery); the laboratory provided this form on August 31, 2010. The antimony result on the resubmitted Form 5a was incorrect. On September 7, 2010, the laboratory resubmitted the corrected form.

On August 6, 2010, the laboratory provided a list of the nominal (unadjusted for sample-specific preparation factors) LODs.

Laboratory Blank Analysis

The field and rinsate blank samples are used for informational purposes and were not used to establish blank action levels for the soil samples.

Aqueous

The following table summarizes the maximum levels of laboratory blank contamination and blank action levels associated with the aqueous field and rinsate blank samples in this SDG:

Analyte	Maximum Concentration	Action Level*	Affected Samples
Aluminum	22.5	112	GI-SB-RB01-060310, GI-SB-RB02-060310, GI-SB-RB03-060310
Antimony	5.5	27.5	GI-SB-RB01-060310
Beryllium	0.054	0.27	GI-SB-RB02-060310
Calcium	136	680	GI-SB-RB01-060310, GI-SB-RB02-060310, GI-SB-RB03-060310
Cobalt	1.3	6.5	All water samples
Copper	5.04	25.2	GI-SB-RB01-060310
Nickel	7.0	35	GI-SB-RB01-060310, GI-SB-RB02-060310
Potassium	59.8	299	GI-SB-RB02-060310, GI-SB-RB03-060310
Sodium	92.9	465	All water samples
Vanadium	0.57	2.8	GI-SB-FB01-060310, GI-SB-RB02-060310
Zinc	11.5	57.4	All water samples

The positive sodium and zinc results below the blank action level and above the LOD in the affected samples are changed to non-detected values (U) due to laboratory blank contamination.

The positive results below the blank action level and below the LOD for aluminum, antimony, beryllium, calcium, cobalt, copper, nickel, potassium, and vanadium in the affected samples are changed to non-detected values (U) at the LOD due to laboratory blank contamination.

Although aluminum, antimony, beryllium, calcium, cobalt, copper, nickel, potassium, sodium, vanadium, and zinc contamination was found in the laboratory blanks, the project sensitivity goals are not impacted since there are no project action limits established for the field and rinsate blank samples. The sodium and zinc results are usable as non-detected values at elevated reporting limits; and the aluminum, antimony, beryllium, calcium, cobalt, copper, nickel, potassium, and vanadium results are usable as non-detected values at the LOD.

Soil

The following table summarizes the maximum levels of laboratory blank contamination and blank action levels associated with the soil samples in this SDG:

Analyte	Maximum Concentration	Action Level*	Affected Samples
Antimony	7.4 µg/L	1.85 mg/kg	GI-SB404-0006, GI-SB404-2430, GI-SB404-4248, GI-SB405-0006, GI-SB405-2430, GI-SB405-4248

* Sample-specific action limits are adjusted for sample preparation factors.

The positive antimony results below the blank action level and above the LOD in the affected samples are changed to non-detected values (U) due to laboratory blank contamination. The positive antimony results below the blank action level and below the LOD in the affected samples are changed to non-detected values (U) at the LOD due to laboratory blank contamination.

Although antimony contamination was found in the laboratory blanks, the project sensitivity goals are not impacted since the non-detected antimony values are below the project action limit for the soil samples. The antimony results are usable as non-detected values at elevated reporting limits or at the LOD.

ICP Interference Check Sample Results

The following results were qualified in the affected samples due to ICP interference attributed to the high concentration of iron in the samples:

Analyte	Action		Bias	Interferent	Affected Samples
	(+)	ND			
Antimony	J	UJ	Low	Fe	All soil samples
Arsenic	J		Low	Fe	All soil samples
Cadmium	J		High	Fe	GI-SB403-4248, GI-SB404-0006, GI-SB405-1218, GI-SB-DUP05-060310
Cobalt	J		Low	Fe	GI-SB403-2430, GI-SB403-4248, GI-SB404-0006, GI-SB404-1218, GI-SB-DUP04-060210, GI-SB-DUP05-060310
Silver	J	UJ	Low	Fe	All soil samples
Sodium	J		High	Fe	All soil samples except GI-SB404-2430

The positive and non-detected results for antimony, arsenic, cobalt, and silver are estimated (J, UJ) in the affected samples due to negative ICP interference attributed to iron. The affected antimony, arsenic, cobalt, and silver results may be biased low.

The positive results for cadmium and sodium are estimated (J) in the affected samples due to positive ICP interference attributed to iron. The affected cadmium and sodium results may be biased high.

Although there were positive and negative ICP interferences attributed to the high concentration of iron that resulted in estimating the results for antimony, arsenic, cadmium, cobalt, silver, and sodium in the samples listed above, the project accuracy goals are not impacted because the project action limits for antimony, arsenic, cadmium, and silver are much higher than the affected sample results, and because there are no project action limits established for cobalt and sodium for the soil samples. The positive and non-detected results for antimony, arsenic, cobalt, and silver in the affected samples are usable as estimated values and estimated reporting limits which may be biased low. The positive cadmium and sodium results in the affected samples are usable as estimated values which may be biased high.

Matrix Spike Recoveries

The following table summarizes the analytes that recovered outside of the 75-125% recovery SAP QC criteria in the matrix spike (MS) analysis of sample GI-SB405-0006:

Analyte	%Recovery	Action	
		(+)	NDs
Antimony	38	J	UJ

The positive antimony results are estimated (J, UJ) in all soil samples due to low MS recoveries.

Although the percent recovery criteria were not met for antimony, the project accuracy goals are not impacted because the project action limit for antimony is much higher than the affected sample results. The positive and non-detected antimony results in all soil samples are usable as estimated values; the results may be biased low.

ICP Serial Dilution Results

The following table summarizes the analytes for which the percent difference between the initial and diluted results in the ICP serial dilution analysis of sample GI-SB405-0006 was above the 15% SAP QC criterion when the initial sample result was above 50 times the MDL:

Analyte	% Difference	Bias	Action	
			(+)	NDs
Barium	20	Low	J	
Beryllium	43	Low	J	
Cobalt	18	Low	J	

The positive results for barium, beryllium, and cobalt in all soil samples are estimated (J). Since the initial sample result was lower than the diluted result, the affected results may be biased low.

Although a matrix suppressing effect for barium, beryllium, and cobalt was detected in the ICP serial dilution analysis, the project accuracy goals are not impacted since the project action limits for barium and beryllium are much higher than the affected sample results and there is no project action limit for cobalt for the soil samples. The positive barium, beryllium, and cobalt results in the affected samples are usable as estimated values which may be biased low.

Reporting Limits

The laboratory reported non-detected metals results down to the LOD. The positive results below the laboratory's LOQ and above the DL are estimated (J) due to uncertainty below the LOQ.

The laboratory-specific quantitation limits (QLs) listed in SAP worksheet 15a were met by the sample-specific (adjusted for sample preparation factors) laboratory LOQs reported for this data set except for iron in select samples due to dilution, and manganese and silver in select samples due to a higher nominal (unadjusted) LOQ than the QL listed in the SAP. All project action limits were achieved by the laboratory sample-specific LOQs and LODs.

As discussed above in the Laboratory Blank Analyses section, reporting limits for antimony were raised or changed to non-detected values at the LOD in select soil samples due to laboratory blank contamination. Reporting limits for select metals were raised or changed to non-detected values at the LOD in select aqueous samples due to laboratory blank contamination. Data usability is not impacted.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

Metals

The project goals with respect to accuracy were met for the metals data set. Antimony, arsenic, cadmium, cobalt, silver, and sodium were qualified as estimated in select soil samples due to positive or negative ICP interferences attributed to the high concentration of iron; the antimony, arsenic, cobalt, and silver

results may be biased low, and the cadmium and sodium results may be biased high. Antimony was estimated in all soil samples due to a low matrix spike recovery; the results may be biased low. Barium, beryllium, and cobalt were estimated in all soil samples due to a sample matrix suppressing effect detected in the ICP serial dilution; the affected results may be biased low. Although specific method/QC criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The laboratory-specific quantitation limits (QLs) listed in SAP worksheet 15a were met by the sample-specific (adjusted for sample preparation factors) laboratory LOQs reported for this data set except for iron in select samples due to dilution, and manganese and silver in select samples due to a higher nominal (unadjusted) LOQ than the QL listed in the SAP. All project action limits were achieved by the laboratory sample-specific LOQs and LODs.

The project goals with respect to precision and completeness were met for the metals data set. Data usability is not impacted with regards to precision and completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-SB403-2430			GI-SB403-4248			GI-SB404-0006			GI-SB404-1218		
SDG: J1154	LAB_ID	J1154-01A			J1154-02A			J1154-05A			J1154-06A		
FRACTION: M	SAMP_DATE	6/2/2010			6/2/2010			6/3/2010			6/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	89.0			92.0			88.0			89.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		6880			6060			5650			6880		
ANTIMONY		0.28	UJ	DK	0.23	UJ	DK	0.25	UJ	ADKP	0.33	UJ	DK
ARSENIC		0.71	J	KP	0.57	J	KP	1.9	J	K	1.3	J	K
BARIUM		15.1	J	I	13	J	I	21.9	J	I	20.8	J	I
BERYLLIUM		0.18	J	IP	0.12	J	IP	0.21	J	I	0.2	J	IP
CADMIUM		2.7			0.73	J	K	0.63	J	K	1.7		
CALCIUM		400			510			362			443		
CHROMIUM		9.6			8			11.4			13.2		
COBALT		3.9	J	IK	3.4	J	IK	3.3	J	IK	3.9	J	IK
COPPER		19.7			14.8			30.7			43		
IRON		17100			14000			14400			16800		
LEAD		11.1			5.4			84.5			88.2		
MAGNESIUM		2570			2450			2160			2530		
MANGANESE		129			116			96.1			111		
MERCURY		0.024	U		0.024	U		0.023	J	P	0.024	J	P
NICKEL		9.9			8			9.1			11.4		
POTASSIUM		633			807			533			550		
SELENIUM		1	U		0.83	U		0.9	U		1.2	U	
SILVER		0.16	UJ	K	0.13	UJ	K	0.14	UJ	K	0.19	UJ	K
SODIUM		31.2	J	KP	28.1	J	KP	33	J	KP	26.7	J	KP
THALLIUM		0.4	U		0.33	U		0.36	U		0.46	U	
VANADIUM		11.6			10.4			12.6			12.7		
ZINC		26.5			21.5			22			31.9		

PROJ_NO: 00949	NSAMPLE	GI-SB404-2430			GI-SB404-4248			GI-SB405-0006			GI-SB405-1218		
SDG: J1154	LAB_ID	J1154-07A			J1154-08A			J1154-09A			J1154-10A		
FRACTION: M	SAMP_DATE	6/3/2010			6/3/2010			6/3/2010			6/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	87.0			86.0			82.0			91.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		4900			8780			5800			6200		
ANTIMONY		0.84	UJ	ADK	0.8	UJ	ADKP	0.28	UJ	ADKP	0.33	UJ	DK
ARSENIC		2	J	K	2.1	J	K	2.1	J	K	0.87	J	KP
BARIUM		21.6	J	I	26.1	J	I	22.1	J	I	22.2	J	I
BERYLLIUM		0.26	J	I	0.34	J	I	0.19	J	IP	0.15	J	IP
CADMIUM		6.8			22.6			2.1			0.78	J	K
CALCIUM		580			484			653			515		
CHROMIUM		9.5			22.6			10.7			8.7		
COBALT		6.4	J	I	8.3	J	I	4.9	J	I	4.7	J	I
COPPER		70.3			84.8			28.5			14.7		
IRON		8830			20500			15500			14000		
LEAD		43.2			111			41.2			9.3		
MAGNESIUM		1810			3700			2190			2490		
MANGANESE		103			179			116			135		
MERCURY		0.031	J	P	0.086			0.022	J	P	0.022	U	
NICKEL		13.1			18.3			11.5			8.7		
POTASSIUM		432			597			603			735		
SELENIUM		0.63	J	P	1.1	U		1	U		1.2	U	
SILVER		0.15	UJ	K	0.17	UJ	K	0.16	UJ	K	0.19	UJ	K
SODIUM		61.7		K	35.9	J	KP	54.7	J	K	23.1	J	KP
THALLIUM		0.39	U		0.44	U		0.4	U		0.47	U	
VANADIUM		10.8			15			17.2			13		
ZINC		36.4			99			37.2			32.8		

PROJ_NO: 00949	NSAMPLE	GI-SB405-2430			GI-SB405-4248			GI-SB-DUP04-060210			GI-SB-DUP05-060310		
SDG: J1154	LAB_ID	J1154-11A			J1154-12A			J1154-03A			J1154-13A		
FRACTION: M	SAMP_DATE	6/3/2010			6/3/2010			6/2/2010			6/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			FD			FD		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	89.0			90.0			89.0			88.0		
	DUP_OF							GI-SB403-1218			GI-SB404-1218		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		5020			7340			7170			7310		
ANTIMONY		0.2	UJ	ADKP	0.3	UJ	ADKP	0.24	UJ	DK	0.21	UJ	DK
ARSENIC		0.85	J	K	1.1	J	K	1.9	J	K	1.8	J	K
BARIUM		16.6	J	I	26.8	J	I	16.8	J	I	24.6	J	I
BERYLLIUM		0.14	J	IP	0.22	J	IP	0.15	J	IP	0.22	J	I
CADMIUM		5.3			12.6			7.2			1.7	J	K
CALCIUM		369			659			445			352		
CHROMIUM		8			13.9			10.6			12.8		
COBALT		3.5	J	I	7.4	J	I	4.3	J	IK	3.8	J	IK
COPPER		14.9			50.4			18.3			50.2		
IRON		13000			18200			17600			17300		
LEAD		13			55.1			13.4			89.5		
MAGNESIUM		2080			2890			2630			2480		
MANGANESE		87.6			132			144			110		
MERCURY		0.025	U		0.009	J	P	0.022	U		0.031	J	P
NICKEL		7.3			14.4			11.4			11.6		
POTASSIUM		702			946			600			586		
SELENIUM		0.73	U		1.1	U		0.87	U		0.74	U	
SILVER		0.12	UJ	K	0.079	J	KP	0.14	UJ	K	0.12	UJ	K
SODIUM		20.9	J	KP	27.7	J	KP	40	J	K	27.3	J	KP
THALLIUM		0.29	U		0.43	U		0.35	U		0.3	U	
VANADIUM		11.5			16.4			14.2			12.9		
ZINC		22.9			45.1			32.5			33.5		

PROJ_NO: 00949	NSAMPLE	GI-SB-FB01-060310			GI-SB-RB01-060310			GI-SB-RB02-060310			GI-SB-RB03-060310		
SDG: J1154	LAB_ID	J1154-17C			J1154-14C			J1154-15C			J1154-16C		
FRACTION: M	SAMP_DATE	6/3/2010			6/3/2010			6/3/2010			6/3/2010		
MEDIA: WATER	QC_TYPE	FB			RB			RB			RB		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		30	U		30	UJ	AP	30	UJ	AP	30	UJ	AP
ANTIMONY		10	U		10	UJ	AP	10	U		10	U	
ARSENIC		6	U		6	U		6	U		6	U	
BARIUM		6	U		6	U		6	U		6	U	
BERYLLIUM		0.1	U		0.1	U		0.1	UJ	AP	0.1	U	
CADMIUM		1	U		1	U		1	U		1	U	
CALCIUM		200	U		200	UJ	AP	200	UJ	AP	200	UJ	AP
CHROMIUM		1	U		1	U		1	U		0.72	J	P
COBALT		1.5	UJ	AP	1.5	UJ	AP	1.5	UJ	AP	1.5	UJ	AP
COPPER		10	U		10	UJ	AP	10	U		10	U	
IRON		100	U		95	J	P	159	J	P	198	J	P
LEAD		4	U		4	U		4	U		4	U	
MAGNESIUM		100	U		100	U		100	U		100	U	
MANGANESE		8	U		8	U		4.8	J	P	6.3	J	P
MERCURY		0.05	U		0.05	U		0.05	U		0.05	U	
NICKEL		1	U		1	UJ	AP	1	UJ	AP	1	U	
POTASSIUM		100	U		100	U		100	UJ	AP	100	UJ	AP
SELENIUM		20	U		20	U		20	U		20	U	
SILVER		4	U		4	U		4	U		4	U	
SODIUM		144	UJ	AP	107	UJ	AP	118	UJ	AP	117	UJ	AP
THALLIUM		10	U		10	U		10	U		10	U	
VANADIUM		1	UJ	AP	1	U		1	UJ	AP	1	U	
ZINC		15.9	UJ	AP	19.5	UJ	AP	16.9	UJ	AP	15.6	UJ	AP

E-2 SEDIMENT DATA VALIDATION MEMORANDA

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-08-10-3800W

Date: August 17, 2010

c: File G00949-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG R1002348
Columbia Analytical Services
CTO 458, Phase 2, Site 17, Gould Island, Naval Station Newport,
Jamestown, Rhode Island

PAH/PCB Homologues/TOC:

20/Sediments/	GI-SD501-0006	GI-SD502-0006
	GI-SD503-0006	GI-SD504-0006
	GI-SD507-0006	GI-SD508-0006
	GI-SD509-0006	GI-SD510-0006
	GI-SD511-0006	GI-SD514-0006
	GI-SD515-0006	GI-SD518-0006
	GI-SD524-0006	GI-SD525-0006
	GI-SD526-0006	GI-SD527-0006
	GI-SD532-0006	GI-SD566-0006
	GI-SD-DUP01-043010	GI-SD-DUP02-050310

(Field Duplicate pairs: GI-SD509-0006/GI-SD-DUP01-043010, GI-SD508-0006/GI-SD-DUP02-050310)

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbons (PAH), polychlorinated biphenyl (PCB) homologues, and total organic carbon (TOC) analytical data for the soil samples in this SDG. The samples were collected from Site 17, Gould Island from April 30, 2010 through May 3, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment at Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The PAH analysis was performed according to USEPA SW-846 Method 8270. The PCB homologue analysis was performed according to USEPA Method 680. The TOC analysis was performed according to the Lloyd Kahn method.

The project specific criteria listed in the site SAP were applied for data validation. The PAH, PCB homologue, and TOC data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

	• Data Completeness
	• Preservation and Technical Holding Times
*	• GC/MS Instrument Performance Check (Tuning)
*	• Initial and Continuing Calibrations
	• Blanks
	• Surrogate Compounds
	• Internal Standards
	• Matrix Spike/Matrix Spike Duplicate
*	• Laboratory Control Sample/Laboratory Control Sample Duplicate
	• Field Duplicates
NA	• Compound Identification/Quantitation
*	• Percent Solids
	• Reporting Limits

* All criteria were met for this parameter.
NA Not Applicable for Tier II

Data Completeness

On August 16, 2010 the laboratory provided the limits of detection (LOD) summary since this was missing from the original submission of the data package.

PAH

On August 13, 2010 the laboratory provided another copy of the EDD to compare to the Form 1s for clarification. The Form 1s were compared to the EDD and found to match the provided EDD. The minor discrepancies that occurred in the original production of the data summary tables were corrected during data validation.

Preservation and Technical Holding Times

PAH

Several samples were re-extracted and re-analyzed since one or more surrogates recovered below the lower QC limit in the original analysis. The surrogate recoveries were improved in the re-extracts for most samples; however, professional judgment was used to report the original analysis, with a few exceptions, since the positive PAH results in the original analyses were higher than those in the re-extracts. However, the positive PAH results for the re-analysis of samples GI-SD510-0006(RE), GI-SD515-0006(RE), GI-SD525-0006(RE), and GI-SD566-0006(RE) were higher than those in the original analyses; therefore, the re-analyses were reported. Since samples GI-SD510-0006(RE), GI-SD515-0006(RE), GI-SD525-0006(RE), and GI-SD566-0006(RE) were extracted 12 days beyond the 14-day extraction holding time criterion, the PAH results in these samples were qualified as estimated (J, UJ).

The extraction holding time criterion was not met for samples GI-SD510-0006(RE), GI-SD515-0006(RE), GI-SD525-0006(RE), and GI-SD566-0006(RE); therefore, the project accuracy goals may be impacted.

The positive and non-detected results in the affected samples are usable as estimated values which may be biased low.

Blanks

PAH

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the sediment samples in this SDG:

Compound	Maximum Conc. (µg/Kg)	Action Level* (µg/Kg)	Affected Samples
2-Methylnapthalene	0.67	3.35	GI-SD502-0006, GI-SD504-0006, GI-SD507-0006, GI-SD508-0006, GI-SD509-0006, GI-SD510-0006, GI-SD511-0006, GI-SD514-0006, GI-SD518-0006, GI-SD524-0006, GI-SD525-0006, GI-SD526-0006, GI-SD527-0006
Naphthalene	1.7	8.5	GI-SD502-0006, GI-SD504-0006, GI-SD508-0006, GI-SD509-0006, GI-SD511-0006, GI-SD514-0006, GI-SD518-0006, GI-SD524-0006, GI-SD525-0006, GI-SD526-0006, GI-SD527-0006, GI-SD-DUP01-043010, GI-SD-DUP02-050310
Phenanthrene	2.7	13.5	GI-SD526-0006
*Action levels are adjusted for each sample preparation factors.			

The positive 2-methylnaphthalene, naphthalene, and phenanthrene results below the blank action levels are changed to non-detected values (U) at the sample result due to laboratory blank contamination.

2-Methylnaphthalene and naphthalene contamination was found in the laboratory blank; therefore, project sensitivity goals may be impacted since the non-detected results exceeded the project action limits. These results are usable as non-detected values.

Although phenanthrene contamination was found in the laboratory blank; the project sensitivity goals is not impacted since the non-detected phenanthrene result in sample GI-SD526-0006 is below the project action limits. These results are usable as non-detected values.

PCB Homologues

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the sediment samples in this SDG:

Compound	Maximum Conc. (µg/Kg)	Action Level* (µg/Kg)	Affected Samples
Pentachlorobiphenyls	1.7	8.5	GI-SD502-0006, GI-SD504-0006, GI-SD509-0006, GI-SD510-0006, GI-SD515-0006, GI-SD518-0006, GI-SD527-0006, GI-SD532-0006, GI-SD566-0006
Dichlorobiphenyls	0.43	2.15	GI-SD511-0006

*Action levels are adjusted for each sample preparation factors.

The positive pentachlorobiphenyl and dichlorobiphenyl results below the blank action levels are changed to non-detected values (U) at the sample result due to laboratory blank contamination.

Pentachlorobiphenyl and dichlorobiphenyl contamination was found in the laboratory blank; therefore, project sensitivity goals may be impacted since the non-detected results exceeded the project action limits. These results are usable as non-detected results.

Surrogate Compounds

PAH

The following samples had surrogate spike recoveries outside of the recovery limits:

Sample	Surrogate	% Recovery	QC Limits	Action	
				(+)	NDs
GI-SD514-0006	Nitrobenzene-d_5	30	35-100	J	
	2-Fluorobiphenyl	15	45-105		
GI-SD507-0006	Nitrobenzene-d_5	30	35-100	J	
	2-Fluorobiphenyl	25	45-105		
GI-SD-DUP01-043010	Nitrobenzene-d_5	32	35-100	J	
	2-Fluorobiphenyl	29	45-105		

The surrogate recovery QC criteria were not met for nitrobenzene-d_5 and 2-fluorobiphenyl; therefore, the project accuracy goals may be impacted. The positive PAH results in the affected samples are usable as estimated values which may be biased low.

Internal Standards

PCB Homologues

The following samples had internal standard areas outside the QC criteria:

Sample	Internal standard*	IS response	QC Limits	Action	
				(+)	NDs
GI-SD502-0006	Chrysene-d_{12}	352658	118517-335764	J	
GI-SD511-0006		305128	105486-301390	J	
GI-SD501-0006		370216	125756-359304	J	
*Chrysene-d_{12} is associated with all PCB homologues.					

The internal standard area QC criteria were not met for chrysene-d_{12}; therefore, the project accuracy goals may be impacted. All affected positive PCB homologues results in samples GI-SD502-0006, GI-SD511-0006, and GI-SD501-0006 are usable as estimated values.

Matrix Spike/Matrix Spike Duplicate

PAH

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed on samples GI-SD514-0006 and GI-SD-DUP02-050310. For sample GI-SD514-0006, the majority of the spiked target compounds were below the statistically derived laboratory recovery QC limits; therefore, professional judgment was used to qualify the PAH results (all positive values) for sample GI-SD514-0006. All positive PAH results in sample GI-SD514-0006 results in this sample were qualified as estimated (J).
The MS/MSD recovery criteria were not met for the majority of the PAH target compounds; therefore, the project accuracy goals may be impacted. The positive PAH results in sample GI-SD514-0006 are usable as estimated values that may be biased low.

Additionally, the majority of the spiked target compounds exceeded the statistically derived laboratory relative percent difference (RPD) QC limits; therefore, professional judgment was used to qualify all positive PAH results for sample GI-SD514-0006. All positive PAH results in sample GI-SD514-0006 results in this sample were qualified as estimated (J).

The MS/MSD RPD criteria were not met for the majority of the PAH target compounds; therefore, the project precision goals may be impacted. The positive PAH results in sample GI-SD514-0006 are usable as estimated values.

The following table summarizes the PAH matrix spiking recoveries and RPDs that did not meet the statistically derived laboratory QC limits in the matrix spike and matrix spike duplicate (MS/MSD) analysis and the qualifications applied to sample GI-SD-DUP02-050310:

Compound	MS/MSD %REC	MS/MSD RPD	QC Limits		Action	
			%REC	RPD	(+)	ND
Anthracene	-/127	-	55-105	30	J	
Benzo(a)anthracene	-/180	34	50-110	30	J	
Benzo(a)pyrene	-/135	-	50-110	30	J	
Benzo(b)fluoranthene	-/194	35	45-115	30	J	
Benzo(k)fluoranthene	-/142	-	45-125	30	J	

Compound	MS/MSD %REC	MS/MSD RPD	QC Limits		Action	
			%REC	RPD	(+)	ND
Chrysene	123/363	61	55-110	30	J	
Phenanthrene	126/418	78	50-110	30	J	

-Criterion met

The MS/MSD recovery criteria were not met for anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, chrysene, and phenanthrene; therefore, project accuracy goals may be impacted. The positive results for anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, chrysene, and phenanthrene in sample GI-SD-DUP02-050310 are usable as estimated values that may be biased high.

Although the MS/MSD recovery criteria were not met for benzo(b)fluoranthene, the project accuracy goals are not impacted since the affected sample result is much lower than the project action limit. The positive result for benzo(b)fluoranthene in sample GI-SD-DUP02-050310 is usable as an estimated value which may be biased high.

The MS/MSD RPD criteria were not met for benzo(a)anthracene, chrysene, and phenanthrene; therefore, project precision goals may be impacted. The positive results for benzo(a)anthracene, chrysene, and phenanthrene in sample GI-SD-DUP02-050310 are usable as estimated values.

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Although the MS/MSD RPD criteria were not met for benzo(b)fluoranthene, the project precision goals are not impacted since the affected sample results are much lower than the project action limits. The positive result for benzo(b)fluoranthene in sample GI-SD-DUP02-050310 is usable as an estimated value.

PCB Homologues

The following table summarizes the PCB homologue matrix spiking RPDs that did not meet the statistically derived laboratory QC limits in the matrix spike and matrix spike duplicate (MS/MSD) analysis and the qualifications applied to sample GI-SD514-0006:

Compound	MS/MSD RPD	QC Limits	Action	
		RPD	(+)	ND
Hexachlorobiphenyls	63	30		UJ
Heptachlorobiphenyls	49	30		UJ

The MS/MSD RPD criteria were not met for hexachlorobiphenyls and heptachlorobiphenyls; therefore, project precision goals may be impacted. The non-detected results for hexachlorobiphenyls and heptachlorobiphenyls in sample GI-SD514-0006 are usable as estimated quantitation limits.

Field Duplicates

PAH

The field duplicate pair GI-SD509-0006/GI-SD-DUP01-043010 did not meet the field duplicate QC criteria of RPD <50% for the following compound:

Compound	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Anthracene	93	180	64	J	

The field duplicate RPD criteria were not met for anthracene; therefore, project precision goals may be impacted. The positive anthracene results in samples GI-SD509-0006 and GI-SD-DUP01-043010 are usable as estimated values.

The field duplicate pair GI-SD508-0006/GI-SD-DUP02-0050310 did not meet the field duplicate QC criteria of RPD <50% for the following compound:

Compound	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Anthracene	150	39	118	J	

The field duplicate RPD criteria were not met for anthracene; therefore, project precision goals may be impacted. The positive anthracene results in samples GI-SD508-0006 and GI-SD-DUP02-050310 are usable as estimated values.

PCB Homologues

The field duplicate pair GI-SD509-0006/GI-SD-DUP01-043010 did not meet the field duplicate QC criteria of RPD <50% for the following compound:

Compound	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Total pentachlorobiphenyls	30	55	55	J	

The field duplicate RPD criteria were not met for total pentachlorobiphenyls; therefore, project precision goals may be impacted. The positive results for total pentachlorobiphenyls in samples GI-SD509-0006 and GI-SD-DUP01-043010 are usable as estimated values.

The field duplicate pair GI-SD508-0006/GI-SD-DUP02-0050310 did not meet the field duplicate QC criteria of RPD <50% for the following compound:

Compound	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Total heptachlorobiphenyls	260	470	57	J	
Total hexachlorobiphenyls	300	560	60	J	
Total pentachlorobiphenyls	40	77	63	J	
Total octachlorobiphenyls	30	51	52	J	

The field duplicate RPD criteria were not met for total heptachlorobiphenyls, total hexachlorobiphenyls, total pentachlorobiphenyls, and total octachlorobiphenyls; therefore, project precision goals may be impacted. The positive results for total heptachlorobiphenyls, total hexachlorobiphenyls, total pentachlorobiphenyls, and total octachlorobiphenyls in samples GI-SD508-0006 and GI-SD-DUP02-050310 are usable as estimated values.

Reporting Limits

Results greater the Method Detection Limit (MDL) and less than the Limit of Quantitation (LOQ) were qualified as estimated (J). The laboratory reported all non-detected results down to the Limit of Detection (LOD).

PAH

The laboratory-specific QLs (unadjusted for sample-specific preparation factors) that were reported by the laboratory did not meet those stipulated in worksheet 15c of the SAP. However, these unadjusted QLs did meet the specified project action limits. QLs for select samples were elevated due to the percent moisture content and/or required dilutions. Naphthalene, 2-methylnaphthalene, and anthracene were not detected in several of these select samples. The project action limit was met for anthracene; however, those for naphthalene and 2-methylnaphthalene were exceeded in some samples. Data usability may be impacted for these select results.

PCB Homologues

All laboratory-specific QLs in worksheet 15c of the SAP were met by the laboratory's actual QLs with the exception of those in select samples for which QLs were elevated as a result of the percent moisture content of the samples. Data usability may be impacted for these select results.

TOC

There are no project action limits established for TOC for the sediment samples.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

PAH

The project goals with respect to accuracy were met for the PAH data set with the following exceptions. All PAH results in samples GI-SD510-0006(RE), GI-SD515-0006(RE), GI-SD525-0006(RE), and GI-SD566-0006(RE) were qualified as estimated due to the exceeded extraction holding time criterion; results may be biased low. All PAH results in samples GI-SD502-0006, GI-SD511-0006, and GI-SD501-0006 were qualified as estimated due to low surrogate recoveries; results may be biased low. All PAH results in sample GI-SD514-0006 were qualified as estimated due to low MS/MSD recoveries; results may be biased low. The results for anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, chrysene, and phenanthrene in sample GI-SD-DUP02-050310 were qualified as estimated due to high MS/MSD recoveries; results may be biased high. Although specific method criteria were not met in these instances, the affected positive and non-detected results are usable as estimated values and estimated quantitation limits which may have a minor impact on data usability. Additionally, the result for benzo(b)fluoranthene was qualified as estimated in sample GI-SD-DUP02-050310 due to the high MSD recovery; the result may be biased high. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive result is usable as an estimated value.

The project goals with respect to precision were met for the PAH data set with the following exceptions. All PAH results in sample GI-SD514-0006 were qualified as estimated due to the exceeded MS/MSD RPD criteria. The results for anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, chrysene, and phenanthrene in sample GI-SD-DUP02-050310 were qualified as estimated due to the exceeded MS/MSD RPD criteria. The anthracene results in samples GI-SD509-0006/GI-SD-DUP01-043010 and GI-SD508-0006/GI-SD-DUP02-050310 were qualified as estimated due to poor field duplicate precision. Although specific method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability. In addition, the result for benzo(b)fluoranthene in sample GI-SD-DUP02-050310 was qualified as estimated due to the exceeded MS/MSD RPD criterion. Although specific method criteria was not met in this instance, data usability is not impacted and the affected positive result is usable as an estimated value.

The project goals with respect to sensitivity were met for the PAH data set with the following exceptions. The QL for select samples were elevated due to the percent moisture content and/or required dilutions. Naphthalene, 2-methylnaphthalene, and anthracene were reported as non-detected in several of these select samples. The project action limit was met for anthracene; however, those for naphthalene and 2-methylnaphthalene were exceeded in some samples. Data usability may be impacted for these select results. Additionally, results for 2-methylnaphthalene and naphthalene in select samples were changed to elevated non-detected values due to laboratory blank contamination. Although specific method criteria were not met in these instances, the affected results are usable as nondetects with elevated detection limits which may have a minor impact on data usability.

The project goals with respect to completeness were met for the PAH data set. Data usability was not impacted with regards to completeness.

PCB Homologues

The project goals with respect to accuracy were met for the PCB homologue data set with the following exceptions. Select PCB homologues in samples GI-SD502-0006, GI-SD511-0006, and GI-SD501-0006 were qualified as estimated (J) due to the exceeded internal standard area criteria. Although specific

method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability.

The project goals with respect to precision were met for the PCB homologue data set with the following exceptions. The results for hexachlorobiphenyls and heptachlorobiphenyls were estimated due to the exceeded MS/MSD RPD criteria. The results for pentachlorobiphenyls in samples GI-SD509-0006 and GI-SD-DUP01-043010; and the positive results for heptachlorobiphenyls, hexachlorobiphenyls, pentachlorobiphenyls, and octachlorobiphenyls in samples GI-SD508-0006 and GI-SD-DUP02-050310 were qualified as estimated due to poor field duplicate precision. Although QC criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability.

The project goals with respect to sensitivity were met for the PCB homologue data set with the following exceptions. All laboratory-specific QLs in worksheet 15c of the SAP were met by the laboratory's actual QLs with the exception of those in select samples for which QLs were elevated due to the percent moisture content of the samples. Data usability may be impacted for these select results.

The project goals with respect to completeness were met for the PCB homologue data set. Data usability was not impacted with regards to completeness.

TOC

The project goals with respect to accuracy, precision, sensitivity, and completeness were met for the TOC data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and completeness.

Tables: Data Summary Tables
Data Validation Qualifiers and Codes

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-SD501-0006			GI-SD502-0006			GI-SD503-0006			GI-SD504-0006		
SDG: R1002348	LAB_ID	R1002348-009			R1002348-018			R1002348-007			R1002348-011		
FRACTION: PAH	SAMP_DATE	4/30/2010			5/3/2010			4/30/2010			4/30/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	63.1			61.2			70.7			69.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		520	U		320	U	A	93	U		96	U	A
ACENAPHTHENE		130	J	P	200	J	P	42	J	P	110		
ACENAPHTHYLENE		210	J	P	110	J	P	24	J	P	29	J	P
ANTHRACENE		4400			2300			300			240		
BENZO(A)ANTHRACENE		5200			2200			1000			650		
BENZO(A)PYRENE		3800			1500			760			590		
BENZO(B)FLUORANTHENE		4100			1700			770			490		
BENZO(G,H,I)PERYLENE		1600			620			330			340		
BENZO(K)FLUORANTHENE		3900			1400			580			530		
CHRYSENE		6900			3800			1100			730		
DIBENZO(A,H)ANTHRACENE		580			250	J	P	130			110		
FLUORANTHENE		12000			8800			2100			1200		
FLUORENE		210	J	P	440			38	J	P	87	J	P
INDENO(1,2,3-CD)PYRENE		1600			690			330			320		
NAPHTHALENE		520	U		320	U	A	93	U		96	U	A
PHENANTHRENE		1600			4700			540			770		
PYRENE		8900			6000			1800			1000		

PROJ_NO: 00949	NSAMPLE	GI-SD507-0006			GI-SD508-0006			GI-SD509-0006			GI-SD510-0006RE		
SDG: R1002348	LAB_ID	R1002348-010			R1002348-019			R1002348-001			R1002348-008		
FRACTION: PAH	SAMP_DATE	4/30/2010			5/3/2010			4/30/2010			4/30/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	72.1			75.6			73.5			79.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		46	UJ	AR	17	U	A	45	U	A	8.4	UJ	AH
ACENAPHTHENE		62	J	R	21			29	J	P	11	J	H
ACENAPHTHYLENE		51	J	R	12	J	P	14	J	P	12	J	H
ANTHRACENE		230	J	R	150	J	G	93	J	G	76	J	H
BENZO(A)ANTHRACENE		750	J	R	180			240			96	J	H
BENZO(A)PYRENE		740	J	R	140			220			130	J	H
BENZO(B)FLUORANTHENE		770	J	R	160			220			120	J	H
BENZO(G,H,I)PERYLENE		330	J	R	67			120			71	J	H
BENZO(K)FLUORANTHENE		590	J	R	120			180			93	J	H
CHRYSENE		1100	J	R	270			370			140	J	H
DIBENZO(A,H)ANTHRACENE		120	J	R	24			43	J	P	26	J	H
FLUORANTHENE		1500	J	R	550			570			150	J	H
FLUORENE		72	J	R	26			32	J	P	23	J	H
INDENO(1,2,3-CD)PYRENE		330	J	R	62			120			73	J	H
NAPHTHALENE		67	J	R	17	U	A	45	U	A	12	J	H
PHENANTHRENE		610	J	R	180			280			110	J	H
PYRENE		1200	J	R	420			460			120	J	H

PROJ_NO: 00949	NSAMPLE	GI-SD511-0006			GI-SD514-0006			GI-SD515-0006RE			GI-SD518-0006		
SDG: R1002348	LAB_ID	R1002348-002			R1002348-005			R1002348-006			R1002348-014		
FRACTION: PAH	SAMP_DATE	4/30/2010			4/30/2010			4/30/2010			5/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.9			56.3			61.6			88.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		9.3	U	A	117	UJ	ADR	26	J	H	37	U	A
ACENAPHTHENE		4.2	J	P	220	J	DR	150	J	H	70		
ACENAPHTHYLENE		1.9	J	P	47	J	DR	14	J	HP	13	J	P
ANTHRACENE		11			500	J	DR	260	J	H	160		
BENZO(A)ANTHRACENE		25			910	J	DR	510	J	H	560		
BENZO(A)PYRENE		28			890	J	DR	530	J	H	540		
BENZO(B)FLUORANTHENE		27			700	J	DR	440	J	H	430		
BENZO(G,H,I)PERYLENE		21			490	J	DR	290	J	H	330		
BENZO(K)FLUORANTHENE		24			630	J	DR	340	J	H	360		
CHRYSENE		31			940	J	DR	500	J	H	560		
DIBENZO(A,H)ANTHRACENE		7.1	J	P	170	J	DR	100	J	H	110		
FLUORANTHENE		49			2000	J	DR	1100	J	H	1000		
FLUORENE		4.7	J	P	200	J	DR	100	J	H	57		
INDENO(1,2,3-CD)PYRENE		16			470	J	DR	300	J	H	310		
NAPHTHALENE		9.3	U	A	117	UJ	ADR	54	J	H	37	U	A
PHENANTHRENE		34			1500	J	DR	790	J	H	540		
PYRENE		43			1500	J	DR	860	J	H	900		

PROJ_NO: 00949	NSAMPLE	GI-SD524-0006			GI-SD525-0006RE			GI-SD526-0006			GI-SD527-0006		
SDG: R1002348	LAB_ID	R1002348-017			R1002348-016			R1002348-015			R1002348-003		
FRACTION: PAH	SAMP_DATE	5/3/2010			5/3/2010			5/3/2010			4/30/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	72.5			59.9			74.0			72.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		9.1	U	A	11	UJ	AH	8.9	U	A	18	U	A
ACENAPHTHENE		9.1	U		3.9	J	H	8.9	U		13	J	P
ACENAPHTHYLENE		4.6	J	P	13	J	H	3.6	J	P	17	J	P
ANTHRACENE		4.1	J	P	15	J	H	5	J	P	57		
BENZO(A)ANTHRACENE		22			61	J	H	15			160		
BENZO(A)PYRENE		24			73	J	H	18			160		
BENZO(B)FLUORANTHENE		19			58	J	H	15			160		
BENZO(G,H,I)PERYLENE		20			48	J	H	14			98		
BENZO(K)FLUORANTHENE		18			52	J	H	13			140		
CHRYSENE		27			71	J	H	17			240		
DIBENZO(A,H)ANTHRACENE		4.1	J	P	15	J	H	3.2	J	P	33		
FLUORANTHENE		40			130	J	H	36			260		
FLUORENE		2.3	J	P	6.7	J	H	1.8	J	P	16	J	P
INDENO(1,2,3-CD)PYRENE		15			45	J	H	12			91		
NAPHTHALENE		9.1	U	A	11	UJ	AH	8.9	U	A	18	U	A
PHENANTHRENE		20			58	J	H	17	U	A	130		
PYRENE		40			120	J	H	30			230		

PROJ_NO: 00949	NSAMPLE	GI-SD532-0006			GI-SD566-0006RE			GI-SD-DUP01-043010			GI-SD-DUP02-050310		
SDG: R1002348	LAB_ID	R1002348-013			R1002348-004			R1002348-012			R1002348-020		
FRACTION: PAH	SAMP_DATE	5/3/2010			4/30/2010			4/30/2010			5/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	69.3			69.9			71.3			75.1		
	DUP_OF							GI-SD509-0006			GI-SD508-0006		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		290	U		13	J	HP	13	J	R	26	U	
ACENAPHTHENE		230	J	P	91	J	H	59	J	R	15	J	P
ACENAPHTHYLENE		87	J	P	5.7	J	HP	20	J	PR	12	J	P
ANTHRACENE		2400			190	J	H	180	J	GR	39	J	DG
BENZO(A)ANTHRACENE		2900			340	J	H	360	J	R	190	J	D
BENZO(A)PYRENE		2100			330	J	H	350	J	R	97	J	D
BENZO(B)FLUORANTHENE		2600			250	J	H	300	J	R	130	J	D
BENZO(G,H,I)PERYLENE		970			180	J	H	190	J	R	56		
BENZO(K)FLUORANTHENE		2000			230	J	H	270	J	R	130	J	D
CHRYSENE		4900			340	J	H	480	J	R	270	J	D
DIBENZO(A,H)ANTHRACENE		360			74	J	H	67	J	R	17	J	P
FLUORANTHENE		8900			770	J	H	680	J	R	760		
FLUORENE		330			66	J	H	56	J	R	17	J	
INDENO(1,2,3-CD)PYRENE		980			190	J	H	190	J	R	51		
NAPHTHALENE		290	U		33	J	H	28	UJ	AR	26	U	A
PHENANTHRENE		3600			550	J	H	410	J	R	180	J	D
PYRENE		6300			590	J	H	580	J	R	610		

PROJ_NO: 00949	NSAMPLE	GI-SD501-0006			GI-SD502-0006			GI-SD503-0006			GI-SD504-0006		
SDG: R1002348	LAB_ID	R1002348-009			R1002348-018			R1002348-007			R1002348-011		
FRACTION: PCBH	SAMP_DATE	4/30/2010			5/3/2010			4/30/2010			4/30/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	63.1			61.2			70.7			69.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLOROBIPHENYL		2.7	U		1.4	U		2.4	U		2.5	U	
HEPTACHLOROBIPHENYL		890	J	N	360	J	N	5.9	U		180		
HEXACHLOROBIPHENYL		1400	J	N	440	J	N	4.7	U		200		
MONOCHLOROBIPHENYL		2.7	U		1.4	U		2.4	U		2.5	U	
NONACHLOROBIPHENYL		13	U		6.8	U		12	U		12	U	
PCB-209		13	U		6.8	U		12	U		12	U	
PENTACHLOROBIPHENYL		300	J	N	51	UJ	AN	4.7	U		43	U	A
TETRACHLOROBIPHENYL		5.2	U		22	J	N	4.7	U		4.8	U	
TOTAL OCTACHLOROBIPHENYLS		130	J	N	40	J	N	5.9	U		14	J	P
TOTAL TRICHLOROBIPHENYLS		2.7	U		1.4	U		2.4	U		2.5	U	

PROJ_NO: 00949	NSAMPLE	GI-SD507-0006			GI-SD508-0006			GI-SD509-0006			GI-SD510-0006		
SDG: R1002348	LAB_ID	R1002348-010			R1002348-019			R1002348-001			R1002348-008		
FRACTION: PCBH	SAMP_DATE	4/30/2010			5/3/2010			4/30/2010			4/30/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	72.1			75.6			73.5			79.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLOROBIPHENYL		2.4	U		0.67	U		1.2	U		0.65	U	
HEPTACHLOROBIPHENYL		970			260	J	G	170			1.6	U	
HEXACHLOROBIPHENYL		1300			300	J	G	220			1.3	U	
MONOCHLOROBIPHENYL		2.4	U		0.67	U		1.2	U		0.65	U	
NONACHLOROBIPHENYL		12	U		3.3	U		5.6	U		3.2	U	
PCB-209		12	U		3.3	U		5.6	U		3.2	U	
PENTACHLOROBIPHENYL		220			40	J	G	30	UJ	AG	7.2	UJ	AP
TETRACHLOROBIPHENYL		4.6	U		1.3	U		2.9	J	P	1.3	U	
TOTAL OCTACHLOROBIPHENYLS		100			30	J	G	20			1.6	U	
TOTAL TRICHLOROBIPHENYLS		2.4	U		0.67	U		1.2	U		0.65	U	

PROJ_NO: 00949	NSAMPLE	GI-SD511-0006			GI-SD514-0006RE			GI-SD515-0006			GI-SD518-0006		
SDG: R1002348	LAB_ID	R1002348-002			R1002348-005			R1002348-006			R1002348-014		
FRACTION: PCBH	SAMP_DATE	4/30/2010			4/30/2010			4/30/2010			5/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	70.9			56.3			61.6			88.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLOROBIPHENYL		0.75	UJ	AN	1.5	U		1.4	U		1	U	
HEPTACHLOROBIPHENYL		94	J	N	3.7	UJ	D	120			62		
HEXACHLOROBIPHENYL		140	J	N	16	J	DP	160			95		
MONOCHLOROBIPHENYL		0.48	U		1.5	U		1.4	U		1	U	
NONACHLOROBIPHENYL		2.3	U		7.4	U		6.7	U		4.7	U	
PCB-209		2.3	U		7.4	U		6.7	U		4.7	U	
PENTACHLOROBIPHENYL		30	J	N	2.9	U		26	U	A	15	U	A
TETRACHLOROBIPHENYL		0.93	U		2.9	U		2.7	U		1.9	U	
TOTAL OCTACHLOROBIPHENYLS		12	J	N	3.7	U		9.5	J	P	7	J	P
TOTAL TRICHLOROBIPHENYLS		0.48	U		1.5	U		1.4	U		1	U	

PROJ_NO: 00949	NSAMPLE	GI-SD524-0006			GI-SD525-0006			GI-SD526-0006			GI-SD527-0006		
SDG: R1002348	LAB_ID	R1002348-017			R1002348-016			R1002348-015			R1002348-003		
FRACTION: PCBH	SAMP_DATE	5/3/2010			5/3/2010			5/3/2010			4/30/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	72.5			59.9			74.0			72.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLOROBIPHENYL		0.23	U		0.28	U		0.23	U		0.23	U	
HEPTACHLOROBIPHENYL		0.58	U		0.7	U		0.57	U		8.3		
HEXACHLOROBIPHENYL		0.46	U		0.55	U		0.45	U		17		
MONOCHLOROBIPHENYL		0.23	U		0.28	U		0.23	U		0.23	U	
NONACHLOROBIPHENYL		1.1	U		1.4	U		1.1	U		1.1	U	
PCB-209		1.1	U		1.4	U		1.1	U		1.1	U	
PENTACHLOROBIPHENYL		0.46	U		0.55	U		0.45	U		5.2	U	A
TETRACHLOROBIPHENYL		0.46	U		0.55	U		0.45	U		0.45	U	
TOTAL OCTACHLOROBIPHENYLS		0.58	U		0.7	U		0.57	U		0.58	U	
TOTAL TRICHLOROBIPHENYLS		0.23	U		0.28	U		0.23	U		0.23	U	

PROJ_NO: 00949	NSAMPLE	GI-SD532-0006			GI-SD566-0006			GI-SD-DUP01-043010			GI-SD-DUP02-050310		
SDG: R1002348	LAB_ID	R1002348-013			R1002348-004			R1002348-012			R1002348-020		
FRACTION: PCBH	SAMP_DATE	5/3/2010			4/30/2010			4/30/2010			5/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	69.3			69.9			71.3			75.1		
	DUP_OF							GI-SD509-0006			GI-SD508-0006		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLOROBIPHENYL		1.2	U		2.4	U		0.48	U		1.1	U	
HEPTACHLOROBIPHENYL		540			41			190			470	J	G
HEXACHLOROBIPHENYL		640			88			230			560	J	G
MONOCHLOROBIPHENYL		1.2	U		2.4	U		0.48	U		1.1	U	
NONACHLOROBIPHENYL		6	U		12	U		2.3	U		5.5	U	
PCB-209		6	U		12	U		2.3	U		5.5	U	
PENTACHLOROBIPHENYL		48	U	A	16	UJ	AP	55	J	G	77	J	G
TETRACHLOROBIPHENYL		2.4	U		4.7	U		9.5			3.3	J	P
TOTAL OCTACHLOROBIPHENYLS		61			6	U		23			51	J	G
TOTAL TRICHLOROBIPHENYLS		1.2	U		2.4	U		0.48	U		1.1	U	

PROJ_NO: 00949	NSAMPLE	GI-SD501-0006			GI-SD502-0006			GI-SD503-0006			GI-SD504-0006		
SDG: R1002348	LAB_ID	R1002348-009			R1002348-018			R1002348-007			R1002348-011		
FRACTION: MISC	SAMP_DATE	4/30/2010			5/3/2010			4/30/2010			4/30/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	63.1			61.2			70.7			69.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		11700			9460			8000			11300		

PROJ_NO: 00949	NSAMPLE	GI-SD507-0006			GI-SD508-0006			GI-SD509-0006			GI-SD510-0006		
SDG: R1002348	LAB_ID	R1002348-010			R1002348-019			R1002348-001			R1002348-008		
FRACTION: MISC	SAMP_DATE	4/30/2010			5/3/2010			4/30/2010			4/30/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	72.1			75.6			73.5			79.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		7240			2770			5700			4740		

PROJ_NO: 00949	NSAMPLE	GI-SD511-0006			GI-SD514-0006			GI-SD515-0006			GI-SD518-0006		
SDG: R1002348	LAB_ID	R1002348-002			R1002348-005			R1002348-006			R1002348-014		
FRACTION: MISC	SAMP_DATE	4/30/2010			4/30/2010			4/30/2010			5/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	70.9			56.3			61.6			88.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		5900			13700			14700			9700		

PROJ_NO: 00949	NSAMPLE	GI-SD524-0006			GI-SD525-0006			GI-SD526-0006			GI-SD527-0006		
SDG: R1002348	LAB_ID	R1002348-017			R1002348-016			R1002348-015			R1002348-003		
FRACTION: MISC	SAMP_DATE	5/3/2010			5/3/2010			5/3/2010			4/30/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	72.5			59.9			74.0			72.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		5900			11600			8490			11400		

PROJ_NO: 00949	NSAMPLE	GI-SD532-0006			GI-SD566-0006			GI-SD-DUP01-043010			GI-SD-DUP02-050310		
SDG: R1002348	LAB_ID	R1002348-013			R1002348-004			R1002348-012			R1002348-020		
FRACTION: MISC	SAMP_DATE	5/3/2010			4/30/2010			4/30/2010			5/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			FD			FD		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	69.3			69.9			71.3			75.1		
	DUP_OF							GI-SD509-0006			GI-SD508-0006		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		4420			10300			6100			2980		

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-08-10-3805W

Date: August 30, 2010

c: File G00949-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy) pf (for)

Subject: Tier II Organic Data Validation, SDG R1002348
Columbia Analytical Services
CTO 458, Phase 2, Site 17, Gould Island, Naval Station Newport,
Jamestown, Rhode Island

Metals/Grain size
20/Sediments/

GI-SD501-0006	GI-SD502-0006
GI-SD503-0006	GI-SD504-0006
GI-SD507-0006	GI-SD508-0006
GI-SD509-0006	GI-SD510-0006
GI-SD511-0006	GI-SD514-0006
GI-SD515-0006	GI-SD518-0006
GI-SD524-0006	GI-SD525-0006
GI-SD526-0006	GI-SD527-0006
GI-SD532-0006	GI-SD566-0006
GI-SD-DUP01-043010	GI-SD-DUP02-050310

(Field Duplicate pairs: GI-SD509-0006/GI-SD-DUP01-043010,
GI-SD508-0006/GI-SD-DUP02-050310)

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the metals analytical data and Tier I data validation on the grain size data for the sediment samples in this SDG. The samples were collected from Site 17, Gould Island from April 30, 2010 through May 3, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment at Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The metals analysis was performed according to USEPA SW-846 Methods 6010C/7471B. The project specific criteria listed in the site SAP were applied for data validation of the metals data. The Tier II data validation was performed according to the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, November 2008. The grain size analysis was performed according to ASTM D422. The Tier I data validation includes evaluation for completeness only.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed. The grain size results are presented in the table with the fraction "Misc".

The analytical data from this SDG were evaluated based on the following parameters:

- Data Completeness
* • Holding Times
* • Calibration Verification

- Laboratory Blank Analyses
- ICP Interference Check Sample Results
- Matrix Spike/Matrix Spike Duplicate Results
- Laboratory Duplicate Results
- * Laboratory Control Sample Results
- Field Duplicate Precision
- ICP Serial Dilution Results
- * Percent Solids
- Reporting Limits

* All quality control criteria were met for this parameter.

Data Completeness

On August 16, 2010 the laboratory provided an LOD summary since this was missing from the original submission of the data package. Additionally, the laboratory provided the manufacturer's QC limits for the solid laboratory control samples.

Laboratory Blank Analysis

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the sediment samples in this SDG:

Analyte	Maximum Conc. (mg/Kg)	Action Level* (mg/Kg)	Affected Samples
Arsenic	-0.294	1.47	GI-SD501-0006, GI-SD503-0006, GI-SD504-0006, GI-SD507-0006, GI-SD508-0006, GI-SD509-0006, GI-SD511-0006, GI-SD514-0006, GI-SD518-0006, GI-SD524-0006, GI-SD525-0006, GI-SD526-0006, GI-SD527-0006, GI-SD532-0006, GI-SD566-0006, GI-SD-DUP01-043010, GI-SD-DUP02-050310
*Action levels are adjusted for sample preparation factors.			

The positive and non-detected arsenic results in affected samples are estimated (J and UJ, respectively) due to negative instrument drift as evidenced by the negative blank results.

Although arsenic exhibited negative instrument drift; the project accuracy goals are not impacted since the arsenic results in affected samples are much lower than the project action limits for this metal. The positive and non-detected arsenic results in affected samples are usable as estimated values and estimated reporting limits that may be biased low.

ICP Interference Check Sample Results

The following results were qualified in the affected samples due to ICP interference attributed to the high concentration of iron or calcium in the samples:

Analyte	Action		Bias	Affected Samples
	(+)	ND		
Arsenic	J	UJ	Low	All sediment samples
Beryllium	J		High	GI-SD510-0006, GI-SD514-0006, GI-SD515-0006, GI-SD502-0006, GI-SD532-0006
Cadmium	J		High	All sediment samples except GI-SD514-0006
	UJ			GI-SD514-0006
Cobalt	J		Low	GI-SD514-0006, GI-SD515-0006
Potassium	J		Low	GI-SD514-0006, GI-SD515-0006, GI-SD502-0006
Silver	J		High	GI-SD507-0006, GI-SD509-0006, GI-SD524-0006, GI-SD526-0006, GI-SD525-0006, , GI-SD501-0006, GI-SD504-0006
	UJ			GI-SD508-0006, GI-SD511-0006, GI-SD503-0006, GI-SD527-0006 GI-SD566-0006, GI-SD-DUP01-043010, GI-SD-DUP02-050310
Thallium	J	UJ	Low	All sediment samples

The positive and non-detected results for arsenic and thallium are qualified as estimated (J and UJ) in the affected samples due to negative ICP interference attributed to iron or calcium. The positive cobalt and potassium results are qualified as estimated (J) in the affected samples due to negative ICP interference attributed to iron or calcium. The affected arsenic, thallium, cobalt, and potassium results may be biased low.

The positive results for beryllium, cadmium, and silver are qualified as estimated (J) in the affected samples due to positive ICP interference attributed to iron or calcium. The affected beryllium, cadmium, and silver results may be biased high. Professional judgment was used to change the positive results for cadmium and silver in the affected samples to estimated, non-detected values (UJ), rather than reject these results as provided in the data validation guidelines, because the reported concentrations may be due entirely (≥ 90%) to positive iron or calcium ICP interference. The results may be false positive.

Although there were negative ICP interferences attributed to the high concentration of iron or calcium that resulted in estimating the results for arsenic and cobalt in the samples listed above; the project accuracy goals are not impacted since all the affected sample results are much lower than the project action limits for these metals. The positive and non-detected results for arsenic and cobalt in the affected samples are usable as estimated values and estimated reporting limits which may be biased low.

Although there were negative ICP interferences attributed to the high concentration of iron or calcium that results in estimating the results for thallium and potassium in the samples listed above, the project accuracy goals are not impacted since there are no project action limits established for these metals. The positive and non-detected results for thallium and potassium in the affected samples are usable as estimated values and estimated reporting limits which may be biased low.

Although there were positive ICP interferences attributed to the high concentration of iron or calcium that resulted in estimating the results for cadmium, beryllium, and silver in the select samples listed above; the project accuracy goals are not impacted since all the affected sample results are much lower than the project action limits for these metals. The positive results for cadmium, beryllium, and silver in the affected samples are usable as estimated values which may be biased high.

Although there were positive ICP interferences attributed to the high concentration of iron or calcium that resulted in raising the reporting limits for cadmium and silver in the samples listed above, the project

accuracy goals are not impacted since the elevated reporting limits are lower than the project action limits. The cadmium and silver results in the affected samples are usable as estimated, non-detected values which may be false positive.

Matrix Spike/Matrix Spike Duplicate

The following table summarizes the analyte that recovered outside of the 75-125% recovery QC limits in the matrix spike (MS) analysis of the sample GI-SD514-0006:

Analyte	%Recovery	Action	
		(+)	NDs
Antimony	62	J	UJ

Although the percent recovery criterion was not met for antimony; the project accuracy goals are not impacted since the antimony results are much lower than the project action limit for this metal. The positive and non-detected antimony results in all sediment samples are usable as estimated values and estimated reporting limits which may be biased low.

Laboratory Duplicate Results

The following table summarizes the analyte that exceeded the relative percent difference (RPD) QC criterion of <35%RPD in the laboratory duplicate analysis of the sample GI-SD514-0006:

Analyte	RPD	Action	
		(+)	NDs
Copper	42	J	

The RPD criterion was not met for copper; therefore, the project precision goals may be impacted. The positive copper results in all sediment samples are usable as estimated values for which the bias is indeterminate.

Field Duplicate Precision

The following table presents the analytes for which the relative percent difference (RPD) exceeded the 50% QC limit in the analysis of field duplicate pair GI-SD509-0006/GI-SD-DUP01-043010:

Analyte	Sample Result	Duplicate Result	RPD	Action*	
	mg/kg	mg/kg		(+)	NDs
Arsenic[#]	1.3	0.29	127	J	UJ
Calcium	5260	15000	96	J	

*Professional judgment was used to apply actions to all sediment samples except the field duplicate pair GI-SD508-0006 and GI-SD-DUP02-050310 since field duplicate precision criteria were met for these samples.
[#]Additionally, the absolute difference between the field duplicate results which are less than 5x the reporting limit (RL) exceeded the 4x RL QC criterion.

The results of the field duplicate analysis exceeded the QC limit for arsenic; therefore, the project precision goals may be impacted. The positive and non-detected arsenic results in affected samples are usable as estimated values and estimated reporting limits for which the bias is indeterminate.

Although the results of the field duplicate analysis exceeded the QC limit for calcium, the project precision goals are not impacted since there is no project action limit established for calcium. The positive calcium results in the affected samples are usable as estimated values for which the bias is indeterminate.

ICP Serial Dilution Results

The following table summarizes the analytes for which the percent difference between the initial and diluted results in the ICP serial dilution analysis of sample GI-SD514-0006 was above the 10% SAP QC criterion when the initial sample result was above 50 times the method detection limit (MDL):

Analyte	% Difference	Bias	Action	
			(+)	NDs
Barium	12	Low	J	
Cobalt	14	Low	J	
Chromium	15	Low	J	
Magnesium	19	Low	J	
Manganese	13	Low	J	
Nickel	17	Low	J	
Lead	13	Low	J	
Vanadium	12	Low	J	
Zinc	16	Low	J	

Although a sample matrix suppressing effect for barium, cobalt, chromium, manganese, nickel, lead, vanadium, and zinc was detected in the ICP serial dilution analysis; the project accuracy goals are not impacted since the affected sample results are much lower than the project action limits for these metals. The positive results for barium, cobalt, chromium, manganese, nickel, lead, vanadium, and zinc in all sediment samples are usable as estimated values which may be biased low.

Although a matrix suppressing effect for magnesium was detected in the ICP serial dilution analysis, the project accuracy goals are not impacted since project action limits are not established for magnesium. The positive magnesium results in all sediment samples are usable as estimated values which may be biased low.

Reporting Limits

The laboratory reported the non-detected results down to the Method Detection Limit (MDL) instead of down to the Limit of Detection (LOD) as required because software limitations. The data validator changed the non-detected results to the LOD values. The positive results above MDL and less than the Limit of Quantitation (LOQ) were qualified as estimated (J) due to uncertainty below QLs.

Sample-specific reporting limits adjusted for preparation factors were reported only for associated non-detected results; these reporting limits for non-detected results are evaluated below.

The following analytes were reported as non-detected in select samples: arsenic, antimony, selenium, silver, and thallium. The sample-specific reporting limits met the project action limits for arsenic,

antimony, and silver. The sample-specific reporting limits for selenium exceeded the project action limits in select samples. Data usability may be impacted for selenium. There is no established project action limit for thallium; therefore, data usability is not impacted for thallium.

As discussed above in the ICP Interference Check Sample Results section, reporting limits were raised for cadmium and silver in select sediment samples; data usability is not impacted for cadmium and silver in the affected samples.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

Metals

The project goals with respect to accuracy were met for the metals data set. Arsenic was qualified as estimated in select sediment samples due to negative instrument drift; results may be biased low. Arsenic, cobalt, thallium, and potassium were qualified as estimated in select sediment samples due to negative ICP interferences; the affected results may be biased low. Cadmium, beryllium, and silver were qualified as estimated in select sediment samples due to positive ICP interferences; the affected results may be biased high. Antimony was qualified as estimated in all sediment samples due to the low MS recovery; results may be biased low. Cobalt, chromium, beryllium, magnesium, manganese, nickel, lead, vanadium, and zinc were qualified as estimated in all sediment samples due to a sample matrix suppressing effect detected in the ICP serial dilution; the affected results may be biased low. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The project goals with respect to precision were met for the metals data set with the following exception. Copper was qualified as estimated in all sediment samples due to poor laboratory duplicate precision. Although specific method criteria were not met in this instance, the affected results are usable as estimated values which may have a minor impact on data usability. Additionally, arsenic and calcium were qualified as estimated in all sediment samples except GI-SD508-0006 and GI-SD-DUP02-050310 due to poor field duplicate precision. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The project goals with respect to sensitivity were met for the metals data set with the following exceptions. The project action limits were achieved by the sample-specific laboratory reporting limits associated with the non-detected results with the exception of selenium. Data usability may be impacted for selenium. Additionally, select cadmium and silver results were reported with elevated reporting limits as a result of ICP interference. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated elevated reporting limits.

The project goals with respect to completeness were met for the metals data set. Data usability is not impacted with regards to completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-SD501-0006			GI-SD502-0006			GI-SD503-0006			GI-SD504-0006		
SDG: R1002348	LAB_ID	R1002348-009			R1002348-018			R1002348-007			R1002348-011		
FRACTION: M	SAMP_DATE	4/30/2010			5/3/2010			4/30/2010			4/30/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	63.1			61.2			70.7			69.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		5070			5190			4790			4380		
ANTIMONY		0.79	UJ	D	0.81	J	DP	0.7	UJ	O	0.72	UJ	D
ARSENIC		1.6	J	GKO	2.7	J	GK	2	J	GKO	1.9	J	GKO
BARIUM		32.5	J	I	26.7	J	I	7.4	J	I	13.8	J	I
BERYLLIUM		0.336			0.271	J	K	0.27			0.304		
CADMIUM		0.307	J	K	0.507	J	K	0.211	J	KP	0.305	J	K
CALCIUM		47000	J	G	122000	J	G	36600	J	G	18700	J	G
CHROMIUM		18.8	J	I	12.4	J	I	13.7	J	I	14.1	J	I
COBALT		3.2	J	I	3.7	J	IK	3.4	J	I	3.2	J	I
COPPER		28.7	J	F	21.2	J	F	9.6	J	F	17.8	J	F
IRON		11200			20100			12700			15400		
LEAD		35.2	J	I	11.3	J	I	13.9	J	I	21	J	I
MAGNESIUM		2950	J	I	3990	J	I	2700	J	I	2320	J	I
MANGANESE		107	J	I	203	J	I	106	J	I	94.3	J	I
MERCURY		0.107			0.02	J	P	0.059			0.083		
NICKEL		7.7	J	I	10	J	I	6.7	J	I	7	J	I
POTASSIUM		1290			835	J	K	1100			1120		
SELENIUM		0.79	U		2.42	U		0.7	U		0.321	U	
SILVER		0.145	J	KP	0.27	U		0.23	UJ	KP	0.223	J	KP
SODIUM		6130			6710			4390			4700		
THALLIUM		0.417	J	KP	2.4	J	K	0.136	J	KP	0.48	UJ	K
VANADIUM		17.3	J	I	11.5	J	I	17	J	I	14	J	I
ZINC		51.9	J	I	43.8	J	I	43.8	J	I	76.9	J	I

PROJ_NO: 00949	NSAMPLE	GI-SD507-0006			GI-SD508-0006			GI-SD509-0006			GI-SD510-0006		
SDG: R1002348	LAB_ID	R1002348-010			R1002348-019			R1002348-001			R1002348-008		
FRACTION: M	SAMP_DATE	4/30/2010			5/3/2010			4/30/2010			4/30/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	72.1			75.6			73.5			79.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		4230			4650			4150			8070		
ANTIMONY		0.69	UJ	D	0.65	UJ	D	0.67	UJ	D	0.63	UJ	D
ARSENIC		1.3	J	GKO	0.854	J	KO	1.3	J	GKO	2.2	J	GK
BARIUM		8.8	J	I	12.6	J	I	9.8	J	I	11.3	J	I
BERYLLIUM		0.237			0.221			0.254			0.222	J	K
CADMIUM		0.145	J	KP	0.328	J	K	0.156	J	KP	0.443	J	K
CALCIUM		3810	J	G	25900			5260	J	G	35900	J	G
CHROMIUM		11.2	J	I	9.4	J	I	10.5	J	I	16.1	J	I
COBALT		3	J	I	3.8	J	I	3.1	J	I	4.7	J	I
COPPER		12.5	J	F	13.5	J	F	13.3	J	F	17.7	J	F
IRON		10200			16800			10600			22900		
LEAD		12.4	J	I	9.5	J	I	11.8	J	I	10.7	J	I
MAGNESIUM		2250	J	I	2580	J	I	2150	J	I	4220	J	I
MANGANESE		83.5	J	I	133	J	I	82.9	J	I	210	J	I
MERCURY		0.045			0.019	J	P	0.028			0.012	J	P
NICKEL		6.5	J	I	8.4	J	I	6.4	J	I	10.8	J	I
POTASSIUM		868			880			897			869		
SELENIUM		0.69	U		0.65	U		0.67	U		0.63	U	
SILVER		0.143	J	KP	0.063	J	KP	0.098	J	KP	0.017	U	
SODIUM		3440			3270			3750			3120		
THALLIUM		0.46	UJ	K	0.43	UJ	K	0.45	UJ	K	0.42	UJ	K
VANADIUM		12.7	J	I	10.8	J	I	13.1	J	I	13.9	J	I
ZINC		42	J	I	36.8	J	I	34.5	J	I	43.9	J	I

PROJ_NO: 00949	NSAMPLE	GI-SD511-0006			GI-SD514-0006			GI-SD515-0006			GI-SD518-0006		
SDG: R1002348	LAB_ID	R1002348-002			R1002348-005			R1002348-006			R1002348-014		
FRACTION: M	SAMP_DATE	4/30/2010			4/30/2010			4/30/2010			5/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	70.9			56.3			61.6			88.4		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		4770			4090			3860			5910		
ANTIMONY		0.71	UJ	D	0.89	UJ	D	0.253	J	DP	0.57	UJ	D
ARSENIC		0.278	J	GKOP	0.59	UJ	GKO	2.6	J	GK	0.643	J	GKO
BARIUM		9.9	J	I	15.9	J	I	15.4	J	I	19.3	J	I
BERYLLIUM		0.238			0.333	J	K	0.275	J	K	0.286		
CADMIUM		0.301	J	K	0.327	UJ	K	0.465	J	K	0.282	J	K
CALCIUM		26700	J	G	206000	J	G	140000	J	G	1390	J	G
CHROMIUM		11.9	J	I	13.5	J	I	20.4	J	I	8.9	J	I
COBALT		3.4	J	I	2.6	J	IKP	2.6	J	IKP	4.9	J	I
COPPER		10.6	J	F	13.9	J	F	18.7	J	F	17.9	J	F
IRON		14300			11400			17900			13700		
LEAD		20.7	J	I	23	J	I	18.3	J	I	14.5	J	I
MAGNESIUM		2800	J	I	3140	J	I	3210	J	I	2530	J	I
MANGANESE		117	J	I	188	J	I	146	J	I	142	J	I
MERCURY		0.029			0.087			0.239			0.023		
NICKEL		7.6	J	I	6.3	J	I	8.2	J	I	9.6	J	I
POTASSIUM		871			1390	J	K	1120	J	K	932		
SELENIUM		0.71	U		2.7	U		2.4	U		0.57	U	
SILVER		0.24	UJ	KP	0.3	U		0.27	U		0.19	U	
SODIUM		4540			9070			8420			810		
THALLIUM		0.47	UJ	K	4.9	J	K	3.5	J	K	1.1	UJ	K
VANADIUM		18.2	J	I	14.9	J	I	16.8	J	I	11.2	J	I
ZINC		32.2	J	I	47.2	J	I	37	J	I	38.3	J	I

PROJ_NO: 00949	NSAMPLE	GI-SD524-0006			GI-SD525-0006			GI-SD526-0006			GI-SD527-0006		
SDG: R1002348	LAB_ID	R1002348-017			R1002348-016			R1002348-015			R1002348-003		
FRACTION: M	SAMP_DATE	5/3/2010			5/3/2010			5/3/2010			4/30/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	72.5			59.9			74.0			72.7		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		4550			6850			7460			5510		
ANTIMONY		0.68	UJ	D	0.83	UJ	D	0.68	UJ	D	0.71	UJ	D
ARSENIC		0.273	J	GKOP	1.6	J	GKO	0.423	J	GKOP	0.975	J	GKO
BARIUM		9.7	J	I	15.7	J	I	7.7	J	I	11.4	J	I
BERYLLIUM		0.216	J	P	0.405			0.395			0.321		
CADMIUM		0.132	J	KP	0.367	J	K	0.27	J	K	0.222	J	KP
CALCIUM		2490	J	G	32500	J	G	4490	J	G	27000	J	G
CHROMIUM		11.1	J	I	19.8	J	I	16.5	J	I	14.2	J	I
COBALT		3.2	J	I	4.4	J	I	6	J	I	3.5	J	I
COPPER		6.2	J	F	15	J	F	9.9	J	F	14.9	J	F
IRON		9200			13500			16700			12100		
LEAD		9.2	J	I	20.6	J	I	10.6	J	I	15	J	I
MAGNESIUM		2560	J	I	3810	J	I	3610	J	I	2760	J	I
MANGANESE		112	J	I	139	J	I	128	J	I	105	J	I
MERCURY		0.028			0.083			0.039			0.054		
NICKEL		7	J	I	10.2	J	I	11.7	J	I	7.7	J	I
POTASSIUM		802			1590			990			1270		
SELENIUM		0.341	J	P	0.83	U		0.68	U		0.322	J	P
SILVER		0.097	J	KP	0.19	J	KP	0.144	J	KP	0.23	UJ	KP
SODIUM		3500			6310			2880			5060		
THALLIUM		0.45	UJ	K	0.56	UJ	K	1.4	UJ	K	0.45	UJ	K
VANADIUM		10.3	J	I	20	J	I	17.8	J	I	15.8	J	I
ZINC		30.7	J	I	61.8	J	I	42.9	J	I	38.3	J	I

PROJ_NO: 00949	NSAMPLE	GI-SD532-0006			GI-SD566-0006			GI-SD-DUP01-043010			GI-SD-DUP02-050310		
SDG: R1002348	LAB_ID	R1002348-013			R1002348-004			R1002348-012			R1002348-020		
FRACTION: M	SAMP_DATE	5/3/2010			4/30/2010			4/30/2010			5/3/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			FD			FD		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	69.3			69.9			71.3			75.1		
	DUP_OF							GI-SD509-0006			GI-SD508-0006		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		4500			4430			3390			4020		
ANTIMONY		0.71	UJ	D	0.71	UJ	D	0.69	UJ	D	0.65	UJ	D
ARSENIC		0.876	J	GKO	0.84	J	GKO	0.29	J	GKOP	1.2	J	KO
BARIUM		24.7	J	I	8.1	J	I	8.4	J	I	9.8	J	I
BERYLLIUM		0.206	J	KP	0.222	J	P	0.209	J	P	0.209	J	P
CADMIUM		0.324	J	K	0.256	J	K	0.143	J	KP	0.531	J	K
CALCIUM		77100	J	G	33100	J	G	15000	J	G	34000		
CHROMIUM		10	J	I	11.9	J	I	9.1	J	I	10.3	J	I
COBALT		3.2	J	I	3	J	I	2.5	J	I	3.1	J	I
COPPER		10.4	J	F	16	J	F	10.3	J	F	16	J	F
IRON		13600			13800			8500			18100		
LEAD		7.1	J	I	17.7	J	I	9.4	J	I	11.7	J	I
MAGNESIUM		3160	J	I	2650	J	I	1860	J	I	2370	J	I
MANGANESE		148	J	I	127	J	I	72.6	J	I	136	J	I
MERCURY		0.023	J	P	0.03			0.029			0.02	J	P
NICKEL		8.4	J	I	8.8	J	I	5.3	J	I	9.4	J	I
POTASSIUM		1160			817			715			659		
SELENIUM		0.71	U		0.71	U		0.69	U		0.65	U	
SILVER		0.24	U		0.24	UJ	KP	0.23	UJ	KP	0.024	J	KP
SODIUM		4530			4490			3870			3720		
THALLIUM		1.3	J	K	0.47	UJ	K	0.46	UJ	K	0.44	UJ	K
VANADIUM		10.8	J	I	12.5	J	I	10.9	J	I	10.7	J	I
ZINC		31	J	I	36.4	J	I	26.6	J	I	57.5	J	I

PROJ_NO: 00949	NSAMPLE	GI-SD501-0006			GI-SD502-0006			GI-SD503-0006			GI-SD504-0006		
SDG: R1002348	LAB_ID	R1002348-009			R1002348-018			R1002348-007			R1002348-011		
FRACTION: MISC	SAMP_DATE	5/5/2010			5/5/2010			5/5/2010			5/5/2010		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.002MM		4						1			3		
SIEVE 1"		100			100			100			100		
SIEVE 1/2"		100			96			100			100		
SIEVE 3/4"		100			100			100			100		
SIEVE 3/8"		100			89			100			83		
SIEVE NO. 004		98			88			87			73		
SIEVE NO. 010		95			74			78			66		
SIEVE NO. 020		92			49			61			62		
SIEVE NO. 040		90			26			40			57		
SIEVE NO. 060		86			12			24			49		
SIEVE NO. 100		72			4			16			38		
SIEVE NO. 200		44			0			12			21		

PROJ_NO: 00949	NSAMPLE	GI-SD507-0006			GI-SD508-0006			GI-SD509-0006			GI-SD510-0006		
SDG: R1002348	LAB_ID	R1002348-010			R1002348-019			R1002348-001			R1002348-008		
FRACTION: MISC	SAMP_DATE	5/5/2010			5/5/2010			5/5/2010			5/5/2010		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.002MM		3			0			3					
SIEVE 1"		100			100			100			100		
SIEVE 1/2"		100			100			100			100		
SIEVE 3/4"		100			100			100			100		
SIEVE 3/8"		100			99			100			95		
SIEVE NO. 004		100			93			98			75		
SIEVE NO. 010		98			89			97			57		
SIEVE NO. 020		96			82			96			27		
SIEVE NO. 040		90			59			93			5		
SIEVE NO. 060		83			24			84			2		
SIEVE NO. 100		70			10			64			1		
SIEVE NO. 200		41			5			26			1		

PROJ_NO: 00949	NSAMPLE	GI-SD511-0006			GI-SD514-0006			GI-SD515-0006			GI-SD518-0006		
SDG: R1002348	LAB_ID	R1002348-002			R1002348-005			R1002348-006			R1002348-014		
FRACTION: MISC	SAMP_DATE	5/5/2010			5/5/2010			5/5/2010			5/5/2010		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.002MM		0			7			4			2		
SIEVE 1"		100			100			100			100		
SIEVE 1/2"		100			92			100			86		
SIEVE 3/4"		100			100			100			93		
SIEVE 3/8"		100			92			96			84		
SIEVE NO. 004		99			86			94			71		
SIEVE NO. 010		94			77			79			58		
SIEVE NO. 020		84			68			57			48		
SIEVE NO. 040		59			62			49			40		
SIEVE NO. 060		38			59			43			33		
SIEVE NO. 100		18			53			36			27		
SIEVE NO. 200		8			40			27			20		

PROJ_NO: 00949	NSAMPLE	GI-SD524-0006			GI-SD525-0006			GI-SD526-0006			GI-SD527-0006		
SDG: R1002348	LAB_ID	R1002348-017			R1002348-016			R1002348-015			R1002348-003		
FRACTION: MISC	SAMP_DATE	5/5/2010			5/5/2010			5/5/2010			5/5/2010		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.002MM		4			10			0			5		
SIEVE 1"		100			100			100			100		
SIEVE 1/2"		100			100			100			100		
SIEVE 3/4"		100			100			100			100		
SIEVE 3/8"		100			100			98			94		
SIEVE NO. 004		99			96			97			87		
SIEVE NO. 010		98			93			89			77		
SIEVE NO. 020		97			90			78			71		
SIEVE NO. 040		93			88			61			64		
SIEVE NO. 060		76			85			39			56		
SIEVE NO. 100		60			78			26			46		
SIEVE NO. 200		20			41			13			30		

PROJ_NO: 00949	NSAMPLE	GI-SD532-0006			GI-SD566-0006			GI-SD-DUP01-043010			GI-SD-DUP02-050310		
SDG: R1002348	LAB_ID	R1002348-013			R1002348-004			R1002348-012			R1002348-020		
FRACTION: MISC	SAMP_DATE	5/5/2010			5/5/2010			5/5/2010			5/5/2010		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			FD			FD		
	UNITS	%			%			%			%		
	PCT_SOLIDS												
	DUP_OF							GI-SD509-0006			GI-SD508-0006		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.002MM		1			1			2					
SIEVE 1"		100			100			100			100		
SIEVE 1/2"		94			100			100			92		
SIEVE 3/4"		100			100			100			100		
SIEVE 3/8"		89			100			100			88		
SIEVE NO. 004		79			100			99			83		
SIEVE NO. 010		67			98			98			80		
SIEVE NO. 020		55			92			97			73		
SIEVE NO. 040		43			77			94			52		
SIEVE NO. 060		28			48			85			21		
SIEVE NO. 100		14			21			65			8		
SIEVE NO. 200		8			13			25			3		

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-08-10-3825W

Date: August 31, 2010

c: File G00949-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy) pd. (for)

Subject: Tier II Organic Data Validation, SDG R1002384
Columbia Analytical Services
CTO 458, Phase 2, Site 17, Gould Island, Naval Station Newport, Jamestown, Rhode Island

PAH/PCB Homologues/TOC:

5/Sediments/	GI-SD429-0006	GI-SD505-0006
	GI-SD506-0006	GI-SD519-0006
	GI-SD529-0006	
1/Rinsate blank/	GI-SD-RB01-050410	
1/Field blank/	GI-SD-FB01-050410	

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbons (PAH), polychlorinated biphenyl (PCB) homologues, and total organic carbon (TOC) analytical data for the sediment samples in this SDG. The samples were collected from Site 17, Gould Island on May 4, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment at Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The PAH analysis was performed according to USEPA SW-846 Method 8270. The PCB homologue analysis was performed according to USEPA Method 680. The TOC analysis was performed according to the Lloyd Kahn method and SW-846 Method 9060.

The project specific criteria listed in the site SAP were applied for data validation. The PAH, PCB homologue, and TOC data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed. The TOC data are reported in the tables listed as "MISC".

The data were evaluated based on the following parameters:

- Data Completeness
- * Preservation and Technical Holding Times
- * GC/MS Instrument Performance Check (Tuning)
- * Initial and Continuing Calibrations
- Blanks

*	•	Surrogate Compounds
*	•	Internal Standards
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
NA	•	Field Duplicates
NA	•	Compound Identification/Quantitation
*	•	Percent Solids
	•	Reporting Limits

* All criteria were met for this parameter.
NA Not Applicable for Tier II

Data Completeness

On August 16, 2010 the laboratory provided the limit of detection (LOD) summary for the sediment samples since this was missing in the original data package.

On August 25, 2010 the laboratory provided the limit of detection (LOD) summary for the aqueous samples since this was missing in the original data package.

Blanks

PCB Homologues

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the rinsate blank in this SDG:

Compound	Maximum Conc. (µg/L)	Action Level (µg/L)	Affected Samples
Trichlorobiphenyls	0.0040	0.02	GI-SD-RB01-050410

The positive trichlorobiphenyls result below the blank action level was changed to a non-detected value (U) at the sample result due to laboratory blank contamination.

Although trichlorobiphenyls contamination was found in the laboratory blank, project sensitivity goals are not impacted since there are no project action limits established for the rinsate blank. This result is usable as a non-detected value.

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the sediment samples in this SDG:

Compound	Maximum Conc. (µg/Kg)	Action Level* (µg/Kg)	Affected Samples
Dichlorobiphenyls	0.43	2.15	GI-SD505-0006

*Action levels are adjusted for each sample preparation factors.

The positive dichlorobiphenyls result below the blank action level was changed to a non-detected value (U) at the sample result due to laboratory blank contamination.

Although dichlorobiphenyls contamination was found in the laboratory blank; project sensitivity goals are not impacted since the elevated reporting limit did not exceed the project action limit. This result is usable as a non-detected result with an elevated reporting limit.

Reporting Limits

Results greater the Method Detection Limit (MDL) and less than the Limit of Quantitation (LOQ) were qualified as estimated (J). The laboratory reported all non-detected results down to the Limit of Detection (LOD).

PAH

The QLs reported by the laboratory were twice the QLs listed in worksheet 15c of the SAP; however, these QLs did meet the specified project action limits. QLs for select samples were elevated due to the percent moisture content and/or required dilutions. 2-Methylnaphthalene, acenaphthylene, and naphthalene were not detected in several of these select samples. The project action limits were met for acenaphthylene and naphthalene; however, the 2-methylnaphthalene project action limit was exceeded in some samples. Data usability may be impacted for these select results.

PCB Homologues

All QLs listed in worksheet 15c of the SAP were met by the laboratory's QLs. As discussed above in the Blank section, reporting limits were raised for dichlorobiphenyls in select samples due to laboratory blank contamination. The elevated reporting limits in select samples met the project action limits for dichlorobipenyls; therefore, data usability is not impacted.

TOC

There are no project action limits established for TOC for the sediment samples.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define

the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

PAH

The project goals with respect to accuracy, precision, and completeness were met for the PAH data set. Data usability was not impacted with regards to accuracy, precision, and completeness.

The project goals with respect to sensitivity were met for the PAH data set with the following exceptions. The QLs reported by the laboratory were twice the value listed in the SAP. The QLs for select samples were elevated due to the percent moisture content and/or required dilutions. 2-Methylnaphthalene, acenaphthylene, and naphthalene were not detected in several of these select samples. The project action limits were met for acenaphthylene and naphthalene; however, the 2-methylnaphthalene project action level was exceeded in some samples. Data usability may be impacted for these select 2-methylnaphthalene results.

PCB Homologues

The project goals with respect to accuracy, precision, sensitivity, and completeness were met for the PCB homologues data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and completeness.

TOC

The project goals with respect to accuracy, sensitivity, and completeness were met for the TOC data set. Data usability was not impacted with regards to accuracy, sensitivity, and completeness.

Parameters that monitor the precision data quality objectives were not analyzed for the TOC data set; therefore, data usability may be impacted.

Tables: Data Summary Tables
Data Validation Qualifiers and Codes

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-SD429-0006			GI-SD505-0006			GI-SD506-0006			GI-SD519-0006		
SDG: R1002384	LAB_ID	R1002384-003			R1002384-005			R1002384-002			R1002384-004		
FRACTION: PAH	SAMP_DATE	5/4/2010			5/4/2010			5/4/2010			5/4/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	74.1			61.2			71.8			74.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		9	J	P	110	U		46	U		1.8	J	P
ACENAPHTHENE		110			38	J	P	19	J	P	6.8	J	P
ACENAPHTHYLENE		18	U		54	J	P	35	J	P	2.3	J	P
ANTHRACENE		130			270			97			25		
BENZO(A)ANTHRACENE		200			580			290			68		
BENZO(A)PYRENE		190			600			260			68		
BENZO(B)FLUORANTHENE		150			590			280			60		
BENZO(G,H,I)PERYLENE		120			320			150			37		
BENZO(K)FLUORANTHENE		120			520			240			49		
CHRYSENE		190			840			480			74		
DIBENZO(A,H)ANTHRACENE		38			110			49			13		
FLUORANTHENE		480			830			940			120		
FLUORENE		59			49	J	P	26	J	P	6.3	J	P
INDENO(1,2,3-CD)PYRENE		110			280			140			34		
NAPHTHALENE		22			110	U		7	J	P	2.7	J	P
PHENANTHRENE		400			390			310			67		
PYRENE		370			840			740			110		

PROJ_NO: 00949	NSAMPLE	GI-SD529-0006
SDG: R1002384	LAB_ID	R1002384-001
FRACTION: PAH	SAMP_DATE	5/4/2010
MEDIA: SOIL	QC_TYPE	NM
	UNITS	UG/KG
	PCT_SOLIDS	69.6
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE	13		
ACENAPHTHENE	57		
ACENAPHTHYLENE	2.4	J	P
ANTHRACENE	98		
BENZO(A)ANTHRACENE	180		
BENZO(A)PYRENE	180		
BENZO(B)FLUORANTHENE	140		
BENZO(G,H,I)PERYLENE	110		
BENZO(K)FLUORANTHENE	150		
CHRYSENE	180		
DIBENZO(A,H)ANTHRACENE	36		
FLUORANTHENE	400		
FLUORENE	47		
INDENO(1,2,3-CD)PYRENE	98		
NAPHTHALENE	30		
PHENANTHRENE	320		
PYRENE	310		

PROJ_NO: 00949	NSAMPLE	GI-SD-FB01-050410			GI-SD-RB01-050410		
SDG: R1002384	LAB_ID	R1002384-007			R1002384-006		
FRACTION: PAH	SAMP_DATE	5/4/2010			5/4/2010		
MEDIA: WATER	QC_TYPE	FB			RB		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.13	J	P	0.12	J	P
ACENAPHTHENE		0.19	U		0.2	U	
ACENAPHTHYLENE		0.19	U		0.2	U	
ANTHRACENE		0.19	U		0.2	U	
BENZO(A)ANTHRACENE		0.094	U		0.1	U	
BENZO(A)PYRENE		0.19	U		0.2	U	
BENZO(B)FLUORANTHENE		0.19	U		0.2	U	
BENZO(G,H,I)PERYLENE		0.19	U		0.2	U	
BENZO(K)FLUORANTHENE		0.19	U		0.2	U	
CHRYSENE		0.19	U		0.2	U	
DIBENZO(A,H)ANTHRACENE		0.19	U		0.2	U	
FLUORANTHENE		0.19	U		0.2	U	
FLUORENE		0.19	U		0.2	U	
INDENO(1,2,3-CD)PYRENE		0.19	U		0.2	U	
NAPHTHALENE		0.19	U		0.2	U	
PHENANTHRENE		0.19	U		0.2	U	
PYRENE		0.19	U		0.2	U	

PROJ_NO: 00949	NSAMPLE	GI-SD429-0006			GI-SD505-0006			GI-SD506-0006			GI-SD519-0006		
SDG: R1002384	LAB_ID	R1002384-003			R1002384-005			R1002384-002			R1002384-004		
FRACTION: PCBH	SAMP_DATE	5/4/2010			5/4/2010			5/4/2010			5/4/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	74.1			61.2			71.8			74.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		2.2	U		6.8	U		5.8	U		3.4	U	
DICHLOROBIPHENYLS		0.46	U		16	U	A	1.2	U		0.69	U	
HEPTACHLOROBIPHENYLS		4.1	J	P	360			210			100		
HEXACHLOROBIPHENYLS		6.9			470			270			150		
MONOCHLOROBIPHENYLS		0.46	U		1.4	U		1.2	U		0.69	U	
NONACHLOROBIPHENYLS		2.2	U		6.8	U		5.8	U		3.4	U	
PENTACHLOROBIPHENYLS		0.89	U		78			41			26		
TETRACHLOROBIPHENYLS		0.89	U		2.7	U		2.3	U		1.3	U	
TOTAL OCTACHLOROBIPHENYLS		1.4	J	P	42			26			10		
TOTAL TRICHLOROBIPHENYLS		0.46	U		1.4	U		1.2	U		0.69	U	

PROJ_NO: 00949	NSAMPLE	GI-SD529-0006		
SDG: R1002384	LAB_ID	R1002384-001		
FRACTION: PCBH	SAMP_DATE	5/4/2010		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	69.6		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DECACHLOROBIPHENYL		6	U	
DICHLOROBIPHENYLS		1.2	U	
HEPTACHLOROBIPHENYLS		3	U	
HEXACHLOROBIPHENYLS		16		
MONOCHLOROBIPHENYLS		1.2	U	
NONACHLOROBIPHENYLS		6	U	
PENTACHLOROBIPHENYLS		2.4	U	
TETRACHLOROBIPHENYLS		2.4	U	
TOTAL OCTACHLOROBIPHENYLS		3	U	
TOTAL TRICHLOROBIPHENYLS		1.2	U	

PROJ_NO: 00949	NSAMPLE	GI-SD-FB01-050410			GI-SD-RB01-050410		
SDG: R1002384	LAB_ID	R1002384-007			R1002384-006		
FRACTION: PCBH	SAMP_DATE	5/4/2010			5/4/2010		
MEDIA: WATER	QC_TYPE	FB			RB		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.024	U		0.024	U	
DICHLOROBIPHENYLS		0.0047	U		0.0044	J	P
HEPTACHLOROBIPHENYLS		0.0075	J	P	0.0121	U	
HEXACHLOROBIPHENYLS		0.12			0.0097	U	
MONOCHLOROBIPHENYLS		0.0047	U		0.0049	U	
NONACHLOROBIPHENYLS		0.024	U		0.024	U	
PENTACHLOROBIPHENYLS		0.23			0.012	J	P
TETRACHLOROBIPHENYLS		0.027			0.0097	U	
TOTAL OCTACHLOROBIPHENYLS		0.0118	U		0.0121	U	
TOTAL TRICHLOROBIPHENYLS		0.04			0.0049	UJ	AP

PROJ_NO: 00949	NSAMPLE	GI-SD429-0006			GI-SD505-0006			GI-SD506-0006			GI-SD519-0006		
SDG: R1002384	LAB_ID	R1002384-003			R1002384-005			R1002384-002			R1002384-004		
FRACTION: MISC	SAMP_DATE	5/4/2010			5/4/2010			5/4/2010			5/4/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	74.1			61.2			71.8			74.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		5860			13800			7200			5240		

PROJ_NO: 00949	NSAMPLE	GI-SD529-0006		
SDG: R1002384	LAB_ID	R1002384-001		
FRACTION: MISC	SAMP_DATE	5/4/2010		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	MG/KG		
	PCT_SOLIDS	69.6		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		8300		

PROJ_NO: 00949	NSAMPLE	GI-SD-FB01-050410			GI-SD-RB01-050410		
SDG: R1002384	LAB_ID	R1002384-007			R1002384-006		
FRACTION: MISC	SAMP_DATE	5/4/2010			5/4/2010		
MEDIA: WATER	QC_TYPE	FB			RB		
	UNITS	MG/L			MG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		0.5	U		0.5	U	

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-08-10-3828W

Date: August 31, 2010

c: File G00949-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG R1002384
Columbia Analytical Services
CTO 458, Phase 2, Site 17, Gould Island, Naval Station Newport,
Jamestown, Rhode Island

Metals/Grain size		
14/Sediments/	GI-SD429-0006	GI-SD505-0006
	GI-SD506-0006	GI-SD519-0006
	GI-SD529-0006	
1/Rinsate blank	GI-SD-RB01-050410	
1/Field blank	GI-SD-FB01-050410	

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the metals analytical data and a Tier I data validation on the grain size data for the sediment samples in this SDG. The samples were collected from Site 17, Gould Island on May 4, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment at Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The metals analysis was performed according to USEPA SW-846 Methods 6010C/7471B/7470. The project specific criteria listed in the site SAP were applied for data validation of the metals data. The Tier II data validation was performed according to the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, November 2008. The grain size analysis was performed according to ASTM D422. The Tier I data validation includes evaluation for completeness only.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed. The grain size results are presented in the table with the fraction "Misc".

The analytical data from this SDG were evaluated based on the following parameters:

- Data Completeness
- * Holding Times
- * Calibration Verification
- Laboratory Blank Analyses
- ICP Interference Check Sample Results
- Matrix Spike/Matrix Spike Duplicate Results
- Laboratory Duplicate Results
- * Laboratory Control Sample Results

NA • Field Duplicate Precision
• ICP Serial Dilution Results
* • Percent Solids
• Reporting Limits

* All quality control criteria were met for this parameter.
NA Not applicable

Data Completeness

On August 16, 2010 the laboratory provided an LOD summary for the sediment samples since this was missing in the original data package. Additionally, the laboratory provided the manufacturer's QC limits for the solid laboratory control samples.

On August 25, 2010 the laboratory provided an LOD summary for the aqueous samples since this was missing in the original the data package and confirmed that an MS analysis was performed in association with the samples in this SDG. The MS and duplicate results were provided for sample GI-SD505-0006

On August 26, 2010 the laboratory provided corrected Form 1s for aqueous samples GI-SD-FB01-050410 and GI-SD-RB01-050410 samples and all associated affected forms in order to re-report the positive sample results below QL and above MDL.

Laboratory Blank Analysis

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the aqueous samples in this SDG:

Analyte	Maximum Conc. (µg/L)	Action Level (µg/L)	Affected Sample
Potassium	123	615	GI-SD-FB01-050410, GI-SD-RB01-050410
Sodium	336	1680	GI-SD-FB01-050410

The positive potassium and sodium results below the blank action level were changed to non-detected values (U) due to laboratory blank contamination.

Although potassium and sodium were found in the laboratory blanks, the project sensitivity goals are not impacted since there are no project action limits established for the rinsate or field blanks.

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the sediment samples in this SDG:

Analyte	Maximum Conc. (mg/Kg)	Action Level* (mg/Kg)	Affected Samples
Arsenic	-0.230	1.15	All sediments
Thallium	-0.14	0.69	GI-SD429-0006, GI-SD506-0006, GI-SD519-0006, GI-SD529-0006
*Action levels are adjusted for sample preparation factors.			

The positive and non-detected arsenic and thallium results in affected samples are qualified as estimated (J and UJ, respectively) due to negative instrument drift as evidenced by the negative blank results.

Arsenic exhibited negative instrument drift; therefore, the project accuracy goals may be impacted. The positive and non-detected arsenic results in affected samples are usable as estimated values and estimated reporting limits that may be biased low.

Although thallium exhibited negative instrument drift, the project accuracy goals are not impacted since there are no project action limits established for thallium. The non-detected thallium results in affected samples are usable as estimated reporting limits that may be biased low.

ICP Interference Check Sample Results

The following results were qualified in the affected samples due to ICP interference attributed to the high concentration of iron or calcium in the samples:

Analyte	Action		Bias	Affected Samples
	(+)	ND		
Arsenic	J		Low	All sediments
Cadmium	J		High	
Cobalt	J		Low	GI-SD505-0006
Potassium	J		Low	
Silver	UJ		High	GI-SD429-0006, GI-SD506-0006, GI-SD519-0006, GI-SD529-0006
Thallium	J	UJ	Low	All sediments

The positive and non-detected results for arsenic, cobalt, potassium, and thallium were qualified as estimated (J and UJ) in the affected samples due to negative ICP interference attributed to iron or calcium. The affected arsenic, cobalt, potassium, and thallium results may be biased low.

The positive results for cadmium were qualified as estimated (J) in the affected samples due to positive ICP interference attributed to iron or calcium. The affected cadmium results may be biased high.

Professional judgment was used to change the positive results for silver in the affected samples to estimated, non-detected values (UJ), rather than reject these results as provided in the data validation guidelines, because the reported concentrations may be due entirely ($\geq$ 90%) to positive iron or calcium ICP interference. The results may be false positive.

Although there were negative ICP interferences attributed to the high concentration of iron or calcium that resulted in estimating the results for arsenic and cobalt in the samples listed above; the project accuracy goals are not impacted since the affected results are much lower than the project action limits for these metals. The positive results for arsenic and cobalt in the affected samples are usable as estimated values which may be biased low.

Although there were negative ICP interferences attributed to the high concentration of iron or calcium that results in estimating the results for thallium and potassium in the samples listed above, the project accuracy goals are not impacted since there are no project action limits established for these analytes. The positive and non-detected results for thallium and potassium in the affected samples are usable as estimated values and estimated reporting limits which may be biased low.

Although there were positive ICP interferences attributed to the high concentration of iron or calcium that resulted in estimating the results for cadmium in the select samples listed above; the project accuracy goals are not impacted since the affected results are much lower than the project action limit for cadmium. The positive results for cadmium in the affected samples are usable as estimated values which may be biased high.

Although there were positive ICP interferences attributed to the high concentration of iron or calcium that resulted in raising the reporting limits for silver in the samples listed above, the project sensitivity goals are not impacted since the elevated reporting limits are lower than the project action limits. The silver results in the affected samples are usable as estimated, non-detected values which may be false positives.

Matrix Spike/Matrix Spike Duplicate Results

The following table summarizes the analytes that recovered outside of the 75-125% recovery QC limits in the matrix spike (MS) analysis of the sample GI-SD505-0006:

Analyte	%Recovery	Action	
		(+)	NDs
Arsenic	65	J	UJ
Copper	142	J	
Antimony	67	J	UJ
Zinc	166	J	

The percent recovery criterion was not met for arsenic, copper, antimony, and zinc; therefore, the project accuracy goals may be impacted. The positive and non-detected results for arsenic, copper, antimony, and zinc in all sediment samples are usable as estimated values and estimated reporting limits. Results for arsenic and antimony may be biased low, and those for copper and zinc may be biased high.

Laboratory Duplicate Results

The following table summarizes the analytes that exceeded the relative percent difference (RPD) QC criterion of <20%RPD in the laboratory duplicate analysis of the sample GI-SD505-0006:

Analyte	RPD	Action	
		(+)	NDs
Calcium	21	J	
Thallium	26	J	UJ

Although the RPD criterion was not met for calcium or thallium, the project precision goals are not impacted since there are no project action limits established for these analytes. The positive and non-detected results for calcium and thallium in all sediment samples are usable as estimated values and estimated reporting limits for which the bias is indeterminate.

ICP Serial Dilution Results

The following table summarizes the analytes for which the percent difference between the initial and diluted results in the ICP serial dilution analysis of sample GI-SD505-0006 was above the 10% SAP QC criterion when the initial sample result was above 50 times the method detection limit (MDL):

Analyte	% Difference	Bias	Action	
			(+)	NDs
Beryllium	14	High	J	

Although a matrix enhancing effect for beryllium was detected in the ICP serial dilution analysis, the project accuracy goals are not impacted since project action limits are not established for this analyte. The positive beryllium results in all sediment samples are usable as estimated values which may be biased high.

Reporting Limits

The laboratory reported the non-detected results down to the Method Detection Limit (MDL) instead of down to the Limit of Detection (LOD) as required because software limitations. The data validator changed the non-detected results to the LOD values. The positive results above MDL and less than the Limit of Quantitation (LOQ) were qualified as estimated (J) due to uncertainty below QLs.

The laboratory's reporting format did not include sample-specific QLs adjusted for sample preparation factors (e.g., sample weight, dilution factor, and percent solids). Therefore, only the unadjusted QLs reported in the Form 10 are evaluated below. Sample-specific reporting limits adjusted for preparation factors were reported only for associated non-detected results; these reporting limits for non-detected results are evaluated below.

The following analytes were reported as non-detected in select samples: antimony, arsenic, selenium, silver, and thallium. The sample-specific reporting limits met the project action limits for antimony, arsenic, and silver; however the sample-specific reporting limits for selenium exceeded the project action limits in select samples. Data usability may be impacted for selenium. There is no established project action limit for thallium; therefore, data usability is not impacted for thallium.

As discussed above in the ICP Interference Check Sample Results section, reporting limits were raised for silver in select sediment samples; data usability is not impacted for silver in the affected samples since the project action limits were still met.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

Metals

The project goals with respect to accuracy were met for the metals data set with the following exceptions. Arsenic, copper, antimony, and zinc were qualified as estimated in all sediment samples due to low or high MS recoveries. Results for arsenic and antimony may be biased low while those for copper and zinc may be biased high. Although specific method criteria were not met in this instance, the affected positive and non-detected results are usable as estimated values and estimated reporting limits which may have a minor impact on data usability. Additionally, arsenic, cobalt, potassium, and thallium were qualified as estimated in select sediment samples due to negative ICP interferences; the affected results may be biased low. Cadmium was qualified as estimated in select sediment samples due to

positive ICP interferences; the affected results may be biased high. Beryllium was qualified as estimated in all sediment samples due to matrix enhancing effects; results may be biased high. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The project goals with respect to sensitivity were met for the metals data set with the following exceptions. The project action limits were achieved by the sample-specific laboratory reporting limits associated with the non-detected results with the exception of selenium for select samples. Data usability may be impacted for selenium. Additionally, silver results in select samples were reported with elevated reporting limits as a result of positive ICP interferences. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated elevated reporting limits.

The project goals with respect to precision were met for the metals data set. Calcium and thallium were qualified as estimated in all sediment samples due to poor laboratory duplicate precision. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated values and estimated reporting limits.

The project goals with respect to completeness were met for the metals data set. Data usability is not impacted with regards to completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-SD429-0006			GI-SD505-0006			GI-SD506-0006			GI-SD519-0006		
SDG: R1002384	LAB_ID	R1002384-003			R1002384-005			R1002384-002			R1002384-004		
FRACTION: M	SAMP_DATE	5/4/2010			5/4/2010			5/4/2010			5/4/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	74.1			61.2			71.8			74.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		6160			4690			3930			4520		
ANTIMONY		0.666	UJ	D	0.208	J	DP	0.692	UJ	D	0.665	UJ	D
ARSENIC		0.7	J	DKO	0.543	UJ	DKO	0.999	J	DKO	0.554	J	DKO
BARIUM		7.6			14.7			9.2			10.5		
BERYLLIUM		0.204	J	IP	0.359	J	I	0.257	J	I	0.205	J	IP
CADMIUM		0.2	J	KP	0.288	J	K	0.103	J	KP	0.177	J	KP
CALCIUM		30500	J	F	165000	J	F	7790	J	F	20000		
CHROMIUM		12			13.9			10.1			9.3		
COBALT		3.8			2.7	J	KP	3.2			3		
COPPER		7.5	J	D	25	J	D	11.1	J	D	10.9	J	D
IRON		12500			8860			9110			10400		
LEAD		11.2			20.4			11.4			17.9		
MAGNESIUM		3390			3070			2150			2570		
MANGANESE		137			109			75			107		
MERCURY		0.026	J	P	0.079			0.035			0.02	J	P
NICKEL		7.4			6.7			6.5			6		
POTASSIUM		758			1220	J	K	818			709		
SELENIUM		0.666	U		2.4	U		0.692	U		0.665	U	
SILVER		0.222	UJ	KP	0.271	U		0.231	UJ	KP	0.222	UJ	KP
SODIUM		3390			7690			3830			3100		
THALLIUM		0.444	UJ	FKO	4.5	J	FK	0.461	UJ	FKO	0.443	U	FKO
VANADIUM		15			16.5			12.2			12.4		
ZINC		34.4	J	D	48.2	J	D	40	J	D	30.9	J	D

PROJ_NO: 00949	NSAMPLE	GI-SD529-0006
SDG: R1002384	LAB_ID	R1002384-001
FRACTION: M	SAMP_DATE	5/4/2010
MEDIA: SOIL	QC_TYPE	NM
	UNITS	MG/KG
	PCT_SOLIDS	69.6
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
ALUMINUM	6250		
ANTIMONY	0.718	UJ	D
ARSENIC	0.49	J	DKO
BARIUM	10.1		
BERYLLIUM	0.213	J	IP
CADMIUM	0.205	J	KP
CALCIUM	31100		
CHROMIUM	11.3		
COBALT	3.6		
COPPER	8.1	J	D
IRON	13200		
LEAD	12.7		
MAGNESIUM	3230		
MANGANESE	129		
MERCURY	0.027	J	P
NICKEL	8.4		
POTASSIUM	867		
SELENIUM	0.718	U	
SILVER	0.252	UJ	KP
SODIUM	4830		
THALLIUM	0.479	UJ	FKO
VANADIUM	13.4		
ZINC	35.2	J	D

PROJ_NO: 00949	NSAMPLE	GI-SD-FB01-050410			GI-SD-RB01-050410		
SDG: R1002384	LAB_ID	R1002384-007			R1002384-006		
FRACTION: M	SAMP_DATE	5/4/2010			5/4/2010		
MEDIA: WATER	QC_TYPE	FB			RB		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		75	U		75	U	
ANTIMONY		15	U		15	U	
ARSENIC		10	U		10	U	
BARIUM		4	U		4	U	
BERYLLIUM		0.7	U		0.7	U	
CADMIUM		0.7	U		0.7	U	
CALCIUM		70	U		70	U	
CHROMIUM		0.7	U		0.7	U	
COBALT		1.5	U		1.5	U	
COPPER		5	U		5	U	
IRON		70	U		70	U	
LEAD		7	U		7	U	
MAGNESIUM		27.3	J	P	41.2	J	P
MANGANESE		1	U		0.813	J	P
MERCURY		0.2	U		0.2	U	
NICKEL		0.7	U		0.7	U	
POTASSIUM		1000	UJ	AP	1000	UJ	AP
SELENIUM		30	U		30	U	
SILVER		5	U		5	U	
SODIUM		901	UJ	AP	2040		
THALLIUM		10	U		10	U	
VANADIUM		1	U		1	U	
ZINC		32.2			46.8		

PROJ_NO: 00949	NSAMPLE	GI-SD429-0006			GI-SD505-0006			GI-SD506-0006			GI-SD519-0006		
SDG: R1002384	LAB_ID	R1002384-003			R1002384-005			R1002384-002			R1002384-004		
FRACTION: MISC	SAMP_DATE	5/12/2010			5/12/2010			5/12/2010			5/12/2010		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.002MM		1			8			2			1		
SIEVE 1"		100			100			100			100		
SIEVE 1/2"		100			100			100			100		
SIEVE 3/4"		100			100			100			100		
SIEVE 3/8"		100			100			100			100		
SIEVE NO. 004		98			100			100			98		
SIEVE NO. 010		88			88			98			95		
SIEVE NO. 020		63			77			96			89		
SIEVE NO. 040		21			71			92			72		
SIEVE NO. 060		14			65			82			39		
SIEVE NO. 100		11			55			60			14		
SIEVE NO. 200		9			38			29			4		

PROJ_NO: 00949	NSAMPLE	GI-SD529-0006		
SDG: R1002384	LAB_ID	R1002348-001		
FRACTION: MISC	SAMP_DATE	5/12/2010		
MEDIA: SEDIMENT	QC_TYPE	NM		
	UNITS	%		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
HYDROMETER-0.002MM		2		
SIEVE 1"		100		
SIEVE 1/2"		100		
SIEVE 3/4"		100		
SIEVE 3/8"		100		
SIEVE NO. 004		95		
SIEVE NO. 010		91		
SIEVE NO. 020		85		
SIEVE NO. 040		77		
SIEVE NO. 060		47		
SIEVE NO. 100		17		
SIEVE NO. 200		9		

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-09-10-3829W

Date: September 2, 2010

c: File G00949-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG R1002638
Columbia Analytical Services
CTO 458, Phase 2, Site 17, Gould Island, Naval Station Newport,
Jamestown, Rhode Island

PAH/PCB Homologues/TOC:

14/Sediments/	GI-SD304-0006	GI-SD311-0006
	GI-SD438-0006	GI-SD512-0006
	GI-SD513-0006	GI-SD517-0006
	GI-SD520-0006	GI-SD521-0006
	GI-SD522-0006	GI-SD523-0006
	GI-SD528-0006	GI-SD530-0006
	GI-SD531-0006	GI-SD-DUP03-051310
	(Field Duplicate pair: GI-SD517-0006/GI-SD-DUP03-051310)	
1/Rinsate blank/	GI-SD-RB02-051310	

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polynuclear aromatic hydrocarbons (PAH), polychlorinated biphenyl (PCB) homologues, and total organic carbon (TOC) analytical data for the sediment samples in this SDG. The samples were collected from Site 17, Gould Island on May 13, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment at Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The PAH analysis was performed according to USEPA SW-846 Method 8270. The PCB homologue analysis was performed according to USEPA Method 680. The TOC analysis was performed according to the Lloyd Kahn method and SW-846 Method 9060.

The project specific criteria listed in the site SAP were applied for data validation. The PAH, PCB homologue, and TOC data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

	•	Data Completeness
	•	Preservation and Technical Holding Times
*	•	GC/MS Instrument Performance Check (Tuning)
*	•	Initial and Continuing Calibrations
	•	Blanks
*	•	Surrogate Compounds
*	•	Internal Standards
	•	Matrix Spike/Matrix Spike Duplicate
	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
	•	Field Duplicates
NA	•	Compound Identification/Quantitation
*	•	Percent Solids
	•	Reporting Limits

* All criteria were met for this parameter.
NA Not Applicable for Tier II

Data Completeness

On August 16, 2010 the laboratory provided the limits of detection (LOD) summary since this was missing from the original submission of the data package.

On August 25, 2010 the laboratory provided the limit of detection (LOD) summary for the aqueous samples since this was missing from the original submission of the data package.

Preservation and Technical Holding Times

PAH

Several samples were re-extracted and re-analyzed because of the low target compound recoveries reported for the associated laboratory control sample (LCS). The target compound recoveries were improved in the re-extract of the LCS.; however, professional judgment was used to report the original analysis, with a few exceptions, since the positive PAH results in the original analyses were similar to those in the re-extracts. The positive PAH results for the re-analysis of samples GI-SD304-0006(RE), GI-SD311-0006(RE), GI-SD438-0006(RE), GI-SD512-0006(RE), GI-SD517-0006(RE), GI-SD520-0006(RE), GI-SD521-0006(RE), and GI-SD523-0006(RE) were higher than those in the original analyses; therefore, the re-analyses were reported. Since samples GI-SD304-0006(RE), GI-SD311-0006(RE), GI-SD438-0006(RE), GI-SD512-0006(RE), GI-SD517-0006(RE), GI-SD520-0006(RE), GI-SD521-0006(RE), and GI-SD523-0006(RE) were extracted 5 or 6 days beyond the 14-day extraction holding time criterion, the PAH results in these samples were qualified as estimated (J, UJ).

The extraction holding time criterion was not met for samples GI-SD304-0006(RE), GI-SD311-0006(RE), GI-SD438-0006(RE), GI-SD512-0006(RE), GI-SD517-0006(RE), GI-SD520-0006(RE), GI-SD521-0006(RE), and GI-SD523-0006(RE); therefore, the project accuracy goals may be impacted. The positive and non-detected results in the affected samples are usable as estimated values which may be biased low.

Blanks

PAH

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the sediment samples in this SDG:

Compound	Maximum Conc. (µg/Kg)	Action Level* (µg/Kg)	Affected Samples
Naphthalene	1.3	6.5	GI-SD304-0006, GI-SD311-0006, GI-SD528-0006, GI-SD530-0006, GI-SD438-0006, GI-SD513-0006, GI-SD517-0006, GI-SD521-0006, GI-SD522-0006, GI-SD523-0006, GI-SD531-0006, GI-SD-DUP03-051310
Anthracene	2.7	13.5	GI-SD311-0006, GI-SD438-0006, GI-SD513-0006, GI-SD517-0006, GI-SD-DUP03-051310
*Action levels are adjusted for each sample preparation factors.			

The positive naphthalene and anthracene results below the blank action levels are changed to non-detected values (U) at the sample result or at the sample specific reporting limit due to laboratory blank contamination.

Anthracene contamination was found in the laboratory blank; therefore, project sensitivity goals may be impacted since the non-detected results in affected samples exceeded the project action limits. These results are usable as non-detected values.

Although naphthalene contamination was found in the laboratory blank; the project sensitivity goals are not impacted since the non-detected naphthalene results in affected samples are below the project action limits. These results are usable as non-detected values.

PCB Homologues

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the rinsate blank in this SDG:

Compound	Maximum Conc. (µg/L)	Action Level (µg/L)	Affected Samples
Pentachlorobiphenyls	0.020	0.10	GI-SD-RB02-051310

The positive pentachlorobiphenyl result below the blank action level is changed to a non-detected value (U) at the sample result due to laboratory blank contamination.

Although pentachlorobiphenyl contamination was found in the laboratory blank, project sensitivity goals are not impacted since there are no project action limits established for the rinsate blank. This result is usable as a non-detected result.

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the sediment samples in this SDG:

Compound	Maximum Conc. (µg/Kg)	Action Level* (µg/Kg)	Affected Samples
Pentachlorobiphenyls	1.1	5.5	GI-SD512-0006, GI-SD513-0006, GI-SD517-0006, GI-SD520-0006, GI-SD522-0006, GI-SD523-0006, GI-SD528-0006, GI-SD531-0006

*Action levels are adjusted for each sample preparation factors.

The positive pentachlorobiphenyl results below the blank action levels are changed to non-detected values (U) at the sample result due to laboratory blank contamination.

Although pentachlorobiphenyl contamination was found in the laboratory blank; the, project sensitivity goals are not impacted since the non-detected results did not exceed the project action limits. These results are usable as non-detected results.

Matrix Spike/Matrix Spike Duplicate

PAH

The following table summarizes the PAH matrix spiking recoveries and RPDs that did not meet the statistically derived laboratory QC limits in the matrix spike and matrix spike duplicate (MS/MSD) analysis and the qualifications applied to sample GI-SD438-0006:

Compound	MS/MSD %REC	MS/MSD RPD	QC Limits		Action	
			%REC	RPD	(+)	ND
Benzo(a)anthracene	-/-	41	50-110	30	J	
Benzo(a)pyrene	17/45	59	50-110	30	J	
Benzo(b)fluoranthene	-/-	36	45-115	30	J	
Benzo(g,h,i)perylene	7/15	67	40-125	30	J	
Chrysene	-/-	44	55-110	30	J	
Fluoranthene	50/165	65	55-115	30	J	
Indeno(1,2,3-cd)pyrene	-/-	37	40-120	30	J	
Phenanthrene	-/157	64	50-110	30	J	
Pyrene	27/-	76	45-125	30	J	

-Criterion met

The MS/MSD recovery criteria were not met for benzo(a)pyrene, benzo(g,h,i)fluoranthene, fluoranthene, phenanthrene, and pyrene; therefore, project accuracy goals may be impacted. The positive results for benzo(a)pyrene, benzo(g,h,i)fluoranthene, fluoranthene, phenanthrene, and pyrene in sample GI-SD438-0006 are usable as estimated values. The results for benzo(a)pyrene, benzo(g,h,i)perylene, and pyrene may be biased low and the results for phenanthrene may be biased high. The bias is indeterminate for fluoranthene.

The MS/MSD RPD criteria were not met for benzo(a)anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene; therefore, project precision goals may be impacted. The positive results for benzo(a)anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene in sample GI-SD438-0006 are usable as estimated values.

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Although the MS/MSD RPD criteria were not met for benzo(b)fluoranthene, the project precision goals are not impacted since the affected sample results are much lower than the project action limits. The positive result for benzo(b)fluoranthene in sample GI-SD438-0006 is usable as an estimated value.

PCB Homologues

The following table summarizes the PCB homologue matrix spiking recoveries and RPDs that did not meet the statistically derived laboratory QC limits in the matrix spike and matrix spike duplicate (MS/MSD) analysis and the qualifications applied to sample GI-SD438-0006:

Compound	MS/MSD %REC	MS/MSD RPD	QC Limits		Action	
			%REC	RPD	(+)	ND
Pentachlorobiphenyls	-/-	43	30-130	30	J	
Hexachlorobiphenyls	514/220	62	30-130	30	J	
Heptachlorobiphenyls	320/159	55	30-130	30	J	
Octachlorobiphenyls	138/-	53	30-130	30	J	

-Criterion met

The MS/MSD recovery criteria were not met for hexachlorobiphenyls, heptachlorobiphenyls, and octachlorobiphenyls; therefore, project accuracy goals may be impacted. The positive results for hexachlorobiphenyls, heptachlorobiphenyls, and octachlorobiphenyls in sample GI-SD438-0006 are usable as estimated values which may be biased high.

The MS/MSD RPD criteria were not met for pentachlorobiphenyls, hexachlorobiphenyls, heptachlorobiphenyls, and octachlorobiphenyls; therefore, project precision goals may be impacted. The positive results for pentachlorobiphenyls, hexachlorobiphenyls, heptachlorobiphenyls, and octachlorobiphenyls in sample GI-SD438-0006 are usable as estimated values.

Laboratory Control Sample/Laboratory Control Sample Duplicate

The following table summarizes the PAH recoveries and RPDs that did not meet the statistically derived laboratory QC limits in the laboratory control sample and laboratory control sample duplicate (LCS/LCSD) analysis:

Compound	LCS/LCSD %REC	LCS/LCSD RPD	QC Limits %REC	QC Limits RPD	Action (+)	Action ND
2-Methylnaphthalene	-/-	31	-	30	J	
Associated samples: GI-SD438-0006, GI-SD304-0006, GI-SD311-0006						
Benzo(a)pyrene	30/25	-	50-110	-	J	
Benzo(g,h,i)perylene	8/6	-	40-125	-	J	
Pyrene	-/35	-	45-125	-	J	
Associated samples: GI-SD528-0006, GI-SD530-006, GI-SD513-0006, GI-SD522-0006, GI-SD531-0006, GI-SD-DUP03-0006						

-Criterion met

The LCS/LCSD recovery criteria were not met for benzo(a)pyrene, benzo(g,h,i)fluoranthene, and pyrene; therefore, project accuracy goals may be impacted. The positive results for benzo(a)pyrene, benzo(g,h,i)fluoranthene, and pyrene in affected samples are usable as estimated values which may be biased low.

The LCS/LCSD RPD criteria were not met for 2-methylnaphthalene; therefore, project precision goals may be impacted. The positive results for 2-methylnaphthalene in affected samples are usable as estimated values.

Field Duplicates

PCB Homologues

The field duplicate pair GI-SD517-0006/GI-SD-DUP03-051310 did not meet the field duplicate QC criteria of RPD <50% for the following compounds:

Compound	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action (+)	Action NDs
Heptachlorobiphenyls	27	67	85	J	
Hexachlorobiphenyls	39	88	77	J	
Trichlorobiphenyls	43	5.8 U	NC	J	UJ
NC: Not calculable. The sample result for trichlorobiphenyls was >2x SQL and the results for the field duplicate was non-detected; therefore, professional judgment was applied to qualify the results as estimated (J/UJ).					

The field duplicate RPD criteria were not met for heptachlorobiphenyls, hexachlorobiphenyls, and trichlorobiphenyls; therefore, project precision goals may be impacted. The positive results for heptachlorobiphenyls, hexachlorobiphenyls, and trichlorobiphenyls in samples GI-SD517-0006 and GI-SD-DUP03-051310 are usable as estimated values.

Reporting Limits

Results greater the Method Detection Limit (MDL) and less than the Limit of Quantitation (LOQ) were qualified as estimated (J). The laboratory reported all non-detected results down to the Limit of Detection (LOD).

PAH

The QLs reported by the laboratory were twice the QLs listed in worksheet 15c of the SAP; however, these QLs did meet the specified project action limits. QLs for select samples were elevated due to the percent moisture content and/or required dilutions. Acenaphthylene and fluorene were not detected in several of these select samples. The project action limit was met for fluorene; however, the acenaphthylene project action limit was exceeded in some samples. Data usability may be impacted for these select results.

As discussed above in the Blank section, reporting limits were raised for naphthalene and anthracene in select samples due to laboratory blank contamination. The elevated reporting limits for naphthalene still met project action limits; therefore, data usability is not impacted for naphthalene. However, the elevated reporting limits in select samples exceeded the project action limits for anthracene; therefore, data usability may be impacted for anthracene.

PCB Homologues

All laboratory-specific QLs in worksheet 15c of the SAP were met by the laboratory's actual QLs with the exception of those in select samples for which QLs were elevated as a result of the percent moisture content of the samples. However, the laboratory's adjusted reporting limits met the project action limits.

As discussed above in the Blank section, reporting limits were raised for pentachlorobiphenyls in select samples due to laboratory blank contamination. The elevated reporting limits in select samples did not exceed the project action limits for pentachlorobipenyls; therefore, data usability is not impacted.

TOC

There are no project action limits established for TOC for the sediment samples.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

PAH

The project goals with respect to accuracy were met for the PAH data set with the following exceptions. All PAH results in samples GI-SD304-0006(RE), GI-SD311-0006(RE), GI-SD438-0006(RE), GI-SD512-0006(RE), GI-SD517-0006(RE), GI-SD520-0006(RE), GI-SD521-0006(RE), and GI-SD523-0006(RE)

were qualified as estimated due to the exceeded extraction holding time criterion; results may be biased low. The results for benzo(a)pyrene, benzo(g,h,i)perylene, fluoranthene, phenanthrene, and pyrene in sample GI-SD438-0006 were qualified as estimated due to low or high MS/MSD recoveries. Results for benzo(a)pyrene, benzo(g,h,i)perylene, and pyrene may be biased high; the result for phenanthrene may be biased low; and that for fluoranthene is indeterminate. The results for benzo(a)pyrene, benzo(g,h,i)perylene, and pyrene in affected samples were qualified as estimated due to low LCS and LCSD recoveries; results may be biased low. Although specific method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability.

The project goals with respect to precision were met for the PAH data set with the following exceptions. The results for benzo(a)anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene and pyrene in sample GI-SD548-0006 were qualified as estimated due to poor MS/MSD precision. The results for 2-methylnaphthalene in affected samples were qualified as estimated due to poor LCS/LCSD precision. Although specific method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability. In addition, the result for benzo(b)fluoranthene in sample GI-SD438-0006 was qualified as estimated due to poor MS/MSD precision. Although specific method criteria were not met in this instance, data usability is not impacted and the affected positive result is usable as an estimated value.

The project goals with respect to sensitivity were met for the PAH data set with the following exceptions. Reporting limits for select samples were elevated due to the percent moisture content and/or required dilutions. Acenaphthylene and fluorene were not detected in several of these select samples. The project action limit was met for fluorene; however, that for acenaphthylene was exceeded in some samples. Data usability may be impacted for these select acenaphthylene results.

The project goals with respect to completeness were met for the PAH data set. Data usability was not impacted with regards to completeness.

PCB Homologues

The project goals with respect to accuracy were met for the PCB homologue data set with the following exceptions. The results for hexachlorobiphenyls, heptachlorobiphenyls, and octachlorobiphenyls in sample GI-SD438-0006 were qualified as estimated due to high MS and MSD recoveries; results may be biased high. Although specific method criteria were not met in these instances, the affected positive results are usable as estimated values which may have a minor impact on data usability.

The project goals with respect to precision were met for the PCB homologue data set with the following exceptions. The results for pentachlorobiphenyls, hexachlorobiphenyls, heptachlorobiphenyls, and octachlorobiphenyls in sample GI-SD438-0006 were estimated due to the exceeded MS/MSD RPD criteria. The results for heptachlorobiphenyls, hexachlorobiphenyls, and trichlorobiphenyls in samples GI-SD517-0006 and GI-SD-DUP03-051310 were qualified as estimated due to poor field duplicate precision. Although QC criteria were not met in these instances, the affected positive and non-detected results are usable as estimated values and estimate reporting limits which may have a minor impact on data usability.

The project goals with respect to sensitivity were met for the PCB homologue data set. Reporting limits were raised for pentachlorobiphenyls in select samples due to laboratory blank contamination. The

elevated reporting limits in select samples did not exceed the project action limits for pentachlorobipenyls; therefore, data usability is not impacted.

The project goals with respect to completeness were met for the PCB homologue data set. Data usability was not impacted with regards to completeness.

TOC

The project goals with respect to accuracy, precision, sensitivity, and completeness were met for the TOC data set. Data usability was not impacted with regards to accuracy, precision, sensitivity, and completeness.

Tables: Data Summary Tables
Data Validation Qualifiers and Codes

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-SD304-0006RE			GI-SD311-0006-DL			GI-SD438-0006RE			GI-SD512-0006RE		
SDG: R1002638	LAB_ID	R1002638-003			R1002638-002			R1002638-001			R1002638-008		
FRACTION: PAH	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	75.8			82.7			74.2			83.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		13	J	EHP	6	J	EHP	18	J	EHP	42	J	H
ACENAPHTHENE		70	J	HP	32	J	HP	85	J	HP	190	J	H
ACENAPHTHYLENE		44	UJ	H	40	UJ	H	89	UJ	H	32	UJ	H
ANTHRACENE		120	J	H	54	UJ	AH	130	UJ	AH	360	J	H
BENZO(A)ANTHRACENE		220	J	H	77	J	H	270	J	DH	420	J	H
BENZO(A)PYRENE		210	J	H	62	J	H	290	J	DH	380	J	H
BENZO(B)FLUORANTHENE		160	J	H	58	J	H	220	J	DH	280	J	H
BENZO(G,H,I)PERYLENE		120	J	H	18	J	HP	150	J	DH	190	J	H
BENZO(K)FLUORANTHENE		180	J	H	56	J	H	200	J	H	260	J	H
CHRYSENE		230	J	H	81	J	H	270	J	DH	370	J	H
DIBENZO(A,H)ANTHRACENE		33	J	HP	20	J	HP	67	J	HP	70	J	H
FLUORANTHENE		520	J	H	240	J	H	630	J	DH	1000	J	H
FLUORENE		57	J	H	24	J	HP	67	J	HP	170	J	H
INDENO(1,2,3-CD)PYRENE		130	J	H	40	J	H	150	J	DH	190	J	H
NAPHTHALENE		44	UJ	AH	40	UJ	AH	89	UJ	AH	130	J	H
PHENANTHRENE		430	J	H	180	J	H	490	J	DH	990	J	H
PYRENE		410	J	H	160	J	H	450	J	DH	750	J	H

PROJ_NO: 00949	NSAMPLE	GI-SD513-0006			GI-SD517-0006RE			GI-SD520-0006RE			GI-SD521-0006RE		
SDG: R1002638	LAB_ID	R1002638-009			R1002638-010			R1002638-011			R1002638-007		
FRACTION: PAH	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	73.0			65.0			74.8			85.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		1.4	J	P	1.5	J	HP	8.9	J	H	31	J	H
ACENAPHTHENE		9	U		3.1	J	HP	21	J	H	290	J	H
ACENAPHTHYLENE		12			3.6	J	HP	12	J	H	12	J	H
ANTHRACENE		9	U	A	12	UJ	AH	70	J	H	780	J	H
BENZO(A)ANTHRACENE		28			42	J	H	150	J	H	1600	J	H
BENZO(A)PYRENE		31	J	E	37	J	H	150	J	H	1400	J	H
BENZO(B)FLUORANTHENE		22			39	J	H	110	J	H	990	J	H
BENZO(G,H,I)PERYLENE		25	J	E	26	J	H	92	J	H	680	J	H
BENZO(K)FLUORANTHENE		24			32	J	H	110	J	H	1100	J	H
CHRYSENE		31			52	J	H	160	J	H	1500	J	H
DIBENZO(A,H)ANTHRACENE		6.8	J	P	8.2	J	H	29	J	H	270	J	H
FLUORANTHENE		48			64	J	H	360	J	H	3300	J	H
FLUORENE		9	U		4.6	J	HP	34	J	H	290	J	H
INDENO(1,2,3-CD)PYRENE		19			23	J	H	82	J	H	690	J	H
NAPHTHALENE		9	U	A	10	UJ	AH	19	J	H	78	UJ	AH
PHENANTHRENE		25			28	J	H	260	J	H	2400	J	H
PYRENE		48	J	E	54	J	H	280	J	H	2600	J	H

PROJ_NO: 00949	NSAMPLE	GI-SD522-0006			GI-SD523-0006RE			GI-SD528-0006			GI-SD530-0006		
SDG: R1002638	LAB_ID	R1002638-013			R1002638-012			R1002638-005			R1002638-006		
FRACTION: PAH	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	57.6			83.4			75.1			72.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		2.9	J	P	4.8	J	HP	3.1	J	P	3.2	J	P
ACENAPHTHENE		7.5	J	P	30		H	13			7.9	J	P
ACENAPHTHYLENE		5.2	J	P	2	J	HP	2.2	J	P	6.9	J	P
ANTHRACENE		25			65		H	22			23		
BENZO(A)ANTHRACENE		130			150		H	55			68		
BENZO(A)PYRENE		81	J	E	150		H	53	J	E	67	J	E
BENZO(B)FLUORANTHENE		76			110		H	46			59		
BENZO(G,H,I)PERYLENE		43	J	E	89		H	38	J	E	40	J	E
BENZO(K)FLUORANTHENE		89			110		H	40			55		
CHRYSENE		160			150		H	54			100		
DIBENZO(A,H)ANTHRACENE		15			30		H	12			15		
FLUORANTHENE		490			320		H	120			140		
FLUORENE		6.9	J	P	28		H	9.3			7.9	J	P
INDENO(1,2,3-CD)PYRENE		42			84		H	33			37		
NAPHTHALENE		11	U	A	7.9	UJ	AH	8.8	U	A	9.2	U	A
PHENANTHRENE		69			230		H	74			74		
PYRENE		360	J	E	260	J	H	100	J	E	130	J	E

PROJ_NO: 00949	NSAMPLE	GI-SD531-0006			GI-SD-DUP03-051310		
SDG: R1002638	LAB_ID	R1002638-004			R1002638-014		
FRACTION: PAH	SAMP_DATE	5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			FD		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	66.3			69.2		
	DUP_OF				GI-SD517-0006		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		3.5	J	P	2.4	J	P
ACENAPHTHENE		17			2.4	J	P
ACENAPHTHYLENE		6	J	P	3.9	J	P
ANTHRACENE		32			10	U	A
BENZO(A)ANTHRACENE		69			32		
BENZO(A)PYRENE		77	J	E	37	J	E
BENZO(B)FLUORANTHENE		93			38		
BENZO(G,H,I)PERYLENE		78	J	E	22	J	E
BENZO(K)FLUORANTHENE		64			32		
CHRYSENE		82			32		
DIBENZO(A,H)ANTHRACENE		25			7.2	J	P
FLUORANTHENE		140			49		
FLUORENE		13			2.9	J	P
INDENO(1,2,3-CD)PYRENE		66			21		
NAPHTHALENE		10	U	A	10	U	A
PHENANTHRENE		95			22		
PYRENE		130	J	E	37	J	E

PROJ_NO: 00949	NSAMPLE	GI-SD-RB02-051310
SDG: R1002638	LAB_ID	R1002638-015
FRACTION: PAH	SAMP_DATE	5/13/2010
MEDIA: WATER	QC_TYPE	RB
	UNITS	UG/L
	PCT_SOLIDS	
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE	0.19	U	
ACENAPHTHENE	0.13	J	P
ACENAPHTHYLENE	0.19	U	
ANTHRACENE	0.19	U	
BENZO(A)ANTHRACENE	0.094	U	
BENZO(A)PYRENE	0.19	U	
BENZO(B)FLUORANTHENE	0.19	U	
BENZO(G,H,I)PERYLENE	0.19	U	
BENZO(K)FLUORANTHENE	0.19	U	
CHRYSENE	0.19	U	
DIBENZO(A,H)ANTHRACENE	0.19	U	
FLUORANTHENE	0.19	U	
FLUORENE	0.19	U	
INDENO(1,2,3-CD)PYRENE	0.19	U	
NAPHTHALENE	0.19	U	
PHENANTHRENE	0.19	U	
PYRENE	0.19	U	

PROJ_NO: 00949	NSAMPLE	GI-SD304-0006			GI-SD311-0006			GI-SD438-0006			GI-SD512-0006		
SDG: R1002638	LAB_ID	R1002638-003			R1002638-002			R1002638-001			R1002638-008		
FRACTION: PCBH	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	75.8			82.7			74.2			83.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		3.3	U		2	U		1.1	U		2	U	
DICHLOROBIPHENYLS		0.67	U		0.41	U		0.23	U		0.41	U	
HEPTACHLOROBIPHENYLS		410			1	U		38	J	D	1	U	
HEXACHLOROBIPHENYLS		650			0.8	U		50	J	D	3.2	J	P
MONOCHLOROBIPHENYLS		0.67	U		0.41	U		0.23	U		0.41	U	
NONACHLOROBIPHENYLS		3.3	U		2	U		1.1	U		2	U	
PENTACHLOROBIPHENYLS		190			0.8	U		11	J	D	3.9	UJ	AP
TETRACHLOROBIPHENYLS		11			0.8	U		0.44	U		0.79	U	
TOTAL OCTACHLOROBIPHENYLS		74			1	U		6.7	J	D	1	U	
TOTAL TRICHLOROBIPHENYLS		0.67	U		0.41	U		0.23	U		0.41	U	

PROJ_NO: 00949	NSAMPLE	GI-SD513-0006			GI-SD517-0006			GI-SD520-0006			GI-SD521-0006		
SDG: R1002638	LAB_ID	R1002638-009			R1002638-010			R1002638-011			R1002638-007		
FRACTION: PCBH	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	73.0			65.0			74.8			85.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		2.3	U		2.6	U		2.2	U		2.9	U	
DICHLOROBIPHENYLS		0.5	U		0.62	J	P	0.45	U		0.6	U	
HEPTACHLOROBIPHENYLS		1.2	U		27	J	G	1.1	U		1.5	U	
HEXACHLOROBIPHENYLS		4.3	J	P	39	J	G	5.1	J	P	1.2	U	
MONOCHLOROBIPHENYLS		0.47	U		0.52	U		0.45	U		0.6	U	
NONACHLOROBIPHENYLS		2.3	U		2.6	U		2.2	U		2.9	U	
PENTACHLOROBIPHENYLS		4.7	UJ	AP	12	U	A	8.7	U	A	1.2	U	
TETRACHLOROBIPHENYLS		0.9	U		1	U		0.88	U		1.2	U	
TOTAL OCTACHLOROBIPHENYLS		1.2	U		7			1.1	U		1.5	U	
TOTAL TRICHLOROBIPHENYLS		0.47	U		43	J	G	1.6	J	P	0.6	U	

PROJ_NO: 00949	NSAMPLE	GI-SD522-0006			GI-SD523-0006			GI-SD528-0006			GI-SD530-0006		
SDG: R1002638	LAB_ID	R1002638-013			R1002638-012			R1002638-005			R1002638-006		
FRACTION: PCBH	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	57.6			83.4			75.1			72.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		2.9	U		1	U		2.2	U		5.8	U	
DICHLOROBIPHENYLS		0.59	U		0.2	U		0.45	U		1.2	U	
HEPTACHLOROBIPHENYLS		1.5	U		0.5	U		23			2.9	U	
HEXACHLOROBIPHENYLS		6.4	J	P	3.2			30			8.1	J	P
MONOCHLOROBIPHENYLS		0.59	U		0.2	U		0.45	U		1.2	U	
NONACHLOROBIPHENYLS		2.9	U		1	U		2.2	U		5.8	U	
PENTACHLOROBIPHENYLS		8.8	U	A	5.2	U	A	8.8	U	A	2.3	U	
TETRACHLOROBIPHENYLS		1.1	U		0.4	U		0.88	U		2.3	U	
TOTAL OCTACHLOROBIPHENYLS		1.5	U		0.5	U		3.1	J	P	2.9	U	
TOTAL TRICHLOROBIPHENYLS		0.59	U		0.72	J	P	0.45	U		1.2	U	

PROJ_NO: 00949	NSAMPLE	GI-SD531-0006			GI-SD-DUP03-051310		
SDG: R1002638	LAB_ID	R1002638-004			R1002638-014		
FRACTION: PCBH	SAMP_DATE	5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			FD		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS	66.3			69.2		
	DUP_OF				GI-SD517-0006		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		3.8	U		2.4	U	
DICHLOROBIPHENYLS		0.77	U		0.49	U	
HEPTACHLOROBIPHENYLS		5.1	J	P	67	J	G
HEXACHLOROBIPHENYLS		14			88	J	G
MONOCHLOROBIPHENYLS		0.77	U		0.49	U	
NONACHLOROBIPHENYLS		3.8	U		2.4	U	
PENTACHLOROBIPHENYLS		6.5	UJ	A	20		
TETRACHLOROBIPHENYLS		1.5	U		0.95	U	
TOTAL OCTACHLOROBIPHENYLS		1.9	U		7.2		
TOTAL TRICHLOROBIPHENYLS		9	U		0.49	UJ	G

PROJ_NO: 00949	NSAMPLE	GI-SD-RB02-051310		
SDG: R1002638	LAB_ID	R1002638-015		
FRACTION: PCBH	SAMP_DATE	5/13/2010		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.024	U	
DICHLOROBIPHENYLS		0.0047	U	
HEPTACHLOROBIPHENYLS		0.012	U	
HEXACHLOROBIPHENYLS		0.0094	U	
MONOCHLOROBIPHENYLS		0.0047	U	
NONACHLOROBIPHENYLS		0.024	U	
PENTACHLOROBIPHENYLS		0.029	U	A
TETRACHLOROBIPHENYLS		0.0094	U	
TOTAL OCTACHLOROBIPHENYLS		0.012	U	
TOTAL TRICHLOROBIPHENYLS		0.0047	J	P

PROJ_NO: 00949	NSAMPLE	GI-SD304-0006			GI-SD311-0006			GI-SD438-0006			GI-SD512-0006		
SDG: R1002638	LAB_ID	R1002638-003			R1002638-002			R1002638-001			R1002638-008		
FRACTION: MISC	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	75.8			82.7			74.2			83.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		4100			5570			5550			2330		

PROJ_NO: 00949	NSAMPLE	GI-SD513-0006			GI-SD517-0006			GI-SD520-0006			GI-SD521-0006		
SDG: R1002638	LAB_ID	R1002638-009			R1002638-010			R1002638-011			R1002638-007		
FRACTION: MISC	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	73.0			65.0			74.8			85.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		6700			9700			4290			2960		

PROJ_NO: 00949	NSAMPLE	GI-SD522-0006			GI-SD523-0006			GI-SD528-0006			GI-SD530-0006		
SDG: R1002638	LAB_ID	R1002638-013			R1002638-012			R1002638-005			R1002638-006		
FRACTION: MISC	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	57.6			83.4			75.1			72.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		11900			3660			4400			5000		

PROJ_NO: 00949	NSAMPLE	GI-SD531-0006			GI-SD-DUP03-051310		
SDG: R1002638	LAB_ID	R1002638-004			R1002638-014		
FRACTION: MISC	SAMP_DATE	5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			FD		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS	66.3			69.2		
	DUP_OF				GI-SD717-0006		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		6460			6800		

PROJ_NO: 00949	NSAMPLE	GI-SD-RB02-051310		
SDG: R1002638	LAB_ID	R1002638-015		
FRACTION: MISC	SAMP_DATE	5/13/2010		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	MG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TOTAL ORGANIC CARBON		1.3		

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-09-10-3834W

Date: September 7, 2010

c: File G00949-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Inorganic Data Validation, SDG R1002638
Columbia Analytical Services
CTO 458, Phase 2, Site 17, Gould Island, Naval Station Newport,
Jamestown, Rhode Island

Metals/		
14/Sediments/	GI-SD304-0006	GI-SD311-0006
	GI-SD438-0006	GI-SD512-0006
	GI-SD513-0006	GI-SD517-0006
	GI-SD520-0006	GI-SD521-0006
	GI-SD522-0006	GI-SD523-0006
	GI-SD528-0006	GI-SD530-0006
	GI-SD531-0006	GI-SD-DUP03-051310
	(Field Duplicate pair: GI-SD517-0006/GI-SD-DUP03-051310)	
1/Rinsate blank	GI-SD-RB02-051310	
Grain size/		
11/Sediments	GI-SD512-0006	GI-SD513-0006
	GI-SD517-0006	GI-SD520-0006
	GI-SD521-0006	GI-SD522-0006
	GI-SD523-0006	GI-SD528-0006
	GI-SD530-0006	GI-SD531-0006
	GI-SD-DUP03-051310	
	(Field Duplicate pair: GI-SD517-0006/GI-SD-DUP03-051310)	

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the metals analytical data and a Tier I data validation on the grain size data for the sediment samples in this SDG. The samples were collected from Site 17, Gould Island on May 13, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment at Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The metals analysis was performed according to USEPA SW-846 Methods 6010C/7471B/7470. The project specific criteria listed in the site SAP were applied for data validation of the metals data. The Tier II data validation was performed according to the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, November 2008. The grain size analysis was performed according to ASTM D422. The Tier I data validation includes evaluation for completeness only.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed. The grain size results are presented in the table with the fraction "Misc".

The analytical data from this SDG were evaluated based on the following parameters:

- Data Completeness
- * Holding Times
- * Calibration Verification
- Laboratory Blank Analyses
- ICP Interference Check Sample Results
- Matrix Spike/Matrix Spike Duplicate Results
- Laboratory Duplicate Results
- * Laboratory Control Sample Results
- Field Duplicate Precision
- * ICP Serial Dilution Results
- * Percent Solids
- Reporting Limits

* All quality control criteria were met for this parameter.

Data Completeness

On August 16, 2010 the laboratory provided an LOD summary since this was missing from the original submission of the data package. Additionally, the laboratory provided the manufacturer's QC limits for the solid laboratory control samples.

On August 20, 2010 the laboratory provided corrected Form 1s for all samples and all associated forms in order to re-report the sample results to the MDL and not the QL.

On August 25, 2010 the laboratory provided an LOD summary for the aqueous samples since this was missing from the original submission of the data package.

Laboratory Blank Analysis

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the rinsate blank in this SDG:

Analyte	Maximum Conc. (µg/L)	Action Level* (µg/L)	Affected Sample
Barium	1.64	8.2	GI-SD-RB02-051310
Potassium	326	1630	
Sodium	215	1075	

The positive barium, potassium, and sodium results below the blank action level were changed to non-detected values (U) due to laboratory blank contamination.

Although barium, potassium, and sodium were found in the laboratory blanks, the project sensitivity goals are not impacted since there is no project action limit established for the rinsate blank.

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the sediment samples in this SDG:

Analyte	Maximum Conc. (mg/Kg)	Action Level* (mg/Kg)	Affected Samples
Antimony	0.239	1.19	GI-SD530-0006
Silver	0.050	0.250	GI-SD304-0006, GI-SD438-0006, GI-SD512-0006, GI-SD517-0006, GI-SD521-0006, GI-SD523-0006, GI-SD528-0006, GI-SD530-0006, GI-SD531-0006, GI-SD-DUP03-051310
*Action levels are adjusted for sample preparation factors.			

The positive antimony and silver results below the blank action level were changed to non-detected values (U) due to laboratory blank contamination.

Although antimony and silver were found in the laboratory blanks, the project sensitivity goals are not impacted since the elevated reporting limits for the affected samples are lower than the silver roject action limits. The antimony and silver results in the affected samples are usable as non-detected values at elevated reporting limits.

ICP Interference Check Sample Results

The following results were qualified in the affected samples due to ICP interference attributed to the high concentration of iron or calcium in the samples:

Analyte	Action		Bias	Affected Samples
	(+)	ND		
Antimony		UJ	Low	All sediment samples
Barium	J		Low	GI-SD512-0006, GI-SD522-0006, GI-SD530-0006
Thallium	J	UJ	Low	All samples except GI-SD513-0006

The positive and non-detected results for antimony, barium, and thallium were qualified as estimated (J and UJ) in the affected samples due to negative ICP interference attributed to iron and/or calcium. The affected antimony, barium, and thallium results may be biased low.

There were negative ICP interferences attributed to the high concentration of iron or calcium that resulted in estimating the results for antimony in the samples listed above; therefore, the project accuracy goals may be impacted. The non-detected results for antimony in the affected samples are usable as estimated values and estimated reporting limits which may be biased low.

Although there were negative ICP interferences attributed to the high concentration of iron or calcium that resulted in estimating the results for barium and thallium in the samples listed above, the project accuracy goals are not impacted since there are no project action limits established for thallium and the positive barium results are much lower than the project action limit for barium. The positive and non-

detected results for thallium and barium in the affected samples are usable as estimated values and estimated reporting limits which may be biased low.

Matrix Spike/Matrix Spike Duplicate

The following table summarizes the analytes that recovered outside of the 75-125% recovery QC limits in the matrix spike (MS) analysis of the sample GI-SD438-0006:

Analyte	%Recovery	Action	
		(+)	NDs
Arsenic	69	J	UJ
Chromium	130	J	
Copper	161	J	

Although the percent recovery criteria were not met for arsenic, chromium, and copper; the project accuracy goals are not impacted since the affected results are much lower than the project action limits for these metals. The positive and non-detected results for arsenic, chromium, and copper in all sediment samples are usable as estimated values and estimated reporting limits. The results for arsenic may be biased low and those for chromium and copper may be biased high.

Laboratory Duplicate Results

The following table summarizes the analytes that exceeded the relative percent difference (RPD) QC criterion of <20%RPD in the laboratory duplicate analysis of the sample GI-SD438-0006:

Analyte	RPD	Action	
		(+)	NDs
Potassium	32	J	
Lead	91	J	
Zinc	29	J	

The laboratory duplicate RPD criterion was not met for lead and zinc; therefore, the project precision goals may be impacted. The positive lead and zinc results in all sediment samples are usable as estimated values for which the bias is indeterminate.

Although the laboratory duplicate RPD criterion was not met for potassium, the project precision goals are not impacted since there are no project action limits established for potassium. The positive potassium results are usable as estimated values for which a bias is indeterminate.

Field Duplicate Precision

The following table presents the analyte for which the relative percent difference (RPD) exceeded the 50% QC limit in the analysis of field duplicate pair GI-SD517-0006/GI-SD-DUP03-051310:

Analyte	Sample Result	Duplicate Result	RPD	Action*	
	mg/kg	mg/kg		(+)	NDs
Lead	54.4	28.9	61.2	J	

The results of the field duplicate analysis exceeded the QC limit for lead; therefore, the project precision goals may be impacted. The positive lead results in all sediment samples are usable as estimated values for which the bias is indeterminate.

Reporting Limits

Results greater the Method Detection Limit (MDL) and less than the Limit of Quantitation (LOQ) were qualified as estimated (J). The laboratory reported all non-detected results down to the Limit of Detection (LOD).

The laboratory's reporting format did not include sample-specific QLs adjusted for sample preparation factors (e.g., sample weight, dilution factor, and percent solids). Therefore, only the unadjusted QLs reported in the Form 10 are evaluated below. Sample-specific reporting limits adjusted for preparation factors were reported only for associated non-detected results; these reporting limits for non-detected results are evaluated below.

The following analytes were reported as non-detected in select samples: antimony, arsenic, mercury, selenium, and thallium. The sample-specific reporting limits met the project action limits for arsenic and mercury. The sample-specific reporting limits for antimony and selenium exceeded the project action limits in select samples. Data usability may be impacted for antimony and selenium. There is no established project action limit for thallium; therefore, data usability is not impacted for thallium.

As discussed above in the Laboratory Blank Analysis section, reporting limits were raised for antimony and silver in select sediment samples; data usability is not impacted for antimony and silver in the affected samples since the project action limits were still met.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

Metals

The project goals with respect to accuracy were met for the metals data set with the following exceptions. Antimony was qualified as estimated in select sediment samples due to negative ICP interferences; the affected results may be biased low. Although specific method criteria were not met in this instance, the affected non-detected results are usable as estimated reporting limits which may have a minor impact on data usability. Additionally, thallium and barium were qualified as estimated in select sediment samples due to negative ICP interferences; the affected results may be biased low. Arsenic, chromium, and copper were qualified as estimated in all sediment samples due to low or high MS recoveries; arsenic results may be biased low and chromium and copper results may be biased high. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive and non-detected results are usable as estimated values and estimated reporting limits.

The project goals with respect to precision were met for the metals data set with the following exceptions. Lead and zinc were qualified as estimated in all sediment samples due to poor laboratory duplicate precision. Lead was also qualified as estimated in all sediment samples due to poor field duplicate precision. Although specific method criteria were not met in these instances, the affected

positive results are usable as estimated values which may have a minor impact on data usability. Additionally, potassium was qualified as estimated in all sediment samples due to poor laboratory duplicate precision. Although specific method criteria were not met in this instance, data usability is not impacted and the affected positive results are usable as estimated values.

The project goals with respect to sensitivity were met for the metals data set with the following exceptions. The project action limits were achieved by the sample-specific laboratory reporting limits associated with the non-detected results with the exception of antimony and selenium for select samples. Data usability may be impacted for antimony and selenium. Additionally, antimony and silver results in select samples were reported with elevated reporting limits as a result of blank contamination. Although specific method criteria were not met in these instances, data usability is not impacted and the affected results are usable as estimated elevated reporting limits.

The project goals with respect to completeness were met for the metals data set. Data usability is not impacted with regards to completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-SD304-0006			GI-SD311-0006			GI-SD438-0006			GI-SD512-0006		
SDG: R1002638	LAB_ID	R1002638-003			R1002638-002			R1002638-001			R1002638-008		
FRACTION: M	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	75.8			82.7			74.2			83.5		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		4840			4280			5400			5730		
ANTIMONY		1.96	UJ	K	0.59	UJ	K	0.67	UJ	K	1.77	UJ	K
ARSENIC		0.467	J	D	0.293	J	DP	2.6	J	D	2.9	J	D
BARIUM		8.6			7.4			11.2			7.9	J	K
BERYLLIUM		0.219			0.203			0.257			0.234		
CADMIUM		0.23			0.22			0.283			0.555		
CALCIUM		16200			14700			39200			11500		
CHROMIUM		9.8	J	D	8.3	J	D	15.5	J	D	19.9	J	D
COBALT		3.6			2.8			4.9			6		
COPPER		13.4	J	D	17	J	D	15.7	J	D	30.6	J	D
IRON		11400			10200			19500			31900		
LEAD		20.7	J	FG	14.1	J	FG	108	J	FG	8.4	J	FG
MAGNESIUM		2870			2450			3460			3140		
MANGANESE		111			102			164			211		
MERCURY		0.02	J	P	0.011	J	P	0.012	J	P	0.006	J	P
NICKEL		7.7			6.4			11.4			33.4		
POTASSIUM		791	J	F	809	J	F	794	J	F	1170	J	F
SELENIUM		1.96	U		1.78	U		6.74	U		5.91	U	
SILVER		0.22	UJ	AP	0.331	J	P	0.248	UJ	AP	0.2	UJ	AP
SODIUM		3530			3020			3560			2240		
THALLIUM		0.44	UJ	K	0.4	UJ	K	0.45	UJ	K	1.18	UJ	K
VANADIUM		15.3			13.2			14.4			12.3		
ZINC		38.1	J	F	29.8	J	F	35.8	J	F	43.4	J	F

PROJ_NO: 00949	NSAMPLE	GI-SD513-0006			GI-SD517-0006			GI-SD520-0006			GI-SD521-0006		
SDG: R1002638	LAB_ID	R1002638-009			R1002638-010			R1002638-011			R1002638-007		
FRACTION: M	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	73.0			65.0			74.8			85.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		4570			4620			4400			4210		
ANTIMONY		2.05	UJ	K	0.76	UJ	K	0.67	UJ	K	0.58	UJ	K
ARSENIC		0.13	UJ	D	1.7	J	D	0.193	J	DP	1.2	J	D
BARIUM		12.8			8.6			10.4			7.4		
BERYLLIUM		0.214	J	P	0.274			0.194	J	P	0.188	J	P
CADMIUM		0.166	J	P	0.264			0.15	J	P	0.212		
CALCIUM		112000			15000			45500			8220		
CHROMIUM		8.4	J	D	16.8	J	D	8.2	J	D	10.1	J	D
COBALT		2.8			4.3			3			3.7		
COPPER		6.8	J	D	14.2	J	D	6.5	J	D	22.9	J	D
IRON		9830			17400			11000			13800		
LEAD		7.3	J	FG	54.4	J	FG	9.3	J	FG	13.2	J	FG
MAGNESIUM		3610			2960			2950			2550		
MANGANESE		175			141			155			136		
MERCURY		0.039	U		0.022	J	P	0.015	J	P	0.019	J	P
NICKEL		6.2			8.4			6.7			9.4		
POTASSIUM		1040	J	F	857	J	F	852	J	F	742	J	F
SELENIUM		2.05	U		2.28	U		2	U		2.89	U	
SILVER		0.524			0.25	UJ	AP	0.435	J	P	0.19	UJ	AP
SODIUM		5600			4750			4180			2710		
THALLIUM		2.4			0.51	UJ	K	0.107	J	K	1.93	UJ	K
VANADIUM		13			23.7			13.2			12		
ZINC		27.6	J	F	39.9	J	F	26.8	J	F	33.7	J	F

PROJ_NO: 00949	NSAMPLE	GI-SD522-0006			GI-SD523-0006			GI-SD528-0006			GI-SD530-0006		
SDG: R1002638	LAB_ID	R1002638-013			R1002638-012			R1002638-005			R1002638-006		
FRACTION: M	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	57.6			83.4			75.1			72.1		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		6990			5460			4450			6060		
ANTIMONY		2.6	UJ	K	0.6	UJ	K	0.67	UJ	K	0.69	UJ	AKP
ARSENIC		5.3	J	D	3.3	J	D	0.841	J	D	5.6	J	D
BARIUM		10.6	J	K	13.1			12.9			10.2	J	K
BERYLLIUM		0.495			0.188	J	P	0.253			0.254		
CADMIUM		1			0.783			0.17	J	P	0.724		
CALCIUM		16800			13800			35400			33400		
CHROMIUM		24.7	J	D	18	J	D	8.9	J	D	28.1	J	D
COBALT		5.7			4.4			3			5.2		
COPPER		40.6	J	D	37.7	J	D	16.4	J	D	186	J	D
IRON		46500			35200			12100			37400		
LEAD		22.2	J	FG	35.9	J	FG	96.8	J	FG	20.9	J	FG
MAGNESIUM		4450			3460			2660			3050		
MANGANESE		281			229			127			230		
MERCURY		0.039			0.005	J	P	0.018	J	P	0.031		
NICKEL		21.6			17.2			7.3			32.8		
POTASSIUM		1190	J	F	897	J	F	788	J	F	712	J	F
SELENIUM		8.68	U		6	U		2	U		2.08	U	
SILVER		0.492	J	P	0.277	UJ	AP	0.254	UJ	AP	0.23	UJ	AP
SODIUM		6610			3380			3410			3700		
THALLIUM		1.74	UJ	K	1.2	UJ	K	0.123	J	KP	0.46	UJ	K
VANADIUM		21.4			11			14.2			14.9		
ZINC		65.4	J	F	50.7	J	F	40	J	F	41.2	J	F

PROJ_NO: 00949	NSAMPLE	GI-SD531-0006			GI-SD-DUP03-051310		
SDG: R1002638	LAB_ID	R1002638-004			R1002638-014		
FRACTION: M	SAMP_DATE	5/13/2010			5/13/2010		
MEDIA: SOIL	QC_TYPE	NM			FD		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS	66.3			69.2		
	DUP_OF				GI-SD517-0006		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		4570			5070		
ANTIMONY		0.75	UJ	K	2.17	UJ	K
ARSENIC		1.4	J	D	1.5	J	D
BARIUM		10.7			8.5		
BERYLLIUM		0.242	J	P	0.281		
CADMIUM		0.288			0.243		
CALCIUM		18000			13800		
CHROMIUM		11.3	J	D	12.1	J	D
COBALT		4			5.1		
COPPER		102	J	D	13.3	J	D
IRON		16500			16200		
LEAD		199	J	FG	28.9	J	FG
MAGNESIUM		3040			3050		
MANGANESE		122			142		
MERCURY		0.229			0.04		
NICKEL		8.2			8.6		
POTASSIUM		894	J	F	869	J	F
SELENIUM		2.24	U		2.17	U	
SILVER		0.25	UJ	AP	0.24	UJ	AP
SODIUM		5480			4100		
THALLIUM		0.5	UJ	K	0.48	UJ	K
VANADIUM		23.8			22.5		
ZINC		47.2	J	F	40.8	J	F

PROJ_NO: 00949	NSAMPLE	GI-SD-RB02-051310		
SDG: R1002638	LAB_ID	R1002638-015		
FRACTION: M	SAMP_DATE	5/13/2010		
MEDIA: WATER	QC_TYPE	RB		
	UNITS	UG/L		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ALUMINUM		75	U	
ANTIMONY		15	U	
ARSENIC		10	U	
BARIUM		4	UJ	AP
BERYLLIUM		0.7	U	
CADMIUM		0.7	U	
CALCIUM		70	U	
CHROMIUM		0.7	U	
COBALT		1.5	U	
COPPER		5	U	
IRON		70	U	
LEAD		7	U	
MAGNESIUM		70	U	
MANGANESE		1	U	
MERCURY		0.2	U	
NICKEL		0.7	U	
POTASSIUM		1000	UJ	AP
SELENIUM		15	U	
SILVER		5	U	
SODIUM		500	UJ	AP
THALLIUM		10	U	
VANADIUM		1	U	
ZINC		48.1		

PROJ_NO: 00949	NSAMPLE	GI-SD512-0006			GI-SD513-0006			GI-SD517-0006			GI-SD520-0006		
SDG: R1002638	LAB_ID	R1002638-008			R1002638-009			R1002638-010			R1002638-011		
FRACTION: MISC	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.002MM		-9999			-9999			3			-9999		
SIEVE 1"		100			100			100			100		
SIEVE 1/2"		100			100			100			92		
SIEVE 3/4"		100			100			100			100		
SIEVE 3/8"		90			93			100			89		
SIEVE NO. 004		77			80			99			74		
SIEVE NO. 010		46			71			96			64		
SIEVE NO. 020		24			54			86			42		
SIEVE NO. 040		8			15			48			12		
SIEVE NO. 060		2			8			28			4		
SIEVE NO. 100		1			7			23			2		
SIEVE NO. 200		1			7			19			1		

PROJ_NO: 00949	NSAMPLE	GI-SD521-0006			GI-SD522-0006			GI-SD523-0006			GI-SD528-0006		
SDG: R1002638	LAB_ID	R1002638-007			R1002638-013			R1002638-012			R1002638-005		
FRACTION: MISC	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010			5/13/2010		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.002MM		-9999			3			-9999			-9999		
SIEVE 1"		100			100			100			100		
SIEVE 1/2"		100			100			95			100		
SIEVE 3/4"		100			100			100			100		
SIEVE 3/8"		99			98			91			100		
SIEVE NO. 004		88			95			70			97		
SIEVE NO. 010		84			88			45			90		
SIEVE NO. 020		67			71			24			82		
SIEVE NO. 040		28			37			11			47		
SIEVE NO. 060		11			21			7			19		
SIEVE NO. 100		7			14			7			11		
SIEVE NO. 200		5			12			7			7		

PROJ_NO: 00949	NSAMPLE	GI-SD530-0006			GI-SD531-0006			GI-SD-DUP03-051310		
SDG: R1002638	LAB_ID	R1002638-006			R1002638-004			R1002638-014		
FRACTION: MISC	SAMP_DATE	5/13/2010			5/13/2010			5/13/2010		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			FD		
	UNITS	%			%			%		
	PCT_SOLIDS									
	DUP_OF							GI-SD517-0006		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HYDROMETER-0.002MM		-9999			-9999			-9999		
SIEVE 1"		100			100			100		
SIEVE 1/2"		100			100			100		
SIEVE 3/4"		100			100			100		
SIEVE 3/8"		77			100			100		
SIEVE NO. 004		54			100			98		
SIEVE NO. 010		39			97			95		
SIEVE NO. 020		22			91			86		
SIEVE NO. 040		9			66			42		
SIEVE NO. 060		4			28			19		
SIEVE NO. 100		1			14			11		
SIEVE NO. 200		1			8			6		

E-3 BIOTA TISSUE DATA VALIDATION MEMORANDA

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-09-10-3835W

Date: September 7, 2010

c: File G02303-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG R1002885
Columbia Analytical Services
CTO WE46, Phase 2, Site 17, Gould Island, Naval Station Newport, Jamestown, Rhode Island

PCB Homologues/%Lipids:

15/Tissues/	GI-ET502-0510	GI-ET504-0510
	GI-ET505-0510	GI-ET517-0510
	GI-ET518-0510	GI-ET520-0610
	GI-ET524-0610	GI-ET525-0610
	GI-ET526-0610	GI-ET529-0610
	GI-ET530-0510	GI-ET566-0510-A
	GI-ET566-0510-B	GI-ET-DUP01-052610
	GI-ET-DUP02-052710	

(Field Duplicate pairs: GI-ET505-0510/GI-ET-DUP01-052610, GI-ET518-0510/GI-ET-DUP02-052710)

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polychlorinated biphenyl (PCB) homologues analytical data and Tier I for the percent lipids data for the tissue samples in this SDG. The samples were collected from Site 17, Gould Island from May 26, 2010 through June 2, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment at Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The PCB homologue analysis was performed according to USEPA Method 680. The percent (%) lipid analysis was performed according to the Columbia Analytical Services laboratory SOP GEN-LIPID. Tier I data validation for % lipids includes evaluation for completeness only.

The project specific criteria listed in the site SAP were applied for data validation. The PCB homologue data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

	•	Data Completeness
*	•	Preservation and Technical Holding Times
*	•	GC/MS Instrument Performance Check (Tuning)
	•	Initial and Continuing Calibrations
*	•	Blanks
	•	Surrogate Compounds
*	•	Internal Standards
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
	•	Field Duplicates
NA	•	Compound Identification/Quantitation
	•	Reporting Limits

* All criteria were met for this parameter.
NA Not Applicable for Tier II

Data Completeness

On August 31, 2010 the laboratory provided the limits of detection (LOD) summary since this was missing from the original submission of the data package.

Initial and Continuing Calibrations

The following table summarizes the PCB homologues that failed to meet the continuing calibration (CC) criterion of %D <20%:

Compound	%D	Action		Affected Samples
		(+)	NDs	
Monochlorobiphenyls	35.8, 25.2, 26.0		UJ	GI-ET502-0510, GI-ET566-0510-B, GI-ET518-0510, GI-ET525-0610, GI-ET517-0510(RE), GI-ET566-0510-A(RE), GI-ET-DUP02-052710(RE), GI-ET529-0610(RE)
Dichlorobiphenyls	25.0, 22.9		UJ	GI-ET502-0510, GI-ET566-0510-B, GI-ET518-0510, GI-ET525-0610, GI-ET-DUP02-052710(RE), GI-ET529-0610(RE)
Heptachlorobiphenyls	-20.7	J		GI-ET-DUP02-052710(RE), GI-ET529-0610(RE)
Nonachlorobiphenyls	-21.2, -22.2		UJ	GI-ET504-0510, GI-ET530-0510, GI-ET-DUP01-052610, GI-ET505-0510, GI-ET-DUP02-052710(RE), GI-ET529-0610(RE)

Although the %Ds were above the QC limits for the homologues listed in the table above, the project accuracy goals are not impacted since the affected total PCB sample results are much lower than the project action limit for total PCBs. The positive and non-detected results for monochlorobiphenyls, dichlorobiphenyls, heptachlorobiphenyls, and nonachlorobiphenyls in the affected samples are usable as estimated values and estimated quantitation limits.

Surrogate Compounds

The following samples had surrogate spike recoveries outside of the recovery limits:

Sample	Surrogate	% Recovery	QC Limits	Action	
				(+)	NDs
GI-ET566-0510-A(RE)	4,4'-DDT	24	30-150	J	UJ
GI-ET525-0610		29		J	UJ
GI-ET529-0610(RE)		25		J	UJ

Although the surrogate recovery QC criteria were not met for 4,4'-DDT, the project accuracy goals are not impacted since the affected total PCB sample results are much lower than the project action limit for total PCBs. The positive and non-detected homologue results in the affected samples are usable as estimated values and estimated quantitation limits which may be biased low.

Field Duplicates

The field duplicate pair GI-ET518-0510/GI-ET-DUP02-052710 did not meet the field duplicate QC criteria of RPD <50% for the following compound:

Compound	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Pentachlorobiphenyls	29	11	90	J	

Although the field duplicate RPD criterion was not met for pentachlorobiphenyls; the project precision goals are not impacted since the affected total PCB sample results are much lower than the project action limit for total PCBs. The positive results for pentachlorobiphenyls in samples GI-ET518-0510 and GI-SD-DUP02-052710 are usable as estimated values.

Reporting Limits

The laboratory reported the non-detected results down to the Limit of Quantitation (LOQ) instead of down to the Limit of Detection (LOD) as required because software limitations. The data validator changed the non-detected results to the LOD values. The positive results above MDL and less than the LOQ were qualified as estimated (J) due to uncertainty below QLs.

Laboratory-specific QLs in worksheet 15d of the SAP were met by the laboratory's actual QLs with the exception of those in select samples for which QLs were elevated as a result of the dilutions performed on the samples. Data usability may be impacted for these select results.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define

the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

The project goals with respect to accuracy were met for the PCB homologue data set. Select PCB homologues in several samples were qualified as estimated due to instrument calibration variability. All PCB homologues in samples GI-ET566-0510-A(RE), GI-ET525-0610, and GI-ET529-0610(RE) were qualified as estimated due to low surrogate recoveries; results may be biased low. Although specific method criteria were not met in these instances, the affected positive and non-detected results are usable as estimated values and estimated quantitation limits which do not impact data usability.

The project goals with respect to precision were met for the PCB homologue data set. The results for pentachlorobiphenyls in samples GI-ET518-0510 and GI-ET-DUP02-052710 were qualified as estimated due to poor field duplicate precision. Although specific QC criteria were not met in this instance, the affected positive results are usable as estimated values which do not impact data usability.

The project goals with respect to sensitivity were met for the PCB homologue data set with the following exceptions. All laboratory-specific QLs in worksheet 15d of the SAP were met by the laboratory's actual QLs with the exception of those in select samples for which QLs were elevated due to the dilution performed on the samples. Data usability may be impacted for these select results.

The project goals with respect to completeness were met for the PCB homologue data set. Data usability was not impacted with regards to completeness.

Tables: Data Summary Tables
Data Validation Qualifiers and Codes

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-ET502-0510			GI-ET504-0510			GI-ET505-0510			GI-ET517-0510-A		
SDG: R1002885	LAB_ID	R1002885-001			R1002885-002			R1002885-004			R1002885-006		
FRACTION: PCBH	SAMP_DATE	5/26/2010			5/26/2010			5/26/2010			5/27/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		25	U		7.5	U		7.5	U		7.5	U	
DICHLOROBIPHENYLS		5.1	UJ	C	1.5	U		1.5	U		1.5	U	
HEPTACHLOROBIPHENYLS		13	U		15	J	P	11	J	P	9.3	J	P
HEXACHLOROBIPHENYLS		81			25			35			34		
MONOCHLOROBIPHENYLS		5.1	UJ	C	1.5	U		1.5	U		1.5	UJ	C
NONACHLOROBIPHENYLS		25	U		7.5	UJ	C	7.5	UJ	C	7.5	UJ	C
PENTACHLOROBIPHENYLS		9.9	U		3	U		17	J	P	14	J	P
TETRACHLOROBIPHENYLS		9.9	U		3	U		3	U		3	U	
TOTAL OCTACHLOROBIPHENYLS		13	U		3.8	U		3.8	U		3.8	U	
TOTAL TRICHLOROBIPHENYLS		5.1	U		1.5	U		1.5	U		1.5	U	

PROJ_NO: 00949	NSAMPLE	GI-ET518-0510			GI-ET520-0610			GI-ET524-0610			GI-ET525-0610		
SDG: R1002885	LAB_ID	R1002885-009			R1002885-014			R1002885-015			R1002885-011		
FRACTION: PCBH	SAMP_DATE	5/27/2010			6/2/2010			6/2/2010			6/2/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		5	U		2.5	U		2.5	U		2.5	UJ	R
DICHLOROBIPHENYLS		1	UJ	C	0.51	U		0.51	U		0.51	UJ	CR
HEPTACHLOROBIPHENYLS		9.8	J	P	1.3	U		1.3	U		1.3	UJ	R
HEXACHLOROBIPHENYLS		36			6.9			2.2	J	P	5.2	J	RP
MONOCHLOROBIPHENYLS		1	UJ	C	0.51	U		0.51	U		0.51	UJ	CR
NONACHLOROBIPHENYLS		5	U		2.5	U		2.5	U		2.5	UJ	R
PENTACHLOROBIPHENYLS		29	J	G	1	U		1	U		1	UJ	R
TETRACHLOROBIPHENYLS		2.8	J	P	1	U		1	U		1	UJ	R
TOTAL OCTACHLOROBIPHENYLS		2.5	U		1.3	U		1.3	U		1.3	UJ	R
TOTAL TRICHLOROBIPHENYLS		1	U		0.51	U		0.51	U		0.51	UJ	R

PROJ_NO: 00949	NSAMPLE	GI-ET526-0610			GI-ET529-0610-A			GI-ET530-0510			GI-ET566-0510-A-A		
SDG: R1002885	LAB_ID	R1002885-013			R1002885-012			R1002885-003			R1002885-007		
FRACTION: PCBH	SAMP_DATE	6/2/2010			6/2/2010			5/26/2010			5/27/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		5	U		2.5	UJ	R	7.5	U		5	UJ	R
DICHLOROBIPHENYLS		1	U		0.51	UJ	CR	2.1	J	P	1	UJ	R
HEPTACHLOROBIPHENYLS		2.5	U		4.7	J	CR	3.8	U		21	J	R
HEXACHLOROBIPHENYLS		6.2	J	P	7.1	J	R	21			19	J	R
MONOCHLOROBIPHENYLS		1	U		0.51	UJ	CR	1.5	U		1	UJ	CR
NONACHLOROBIPHENYLS		5	U		2.5	UJ	CR	7.5	UJ	C	5	UJ	R
PENTACHLOROBIPHENYLS		2	U		4	J	RP	14	J	P	2	UJ	R
TETRACHLOROBIPHENYLS		2	U		1.1	J	RP	5.7	J	P	2	UJ	R
TOTAL OCTACHLOROBIPHENYLS		2.5	U		1.3	UJ	R	3.8	U		2.5	UJ	R
TOTAL TRICHLOROBIPHENYLS		1	U		0.51	UJ	R	1.5	U		1	UJ	R

PROJ_NO: 00949	NSAMPLE	GI-ET566-0510-B			GI-ET-DUP01-052610			GI-ET-DUP02-052710-A		
SDG: R1002885	LAB_ID	R1002885-008			R1002885-005			R1002885-010		
FRACTION: PCBH	SAMP_DATE	5/27/2010			5/26/2010			5/27/2010		
MEDIA: TISSUE	QC_TYPE	NM			FD			FD		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS									
	DUP_OF				GI-ET505-0510			GI-ET518-0510		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		2.5	U		10	U		7.5	U	
DICHLOROBIPHENYLS		0.51	UJ	C	2	U		1.5	U	
HEPTACHLOROBIPHENYLS		8.8			5	U		3.8	U	
HEXACHLOROBIPHENYLS		16			43			32		
MONOCHLOROBIPHENYLS		0.51	UJ	C	2	U		1.5	U	
NONACHLOROBIPHENYLS		2.5	U		10	UJ	C	7.5	U	
PENTACHLOROBIPHENYLS		5	J	P	16	J	P	11	J	G
TETRACHLOROBIPHENYLS		1	U		4	U		3.3	J	P
TOTAL OCTACHLOROBIPHENYLS		1.3	U		5	U		3.8	U	
TOTAL TRICHLOROBIPHENYLS		0.51	U		2	U		1.5	U	

PROJ_NO: 00949	NSAMPLE	GI-ET502-0510			GI-ET504-0510			GI-ET505-0510			GI-ET517-0510		
SDG: R1002885	LAB_ID	R1002885-001			R1002885-002			R1002885-004			R1002885-006		
FRACTION: MISC	SAMP_DATE	5/26/2010			5/26/2010			5/26/2010			5/27/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LIPIDS		1.06			0.5	U		0.641			0.702		

PROJ_NO: 00949	NSAMPLE	GI-ET518-0510			GI-ET520-0610			GI-ET524-0610			GI-ET525-0610		
SDG: R1002885	LAB_ID	R1002885-009			R1002885-014			R1002885-015			R1002885-011		
FRACTION: MISC	SAMP_DATE	5/27/2010			6/2/2010			6/2/2010			6/2/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LIPIDS		1.2			5.43			4.23			2.99		

PROJ_NO: 00949	NSAMPLE	GI-ET526-0610			GI-ET529-0610			GI-ET530-0510			GI-ET566-0510-A		
SDG: R1002885	LAB_ID	R1002885-013			R1002885-012			R1002885-003			R1002885-007		
FRACTION: MISC	SAMP_DATE	6/2/2010			6/2/2010			5/26/2010			5/27/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LIPIDS		3.32			4.02			0.884			0.5	U	

PROJ_NO: 00949	NSAMPLE	GI-ET566-0510-B			GI-ET-DUP01-052610			GI-ET-DUP02-052710		
SDG: R1002885	LAB_ID	R1002885-008			R1002885-005			R1002885-010		
FRACTION: MISC	SAMP_DATE	5/27/2010			5/26/2010			5/27/2010		
MEDIA: TISSUE	QC_TYPE	NM			FD			FD		
	UNITS	%			%			%		
	PCT_SOLIDS									
	DUP_OF				GI-ET505-0510			GI-ET518-0510		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LIPIDS		0.5	U		0.757			0.582		

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-09-10-3836W

Date: September 9, 2010

c: File G02303-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG R1002885
Columbia Analytical Services
CTO WE46, Phase 2, Site 17, Gould Island, Naval Station Newport, Jamestown, Rhode Island

Metals
15/Tissues/

GI-ET502-0510	GI-ET504-0510
GI-ET505-0510	GI-ET517-0510
GI-ET518-0510	GI-ET520-0610
GI-ET524-0610	GI-ET525-0610
GI-ET526-0610	GI-ET529-0610
GI-ET530-0510	GI-ET566-0510-A
GI-ET566-0510-B	GI-ET-DUP01-052610
GI-ET-DUP02-052710	

(Field Duplicate pairs: GI-ET505-0510/GI-ET-DUP01-052610, GI-ET518-0510/GI-ET-DUP02-052710)

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the metals analytical data for the tissue samples in this SDG. The samples were collected from Site 17, Gould Island from May 26, 2010 through June 2, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment at Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The metals analysis was performed according to USEPA SW-846 Methods 6010C/6020/7471B. The project specific criteria listed in the site SAP were applied for data validation of the metals data. The Tier II data validation was performed according to the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The analytical data from this SDG were evaluated based on the following parameters:

- Data Completeness
* • Holding Times
* • ICPMS Tuning and Internal Standard Areas
* • Calibration Verification
- Laboratory Blank Analyses
* • ICP Interference Check Sample Results

- Matrix Spike/Matrix Spike Duplicate Results
* • Laboratory Duplicate Results
* • Laboratory Control Sample Results
- Field Duplicate Precision
* • ICP Serial Dilution Results
- Reporting Limits

* All quality control criteria were met for this parameter.

Data Completeness

On August 31, 2010 the laboratory provided an LOD summary since this was missing from the original submission of the data package.

Laboratory Blank Analysis

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the sediment samples in this SDG:

Analyte	Maximum Conc. (mg/Kg)	Action Level* (mg/Kg)	Affected Samples
Barium	0.236	1.18	GI-ET505-0510, GI-ET517-0510, GI-ET518-0510, GI-ET530-0510, GI-ET-DUP01-052610, GI-ET-DUP02-052710
Beryllium	0.012	0.060	GI-ET504-0510, GI-ET520-0510, GI-ET524-0510, GI-ET525-0610, GI-ET526-0610, GI-ET529-0610, GI-ET566-0510-A, GI-ET566-0510-B
*Action levels are adjusted for sample preparation factors.			

The positive barium and beryllium results below the blank action level were changed to non-detected values (U) due to laboratory blank contamination.

Although barium and beryllium were found in the laboratory blanks, the project sensitivity goals are not impacted since the affected sample elevated reporting limits are below the project action limits. The barium and beryllium results in affected samples are usable as non-detects with elevated reporting limits.

Matrix Spike/Matrix Spike Duplicate

The following table summarizes the analytes that recovered outside of the 75-125% recovery QC limits in the matrix spike (MS) analysis of the sample GI-ET502-0510:

Analyte	%Recovery	Action	
		(+)	NDs
Iron	48	J	

Although the percent recovery criterion was not met for iron, the project accuracy goals are not impacted since the affected sample results are much lower than the project action limits. The positive iron results in all tissue samples are usable as estimated values which may be biased low.

Field Duplicate Precision

The following table presents the analyte for which the relative percent difference (RPD) exceeded the 50% QC limit in the analysis of field duplicate pair GI-ET518-0510/GI-ET-DUP02-052710:

Analyte	Sample Result mg/kg	Duplicate Result mg/kg	RPD	Action* (+)	Action* NDs
Aluminum#	25.2	59.9	82	J	
Calcium	801	1900	81	J	
Iron	60.5	143	81	J	

*Professional judgment was used to apply actions to all tissue samples except the field duplicate pair GI-ET505-0510 and GI-SD-DUP01-052610 since field duplicate precision criteria were met for these samples.
#Additionally, the absolute difference between the field duplicate results which are less than 5x the reporting limit (RL) exceeded the 4x RL QC criterion.

The results of the field duplicate analysis exceeded the QC limits for aluminum; therefore, the project precision goals may be impacted. The positive and non-detected aluminum results in affected samples are usable as estimated values for which the bias is indeterminate.

Although the results of the field duplicate analysis exceeded the QC limit for calcium and iron, the project precision goals are not impacted due to the following: 1) there is no project action limit established for calcium or 2) the affect iron sample results are much lower than the project action limit. The positive calcium and iron results in the affected samples are usable as estimated values for which the bias is indeterminate.

Reporting Limits

The laboratory reported the non-detected results down to the Method Detection Limit (MDL) instead of down to the Limit of Detection (LOD) as required because software limitations. The data validator changed the non-detected results to the LOD values. The positive results above MDL and less than the Limit of Quantitation (LOQ) were qualified as estimated (J) due to uncertainty below QLs.

Sample-specific reporting limits adjusted for preparation factors were reported only for associated non-detected results; these reporting limits for non-detected results are evaluated below.

The following analytes were reported as non-detected in select samples: antimony, beryllium, and thallium. The sample-specific reporting limits met the project action limits for beryllium. The sample-specific reporting limits were not met for antimony and thallium in select samples. Data usability may be impacted for antimony and thallium. As discussed above in the Laboratory Blank Analysis section, reporting limits were raised for barium and beryllium in select tissue samples; data usability is not impacted for barium and beryllium in the affected samples.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

The project goals with respect to accuracy were met for the metals data set. Iron was qualified as estimated in all tissue samples due to low MS recoveries; results may be biased low. Although specific method criteria were not met in this instance, data usability is not impacted and the affected positive results are usable as estimated values.

The project goals with respect to precision were met for the metals data set with the following exception. Aluminum was qualified as estimated in all tissue samples except GI-ET505-0510 and GI-ET-DUP01-052610 due to poor field duplicate precision. Although specific method criteria were not met in this instance, the affected results are usable as estimated values which may have a minor impact on data usability. Additionally, calcium and iron were qualified as estimated in all tissue samples except GI-ET505-0510 and GI-ET-DUP01-052610 due to poor field duplicate precision. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive results are usable as estimated values.

The project goals with respect to sensitivity were met for the metals data set with the following exception. The following analytes were reported as non-detected in select samples: antimony, beryllium, and thallium. The sample-specific reporting limits met the project action limits for beryllium. The sample-specific reporting limits were not met for antimony and thallium in select samples. Data usability may be impacted for antimony and thallium.

The project goals with respect to completeness were met for the metals data set. Data usability is not impacted with regards to completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-ET502-0510			GI-ET504-0510			GI-ET505-0510			GI-ET517-0510		
SDG: R1002885	LAB_ID	R1002885-001			R1002885-002			R1002885-004			R1002885-006		
FRACTION: M	SAMP_DATE	5/26/2010			5/26/2010			5/26/2010			5/27/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		26.9	J	G	32.2	J	G	27.8			38.8	J	G
ANTIMONY		0.962	U		0.743	U		1	U		1.1	U	
ARSENIC		2.1			3.2			2.6			2.5		
BARIUM		0.255	J	P	0.754			0.166	UJ	AP	0.181	UJ	AP
BERYLLIUM		0.096	U		0.074	UJ	AP	0.101	U		0.106	U	
CADMIUM		0.153			0.18			0.191			0.198		
CALCIUM		2060	J	G	1460	J	G	1350			1240	J	G
CHROMIUM		0.215			0.275			0.193	J	P	0.321		
COBALT		0.087	J	P	0.147	J	P	0.104	J	P	0.124	J	P
COPPER		1.4			1.9			1.8			1.7		
IRON		58.3	J	DG	81.1	J	DG	54.1	J	D	92.2	J	DG
LEAD		0.287			1.4			0.333			0.705		
MAGNESIUM		680			838			654			668		
MANGANESE		3			6.7			3.2			3.7		
MERCURY		0.014	J	P	0.016			0.014	J	P	0.013	J	P
NICKEL		0.272	J	P	0.546	J	P	0.298	J	P	0.329	J	P
POTASSIUM		2160			2250			2620			2610		
SELENIUM		0.863			0.713			0.938			0.876		
SILVER		0.022	J	P	0.213			0.018	J	P	0.014	J	P
SODIUM		4210			5560			4210			4190		
THALLIUM		3.3	U		2.5	U		3.5	U		3.7	U	
VANADIUM		0.199	J	P	0.208	J	P	0.257	J	P	0.234	J	P
ZINC		16.2			15.2			20.8			19.5		

PROJ_NO: 00949	NSAMPLE	GI-ET518-0510			GI-ET520-0610			GI-ET524-0610			GI-ET525-0610		
SDG: R1002885	LAB_ID	R1002885-009			R1002885-014			R1002885-015			R1002885-011		
FRACTION: M	SAMP_DATE	5/27/2010			6/2/2010			6/2/2010			6/2/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		25.2	J	G	7.6	J	G	34.1	J	G	20.9	J	G
ANTIMONY		1.2	U		0.99	U		0.97	U		1.1	U	
ARSENIC		2.5			3.8			7.2			6		
BARIUM		0.547	UJ	AP	0.701			1.5			0.783		
BERYLLIUM		0.117	U		0.099	UJ	AP	0.097	UJ	AP	0.106	UJ	AP
CADMIUM		0.174			0.194			0.23			0.157		
CALCIUM		801	J	G	4540	J	G	1360	J	G	2890	J	G
CHROMIUM		0.229	J	P	0.29			0.546			0.367		
COBALT		0.088	J	P	0.124	J	P	0.225	J	P	0.235	J	
COPPER		1.7			2.4			4			3.4		
IRON		60.5	J	DG	26	J	DG	62.9	J	DG	41.5	J	DG
LEAD		0.322			0.216			0.574			0.265		
MAGNESIUM		656			742			828			726		
MANGANESE		2.8			12			5.9			7		
MERCURY		0.015	J	P	0.015	J	P	0.042			0.026		
NICKEL		0.3	J	P	0.348	J	P	0.86			0.559	J	P
POTASSIUM		2670			2490			3050			3110		
SELENIUM		0.78			0.67			1.2			0.937		
SILVER		0.016	J	P	0.241			0.358			0.817		
SODIUM		3980			4470			4860			4070		
THALLIUM		3.7	U		3.2	U		3	U		3.7	U	
VANADIUM		0.17	J	P	0.226	J	P	0.58	J	P	0.408	J	P
ZINC		16.6			15.5			17			16.7		

PROJ_NO: 00949	NSAMPLE	GI-ET526-0610			GI-ET529-0610			GI-ET530-0510			GI-ET566-0510-A		
SDG: R1002885	LAB_ID	R1002885-013			R1002885-012			R1002885-003			R1002885-007		
FRACTION: M	SAMP_DATE	6/2/2010			6/2/2010			5/26/2010			5/27/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		46.7	J	G	15.9	J	G	18.7	J	G	35.5	J	G
ANTIMONY		0.968	U		1	U		0.98	U		0.974	U	
ARSENIC		3.6			3.5			2.4			3.5		
BARIUM		0.982			0.535			0.086	UJ	AP	0.754		
BERYLLIUM		0.097	UJ	AP	0.1	UJ	AP	0.098	U		0.097	UJ	AP
CADMIUM		0.183			0.156			0.171			0.195		
CALCIUM		3690	J	G	2510	J	G	751	J	G	3580	J	G
CHROMIUM		0.303			0.181	J	P	0.174	J	P	0.457		
COBALT		0.202	J	P	0.1	J	P	0.091	J	P	0.176	J	P
COPPER		2.5			2.7			1.4			2.3		
IRON		107	J	DG	36.4	J	DG	99.6	J	DG	84.7	J	DG
LEAD		1.1			0.245			0.291			0.549		
MAGNESIUM		705			609			614			694		
MANGANESE		20.6			12.1			3			6.9		
MERCURY		0.016	J	P	0.012	J	P	0.015	J	P	0.006	J	P
NICKEL		0.464	J	P	0.291	J	P	0.269	J	P	0.59	J	P
POTASSIUM		2510			2710			2530			2650		
SELENIUM		0.764			0.69			0.806			0.748		
SILVER		0.58			0.48			0.012	J	P	0.407		
SODIUM		4100			3510			3790			3990		
THALLIUM		3.2	U		3.4	U		3.4	U		3.5	U	
VANADIUM		0.315	J	P	0.195	J	P	0.235	J	P	0.294	J	P
ZINC		18.5			15.2			15.8			15.1		

PROJ_NO: 00949	NSAMPLE	GI-ET566-0510-B			GI-ET-DUP01-052610			GI-ET-DUP02-052710		
SDG: R1002885	LAB_ID	R1002885-008			R1002885-005			R1002885-010		
FRACTION: M	SAMP_DATE	5/27/2010			5/26/2010			5/27/2010		
MEDIA: TISSUE	QC_TYPE	NM			FD			FD		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS									
	DUP_OF				GI-ET505-0510			GI-ET518-0510		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		13.1	J	G	17.3			59.9	J	G
ANTIMONY		1.2	U		1.1	U		1.1	U	
ARSENIC		3.7			2.4			2.8		
BARIUM		0.44	J	P	0.493	UJ	AP	0.307	J	P
BERYLLIUM		0.097	UJ	AP	0.049	U		0.109	UJ	AP
CADMIUM		0.123			0.146			0.226		
CALCIUM		3240	J	G	1550			1900	J	G
CHROMIUM		0.533			0.175	J	P	0.626		
COBALT		0.163	J	P	0.099	J	P	0.128	J	P
COPPER		2.1			1.6			1.8		
IRON		38.8	J	DG	41.6	J	D	143	J	DG
LEAD		0.251			0.315			0.474		
MAGNESIUM		784			627			737		
MANGANESE		9.3			3.4			4.9		
MERCURY		0.012	J	P	0.018	J	P	0.017	J	P
NICKEL		0.544	J	P	0.323	J	P	0.465	J	P
POTASSIUM		3120			2530			2830		
SELENIUM		0.782			0.947			0.987		
SILVER		0.247			0.018	J	P	0.011	J	P
SODIUM		4450			3900			4600		
THALLIUM		4.1	U		3.3	U		0.002	J	P
VANADIUM		0.19	J	P	0.208	J	P	0.263	J	P
ZINC		18.4			16.1			20.7		

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-09-10-3840W

Date: September 9, 2010

c: File G02303-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Organic Data Validation, SDG R1003030
Columbia Analytical Services
CTO WE46, Phase 2, Site 17, Gould Island, Naval Station Newport,
Jamestown, Rhode Island

PCB Homologues/%Lipids:

10/Tissues/	GI-ET507-0610	GI-ET509-0610
	GI-ET514-0610	GI-ET515-0610
	GI-ET523-0610	GI-ET524-0610_20100604
	GI-ET525-0610_20100604	GI-ET526-0610_20100604
	GI-ET527-0610	GI-ET-DUP01-060410

(Field Duplicate pairs: GI-ET509-0610/GI-ET-DUP01-060410)

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the polychlorinated biphenyl (PCB) homologues analytical data and Tier I for the percent lipids data for the tissue samples in this SDG. The samples were collected from Site 17, Gould Island on June 4, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment at Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The PCB homologue analysis was performed according to USEPA Method 680. The percent (%) lipid analysis was performed according to the Columbia Analytical Services laboratory SOP GEN-LIPID. Tier I data validation for % lipids includes evaluation for completeness only.

The project specific criteria listed in the site SAP were applied for data validation. The PCB homologue data validation was performed in accordance with the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The data were evaluated based on the following parameters:

- Data Completeness
* • Preservation and Technical Holding Times
* • GC/MS Instrument Performance Check (Tuning)
* • Initial and Continuing Calibrations

*	•	Blanks
*	•	Surrogate Compounds
*	•	Internal Standards
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Laboratory Control Sample/Laboratory Control Sample Duplicate
	•	Field Duplicates
NA	•	Compound Identification/Quantitation
	•	Reporting Limits

* All criteria were met for this parameter.
NA Not Applicable for Tier II

Data Completeness

On August 31, 2010 the laboratory provided the limits of detection (LOD) summary since this was missing from the original submission of the data package.

The following samples collected on June 4, 2010 and identified on the chain-of custody form as GI-ET524-0610, GI-ET525-0610, and GI-ET526-0610 have the same sample ID as samples collected on June 2, 2010 which were reported under SDG R1002885. In order to differentiate both sets of samples in the database, the date of sample collection (_20100604) was appended to the sample ID for samples GI-ET524-0610, GI-ET525-0610, and GI-ET526-0610 collected on June 4, 20101 and reported in this SDG in order to maintain unique sample IDs.

Field Duplicates

The field duplicate pair GI-ET509-0610/GI-ET-DUP01-060410 did not meet the field duplicate QC criteria of RPD <50% for the following analyte:

Compound	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD	Action	
				(+)	NDs
Hexachlorobiphenyls	80	46	54	J	

Although the field duplicate RPD criterion was not met for hexachlorobiphenyls, the project precision goals are not impacted since the affected total PCB sample results are much lower than the project action limit for total PCBs. The positive results for hexachlorobiphenyls in samples GI-ET509-0610 and GI-ET-DUP01-060410 are usable as estimated values.

Reporting Limits

The laboratory reported the non-detected results down to the Limit of Quantitation (LOQ) instead of down to the Limit of Detection (LOD) as required because of software limitations. The data validator changed the non-detected results to the LOD values. The positive results above MDL and less than the LOQ were qualified as estimated (J) due to uncertainty below the QLs.

All laboratory-specific QLs in worksheet 15d of the SAP were met by the laboratory's actual QLs with the exception of those in select samples for which QLs were elevated as a result of the dilutions performed on the samples. Data usability may be impacted for these select results.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

The project goals with respect to precision were met for the PCB homologue data set. The results for hexachlorobiphenyls in samples GI-ET509-0510 and GI-ET-DUP01-060410 were qualified as estimated due to poor field duplicate precision. Although specific QC criteria were not met in this instance, the affected positive results are usable as estimated values which do not impact data usability.

The project goals with respect to sensitivity were met for the PCB homologue data set with the following exceptions. All laboratory-specific QLs in worksheet 15d of the SAP were met by the laboratory's actual QLs with the exception of those in select samples for which QLs were elevated due to the dilution performed on the samples. Data usability may be impacted for these select results.

The project goals with respect to accuracy and completeness were met for the PCB homologue data set. Data usability was not impacted with regards to accuracy and completeness.

Tables: Data Summary Tables
Data Validation Qualifiers and Codes

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
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D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
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U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-ET507-0610			GI-ET509-0610			GI-ET514-0610			GI-ET515-0610		
SDG: R1003030	LAB_ID	R1003030-006			R1003030-007			R1003030-004			R1003030-003		
FRACTION: PCBH	SAMP_DATE	6/4/2010			6/4/2010			6/4/2010			6/4/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		7.4	U		7.3	U		7.3	U		7.4	U	
DICHLOROBIPHENYLS		1.5	U		1.5	U		2.4	J	P	1.5	U	
HEPTACHLOROBIPHENYLS		18			23			8	J	P	13	J	P
HEXACHLOROBIPHENYLS		35			80	J	G	24			31		
MONOCHLOROBIPHENYLS		1.5	U		1.5	U		1.5	U		1.5	U	
NONACHLOROBIPHENYLS		7.4	U		7.3	U		7.3	U		7.4	U	
PENTACHLOROBIPHENYLS		20			32			16	J	P	3	U	
TETRACHLOROBIPHENYLS		2.9	U		2.9	U		2.9	U		3	U	
TOTAL OCTACHLOROBIPHENYLS		3.7	U		3.7	U		3.7	U		3.8	U	
TOTAL TRICHLOROBIPHENYLS		1.5	U		1.5	U		1.5	U		1.5	U	

PROJ_NO: 00949	NSAMPLE	GI-ET523-0610			GI-ET524-0610_2010604			GI-ET525-0610_20100604			GI-ET526-0610_2010604		
SDG: R1003030	LAB_ID	R1003030-001			R1003030-009			R1003030-002			R1003030-008		
FRACTION: PCBH	SAMP_DATE	6/4/2010			6/4/2010			6/4/2010			6/4/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		4.9	U		2.4	U		4.6	U		7.3	U	
DICHLOROBIPHENYLS		1	U		0.5	U		0.95	U		1.5	U	
HEPTACHLOROBIPHENYLS		9.5	J	P	2.9	J	P	2.3	U		3.7	U	
HEXACHLOROBIPHENYLS		61			15			14			22		
MONOCHLOROBIPHENYLS		1	U		0.5	U		0.95	U		1.5	U	
NONACHLOROBIPHENYLS		4.9	U		2.4	U		4.6	U		7.3	U	
PENTACHLOROBIPHENYLS		50			14			15			2.9	U	
TETRACHLOROBIPHENYLS		2	U		1	U		1.8	U		2.9	U	
TOTAL OCTACHLOROBIPHENYLS		2.5	U		1.2	U		2.3	U		3.7	U	
TOTAL TRICHLOROBIPHENYLS		1	U		0.5	U		0.95	U		1.5	U	

PROJ_NO: 00949	NSAMPLE	GI-ET527-0610			GI-ET-DUP01-060410		
SDG: R1003030	LAB_ID	R1003030-005			R1003030-010		
FRACTION: PCBH	SAMP_DATE	6/4/2010			6/4/2010		
MEDIA: TISSUE	QC_TYPE	NM			FD		
	UNITS	UG/KG			UG/KG		
	PCT_SOLIDS						
	DUP_OF				GI-ET509-0610		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		7.4	U		7.4	U	
DICHLOROBIPHENYLS		1.5	U		1.5	U	
HEPTACHLOROBIPHENYLS		18			18		
HEXACHLOROBIPHENYLS		45			46	J	G
MONOCHLOROBIPHENYLS		1.5	U		1.5	U	
NONACHLOROBIPHENYLS		7.4	U		7.4	U	
PENTACHLOROBIPHENYLS		11	J	P	22		
TETRACHLOROBIPHENYLS		2.9	U		2.9	U	
TOTAL OCTACHLOROBIPHENYLS		3.7	U		3.8	U	
TOTAL TRICHLOROBIPHENYLS		1.5	U		1.5	U	

PROJ_NO: 00949	NSAMPLE	GI-ET507-0610			GI-ET509-0610			GI-ET514-0610			GI-ET515-0610		
SDG: R1003030	LAB_ID	R1003030-006			R1003030-007			R1003030-004			R1003030-003		
FRACTION: MISC	SAMP_DATE	6/4/2010			6/4/2010			6/4/2010			6/4/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LIPIDS		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 00949	NSAMPLE	GI-ET523-0610			GI-ET524-0610_2010604			GI-ET525-0610_20100604			GI-ET526-0610_2010604		
SDG: R1003030	LAB_ID	R1003030-001			R1003030-009			R1003030-002			R1003030-008		
FRACTION: MISC	SAMP_DATE	6/4/2010			6/4/2010			6/4/2010			6/4/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
LIPIDS		0.5	U		0.687			0.5	U		0.5	U	

PROJ_NO: 00949	NSAMPLE	GI-ET527-0610			GI-ET-DUP01-060410		
SDG: R1003030	LAB_ID	R1003030-005			R1003030-010		
FRACTION: MISC	SAMP_DATE	6/4/2010			6/4/2010		
MEDIA: TISSUE	QC_TYPE	NM			FD		
	UNITS	%			%		
	PCT_SOLIDS						
	DUP_OF				GI-ET509-0610		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
LIPIDS		0.5	U		0.5	U	

TETRA TECH

INTERNAL CORRESPONDENCE

C-NAVY-09-10-3841W

Date: September 9, 2010

c: File G02303-4.10 (w/enc.-original)

To: Steve Parker (w/o enc.)

From: Paula DiMattei (no copy)

Subject: Tier II Inorganic Data Validation, SDG R1003030
Columbia Analytical Services
CTO WE46, Phase 2, Site 17, Gould Island, Naval Station Newport, Jamestown, Rhode Island

Metals
10/Tissues/

GI-ET507-0610	GI-ET509-0610
GI-ET514-0610	GI-ET515-0610
GI-ET523-0610	GI-ET524-0610_20100604
GI-ET525-0610_20100604	GI-ET526-0610_20100604
GI-ET527-0610	GI-ET-DUP01-060410

(Field Duplicate pairs: GI-ET509-0610/GI-ET-DUP01-060410)

Tetra Tech NUS, Inc. (TtNUS) performed a Tier II data validation on the metals analytical data for the tissue samples in this SDG. The samples were collected from Site 17, Gould Island on June 4, 2010. Sample collection and analysis was performed according to the requirements of the Sampling and Analysis Plan for the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment at Naval Station Newport, Jamestown, Rhode Island, dated December 2009.

The metals analysis was performed according to USEPA SW-846 Methods 6010C/6020/7471B. The project specific criteria listed in the site SAP were applied for data validation of the metals data. The Tier II data validation was performed according to the Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part IV, November 2008.

The sample results, validation qualifiers (VQL), and qualifier codes (QLCD) are presented in the enclosed data summary tables. A list of the qualifier codes, which provide the reasons for the validation qualifiers, is enclosed.

The analytical data from this SDG were evaluated based on the following parameters:

- Data Completeness
* • Holding Times
* • ICPMS Tuning and Internal Standard Areas
- Calibration Verification
- Laboratory Blank Analyses
- ICP Interference Check Sample Results
- Matrix Spike/Matrix Spike Duplicate Results
- Laboratory Duplicate Results
* • Laboratory Control Sample Results
* • Field Duplicate Precision

- ICP Serial Dilution Results
- Reporting Limits

* All quality control criteria were met for this parameter.

Data Completeness

On August 31, 2010 the laboratory provided an LOD summary since this was missing from the original submission of the data package.

Calibration Verification

The following table summarizes the analytes that failed to meet the continuing calibration verification (CCV) criterion of 90-110%:

Analyte	%Rec.	Action		Affected Samples
		(+)	NDs	
Mercury		J		GI-ET507-0610, GI-ET509-0610, GI-ET526-0610, GI-ET524-0610, GI-ET-DUP01-060410

Although the percent recovery was below the QC limits for mercury, the project accuracy goals are not impacted since the affected sample results are much lower than the project action limit for mercury. The positive results for mercury in the affected samples are usable as estimated values which may be biased low.

Laboratory Blank Analysis

The following table summarizes the level of blank contamination detected in the laboratory blanks associated with the tissue samples in this SDG:

Analyte	Maximum Conc. (mg/Kg)	Action Level* (mg/Kg)	Affected Samples
Beryllium	0.024	0.12	GI-ET507-0610, GI-ET509-0610, GI-ET514-0610, GI-ET515-0610, GI-ET523-0610, GI-ET525-0610, GI-ET527-0610
Chromium	0.41	2.1	GI-ET523-0610, GI-ET525-0610
*Action levels are adjusted for sample preparation factors.			

The positive beryllium and chromium results below the blank action level were changed to non-detected values (U) due to laboratory blank contamination.

Although beryllium and chromium were found in the laboratory blanks, the project sensitivity goals are not impacted since the elevated reporting limits in the affected samples are below the project action limits for beryllium and chromium. The beryllium and chromium results in the affected samples are usable as non-detected values with elevated reporting limits.

ICP Interference Check Sample Results

The following results were qualified in the affected samples due to ICP interference attributed to the high concentration of calcium in the tissue samples:

Analyte	Action		Bias	Affected Samples
	(+)	ND		
Antimony		UJ	Low	All tissue samples
Beryllium	J		High	
Cobalt	J		Low	
Selenium	J		Low	
Vanadium	J		High	GI-ET509-0610, GI-ET514-0610, GI-ET515-0610, GI-ET523-0610, GI-ET524-0610_2010604, GI-ET525-0610_20100604, GI-ET527-0610, GI-ET-DUP01-060410

The non-detected results for antimony were qualified as estimated (UJ) in all tissue samples; and the positive results for cobalt and selenium were qualified as estimated (J) in affected samples due to negative ICP interferences attributed to calcium. The affected antimony, cobalt, and selenium results may be biased low.

The positive results for beryllium and vanadium were qualified as estimated (J) in all tissue samples due to positive ICP interferences attributed to calcium. The affected beryllium and vanadium results may be biased high.

There were negative ICP interferences attributed to the high concentration of calcium that resulted in estimating the results for antimony in all tissue samples; therefore, the project accuracy goals may be impacted. The non-detected results for antimony in all tissue samples are usable as estimated values which may be biased low.

Although there were negative ICP interferences attributed to the high concentration of calcium that resulted in estimating the results for cobalt and selenium in the samples listed above, the project accuracy goals are not impacted since the affected results are much lower than the project action limits for these metals. The positive results for cobalt and selenium in the affected samples are usable as estimated values which may be biased low.

Although there were positive ICP interferences attributed to the high concentration of calcium that resulted in estimating the results for beryllium and vanadium in all tissue samples, the project accuracy goals are not impacted since the affected results are much lower than the project action limits for these metals. The positive results for beryllium and vanadium in all tissue samples are usable as estimated values which may be biased high.

Matrix Spike/Matrix Spike Duplicate Results

The following table summarizes the analytes that recovered outside of the 75-125% recovery QC limits in the matrix spike (MS) analysis of the sample GI-ET507-0610:

Analyte	%Recovery	Action	
		(+)	NDs
Potassium	140	J	
Silver	NC	J	
NC: The % recovery is not calculable since the concentration of the analyte detected in the native unspiked concentration is greater than that detected in the MS sample.			

Although the percent recovery criteria were not met for potassium or silver, the project accuracy goals are not impacted since either there are no project action limits established for potassium or the silver affected sample results are much lower than the project action limits for the metal. The positive results for potassium in all tissue samples are usable as estimated values which may be biased high; and the positive results for silver in all tissue samples are usable as estimated values for which the bias is indeterminate.

Laboratory Duplicate Results

The following table summarizes the analyte that exceeded the relative percent difference (RPD) QC criterion of <35%RPD in the laboratory duplicate analysis of the sample GI-ET507-0610:

Analyte	RPD	Action	
		(+)	NDs
Lead	79	J	

Although the RPD criterion was not met for lead, the project precision goals are not impacted since the affected sample results are much lower than the project action limits for the metal. The positive results for lead in all tissue samples are usable as estimated values for which the bias is indeterminate.

ICP Serial Dilution Results

The following table summarizes the analytes for which the percent difference between the initial and diluted results in the ICP serial dilution analysis of sample GI-ET507-0610 was above the 10% SAP QC criterion when the initial sample result was above 50 times the method detection limit (MDL):

Analyte	% Difference	Bias	Action	
			(+)	NDs
Arsenic	15	Low	J	
Calcium	11	Low	J	
Sodium	13	Low	J	
Silver	22	Low	J	

A matrix suppressing effect for arsenic was detected in the ICP serial dilution analysis; therefore, the project accuracy goals may be impacted. The positive results for arsenic in all tissue samples are usable as estimated values which may be biased low.

Although a matrix suppressing effect for calcium, sodium, and silver was detected in the ICP serial dilution analysis, the project accuracy goals are not impacted since project action limits are not established for the analyte or the affected sample results are much lower than the project action limits for

the metal. The positive results for calcium, sodium, and silver in all tissue samples are usable as estimated values which may be biased low.

Reporting Limits

The laboratory reported the non-detected results down to the Method Detection Limit (MDL) instead of down to the Limit of Detection (LOD) as required because of software limitations. The data validator changed the non-detected results to the LOD values. The positive results above MDL and less than the Limit of Quantitation (LOQ) were qualified as estimated (J) due to uncertainty below QLs.

Sample-specific reporting limits adjusted for preparation factors were reported only for associated non-detected results; these reporting limits for non-detected results are evaluated below.

The following analytes were reported as non-detected in select samples: antimony and thallium. The sample-specific reporting limits did not meet the project action limits for antimony or beryllium. Data usability may be impacted for antimony and thallium. As discussed above in the Laboratory Blank Analysis section, reporting limits were raised for beryllium and chromium in select tissue samples; data usability is not impacted for beryllium and chromium in the affected samples.

Data Usability Assessment

The data usability assessment was performed to determine if the data met the project data quality objectives for acceptable accuracy, precision, sensitivity, and completeness; and to determine and define the impact of the exceeded quality control indicators on the technical usability of the data. Please refer to the specific sections in the above validation report for further details.

The project goals with respect to accuracy were met for the metals data set with the following exceptions. Antimony was qualified as estimated in all tissue samples due to negative ICP interferences attributed to the high concentration of calcium in the samples; results may be biased low. Arsenic in all tissue samples was qualified as estimated due to a matrix suppressing effect; results may be biased low. Although specific method criteria were not met in these instances, the affected positive and non-detected results are usable as estimated values and estimated reporting limits which may have a minor impact on data usability. Additionally, mercury was qualified as estimated in select samples due to the low continuing calibration verification standard recovery; results may be biased low. Cobalt and selenium were qualified as estimated in select samples due to negative ICP interferences attributed to the high concentration of calcium in the samples; results may be biased low. Beryllium and vanadium were qualified as estimated in all tissue samples due to positive ICP interferences attributed to the high concentration of calcium in the samples; results may be biased high. Potassium and silver were qualified as estimated in all tissue samples due to exceeded MS spike recoveries; results for potassium may be biased high and silver may be biased low. Calcium, sodium, and silver in all tissue samples were qualified as estimated due to a matrix suppressing effect; results may be biased low. Although specific method criteria were not met in these instances, data usability is not impacted and the affected positive results are usable as estimated values.

The project goals with respect to precision were met for the metals data set. Lead was qualified as estimated in all tissue samples due to poor laboratory duplicate precision. Although specific method criteria were not met in this instance, data usability is not impacted and the affected positive results are usable as estimated values.

The project goals with respect to sensitivity were met for the metals data set with the following exception. The following analytes were reported as non-detected in select samples: antimony and thallium. The sample-specific reporting limits did not meet the project action limits for antimony or beryllium. Data usability may be impacted for antimony and thallium.

The project goals with respect to completeness were met for the metals data set. Data usability is not impacted with regards to completeness.

Tables: Data Validation Qualifiers and Codes
Data Summary Tables

Enclosures: Data Validation Worksheets

Data Validation Qualifiers and Codes

Data Validation Qualifiers:

= No qualifier attached to value (positive hit)
J = Value is estimated
U = Value is not detected
UJ = Value is not detected and estimated
R = Value (positive hit) is not usable
UR = Value was reported as ND but is not usable

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty below quantitation limit (< QL but ≥ MDL)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00949	NSAMPLE	GI-ET507-0610			GI-ET509-0610			GI-ET514-0610			GI-ET515-0610		
SDG: R1003030	LAB_ID	R1003030-006			R1003030-007			R1003030-004			R1003030-003		
FRACTION: M	SAMP_DATE	6/4/2010			6/4/2010			6/4/2010			6/4/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		386			435			345			429		
ANTIMONY		1.9	UJ	K	2	UJ	K	1.7	UJ	K	1.8	UJ	K
ARSENIC		8.9	J	I	7.6	J	I	7.3	J	I	6.3	J	I
BARIUM		5.8			6.3			6.2			5.2		
BERYLLIUM		0.195	UJ	AKP	0.2	UJ	AKP	0.168	UJ	AKP	0.179	UJ	AKP
CADMIUM		0.052	J	P	0.047	J	P	0.052	J	P	0.082	J	P
CALCIUM		42900	J	I	59300	J	I	56300	J	I	87500	J	I
CHROMIUM		1.5			2.1			2.3			3.4		
COBALT		0.365	J	KP	0.341	J	KP	0.347	J	KP	0.325	J	KP
COPPER		31.2			37.2			26.6			30.6		
IRON		812			846			800			762		
LEAD		2	J	F	2.4	J	F	1.7	J	F	1.9	J	F
MAGNESIUM		5050			5610			5340			4170		
MANGANESE		112			101			133			97.3		
MERCURY		0.066	J	C	0.049	J	C	0.027			0.037		
NICKEL		1.8			3			2.4			4.5		
POTASSIUM		2100	J	D	1860	J	D	1540	J	D	1200	J	D
SELENIUM		1.3	J	K	0.958	J	K	0.859	J	K	1.1	J	K
SILVER		0.224	J	DI	0.127	J	DIP	0.246	J	DI	0.169	J	DIP
SODIUM		4660	J	I	4620	J	I	3690	J	I	3620	J	I
THALLIUM		6.8	U		6.1	U		0.004	J	P	6	U	
VANADIUM		1.7	J	P	1.8	J	KP	1.5	J	KP	1.6	J	KP
ZINC		34.8			36.4			26.8			32.4		

PROJ_NO: 00949	NSAMPLE	GI-ET523-0610			GI-ET524-0610_2010604			GI-ET525-0610_20100604			GI-ET526-0610_2010604		
SDG: R1003030	LAB_ID	R1003030-001			R1003030-009			R1003030-002			R1003030-008		
FRACTION: M	SAMP_DATE	6/4/2010			6/4/2010			6/4/2010			6/4/2010		
MEDIA: TISSUE	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		91.6			697			85.7			601		
ANTIMONY		1.7	UJ	K	2	UJ	K	1.6	UJ	K	2	UJ	K
ARSENIC		7.8	J	I	7.1	J	I	8	J	I	9.9	J	I
BARIUM		3.8			5.5			4.3			6.5		
BERYLLIUM		0.026	UJ	AKP	0.063	J	KP	0.159	UJ	AKP	0.05	J	KP
CADMIUM		0.289			0.128	J	P	0.155	J	P	0.064	J	P
CALCIUM		78400	J	I	61100	J	I	75600	J	I	44400	J	I
CHROMIUM		0.49	U	A	6			0.508	U	A	8.2		
COBALT		0.168	J	KP	0.471	J	KP	0.362	J	KP	0.566	J	KP
COPPER		31.6			56.6			28.4			47.5		
IRON		197			992			290			1030		
LEAD		0.763	J	F	6.1	J	F	1.2	J	F	2.5	J	F
MAGNESIUM		3280			5560			3530			5340		
MANGANESE		32.3			65.9			53.1			143		
MERCURY		0.043			0.049	J	C	0.082			0.05	J	C
NICKEL		0.978	J	P	7.1			0.637	J	P	10.4		
POTASSIUM		2120	J	D	2280	J	D	1370	J	D	2470	J	D
SELENIUM		1.2	J	K	1.1	J	K	1.1	J	K	1.4	J	K
SILVER		0.296	J	DI	0.216	J	DI	0.145	J	DIP	0.194	J	DIP
SODIUM		5620	J	I	5710	J	I	4530	J	I	5680	J	I
THALLIUM		5.9	U		0.005	J	P	5.2	U		0.004	J	P
VANADIUM		0.598	J	KP	2.1	J	KP	0.841	J	KP	2.2		
ZINC		37.4			50.5			32			47.1		

PROJ_NO: 00949	NSAMPLE	GI-ET527-0610			GI-ET-DUP01-060410		
SDG: R1003030	LAB_ID	R1003030-005			R1003030-010		
FRACTION: M	SAMP_DATE	6/4/2010			6/4/2010		
MEDIA: TISSUE	QC_TYPE	NM			FD		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS						
	DUP_OF				GI-ET509-0610		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		411			502		
ANTIMONY		1.9	UJ	K	1.9	UJ	K
ARSENIC		8.5	J	I	9	J	I
BARIUM		5.9			6		
BERYLLIUM		0.04	UJ	AKP	0.044	J	KP
CADMIUM		0.052	J	P	0.054	J	P
CALCIUM		68200	J	I	56300	J	I
CHROMIUM		1.8			2.6		
COBALT		0.337	J	KP	0.425	J	KP
COPPER		31.2			35.9		
IRON		790			915		
LEAD		1.8	J	F	2.3	J	F
MAGNESIUM		4990			4970		
MANGANESE		108			103		
MERCURY		0.032	J	P	0.047	J	C
NICKEL		2.2			2.6		
POTASSIUM		2040	J	D	1980	J	D
SELENIUM		1.2	J	K	1.4	J	K
SILVER		0.246	J	DI	0.34	J	DI
SODIUM		5000	J	I	5020	J	I
THALLIUM		5.7	U		6.4	U	
VANADIUM		1.7	J	KP	2	J	KP
ZINC		35			38.6		

APPENDIX F

PRO-UCL OUTPUT FOR DATA STATISTICS

	A	B	C	D	E
1	**General UCL Statistics for Data Sets with Non-Detects**				
2	**User Selected Options**				
3	From File	sd.wst			
4	Full Precision	ON			
5	Confidence Coefficient	95%			
6	Number of Bootstrap Operations	2000			
7					
8					
9	**AVS/SEM|RATIO|SEM/AVS (gi_sd_ne_2005)**				
10					
11	**General Statistics**				
12	Number of Valid Observations		36	Number of Distinct Observations	30
13					
14	**Raw Statistics**			**Log-transformed Statistics**	
15	Minimum		0.02	Minimum of Log Data	-3.912023
16	Maximum		3.5	Maximum of Log Data	1.252763
17	Mean		0.3728056	Mean of log Data	-1.592772
18	Median		0.16	SD of log Data	1.0338252
19	SD		0.6056595		
20	Coefficient of Variation		1.6245989		
21	Skewness		4.2480192		
22					
23	**Relevant UCL Statistics**				
24	**Normal Distribution Test**			**Lognormal Distribution Test**	
25	Shapiro Wilk Test Statistic		0.5181784	Shapiro Wilk Test Statistic	0.97719
26	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
27	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
28					
29	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30	95% Student's-t UCL		0.5433565	95% H-UCL	0.5298136
31	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.6374897
32	95% Adjusted-CLT UCL (Chen-1995)		0.6152072	97.5% Chebyshev (MVUE) UCL	0.7664279
33	95% Modified-t UCL (Johnson-1978)		0.5552678	99% Chebyshev (MVUE) UCL	1.0197022
34					
35	**Gamma Distribution Test**			**Data Distribution**	
36	k star (bias corrected)		0.896072	**Data appear Lognormal at 5% Significance Level**	
37	Theta Star		0.4160442		
38	MLE of Mean		0.3728056		
39	MLE of Standard Deviation		0.3938319		
40	nu star		64.517185		
41	Approximate Chi Square Value (.05)		47.036817	**Nonparametric Statistics**	
42	Adjusted Level of Significance		0.0428	95% CLT UCL	0.5388424
43	Adjusted Chi Square Value		46.358544	95% Jackknife UCL	0.5433565
44				95% Standard Bootstrap UCL	0.5334838
45	Anderson-Darling Test Statistic		1.4453755	95% Bootstrap-t UCL	0.7480378
46	Anderson-Darling 5% Critical Value		0.7782957	95% Hall's Bootstrap UCL	1.1801798
47	Kolmogorov-Smirnov Test Statistic		0.1729984	95% Percentile Bootstrap UCL	0.5595833
48	Kolmogorov-Smirnov 5% Critical Value		0.1514039	95% BCA Bootstrap UCL	0.6399722
49	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.812807
50				97.5% Chebyshev(Mean, Sd) UCL	1.0031959
51	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1.3771782
52	95% Approximate Gamma UCL		0.5113519		
53	95% Adjusted Gamma UCL		0.5188335		
54					
55	**Potential UCL to Use**			Use 95% H-UCL	0.5298136
56					
57	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
58	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
59	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
60	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
61					
62	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
63	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				

	A	B	C	D	E
64	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
65					
66					
67	AVS/SEM|RATIO|SEM/AVS (gi_sd_ne_2009)				
68					
69	General Statistics				
70	Number of Valid Data		0	Number of Detected Data	0
71	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
72	Number of Missing Values		20	Percent Non-Detects	NaN%
73					
74	Warning: This data set only has 0 observations!				
75	Data set is too small to compute reliable and meaningful statistics and estimates!				
76	The data set for variable AVS/SEM|RATIO|SEM/AVS (gi_sd_ne_2009) was not processed!				
77					
78	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
79	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
80					
81					
82					
83	AVS/SEM|RATIO|SEM/AVS (gi_sd_ne_2010)				
84					
85	General Statistics				
86	Number of Valid Data		0	Number of Detected Data	0
87	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
88	Number of Missing Values		16	Percent Non-Detects	NaN%
89					
90	Warning: This data set only has 0 observations!				
91	Data set is too small to compute reliable and meaningful statistics and estimates!				
92	The data set for variable AVS/SEM|RATIO|SEM/AVS (gi_sd_ne_2010) was not processed!				
93					
94	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
95	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
96					
97					
98					
99	AVS/SEM|RATIO|SEM/AVS (gi_sd_nw_2005)				
100					
101	General Statistics				
102	Number of Valid Observations		18	Number of Distinct Observations	14
103					
104	Raw Statistics			Log-transformed Statistics	
105	Minimum		0.032	Minimum of Log Data	-3.442019
106	Maximum		1.8	Maximum of Log Data	0.5877867
107	Mean		0.369	Mean of log Data	-1.554538
108	Median		0.175	SD of log Data	1.0032661
109	SD		0.4985671		
110	Coefficient of Variation		1.3511304		
111	Skewness		2.289851		
112					
113	Relevant UCL Statistics				
114	Normal Distribution Test			Lognormal Distribution Test	
115	Shapiro Wilk Test Statistic		0.6089615	Shapiro Wilk Test Statistic	0.9152235
116	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
117	Data not Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
118					
119	Assuming Normal Distribution			Assuming Lognormal Distribution	
120	95% Student's-t UCL		0.5734271	95% H-UCL	0.6648371
121	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	0.7206698
122	95% Adjusted-CLT UCL (Chen-1995)		0.6300625	97.5% Chebyshev (MVUE) UCL	0.8870887

	A	B	C	D	E
123	95% Modified-t UCL (Johnson-1978)		0.5839979	99% Chebyshev (MVUE) UCL	1.2139864
124					
125	**Gamma Distribution Test**			**Data Distribution**	
126	k star (bias corrected)		0.8966129	**Data appear Lognormal at 5% Significance Level**	
127	Theta Star		0.4115489		
128	MLE of Mean		0.369		
129	MLE of Standard Deviation		0.3896941		
130	nu star		32.278064		
131	Approximate Chi Square Value (.05)		20.292666	**Nonparametric Statistics**	
132	Adjusted Level of Significance		0.03574	95% CLT UCL	0.5622923
133	Adjusted Chi Square Value		19.382281	95% Jackknife UCL	0.5734271
134				95% Standard Bootstrap UCL	0.5555268
135	Anderson-Darling Test Statistic		1.50989	95% Bootstrap-t UCL	0.8679765
136	Anderson-Darling 5% Critical Value		0.7659481	95% Hall's Bootstrap UCL	0.7236363
137	Kolmogorov-Smirnov Test Statistic		0.2900486	95% Percentile Bootstrap UCL	0.5686111
138	Kolmogorov-Smirnov 5% Critical Value		0.2093008	95% BCA Bootstrap UCL	0.6427778
139	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.881229
140				97.5% Chebyshev(Mean, Sd) UCL	1.1028709
141	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1.5382435
142	95% Approximate Gamma UCL		0.5869414		
143	95% Adjusted Gamma UCL		0.61451		
144					
145	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	0.881229
146					
147	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
148	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
149	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
150					
151					
152	**AVS/SEM|RATIO|SEM/AVS (gi_sd_nw_2009)**				
153					
154	**General Statistics**				
155	Number of Valid Data		0	Number of Detected Data	0
156	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
157	Number of Missing Values		7	Percent Non-Detects	NaN%
158					
159	**Warning: This data set only has 0 observations!**				
160	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
161	**The data set for variable AVS/SEM|RATIO|SEM/AVS (gi_sd_nw_2009) was not processed!**				
162					
163	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
164	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
165					
166					
167					
168	**AVS/SEM|RATIO|SEM/AVS (gi_sd_nw_2010)**				
169					
170	**General Statistics**				
171	Number of Valid Data		0	Number of Detected Data	0
172	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
173	Number of Missing Values		4	Percent Non-Detects	NaN%
174					
175	**Warning: This data set only has 0 observations!**				
176	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
177	**The data set for variable AVS/SEM|RATIO|SEM/AVS (gi_sd_nw_2010) was not processed!**				
178					
179	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
180	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
181					
182					
183					
184	AVS/SEM|RATIO|SEM/AVS (gi_sd_ref_2009)				
185					
186	General Statistics				
187	Number of Valid Data		0	Number of Detected Data	0
188	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
189	Number of Missing Values		6	Percent Non-Detects	NaN%
190					
191	Warning: This data set only has 0 observations!				
192	Data set is too small to compute reliable and meaningful statistics and estimates!				
193	The data set for variable AVS/SEM|RATIO|SEM/AVS (gi_sd_ref_2009) was not processed!				
194					
195	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
196	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
197					
198					
199					
200	AVS/SEM|RATIO|SEM/AVS (gi_sd_ref_2010)				
201					
202	General Statistics				
203	Number of Valid Data		0	Number of Detected Data	0
204	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
205	Number of Missing Values		3	Percent Non-Detects	NaN%
206					
207	Warning: This data set only has 0 observations!				
208	Data set is too small to compute reliable and meaningful statistics and estimates!				
209	The data set for variable AVS/SEM|RATIO|SEM/AVS (gi_sd_ref_2010) was not processed!				
210					
211	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
212	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
213					
214					
215					
216	AVS/SEM|RATIO|SEM/AVS (gi_sd_s_2005)				
217					
218	General Statistics				
219	Number of Valid Observations		8	Number of Distinct Observations	7
220					
221	Raw Statistics			Log-transformed Statistics	
222	Minimum		0.108	Minimum of Log Data	-2.225624
223	Maximum		0.45	Maximum of Log Data	-0.798508
224	Mean		0.246	Mean of log Data	-1.511744
225	Median		0.25	SD of log Data	0.5136804
226	SD		0.1176775		
227	Coefficient of Variation		0.4783639		
228	Skewness		0.4478411		
229					
230					
231	Warning: There are only 8 Values in this data				
232	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
233	the resulting calculations may not be reliable enough to draw conclusions				
234					
235	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				

	A	B	C	D	E
236					
237	**Relevant UCL Statistics**				
238	**Normal Distribution Test**			**Lognormal Distribution Test**	
239	Shapiro Wilk Test Statistic		0.9365763	Shapiro Wilk Test Statistic	0.929506
240	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
241	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
242					
243	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
244	95% Student's-t UCL		0.3248245	95% H-UCL	0.3992236
245	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.444855
246	95% Adjusted-CLT UCL (Chen-1995)		0.3214736	97.5% Chebyshev (MVUE) UCL	0.5304003
247	95% Modified-t UCL (Johnson-1978)		0.3259224	99% Chebyshev (MVUE) UCL	0.6984373
248					
249	**Gamma Distribution Test**			**Data Distribution**	
250	k star (bias corrected)		3.0421139	**Data appear Normal at 5% Significance Level**	
251	Theta Star		0.0808648		
252	MLE of Mean		0.246		
253	MLE of Standard Deviation		0.1410416		
254	nu star		48.673823		
255	Approximate Chi Square Value (.05)		33.658711	**Nonparametric Statistics**	
256	Adjusted Level of Significance		0.01946	95% CLT UCL	0.3144346
257	Adjusted Chi Square Value		30.531394	95% Jackknife UCL	0.3248245
258				95% Standard Bootstrap UCL	0.3098145
259	Anderson-Darling Test Statistic		0.3169426	95% Bootstrap-t UCL	0.3351024
260	Anderson-Darling 5% Critical Value		0.718937	95% Hall's Bootstrap UCL	0.3265803
261	Kolmogorov-Smirnov Test Statistic		0.1999093	95% Percentile Bootstrap UCL	0.3125
262	Kolmogorov-Smirnov 5% Critical Value		0.2952639	95% BCA Bootstrap UCL	0.3175
263	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.4273532
264				97.5% Chebyshev(Mean, Sd) UCL	0.5058249
265	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.6599674
266	95% Approximate Gamma UCL		0.3557403		
267	95% Adjusted Gamma UCL		0.3921786		
268					
269	**Potential UCL to Use**			Use 95% Student's-t UCL	0.3248245
270					
271	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
272	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
273	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
274					
275					
276	**AVS/SEM|RATIO|SEM/AVS (gi_sd_s_2010)**				
277					
278	**General Statistics**				
279	Number of Valid Data		0	Number of Detected Data	0
280	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
281	Number of Missing Values		2	Percent Non-Detects	NaN%
282					
283	**Warning: This data set only has 0 observations!**				
284	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
285	**The data set for variable AVS/SEM|RATIO|SEM/AVS (gi_sd_s_2010) was not processed!**				
286					
287	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
288	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
289					
290					
291					
292	**AVS/SEM|RATIO|SEM/AVS (gi_sd_stillwater_2005)**				
293					
294	**General Statistics**				
295	Number of Valid Observations		4	Number of Distinct Observations	4

	A	B	C	D	E
296					
297					
298	**Warning: This data set only has 4 observations!**				
299	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
300	**The data set for variable AVS/SEM|RATIO|SEM/AVS (gi_sd_stillwater_2005) was not processed!**				
301					
302	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
303	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
304					
305					
306					
307	**AVS/SEM|RATIO|SEM/AVS (gi_sd_stillwater_2009)**				
308					
309	**General Statistics**				
310	Number of Valid Data		0	Number of Detected Data	0
311	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
312	Number of Missing Values		60	Percent Non-Detects	NaN%
313					
314	**Warning: This data set only has 0 observations!**				
315	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
316	**The data set for variable AVS/SEM|RATIO|SEM/AVS (gi_sd_stillwater_2009) was not processed!**				
317					
318	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
319	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
320					
321					
322					
323	**AVS/SEM|RATIO|SEM/AVS (gi_sd_stillwater_2010)**				
324					
325	**General Statistics**				
326	Number of Valid Data		0	Number of Detected Data	0
327	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
328	Number of Missing Values		11	Percent Non-Detects	NaN%
329					
330	**Warning: This data set only has 0 observations!**				
331	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
332	**The data set for variable AVS/SEM|RATIO|SEM/AVS (gi_sd_stillwater_2010) was not processed!**				
333					
334	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
335	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
336					
337					
338					
339	**AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_ne_2005)**				
340					
341	**General Statistics**				
342	Number of Valid Data		36	Number of Detected Data	35
343	Number of Distinct Detected Data		32	Number of Non-Detect Data	1
344				Percent Non-Detects	2.78%
345					
346	**Raw Statistics**			**Log-transformed Statistics**	
347	Minimum Detected		0.57	Minimum Detected	-0.562119

	A	B	C	D	E
348	Maximum Detected		18.5	Maximum Detected	2.9177707
349	Mean of Detected		5.2591429	Mean of Detected	1.3567687
350	SD of Detected		4.0008436	SD of Detected	0.8441538
351	Minimum Non-Detect		0.61	Minimum Non-Detect	-0.494296
352	Maximum Non-Detect		0.61	Maximum Non-Detect	-0.494296
353					
354					
355	**UCL Statistics**				
356	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
357	Shapiro Wilk Test Statistic		0.8845754	Shapiro Wilk Test Statistic	0.9658778
358	5% Shapiro Wilk Critical Value		0.934	5% Shapiro Wilk Critical Value	0.934
359	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
360					
361	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
362	DL/2 Substitution Method			DL/2 Substitution Method	
363	Mean		5.1215278	Mean	1.2860961
364	SD		4.0287937	SD	0.9338318
365	95% DL/2 (t) UCL		6.2560176	95% H-Stat (DL/2) UCL	8.0577533
366					
367	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
368	Mean		5.0129934	Mean in Log Scale	1.3061431
369	SD		4.1448238	SD in Log Scale	0.8857213
370	95% MLE (t) UCL		6.1801567	Mean in Original Scale	5.1304906
371	95% MLE (Tiku) UCL		6.1436948	SD in Original Scale	4.018117
372				95% t UCL	6.2619739
373				95% Percentile Bootstrap UCL	6.2880556
374				95% BCA Bootstrap UCL	6.3356385
375					
376	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
377	k star (bias corrected)		1.6627279	**Data appear Gamma Distributed at 5% Significance Level**	
378	Theta Star		3.1629605		
379	nu star		116.39096		
380					
381	A-D Test Statistic		0.2647664	**Nonparametric Statistics**	
382	5% A-D Critical Value		0.7624905	Kaplan-Meier (KM) Method	
383	K-S Test Statistic		0.7624905	Mean	5.1288889
384	5% K-S Critical Value		0.1509876	SD	3.9637481
385	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.6702693
386				95% KM (t) UCL	6.2613575
387	**Assuming Gamma Distribution**			95% KM (z) UCL	6.2313839
388	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	6.2548412
389	Minimum		1E-12	95% KM (bootstrap t) UCL	6.4610987
390	Maximum		18.5	95% KM (BCA) UCL	6.2752778
391	Mean		5.1130556	95% KM (Percentile Bootstrap) UCL	6.2402778
392	Median		4.475	95% KM (Chebyshev) UCL	8.0505252
393	SD		4.0395182	97.5% KM (Chebyshev) UCL	9.3147196
394	k star		0.5460842	99% KM (Chebyshev) UCL	11.797985
395	Theta star		9.3631262		
396	Nu star		39.318065	**Potential UCLs to Use**	
397	AppChi2		25.954087	95% KM (Chebyshev) UCL	8.0505252
398	95% Gamma Approximate UCL		7.7458107		
399	95% Adjusted Gamma UCL		7.8960949		
400	**Note: DL/2 is not a recommended method.**				
401					
402	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
403	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
404	**For additional insight, the user may want to consult a statistician.**				
405					
406					
407	**AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_ne_2009)**				
408					
409	**General Statistics**				
410	Number of Valid Data		0	Number of Detected Data	0
411	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
412	Number of Missing Values		20	Percent Non-Detects	NaN%
413					

	A	B	C	D	E
414	**Warning: This data set only has 0 observations!**				
415	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
416	**The data set for variable AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_ne_2009) was not processed!**				
417					
418	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
419	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
420					
421					
422					
423	**AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_ne_2010)**				
424					
425	**General Statistics**				
426	Number of Valid Data		0	Number of Detected Data	0
427	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
428	Number of Missing Values		16	Percent Non-Detects	NaN%
429					
430	**Warning: This data set only has 0 observations!**				
431	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
432	**The data set for variable AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_ne_2010) was not processed!**				
433					
434	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
435	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
436					
437					
438					
439	**AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_nw_2005)**				
440					
441	**General Statistics**				
442	Number of Valid Data		18	Number of Detected Data	17
443	Number of Distinct Detected Data		16	Number of Non-Detect Data	1
444				Percent Non-Detects	5.56%
445					
446	**Raw Statistics**			**Log-transformed Statistics**	
447	Minimum Detected		0.83	Minimum Detected	-0.18633
448	Maximum Detected		12.3	Maximum Detected	2.5095993
449	Mean of Detected		4.6164706	Mean of Detected	1.2677212
450	SD of Detected		3.3300787	SD of Detected	0.7753687
451	Minimum Non-Detect		0.61	Minimum Non-Detect	-0.494296
452	Maximum Non-Detect		0.61	Maximum Non-Detect	-0.494296
453					
454					
455	**UCL Statistics**				
456	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
457	Shapiro Wilk Test Statistic		0.9018934	Shapiro Wilk Test Statistic	0.9749337
458	5% Shapiro Wilk Critical Value		0.892	5% Shapiro Wilk Critical Value	0.892
459	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
460					
461	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
462	DL/2 Substitution Method			DL/2 Substitution Method	
463	Mean		4.3769444	Mean	1.1313232
464	SD		3.3867115	SD	0.9490583
465	95% DL/2 (t) UCL		5.7655952	95% H-Stat (DL/2) UCL	8.7759442
466					
467	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
468	Mean		4.2968758	Mean in Log Scale	1.1610999
469	SD		3.423091	SD in Log Scale	0.8777572
470	95% MLE (t) UCL		5.7004433	Mean in Original Scale	4.3889602
471	95% MLE (Tiku) UCL		5.6583639	SD in Original Scale	3.3717655

	A	B	C	D	E
472				95% t UCL	5.7714827
473				95% Percentile Bootstrap UCL	5.7194444
474				95% BCA Bootstrap UCL	5.8484046
475					
476	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
477	k star (bias corrected)		1.7358461	**Data appear Normal at 5% Significance Level**	
478	Theta Star		2.659493		
479	nu star		59.018767		
480					
481	A-D Test Statistic		0.2196886	**Nonparametric Statistics**	
482	5% A-D Critical Value		0.7491874	Kaplan-Meier (KM) Method	
483	K-S Test Statistic		0.7491874	Mean	4.4061111
484	5% K-S Critical Value		0.211608	SD	3.2572281
485	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.7913642
486				95% KM (t) UCL	5.7827736
487	**Assuming Gamma Distribution**			95% KM (z) UCL	5.7077894
488	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	5.7670651
489	Minimum		1E-12	95% KM (bootstrap t) UCL	6.0833671
490	Maximum		12.3	95% KM (BCA) UCL	5.8572222
491	Mean		4.36	95% KM (Percentile Bootstrap) UCL	5.7005556
492	Median		3.25	95% KM (Chebyshev) UCL	7.8555876
493	SD		3.4089726	97.5% KM (Chebyshev) UCL	9.3481788
494	k star		0.3440236	99% KM (Chebyshev) UCL	12.280085
495	Theta star		12.67355		
496	Nu star		12.384849	**Potential UCLs to Use**	
497	AppChi2		5.4815637	95% KM (t) UCL	5.7827736
498	95% Gamma Approximate UCL		9.8508279	95% KM (Percentile Bootstrap) UCL	5.7005556
499	95% Adjusted Gamma UCL		10.70076		
500	**Note: DL/2 is not a recommended method.**				
501					
502	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
503	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
504	**For additional insight, the user may want to consult a statistician.**				
505					
506					
507	**AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_nw_2009)**				
508					
509	**General Statistics**				
510	Number of Valid Data		0	Number of Detected Data	0
511	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
512	Number of Missing Values		7	Percent Non-Detects	NaN%
513					
514	**Warning: This data set only has 0 observations!**				
515	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
516	**The data set for variable AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_nw_2009) was not processed!**				
517					
518	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
519	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
520					
521					
522					
523	**AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_nw_2010)**				
524					
525	**General Statistics**				
526	Number of Valid Data		0	Number of Detected Data	0
527	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
528	Number of Missing Values		4	Percent Non-Detects	NaN%
529					
530	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
531	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
532	**The data set for variable AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_nw_2010) was not processed!**				
533					
534	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
535	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
536					
537					
538					
539	**AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_ref_2009)**				
540					
541	**General Statistics**				
542	Number of Valid Data		0	Number of Detected Data	0
543	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
544	Number of Missing Values		6	Percent Non-Detects	NaN%
545					
546	**Warning: This data set only has 0 observations!**				
547	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
548	**The data set for variable AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_ref_2009) was not processed!**				
549					
550	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
551	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
552					
553					
554					
555	**AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_ref_2010)**				
556					
557	**General Statistics**				
558	Number of Valid Data		0	Number of Detected Data	0
559	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
560	Number of Missing Values		3	Percent Non-Detects	NaN%
561					
562	**Warning: This data set only has 0 observations!**				
563	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
564	**The data set for variable AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_ref_2010) was not processed!**				
565					
566	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
567	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
568					
569					
570					
571	**AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_s_2005)**				
572					
573	**General Statistics**				
574	Number of Valid Observations		8	Number of Distinct Observations	6
575					
576	**Raw Statistics**			**Log-transformed Statistics**	
577	Minimum		0.88	Minimum of Log Data	-0.127833
578	Maximum		4.45	Maximum of Log Data	1.4929041
579	Mean		1.5975	Mean of log Data	0.3085838
580	Median		1.2	SD of log Data	0.5423904
581	SD		1.1997708		
582	Coefficient of Variation		0.7510302		

	A	B	C	D	E
583	Skewness		2.4348332		
584					
585					
586	**Warning: There are only 8 Values in this data**				
587	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
588	**the resulting calculations may not be reliable enough to draw conclusions**				
589					
590	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
591					
592	**Relevant UCL Statistics**				
593	**Normal Distribution Test**			**Lognormal Distribution Test**	
594	Shapiro Wilk Test Statistic		0.6463642	Shapiro Wilk Test Statistic	0.8015966
595	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
596	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
597					
598	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
599	95% Student's-t UCL		2.4011481	95% H-UCL	2.5944497
600	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	2.8524988
601	95% Adjusted-CLT UCL (Chen-1995)		2.6853927	97.5% Chebyshev (MVUE) UCL	3.4179326
602	95% Modified-t UCL (Johnson-1978)		2.4620073	99% Chebyshev (MVUE) UCL	4.5286177
603					
604	**Gamma Distribution Test**			**Data Distribution**	
605	k star (bias corrected)		2.1365147	**Data do not follow a Discernable Distribution (0.05)**	
606	Theta Star		0.7477131		
607	MLE of Mean		1.5975		
608	MLE of Standard Deviation		1.0929189		
609	nu star		34.184235		
610	Approximate Chi Square Value (.05)		21.811689	**Nonparametric Statistics**	
611	Adjusted Level of Significance		0.01946	95% CLT UCL	2.295219
612	Adjusted Chi Square Value		19.350505	95% Jackknife UCL	2.4011481
613				95% Standard Bootstrap UCL	2.2513894
614	Anderson-Darling Test Statistic		0.89799	95% Bootstrap-t UCL	5.1742326
615	Anderson-Darling 5% Critical Value		0.7206432	95% Hall's Bootstrap UCL	5.6111189
616	Kolmogorov-Smirnov Test Statistic		0.3187313	95% Percentile Bootstrap UCL	2.36875
617	Kolmogorov-Smirnov 5% Critical Value		0.2960235	95% BCA Bootstrap UCL	2.70625
618	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3.446471
619				97.5% Chebyshev(Mean, Sd) UCL	4.2465222
620	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	5.8180679
621	95% Approximate Gamma UCL		2.503672		
622	95% Adjusted Gamma UCL		2.8221131		
623					
624	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	3.446471
625					
626	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
627	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
628	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
629					
630					
631	**AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_s_2010)**				
632					
633	**General Statistics**				
634	Number of Valid Data		0	Number of Detected Data	0
635	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
636	Number of Missing Values		2	Percent Non-Detects	NaN%
637					
638	**Warning: This data set only has 0 observations!**				
639	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
640	**The data set for variable AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_s_2010) was not processed!**				
641					

	A	B	C	D	E
642	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
643	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
644					
645					
646					
647	AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_stillwater_2005)				
648					
649	General Statistics				
650	Number of Valid Observations		4	Number of Distinct Observations	4
651					
652					
653	Warning: This data set only has 4 observations!				
654	Data set is too small to compute reliable and meaningful statistics and estimates!				
655	The data set for variable AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_stillwater_2005) was not processed!				
656					
657	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
658	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
659					
660					
661					
662	AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_stillwater_2009)				
663					
664	General Statistics				
665	Number of Valid Data		0	Number of Detected Data	0
666	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
667	Number of Missing Values		60	Percent Non-Detects	NaN%
668					
669	Warning: This data set only has 0 observations!				
670	Data set is too small to compute reliable and meaningful statistics and estimates!				
671	The data set for variable AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_stillwater_2009) was not processed!				
672					
673	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
674	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
675					
676					
677					
678	AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_stillwater_2010)				
679					
680	General Statistics				
681	Number of Valid Data		0	Number of Detected Data	0
682	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
683	Number of Missing Values		11	Percent Non-Detects	NaN%
684					
685	Warning: This data set only has 0 observations!				
686	Data set is too small to compute reliable and meaningful statistics and estimates!				
687	The data set for variable AVS/SEM|UMOLES/G|ACID VOLATILE SULFIDE (gi_sd_stillwater_2010) was not processed!				
688					

	A	B	C	D	E
689	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
690	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
691					
692					
693					
694	AVS/SEM|UMOLES/G|CADMIUM (gi_sd_ne_2005)				
695					
696	General Statistics				
697	Number of Valid Data		36	Number of Detected Data	1
698	Number of Distinct Detected Data		1	Number of Non-Detect Data	35
699				Percent Non-Detects	97.22%
700					
701	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
702	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
703					
704	The data set for variable AVS/SEM|UMOLES/G|CADMIUM (gi_sd_ne_2005) was not processed!				
705					
706					
707					
708	AVS/SEM|UMOLES/G|CADMIUM (gi_sd_ne_2009)				
709					
710	General Statistics				
711	Number of Valid Data		0	Number of Detected Data	0
712	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
713	Number of Missing Values		20	Percent Non-Detects	NaN%
714					
715	Warning: This data set only has 0 observations!				
716	Data set is too small to compute reliable and meaningful statistics and estimates!				
717	The data set for variable AVS/SEM|UMOLES/G|CADMIUM (gi_sd_ne_2009) was not processed!				
718					
719	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
720	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
721					
722					
723					
724	AVS/SEM|UMOLES/G|CADMIUM (gi_sd_ne_2010)				
725					
726	General Statistics				
727	Number of Valid Data		0	Number of Detected Data	0
728	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
729	Number of Missing Values		16	Percent Non-Detects	NaN%
730					
731	Warning: This data set only has 0 observations!				
732	Data set is too small to compute reliable and meaningful statistics and estimates!				
733	The data set for variable AVS/SEM|UMOLES/G|CADMIUM (gi_sd_ne_2010) was not processed!				
734					
735	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
736	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
737					

	A	B	C	D	E
738					
739					
740	**AVS/SEM|UMOLES/G|CADMIUM (gi_sd_nw_2005)**				
741					
742	**General Statistics**				
743	Number of Valid Data		18	Number of Detected Data	2
744	Number of Distinct Detected Data		2	Number of Non-Detect Data	16
745				Percent Non-Detects	88.89%
746					
747	**Raw Statistics**			**Log-transformed Statistics**	
748	Minimum Detected		0.0165	Minimum Detected	-4.104395
749	Maximum Detected		0.037	Maximum Detected	-3.296837
750	Mean of Detected		0.02675	Mean of Detected	-3.700616
751	SD of Detected		0.0144957	SD of Detected	0.5710294
752	Minimum Non-Detect		0.00086	Minimum Non-Detect	-7.058578
753	Maximum Non-Detect		0.0098	Maximum Non-Detect	-4.625373
754					
755	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	16
756	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	2
757	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	88.89%
758					
759	**Warning: Data set has only 2 Distinct Detected Values.**				
760	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
761	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
762					
763	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
764					
765	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
766	**Those methods will return a 'N/A' value on your output display!**				
767					
768	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
769	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
770	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
771					
772					
773	**UCL Statistics**				
774	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
775	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
776	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
777	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
778					
779	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
780	DL/2 Substitution Method			DL/2 Substitution Method	
781	Mean		0.0039806	Mean	-6.651411
782	SD		0.009056	SD	1.2377295
783	95% DL/2 (t) UCL		0.0076938	95% H-Stat (DL/2) UCL	0.0068435
784					
785	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
786	**MLE method failed to converge properly**			Mean in Log Scale	N/A
787				SD in Log Scale	N/A
788				Mean in Original Scale	N/A
789				SD in Original Scale	N/A
790				95% t UCL	N/A
791				95% Percentile Bootstrap UCL	N/A
792				95% BCA Bootstrap UCL	N/A
793					
794	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
795	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	

	A	B	C	D	E
796	Theta Star		N/A		
797	nu star		N/A		
798					
799	A-D Test Statistic		N/A	**Nonparametric Statistics**	
800	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
801	K-S Test Statistic		N/A	Mean	0.0176389
802	5% K-S Critical Value		N/A	SD	0.0046958
803	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0015653
804				95% KM (t) UCL	0.0203618
805	**Assuming Gamma Distribution**			95% KM (z) UCL	0.0202135
806	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.0312941
807	Minimum		N/A	95% KM (bootstrap t) UCL	N/A
808	Maximum		N/A	95% KM (BCA) UCL	0.037
809	Mean		N/A	95% KM (Percentile Bootstrap) UCL	N/A
810	Median		N/A	95% KM (Chebyshev) UCL	0.0244617
811	SD		N/A	97.5% KM (Chebyshev) UCL	0.0274139
812	k star		N/A	99% KM (Chebyshev) UCL	0.033213
813	Theta star		N/A		
814	Nu star		N/A	**Potential UCLs to Use**	
815	AppChi2		N/A	95% KM (t) UCL	0.0203618
816	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	N/A
817	95% Adjusted Gamma UCL		N/A		
818	**Note: DL/2 is not a recommended method.**				
819					
820	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
821	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
822	**For additional insight, the user may want to consult a statistician.**				
823					
824					
825	**AVS/SEM|UMOLES/G|CADMIUM (gi_sd_nw_2009)**				
826					
827	**General Statistics**				
828	Number of Valid Data		0	Number of Detected Data	0
829	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
830	Number of Missing Values		7	Percent Non-Detects	NaN%
831					
832	**Warning: This data set only has 0 observations!**				
833	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
834	**The data set for variable AVS/SEM|UMOLES/G|CADMIUM (gi_sd_nw_2009) was not processed!**				
835					
836	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
837	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
838					
839					
840					
841	**AVS/SEM|UMOLES/G|CADMIUM (gi_sd_nw_2010)**				
842					
843	**General Statistics**				
844	Number of Valid Data		0	Number of Detected Data	0
845	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
846	Number of Missing Values		4	Percent Non-Detects	NaN%
847					
848	**Warning: This data set only has 0 observations!**				
849	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
850	**The data set for variable AVS/SEM|UMOLES/G|CADMIUM (gi_sd_nw_2010) was not processed!**				
851					
852	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
853	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
854					
855					
856					
857	AVS/SEM|UMOLES/G|CADMIUM (gi_sd_ref_2009)				
858					
859	General Statistics				
860	Number of Valid Data		0	Number of Detected Data	0
861	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
862	Number of Missing Values		6	Percent Non-Detects	NaN%
863					
864	Warning: This data set only has 0 observations!				
865	Data set is too small to compute reliable and meaningful statistics and estimates!				
866	The data set for variable AVS/SEM|UMOLES/G|CADMIUM (gi_sd_ref_2009) was not processed!				
867					
868	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
869	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
870					
871					
872					
873	AVS/SEM|UMOLES/G|CADMIUM (gi_sd_ref_2010)				
874					
875	General Statistics				
876	Number of Valid Data		0	Number of Detected Data	0
877	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
878	Number of Missing Values		3	Percent Non-Detects	NaN%
879					
880	Warning: This data set only has 0 observations!				
881	Data set is too small to compute reliable and meaningful statistics and estimates!				
882	The data set for variable AVS/SEM|UMOLES/G|CADMIUM (gi_sd_ref_2010) was not processed!				
883					
884	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
885	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
886					
887					
888					
889	AVS/SEM|UMOLES/G|CADMIUM (gi_sd_s_2005)				
890					
891	General Statistics				
892	Number of Valid Data		8	Number of Detected Data	0
893	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
894				Percent Non-Detects	100.00%
895					
896	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
897	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
898	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
899					
900	The data set for variable AVS/SEM|UMOLES/G|CADMIUM (gi_sd_s_2005) was not processed!				
901					
902					

	A	B	C	D	E
903					
904	**AVS/SEM|UMOLES/G|CADMIUM (gi_sd_s_2010)**				
905					
906	**General Statistics**				
907	Number of Valid Data		0	Number of Detected Data	0
908	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
909	Number of Missing Values		2	Percent Non-Detects	NaN%
910					
911	**Warning: This data set only has 0 observations!**				
912	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
913	**The data set for variable AVS/SEM|UMOLES/G|CADMIUM (gi_sd_s_2010) was not processed!**				
914					
915	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
916	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
917					
918					
919					
920	**AVS/SEM|UMOLES/G|CADMIUM (gi_sd_stillwater_2005)**				
921					
922	**General Statistics**				
923	Number of Valid Data		4	Number of Detected Data	0
924	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
925				Percent Non-Detects	100.00%
926					
927	**Warning: This data set only has 4 observations!**				
928	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
929	**The data set for variable AVS/SEM|UMOLES/G|CADMIUM (gi_sd_stillwater_2005) was not processed!**				
930					
931	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
932	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
933					
934					
935					
936	**AVS/SEM|UMOLES/G|CADMIUM (gi_sd_stillwater_2009)**				
937					
938	**General Statistics**				
939	Number of Valid Data		0	Number of Detected Data	0
940	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
941	Number of Missing Values		60	Percent Non-Detects	NaN%
942					
943	**Warning: This data set only has 0 observations!**				
944	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
945	**The data set for variable AVS/SEM|UMOLES/G|CADMIUM (gi_sd_stillwater_2009) was not processed!**				
946					
947	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
948	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
949					
950					
951					
952	**AVS/SEM|UMOLES/G|CADMIUM (gi_sd_stillwater_2010)**				
953					

	A	B	C	D	E
954	**General Statistics**				
955	Number of Valid Data		0	Number of Detected Data	0
956	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
957	Number of Missing Values		11	Percent Non-Detects	NaN%
958					
959	**Warning: This data set only has 0 observations!**				
960	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
961	**The data set for variable AVS/SEM|UMOLES/G|CADMIUM (gi_sd_stillwater_2010) was not processed!**				
962					
963	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
964	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
965					
966					
967					
968	**AVS/SEM|UMOLES/G|COPPER (gi_sd_ne_2005)**				
969					
970	**General Statistics**				
971	Number of Valid Data		36	Number of Detected Data	29
972	Number of Distinct Detected Data		19	Number of Non-Detect Data	7
973				Percent Non-Detects	19.44%
974					
975	**Raw Statistics**			**Log-transformed Statistics**	
976	Minimum Detected		0.0618	Minimum Detected	-2.783852
977	Maximum Detected		0.42	Maximum Detected	-0.867501
978	Mean of Detected		0.1589586	Mean of Detected	-1.93865
979	SD of Detected		0.0803781	SD of Detected	0.4424712
980	Minimum Non-Detect		0.055	Minimum Non-Detect	-2.900422
981	Maximum Non-Detect		0.091	Maximum Non-Detect	-2.396896
982					
983	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	11
984	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	25
985	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	30.56%
986					
987	**UCL Statistics**				
988	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
989	Shapiro Wilk Test Statistic		0.7969332	Shapiro Wilk Test Statistic	0.953747
990	5% Shapiro Wilk Critical Value		0.926	5% Shapiro Wilk Critical Value	0.926
991	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
992					
993	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
994	DL/2 Substitution Method			DL/2 Substitution Method	
995	Mean		0.1349944	Mean	-2.212757
996	SD		0.0873143	SD	0.6951848
997	95% DL/2 (t) UCL		0.1595818	95% H-Stat (DL/2) UCL	0.1776742
998					
999	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
1000	Mean		0.1277561	Mean in Log Scale	-2.114799
1001	SD		0.0975519	SD in Log Scale	0.5402156
1002	95% MLE (t) UCL		0.1552263	Mean in Original Scale	0.1394431
1003	95% MLE (Tiku) UCL		0.1567991	SD in Original Scale	0.0824709
1004				95% t UCL	0.1626665
1005				95% Percentile Bootstrap UCL	0.1636303
1006				95% BCA Bootstrap UCL	0.1661178
1007					
1008	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
1009	k star (bias corrected)		4.6707755	**Data appear Gamma Distributed at 5% Significance Level**	
1010	Theta Star		0.0340326		
1011	nu star		270.90498		
1012					
1013	A-D Test Statistic		0.6411116	**Nonparametric Statistics**	
1014	5% A-D Critical Value		0.7474619	Kaplan-Meier (KM) Method	
1015	K-S Test Statistic		0.7474619	Mean	0.1404792
1016	5% K-S Critical Value		0.1629998	SD	0.0802777

	A	B	C	D	E
1017	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.0136217
1018				95% KM (t) UCL	0.1634941
1019	**Assuming Gamma Distribution**			95% KM (z) UCL	0.1628849
1020	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.1625026
1021	Minimum		0.0422214	95% KM (bootstrap t) UCL	0.1701095
1022	Maximum		0.42	95% KM (BCA) UCL	0.1658389
1023	Mean		0.1418976	95% KM (Percentile Bootstrap) UCL	0.1640278
1024	Median		0.13	95% KM (Chebyshev) UCL	0.199855
1025	SD		0.0806637	97.5% KM (Chebyshev) UCL	0.2255469
1026	k star		3.605864	99% KM (Chebyshev) UCL	0.2760138
1027	Theta star		0.0393519		
1028	Nu star		259.62221	**Potential UCLs to Use**	
1029	AppChi2		223.31202	95% KM (BCA) UCL	0.1658389
1030	95% Gamma Approximate UCL		0.16497		
1031	95% Adjusted Gamma UCL		0.1661047		
1032	**Note: DL/2 is not a recommended method.**				
1033					
1034	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
1035	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
1036	**For additional insight, the user may want to consult a statistician.**				
1037					
1038					
1039	**AVS/SEM|UMOLES/G|COPPER (gi_sd_ne_2009)**				
1040					
1041	**General Statistics**				
1042	Number of Valid Data		0	Number of Detected Data	0
1043	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1044	Number of Missing Values		20	Percent Non-Detects	NaN%
1045					
1046	**Warning: This data set only has 0 observations!**				
1047	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1048	**The data set for variable AVS/SEM|UMOLES/G|COPPER (gi_sd_ne_2009) was not processed!**				
1049					
1050	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
1051	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
1052					
1053					
1054					
1055	**AVS/SEM|UMOLES/G|COPPER (gi_sd_ne_2010)**				
1056					
1057	**General Statistics**				
1058	Number of Valid Data		0	Number of Detected Data	0
1059	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1060	Number of Missing Values		16	Percent Non-Detects	NaN%
1061					
1062	**Warning: This data set only has 0 observations!**				
1063	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1064	**The data set for variable AVS/SEM|UMOLES/G|COPPER (gi_sd_ne_2010) was not processed!**				
1065					
1066	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
1067	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
1068					
1069					
1070					

	A	B	C	D	E
1071	**AVS/SEM|UMOLES/G|COPPER (gi_sd_nw_2005)**				
1072					
1073	**General Statistics**				
1074	Number of Valid Data		18	Number of Detected Data	13
1075	Number of Distinct Detected Data		13	Number of Non-Detect Data	5
1076				Percent Non-Detects	27.78%
1077					
1078	**Raw Statistics**			**Log-transformed Statistics**	
1079	Minimum Detected		0.088	Minimum Detected	-2.430418
1080	Maximum Detected		2.4	Maximum Detected	0.8754687
1081	Mean of Detected		0.3839231	Mean of Detected	-1.479235
1082	SD of Detected		0.6170368	SD of Detected	0.8869327
1083	Minimum Non-Detect		0.022	Minimum Non-Detect	-3.816713
1084	Maximum Non-Detect		0.069	Maximum Non-Detect	-2.673649
1085					
1086	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	5
1087	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	13
1088	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	27.78%
1089					
1090	**UCL Statistics**				
1091	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
1092	Shapiro Wilk Test Statistic		0.4783997	Shapiro Wilk Test Statistic	0.8640754
1093	5% Shapiro Wilk Critical Value		0.866	5% Shapiro Wilk Critical Value	0.866
1094	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
1095					
1096	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
1097	DL/2 Substitution Method			DL/2 Substitution Method	
1098	Mean		0.2851944	Mean	-2.07798
1099	SD		0.5437008	SD	1.2644886
1100	95% DL/2 (t) UCL		0.5081277	95% H-Stat (DL/2) UCL	0.7082669
1101					
1102	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
1103	Mean		0.1615017	Mean in Log Scale	-2.046271
1104	SD		0.6492247	SD in Log Scale	1.2042501
1105	95% MLE (t) UCL		0.4277028	Mean in Original Scale	0.2856301
1106	95% MLE (Tiku) UCL		0.4340888	SD in Original Scale	0.54347
1107				95% t UCL	0.5084687
1108				95% Percentile Bootstrap UCL	0.530537
1109				95% BCA Bootstrap UCL	0.6399395
1110					
1111	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
1112	k star (bias corrected)		0.8932656	**Data do not follow a Discernable Distribution (0.05)**	
1113	Theta Star		0.4297972		
1114	nu star		23.224904		
1115					
1116	A-D Test Statistic		1.2934521	**Nonparametric Statistics**	
1117	5% A-D Critical Value		0.7560627	Kaplan-Meier (KM) Method	
1118	K-S Test Statistic		0.7560627	Mean	0.3017222
1119	5% K-S Critical Value		0.2426328	SD	0.5209521
1120	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.1278035
1121				95% KM (t) UCL	0.52405
1122	**Assuming Gamma Distribution**			95% KM (z) UCL	0.5119402
1123	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.5210633
1124	Minimum		1E-12	95% KM (bootstrap t) UCL	1.2110948
1125	Maximum		2.4	95% KM (BCA) UCL	0.5442778
1126	Mean		0.2801856	95% KM (Percentile Bootstrap) UCL	0.536
1127	Median		0.15	95% KM (Chebyshev) UCL	0.8588046
1128	SD		0.5463591	97.5% KM (Chebyshev) UCL	1.0998545
1129	k star		0.1443327	99% KM (Chebyshev) UCL	1.5733505
1130	Theta star		1.9412484		
1131	Nu star		5.1959776	**Potential UCLs to Use**	
1132	AppChi2		1.2437936	95% KM (BCA) UCL	0.5442778
1133	95% Gamma Approximate UCL		1.1704822		
1134	95% Adjusted Gamma UCL		1.3601334		
1135	**Note: DL/2 is not a recommended method.**				
1136					
1137	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
1138	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).				
1139	For additional insight, the user may want to consult a statistician.				
1140					
1141					
1142	AVS/SEM|UMOLES/G|COPPER (gi_sd_nw_2009)				
1143					
1144	General Statistics				
1145	Number of Valid Data		0	Number of Detected Data	0
1146	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1147	Number of Missing Values		7	Percent Non-Detects	NaN%
1148					
1149	Warning: This data set only has 0 observations!				
1150	Data set is too small to compute reliable and meaningful statistics and estimates!				
1151	The data set for variable AVS/SEM|UMOLES/G|COPPER (gi_sd_nw_2009) was not processed!				
1152					
1153	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
1154	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
1155					
1156					
1157					
1158	AVS/SEM|UMOLES/G|COPPER (gi_sd_nw_2010)				
1159					
1160	General Statistics				
1161	Number of Valid Data		0	Number of Detected Data	0
1162	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1163	Number of Missing Values		4	Percent Non-Detects	NaN%
1164					
1165	Warning: This data set only has 0 observations!				
1166	Data set is too small to compute reliable and meaningful statistics and estimates!				
1167	The data set for variable AVS/SEM|UMOLES/G|COPPER (gi_sd_nw_2010) was not processed!				
1168					
1169	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
1170	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
1171					
1172					
1173					
1174	AVS/SEM|UMOLES/G|COPPER (gi_sd_ref_2009)				
1175					
1176	General Statistics				
1177	Number of Valid Data		0	Number of Detected Data	0
1178	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1179	Number of Missing Values		6	Percent Non-Detects	NaN%
1180					
1181	Warning: This data set only has 0 observations!				
1182	Data set is too small to compute reliable and meaningful statistics and estimates!				
1183	The data set for variable AVS/SEM|UMOLES/G|COPPER (gi_sd_ref_2009) was not processed!				
1184					
1185	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
1186	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				

	A	B	C	D	E
1187					
1188					
1189					
1190	**AVS/SEM|UMOLES/G|COPPER (gi_sd_ref_2010)**				
1191					
1192	**General Statistics**				
1193	Number of Valid Data		0	Number of Detected Data	0
1194	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1195	Number of Missing Values		3	Percent Non-Detects	NaN%
1196					
1197	**Warning: This data set only has 0 observations!**				
1198	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1199	**The data set for variable AVS/SEM|UMOLES/G|COPPER (gi_sd_ref_2010) was not processed!**				
1200					
1201	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
1202	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
1203					
1204					
1205					
1206	**AVS/SEM|UMOLES/G|COPPER (gi_sd_s_2005)**				
1207					
1208	**General Statistics**				
1209	Number of Valid Data		8	Number of Detected Data	2
1210	Number of Distinct Detected Data		2	Number of Non-Detect Data	6
1211				Percent Non-Detects	75.00%
1212					
1213	**Raw Statistics**			**Log-transformed Statistics**	
1214	Minimum Detected		0.0702	Minimum Detected	-2.656407
1215	Maximum Detected		0.14	Maximum Detected	-1.966113
1216	Mean of Detected		0.1051	Mean of Detected	-2.31126
1217	SD of Detected		0.0493561	SD of Detected	0.4881116
1218	Minimum Non-Detect		0.039	Minimum Non-Detect	-3.244194
1219	Maximum Non-Detect		0.1	Maximum Non-Detect	-2.302585
1220					
1221	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	7
1222	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	1
1223	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	87.50%
1224					
1225	**Warning: Data set has only 2 Distinct Detected Values.**				
1226	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
1227	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
1228					
1229	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
1230					
1231	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
1232	**Those methods will return a 'N/A' value on your output display!**				
1233					
1234	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
1235	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
1236	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
1237					
1238					
1239	**UCL Statistics**				
1240	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	

	A	B	C	D	E
1241	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
1242	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
1243	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
1244					
1245	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
1246	DL/2 Substitution Method			DL/2 Substitution Method	
1247	Mean		0.050775	Mean	-3.18338
1248	SD		0.039547	SD	0.6456896
1249	95% DL/2 (t) UCL		0.0772649	95% H-Stat (DL/2) UCL	0.0968367
1250					
1251	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
1252	**MLE method failed to converge properly**			Mean in Log Scale	N/A
1253				SD in Log Scale	N/A
1254				Mean in Original Scale	N/A
1255				SD in Original Scale	N/A
1256				95% t UCL	N/A
1257				95% Percentile Bootstrap UCL	N/A
1258				95% BCA Bootstrap UCL	N/A
1259					
1260	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
1261	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
1262	Theta Star		N/A		
1263	nu star		N/A		
1264					
1265	A-D Test Statistic		N/A	**Nonparametric Statistics**	
1266	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
1267	K-S Test Statistic		N/A	Mean	0.078925
1268	5% K-S Critical Value		N/A	SD	0.0230842
1269	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0115421
1270				95% KM (t) UCL	0.1007924
1271	**Assuming Gamma Distribution**			95% KM (z) UCL	0.09791
1272	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.1294272
1273	Minimum		N/A	95% KM (bootstrap t) UCL	N/A
1274	Maximum		N/A	95% KM (BCA) UCL	0.14
1275	Mean		N/A	95% KM (Percentile Bootstrap) UCL	0.14
1276	Median		N/A	95% KM (Chebyshev) UCL	0.1292358
1277	SD		N/A	97.5% KM (Chebyshev) UCL	0.1510053
1278	k star		N/A	99% KM (Chebyshev) UCL	0.1937673
1279	Theta star		N/A		
1280	Nu star		N/A	**Potential UCLs to Use**	
1281	AppChi2		N/A	95% KM (t) UCL	0.1007924
1282	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	0.14
1283	95% Adjusted Gamma UCL		N/A		
1284	**Note: DL/2 is not a recommended method.**				
1285					
1286	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
1287	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
1288	**For additional insight, the user may want to consult a statistician.**				
1289					
1290					
1291	**AVS/SEM|UMOLES/G|COPPER (gi_sd_s_2010)**				
1292					
1293	**General Statistics**				
1294	Number of Valid Data		0	Number of Detected Data	0
1295	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1296	Number of Missing Values		2	Percent Non-Detects	NaN%
1297					
1298	**Warning: This data set only has 0 observations!**				
1299	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1300	**The data set for variable AVS/SEM|UMOLES/G|COPPER (gi_sd_s_2010) was not processed!**				
1301					
1302	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
1303	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
1304					
1305					
1306					
1307	AVS/SEM|UMOLES/G|COPPER (gi_sd_stillwater_2005)				
1308					
1309	General Statistics				
1310	Number of Valid Observations		4	Number of Distinct Observations	4
1311					
1312					
1313	Warning: This data set only has 4 observations!				
1314	Data set is too small to compute reliable and meaningful statistics and estimates!				
1315	The data set for variable AVS/SEM|UMOLES/G|COPPER (gi_sd_stillwater_2005) was not processed!				
1316					
1317	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
1318	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
1319					
1320					
1321					
1322	AVS/SEM|UMOLES/G|COPPER (gi_sd_stillwater_2009)				
1323					
1324	General Statistics				
1325	Number of Valid Data		0	Number of Detected Data	0
1326	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1327	Number of Missing Values		60	Percent Non-Detects	NaN%
1328					
1329	Warning: This data set only has 0 observations!				
1330	Data set is too small to compute reliable and meaningful statistics and estimates!				
1331	The data set for variable AVS/SEM|UMOLES/G|COPPER (gi_sd_stillwater_2009) was not processed!				
1332					
1333	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
1334	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
1335					
1336					
1337					
1338	AVS/SEM|UMOLES/G|COPPER (gi_sd_stillwater_2010)				
1339					
1340	General Statistics				
1341	Number of Valid Data		0	Number of Detected Data	0
1342	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1343	Number of Missing Values		11	Percent Non-Detects	NaN%
1344					
1345	Warning: This data set only has 0 observations!				
1346	Data set is too small to compute reliable and meaningful statistics and estimates!				
1347	The data set for variable AVS/SEM|UMOLES/G|COPPER (gi_sd_stillwater_2010) was not processed!				
1348					
1349	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
1350	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
1351					
1352					

	A	B	C	D	E
1353					
1354	**AVS/SEM|UMOLES/G|LEAD (gi_sd_ne_2005)**				
1355					
1356	**General Statistics**				
1357	Number of Valid Data		36	Number of Detected Data	30
1358	Number of Distinct Detected Data		28	Number of Non-Detect Data	6
1359				Percent Non-Detects	16.67%
1360					
1361	**Raw Statistics**			**Log-transformed Statistics**	
1362	Minimum Detected		0.048	Minimum Detected	-3.036554
1363	Maximum Detected		2.3	Maximum Detected	0.8329091
1364	Mean of Detected		0.3112167	Mean of Detected	-1.851865
1365	SD of Detected		0.5494187	SD of Detected	0.9908771
1366	Minimum Non-Detect		0.028	Minimum Non-Detect	-3.575551
1367	Maximum Non-Detect		0.05	Maximum Non-Detect	-2.995732
1368					
1369	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	7
1370	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	29
1371	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	19.44%
1372					
1373	**UCL Statistics**				
1374	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
1375	Shapiro Wilk Test Statistic		0.4794608	Shapiro Wilk Test Statistic	0.8544036
1376	5% Shapiro Wilk Critical Value		0.927	5% Shapiro Wilk Critical Value	0.927
1377	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
1378					
1379	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
1380	DL/2 Substitution Method			DL/2 Substitution Method	
1381	Mean		0.2627014	Mean	-2.19726
1382	SD		0.5120749	SD	1.1973298
1383	95% DL/2 (t) UCL		0.4068993	95% H-Stat (DL/2) UCL	0.3863592
1384					
1385	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
1386	Mean		0.1868954	Mean in Log Scale	-2.205981
1387	SD		0.579177	SD in Log Scale	1.2078166
1388	95% MLE (t) UCL		0.349989	Mean in Original Scale	0.2624759
1389	95% MLE (Tiku) UCL		0.3455478	SD in Original Scale	0.5121828
1390				95% t UCL	0.4067042
1391				95% Percentile Bootstrap UCL	0.4113901
1392				95% BCA Bootstrap UCL	0.4815016
1393					
1394	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
1395	k star (bias corrected)		0.7952955	**Data do not follow a Discernable Distribution (0.05)**	
1396	Theta Star		0.391322		
1397	nu star		47.717732		
1398					
1399	A-D Test Statistic		3.1644079	**Nonparametric Statistics**	
1400	5% A-D Critical Value		0.7824243	Kaplan-Meier (KM) Method	
1401	K-S Test Statistic		0.7824243	Mean	0.2673472
1402	5% K-S Critical Value		0.1656362	SD	0.5027807
1403	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0852293
1404				95% KM (t) UCL	0.4113483
1405	**Assuming Gamma Distribution**			95% KM (z) UCL	0.407537
1406	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.4103571
1407	Minimum		1E-12	95% KM (bootstrap t) UCL	0.6561215
1408	Maximum		2.3	95% KM (BCA) UCL	0.436625
1409	Mean		0.2593472	95% KM (Percentile Bootstrap) UCL	0.4133333
1410	Median		0.0975	95% KM (Chebyshev) UCL	0.6388532
1411	SD		0.5137606	97.5% KM (Chebyshev) UCL	0.7996041
1412	k star		0.164108	99% KM (Chebyshev) UCL	1.1153681
1413	Theta star		1.5803443		
1414	Nu star		11.815779	**Potential UCLs to Use**	
1415	AppChi2		5.1059254	95% KM (Chebyshev) UCL	0.6388532
1416	95% Gamma Approximate UCL		0.6001634		
1417	95% Adjusted Gamma UCL		0.6246243		
1418	**Note: DL/2 is not a recommended method.**				
1419					
1420	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
1421	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
1422	**For additional insight, the user may want to consult a statistician.**				
1423					
1424					
1425	**AVS/SEM|UMOLES/G|LEAD (gi_sd_ne_2009)**				
1426					
1427	**General Statistics**				
1428	Number of Valid Data		0	Number of Detected Data	0
1429	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1430	Number of Missing Values		20	Percent Non-Detects	NaN%
1431					
1432	**Warning: This data set only has 0 observations!**				
1433	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1434	**The data set for variable AVS/SEM|UMOLES/G|LEAD (gi_sd_ne_2009) was not processed!**				
1435					
1436	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
1437	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
1438					
1439					
1440					
1441	**AVS/SEM|UMOLES/G|LEAD (gi_sd_ne_2010)**				
1442					
1443	**General Statistics**				
1444	Number of Valid Data		0	Number of Detected Data	0
1445	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1446	Number of Missing Values		16	Percent Non-Detects	NaN%
1447					
1448	**Warning: This data set only has 0 observations!**				
1449	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1450	**The data set for variable AVS/SEM|UMOLES/G|LEAD (gi_sd_ne_2010) was not processed!**				
1451					
1452	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
1453	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
1454					
1455					
1456					
1457	**AVS/SEM|UMOLES/G|LEAD (gi_sd_nw_2005)**				
1458					
1459	**General Statistics**				
1460	Number of Valid Data		18	Number of Detected Data	15
1461	Number of Distinct Detected Data		15	Number of Non-Detect Data	3
1462				Percent Non-Detects	16.67%
1463					
1464	**Raw Statistics**			**Log-transformed Statistics**	
1465	Minimum Detected		0.034	Minimum Detected	-3.381395
1466	Maximum Detected		0.19	Maximum Detected	-1.660731
1467	Mean of Detected		0.0715667	Mean of Detected	-2.765449
1468	SD of Detected		0.0426911	SD of Detected	0.496746
1469	Minimum Non-Detect		0.026	Minimum Non-Detect	-3.649659
1470	Maximum Non-Detect		0.03	Maximum Non-Detect	-3.506558
1471					
1472	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	3
1473	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	15
1474	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	16.67%
1475					
1476	**UCL Statistics**				
1477	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
1478	Shapiro Wilk Test Statistic		0.7937311	Shapiro Wilk Test Statistic	0.9252147

	A	B	C	D	E
1479	5% Shapiro Wilk Critical Value		0.881	5% Shapiro Wilk Critical Value	0.881
1480	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
1481					
1482	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
1483	DL/2 Substitution Method			DL/2 Substitution Method	
1484	Mean		0.0619722	Mean	-3.016274
1485	SD		0.0445911	SD	0.7327247
1486	95% DL/2 (t) UCL		0.0802559	95% H-Stat (DL/2) UCL	0.0960298
1487					
1488	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
1489	Mean		0.0599258	Mean in Log Scale	-2.956576
1490	SD		0.0467429	SD in Log Scale	0.6297656
1491	95% MLE (t) UCL		0.0790917	Mean in Original Scale	0.0629716
1492	95% MLE (Tiku) UCL		0.0788847	SD in Original Scale	0.0434973
1493				95% t UCL	0.0808067
1494				95% Percentile Bootstrap UCL	0.0800831
1495				95% BCA Bootstrap UCL	0.0854165
1496					
1497	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
1498	k star (bias corrected)		3.2889288	**Data appear Gamma Distributed at 5% Significance Level**	
1499	Theta Star		0.0217599		
1500	nu star		98.667863		
1501					
1502	A-D Test Statistic		0.6395296	**Nonparametric Statistics**	
1503	5% A-D Critical Value		0.7399477	Kaplan-Meier (KM) Method	
1504	K-S Test Statistic		0.7399477	Mean	0.0653056
1505	5% K-S Critical Value		0.2225239	SD	0.0401688
1506	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.0098002
1507				95% KM (t) UCL	0.082354
1508	**Assuming Gamma Distribution**			95% KM (z) UCL	0.0814254
1509	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.082144
1510	Minimum		0.0190332	95% KM (bootstrap t) UCL	0.0917193
1511	Maximum		0.19	95% KM (BCA) UCL	0.0849167
1512	Mean		0.0628111	95% KM (Percentile Bootstrap) UCL	0.0818333
1513	Median		0.04775	95% KM (Chebyshev) UCL	0.1080236
1514	SD		0.0436664	97.5% KM (Chebyshev) UCL	0.1265077
1515	k star		2.2793684	99% KM (Chebyshev) UCL	0.1628161
1516	Theta star		0.0275564		
1517	Nu star		82.057264	**Potential UCLs to Use**	
1518	AppChi2		62.182198	95% KM (BCA) UCL	0.0849167
1519	95% Gamma Approximate UCL		0.0828872		
1520	95% Adjusted Gamma UCL		0.0851604		
1521	**Note: DL/2 is not a recommended method.**				
1522					
1523	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
1524	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
1525	**For additional insight, the user may want to consult a statistician.**				
1526					
1527					
1528	**AVS/SEM|UMOLES/G|LEAD (gi_sd_nw_2009)**				
1529					
1530	**General Statistics**				
1531	Number of Valid Data		0	Number of Detected Data	0
1532	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1533	Number of Missing Values		7	Percent Non-Detects	NaN%
1534					
1535	**Warning: This data set only has 0 observations!**				
1536	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1537	**The data set for variable AVS/SEM|UMOLES/G|LEAD (gi_sd_nw_2009) was not processed!**				
1538					
1539	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
1540	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
1541					
1542					
1543					
1544	AVS/SEM|UMOLES/G|LEAD (gi_sd_nw_2010)				
1545					
1546	General Statistics				
1547	Number of Valid Data		0	Number of Detected Data	0
1548	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1549	Number of Missing Values		4	Percent Non-Detects	NaN%
1550					
1551	Warning: This data set only has 0 observations!				
1552	Data set is too small to compute reliable and meaningful statistics and estimates!				
1553	The data set for variable AVS/SEM|UMOLES/G|LEAD (gi_sd_nw_2010) was not processed!				
1554					
1555	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
1556	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
1557					
1558					
1559					
1560	AVS/SEM|UMOLES/G|LEAD (gi_sd_ref_2009)				
1561					
1562	General Statistics				
1563	Number of Valid Data		0	Number of Detected Data	0
1564	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1565	Number of Missing Values		6	Percent Non-Detects	NaN%
1566					
1567	Warning: This data set only has 0 observations!				
1568	Data set is too small to compute reliable and meaningful statistics and estimates!				
1569	The data set for variable AVS/SEM|UMOLES/G|LEAD (gi_sd_ref_2009) was not processed!				
1570					
1571	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
1572	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
1573					
1574					
1575					
1576	AVS/SEM|UMOLES/G|LEAD (gi_sd_ref_2010)				
1577					
1578	General Statistics				
1579	Number of Valid Data		0	Number of Detected Data	0
1580	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1581	Number of Missing Values		3	Percent Non-Detects	NaN%
1582					
1583	Warning: This data set only has 0 observations!				
1584	Data set is too small to compute reliable and meaningful statistics and estimates!				
1585	The data set for variable AVS/SEM|UMOLES/G|LEAD (gi_sd_ref_2010) was not processed!				
1586					
1587	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
1588	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
1589					
1590					
1591					
1592	AVS/SEM|UMOLES/G|LEAD (gi_sd_s_2005)				

	A	B	C	D	E
1593					
1594	**General Statistics**				
1595	Number of Valid Data		8	Number of Detected Data	7
1596	Number of Distinct Detected Data		7	Number of Non-Detect Data	1
1597				Percent Non-Detects	12.50%
1598					
1599	**Raw Statistics**			**Log-transformed Statistics**	
1600	Minimum Detected		0.031	Minimum Detected	-3.473768
1601	Maximum Detected		0.078	Maximum Detected	-2.551046
1602	Mean of Detected		0.0532857	Mean of Detected	-2.986567
1603	SD of Detected		0.0184094	SD of Detected	0.3627164
1604	Minimum Non-Detect		0.019	Minimum Non-Detect	-3.963316
1605	Maximum Non-Detect		0.019	Maximum Non-Detect	-3.963316
1606					
1607					
1608	**Warning: There are only 7 Detected Values in this data**				
1609	**Note: It should be noted that even though bootstrap may be performed on this data set**				
1610	**the resulting calculations may not be reliable enough to draw conclusions**				
1611					
1612	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
1613					
1614					
1615	**UCL Statistics**				
1616	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
1617	Shapiro Wilk Test Statistic		0.9264427	Shapiro Wilk Test Statistic	0.9217942
1618	5% Shapiro Wilk Critical Value		0.803	5% Shapiro Wilk Critical Value	0.803
1619	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
1620					
1621	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
1622	DL/2 Substitution Method			DL/2 Substitution Method	
1623	Mean		0.0478125	Mean	-3.195304
1624	SD		0.0230247	SD	0.6792184
1625	95% DL/2 (t) UCL		0.0632353	95% H-Stat (DL/2) UCL	0.1029335
1626					
1627	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
1628	Mean		0.0477138	Mean in Log Scale	-3.098644
1629	SD		0.0219437	SD in Log Scale	0.4617978
1630	95% MLE (t) UCL		0.0624125	Mean in Original Scale	0.0491982
1631	95% MLE (Tiku) UCL		0.0627986	SD in Original Scale	0.020595
1632				95% t UCL	0.0629934
1633				95% Percentile Bootstrap UCL	0.0603232
1634				95% BCA Bootstrap UCL	0.0604482
1635					
1636	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
1637	k star (bias corrected)		5.4330593	**Data appear Normal at 5% Significance Level**	
1638	Theta Star		0.0098077		
1639	nu star		76.06283		
1640					
1641	A-D Test Statistic		0.2993991	**Nonparametric Statistics**	
1642	5% A-D Critical Value		0.7086618	Kaplan-Meier (KM) Method	
1643	K-S Test Statistic		0.7086618	Mean	0.0505
1644	5% K-S Critical Value		0.3120723	SD	0.0175642
1645	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.0067074
1646				95% KM (t) UCL	0.0632077
1647	**Assuming Gamma Distribution**			95% KM (z) UCL	0.0615327
1648	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.0630334
1649	Minimum		0.0221736	95% KM (bootstrap t) UCL	0.0639579
1650	Maximum		0.078	95% KM (BCA) UCL	0.062375
1651	Mean		0.0493967	95% KM (Percentile Bootstrap) UCL	0.061875
1652	Median		0.05	95% KM (Chebyshev) UCL	0.079737
1653	SD		0.0202851	97.5% KM (Chebyshev) UCL	0.0923879
1654	k star		4.0197968	99% KM (Chebyshev) UCL	0.1172381
1655	Theta star		0.0122884		
1656	Nu star		64.316749	**Potential UCLs to Use**	
1657	AppChi2		46.865528	95% KM (t) UCL	0.0632077
1658	95% Gamma Approximate UCL		0.0677904	95% KM (Percentile Bootstrap) UCL	0.061875
1659	95% Adjusted Gamma UCL		0.073676		
1660	**Note: DL/2 is not a recommended method.**				

	A	B	C	D	E
1661					
1662	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
1663	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).				
1664	For additional insight, the user may want to consult a statistician.				
1665					
1666					
1667	AVS/SEM|UMOLES/G|LEAD (gi_sd_s_2010)				
1668					
1669	General Statistics				
1670	Number of Valid Data		0	Number of Detected Data	0
1671	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1672	Number of Missing Values		2	Percent Non-Detects	NaN%
1673					
1674	Warning: This data set only has 0 observations!				
1675	Data set is too small to compute reliable and meaningful statistics and estimates!				
1676	The data set for variable AVS/SEM|UMOLES/G|LEAD (gi_sd_s_2010) was not processed!				
1677					
1678	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
1679	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
1680					
1681					
1682					
1683	AVS/SEM|UMOLES/G|LEAD (gi_sd_stillwater_2005)				
1684					
1685	General Statistics				
1686	Number of Valid Observations		4	Number of Distinct Observations	4
1687					
1688					
1689	Warning: This data set only has 4 observations!				
1690	Data set is too small to compute reliable and meaningful statistics and estimates!				
1691	The data set for variable AVS/SEM|UMOLES/G|LEAD (gi_sd_stillwater_2005) was not processed!				
1692					
1693	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
1694	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
1695					
1696					
1697					
1698	AVS/SEM|UMOLES/G|LEAD (gi_sd_stillwater_2009)				
1699					
1700	General Statistics				
1701	Number of Valid Data		0	Number of Detected Data	0
1702	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1703	Number of Missing Values		60	Percent Non-Detects	NaN%
1704					
1705	Warning: This data set only has 0 observations!				
1706	Data set is too small to compute reliable and meaningful statistics and estimates!				
1707	The data set for variable AVS/SEM|UMOLES/G|LEAD (gi_sd_stillwater_2009) was not processed!				
1708					
1709	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
1710	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
1711					
1712					
1713					
1714	**AVS/SEM|UMOLES/G|LEAD (gi_sd_stillwater_2010)**				
1715					
1716	**General Statistics**				
1717	Number of Valid Data		0	Number of Detected Data	0
1718	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1719	Number of Missing Values		11	Percent Non-Detects	NaN%
1720					
1721	**Warning: This data set only has 0 observations!**				
1722	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1723	**The data set for variable AVS/SEM|UMOLES/G|LEAD (gi_sd_stillwater_2010) was not processed!**				
1724					
1725	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
1726	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
1727					
1728					
1729					
1730	**AVS/SEM|UMOLES/G|MERCURY (gi_sd_ne_2005)**				
1731					
1732	**General Statistics**				
1733	Number of Valid Data		36	Number of Detected Data	30
1734	Number of Distinct Detected Data		20	Number of Non-Detect Data	6
1735				Percent Non-Detects	16.67%
1736					
1737	**Raw Statistics**			**Log-transformed Statistics**	
1738	Minimum Detected		0.00004	Minimum Detected	-10.12663
1739	Maximum Detected		0.0037	Maximum Detected	-5.599422
1740	Mean of Detected		0.00031533	Mean of Detected	-8.503155
1741	SD of Detected		0.0006434	SD of Detected	0.6967943
1742	Minimum Non-Detect		0.00003	Minimum Non-Detect	-10.41431
1743	Maximum Non-Detect		0.00025	Maximum Non-Detect	-8.29405
1744					
1745	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	29
1746	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	7
1747	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	80.56%
1748					
1749	**UCL Statistics**				
1750	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
1751	Shapiro Wilk Test Statistic		0.2804226	Shapiro Wilk Test Statistic	0.7692062
1752	5% Shapiro Wilk Critical Value		0.927	5% Shapiro Wilk Critical Value	0.927
1753	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
1754					
1755	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
1756	DL/2 Substitution Method			DL/2 Substitution Method	
1757	Mean		0.00027111	Mean	-8.797512
1758	SD		0.00059442	SD	0.9890148
1759	95% DL/2 (t) UCL		0.0004385	95% H-Stat (DL/2) UCL	0.00036627
1760					
1761	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
1762	**MLE yields a negative mean**			Mean in Log Scale	-8.685421
1763				SD in Log Scale	0.7736311
1764				Mean in Original Scale	0.00027505
1765				SD in Original Scale	0.00059289
1766				95% t UCL	0.00044201
1767				95% Percentile Bootstrap UCL	0.00046614
1768				95% BCA Bootstrap UCL	0.00064851
1769					
1770	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	

	A	B	C	D	E
1771	k star (bias corrected)		1.1687769	**Data do not follow a Discernable Distribution (0.05)**	
1772	Theta Star		0.0002698		
1773	nu star		70.126613		
1774					
1775	A-D Test Statistic		4.3902284	**Nonparametric Statistics**	
1776	5% A-D Critical Value		0.7686587	Kaplan-Meier (KM) Method	
1777	K-S Test Statistic		0.7686587	Mean	0.00027372
1778	5% K-S Critical Value		0.163738	SD	0.00058529
1779	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	9.9241E-05
1780				95% KM (t) UCL	0.0004414
1781	**Assuming Gamma Distribution**			95% KM (z) UCL	0.00043696
1782	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.00043376
1783	Minimum		1E-12	95% KM (bootstrap t) UCL	0.0011197
1784	Maximum		0.0037	95% KM (BCA) UCL	0.00057264
1785	Mean		0.00027283	95% KM (Percentile Bootstrap) UCL	0.00047542
1786	Median		0.00018	95% KM (Chebyshev) UCL	0.00070631
1787	SD		0.00059539	97.5% KM (Chebyshev) UCL	0.00089348
1788	k star		0.279001	99% KM (Chebyshev) UCL	0.0012612
1789	Theta star		0.00097787		
1790	Nu star		20.08807	**Potential UCLs to Use**	
1791	AppChi2		10.916091	95% KM (Chebyshev) UCL	0.00070631
1792	95% Gamma Approximate UCL		0.00050206		
1793	95% Adjusted Gamma UCL		0.00051662		
1794	**Note: DL/2 is not a recommended method.**				
1795					
1796	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
1797	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
1798	**For additional insight, the user may want to consult a statistician.**				
1799					
1800					
1801	**AVS/SEM|UMOLES/G|MERCURY (gi_sd_ne_2009)**				
1802					
1803	**General Statistics**				
1804	Number of Valid Data		0	Number of Detected Data	0
1805	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1806	Number of Missing Values		20	Percent Non-Detects	NaN%
1807					
1808	**Warning: This data set only has 0 observations!**				
1809	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1810	**The data set for variable AVS/SEM|UMOLES/G|MERCURY (gi_sd_ne_2009) was not processed!**				
1811					
1812	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
1813	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
1814					
1815					
1816					
1817	**AVS/SEM|UMOLES/G|MERCURY (gi_sd_ne_2010)**				
1818					
1819	**General Statistics**				
1820	Number of Valid Data		0	Number of Detected Data	0
1821	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1822	Number of Missing Values		16	Percent Non-Detects	NaN%
1823					
1824	**Warning: This data set only has 0 observations!**				
1825	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1826	**The data set for variable AVS/SEM|UMOLES/G|MERCURY (gi_sd_ne_2010) was not processed!**				
1827					

	A	B	C	D	E
1828	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
1829	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
1830					
1831					
1832					
1833	**AVS/SEM|UMOLES/G|MERCURY (gi_sd_nw_2005)**				
1834					
1835	**General Statistics**				
1836	Number of Valid Data		18	Number of Detected Data	6
1837	Number of Distinct Detected Data		6	Number of Non-Detect Data	12
1838				Percent Non-Detects	66.67%
1839					
1840	**Raw Statistics**			**Log-transformed Statistics**	
1841	Minimum Detected		0.0002	Minimum Detected	-8.517193
1842	Maximum Detected		0.00065	Maximum Detected	-7.338538
1843	Mean of Detected		0.00037	Mean of Detected	-7.997365
1844	SD of Detected		0.00018385	SD of Detected	0.4680798
1845	Minimum Non-Detect		0.00003	Minimum Non-Detect	-10.41431
1846	Maximum Non-Detect		0.00011	Maximum Non-Detect	-9.11503
1847					
1848	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	12
1849	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	6
1850	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	66.67%
1851					
1852	**Warning: There are only 6 Detected Values in this data**				
1853	**Note: It should be noted that even though bootstrap may be performed on this data set**				
1854	**the resulting calculations may not be reliable enough to draw conclusions**				
1855					
1856	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
1857					
1858					
1859	**UCL Statistics**				
1860	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
1861	Shapiro Wilk Test Statistic		0.8374346	Shapiro Wilk Test Statistic	0.8918717
1862	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788
1863	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
1864					
1865	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
1866	DL/2 Substitution Method			DL/2 Substitution Method	
1867	Mean		0.00014694	Mean	-9.550886
1868	SD		0.0001908	SD	1.2095103
1869	95% DL/2 (t) UCL		0.00022518	95% H-Stat (DL/2) UCL	0.00035188
1870					
1871	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
1872	Mean		0.00039144	Mean in Log Scale	-9.097536
1873	SD		0.00016783	SD in Log Scale	0.8732613
1874	95% MLE (t) UCL		0.00046025	Mean in Original Scale	0.00016814
1875	95% MLE (Tiku) UCL		0.00050821	SD in Original Scale	0.00017821
1876				95% t UCL	0.00024121
1877				95% Percentile Bootstrap UCL	0.00023882
1878				95% BCA Bootstrap UCL	0.00025731
1879					
1880	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
1881	k star (bias corrected)		2.8134017	**Data appear Normal at 5% Significance Level**	
1882	Theta Star		0.00013151		
1883	nu star		33.760821		
1884					
1885	A-D Test Statistic		0.5002973	**Nonparametric Statistics**	
1886	5% A-D Critical Value		0.6980727	Kaplan-Meier (KM) Method	
1887	K-S Test Statistic		0.6980727	Mean	0.00025667
1888	5% K-S Critical Value		0.3327649	SD	0.00012574
1889	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	3.2467E-05

	A	B	C	D	E
1890				95% KM (t) UCL	0.00031315
1891	**Assuming Gamma Distribution**			95% KM (z) UCL	0.00031007
1892	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.0003061
1893	Minimum		0.0002	95% KM (bootstrap t) UCL	0.00040677
1894	Maximum		0.00065	95% KM (BCA) UCL	0.00036444
1895	Mean		0.00037	95% KM (Percentile Bootstrap) UCL	0.00033889
1896	Median		0.0003715	95% KM (Chebyshev) UCL	0.00039818
1897	SD		0.0001011	97.5% KM (Chebyshev) UCL	0.00045942
1898	k star		12.89303	99% KM (Chebyshev) UCL	0.0005797
1899	Theta star		2.8698E-05		
1900	Nu star		464.14906	**Potential UCLs to Use**	
1901	AppChi2		415.1962	95% KM (t) UCL	0.00031315
1902	95% Gamma Approximate UCL		0.00041362	95% KM (Percentile Bootstrap) UCL	0.00033889
1903	95% Adjusted Gamma UCL		0.00041809		
1904	**Note: DL/2 is not a recommended method.**				
1905					
1906	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
1907	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
1908	**For additional insight, the user may want to consult a statistician.**				
1909					
1910					
1911	**AVS/SEM|UMOLES/G|MERCURY (gi_sd_nw_2009)**				
1912					
1913	**General Statistics**				
1914	Number of Valid Data		0	Number of Detected Data	0
1915	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1916	Number of Missing Values		7	Percent Non-Detects	NaN%
1917					
1918	**Warning: This data set only has 0 observations!**				
1919	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1920	**The data set for variable AVS/SEM|UMOLES/G|MERCURY (gi_sd_nw_2009) was not processed!**				
1921					
1922	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
1923	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
1924					
1925					
1926					
1927	**AVS/SEM|UMOLES/G|MERCURY (gi_sd_nw_2010)**				
1928					
1929	**General Statistics**				
1930	Number of Valid Data		0	Number of Detected Data	0
1931	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1932	Number of Missing Values		4	Percent Non-Detects	NaN%
1933					
1934	**Warning: This data set only has 0 observations!**				
1935	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1936	**The data set for variable AVS/SEM|UMOLES/G|MERCURY (gi_sd_nw_2010) was not processed!**				
1937					
1938	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
1939	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
1940					
1941					
1942					
1943	**AVS/SEM|UMOLES/G|MERCURY (gi_sd_ref_2009)**				
1944					

	A	B	C	D	E
1945	**General Statistics**				
1946	Number of Valid Data		0	Number of Detected Data	0
1947	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1948	Number of Missing Values		6	Percent Non-Detects	NaN%
1949					
1950	**Warning: This data set only has 0 observations!**				
1951	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1952	**The data set for variable AVS/SEM|UMOLES/G|MERCURY (gi_sd_ref_2009) was not processed!**				
1953					
1954	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
1955	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
1956					
1957					
1958					
1959	**AVS/SEM|UMOLES/G|MERCURY (gi_sd_ref_2010)**				
1960					
1961	**General Statistics**				
1962	Number of Valid Data		0	Number of Detected Data	0
1963	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1964	Number of Missing Values		3	Percent Non-Detects	NaN%
1965					
1966	**Warning: This data set only has 0 observations!**				
1967	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1968	**The data set for variable AVS/SEM|UMOLES/G|MERCURY (gi_sd_ref_2010) was not processed!**				
1969					
1970	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
1971	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
1972					
1973					
1974					
1975	**AVS/SEM|UMOLES/G|MERCURY (gi_sd_s_2005)**				
1976					
1977	**General Statistics**				
1978	Number of Valid Data		8	Number of Detected Data	0
1979	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
1980				Percent Non-Detects	100.00%
1981					
1982	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
1983	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
1984	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
1985					
1986	**The data set for variable AVS/SEM|UMOLES/G|MERCURY (gi_sd_s_2005) was not processed!**				
1987					
1988					
1989					
1990	**AVS/SEM|UMOLES/G|MERCURY (gi_sd_s_2010)**				
1991					
1992	**General Statistics**				
1993	Number of Valid Data		0	Number of Detected Data	0
1994	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
1995	Number of Missing Values		2	Percent Non-Detects	NaN%
1996					

	A	B	C	D	E
1997	**Warning: This data set only has 0 observations!**				
1998	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
1999	**The data set for variable AVS/SEM|UMOLES/G|MERCURY (gi_sd_s_2010) was not processed!**				
2000					
2001	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2002	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2003					
2004					
2005					
2006	**AVS/SEM|UMOLES/G|MERCURY (gi_sd_stillwater_2005)**				
2007					
2008	**General Statistics**				
2009	Number of Valid Observations		4	Number of Distinct Observations	4
2010					
2011					
2012	**Warning: This data set only has 4 observations!**				
2013	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2014	**The data set for variable AVS/SEM|UMOLES/G|MERCURY (gi_sd_stillwater_2005) was not processed!**				
2015					
2016	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2017	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2018					
2019					
2020					
2021	**AVS/SEM|UMOLES/G|MERCURY (gi_sd_stillwater_2009)**				
2022					
2023	**General Statistics**				
2024	Number of Valid Data		0	Number of Detected Data	0
2025	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2026	Number of Missing Values		60	Percent Non-Detects	NaN%
2027					
2028	**Warning: This data set only has 0 observations!**				
2029	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2030	**The data set for variable AVS/SEM|UMOLES/G|MERCURY (gi_sd_stillwater_2009) was not processed!**				
2031					
2032	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2033	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2034					
2035					
2036					
2037	**AVS/SEM|UMOLES/G|MERCURY (gi_sd_stillwater_2010)**				
2038					
2039	**General Statistics**				
2040	Number of Valid Data		0	Number of Detected Data	0
2041	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2042	Number of Missing Values		11	Percent Non-Detects	NaN%
2043					
2044	**Warning: This data set only has 0 observations!**				
2045	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
2046	**The data set for variable AVS/SEM|UMOLES/G|MERCURY (gi_sd_stillwater_2010) was not processed!**				
2047					
2048	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2049	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2050					
2051					
2052					
2053	**AVS/SEM|UMOLES/G|NICKEL (gi_sd_ne_2005)**				
2054					
2055	**General Statistics**				
2056	Number of Valid Data		36	Number of Detected Data	14
2057	Number of Distinct Detected Data		13	Number of Non-Detect Data	22
2058				Percent Non-Detects	61.11%
2059					
2060	**Raw Statistics**			**Log-transformed Statistics**	
2061	Minimum Detected		0.031	Minimum Detected	-3.473768
2062	Maximum Detected		1.2	Maximum Detected	0.1823216
2063	Mean of Detected		0.2432143	Mean of Detected	-2.19618
2064	SD of Detected		0.3298951	SD of Detected	1.2898981
2065	Minimum Non-Detect		0.02	Minimum Non-Detect	-3.912023
2066	Maximum Non-Detect		0.24	Maximum Non-Detect	-1.427116
2067					
2068	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	31
2069	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	5
2070	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	86.11%
2071					
2072	**UCL Statistics**				
2073	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
2074	Shapiro Wilk Test Statistic		0.702408	Shapiro Wilk Test Statistic	0.8463726
2075	5% Shapiro Wilk Critical Value		0.874	5% Shapiro Wilk Critical Value	0.874
2076	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
2077					
2078	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
2079	DL/2 Substitution Method			DL/2 Substitution Method	
2080	Mean		0.1184444	Mean	-3.000715
2081	SD		0.2263201	SD	1.1668109
2082	95% DL/2 (t) UCL		0.1821751	95% H-Stat (DL/2) UCL	0.1634248
2083					
2084	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
2085	**MLE yields a negative mean**			Mean in Log Scale	-3.623425
2086				SD in Log Scale	1.4680264
2087				Mean in Original Scale	0.1022004
2088				SD in Original Scale	0.2312228
2089				95% t UCL	0.1673117
2090				95% Percentile Bootstrap UCL	0.1685302
2091				95% BCA Bootstrap UCL	0.2029595
2092					
2093	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
2094	k star (bias corrected)		0.6473845	**Data do not follow a Discernable Distribution (0.05)**	
2095	Theta Star		0.3756875		
2096	nu star		18.126765		
2097					
2098	A-D Test Statistic		1.0533201	**Nonparametric Statistics**	
2099	5% A-D Critical Value		0.7700513	Kaplan-Meier (KM) Method	
2100	K-S Test Statistic		0.7700513	Mean	0.1152548
2101	5% K-S Critical Value		0.2374588	SD	0.2231107
2102	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0386153
2103				95% KM (t) UCL	0.1804982
2104	**Assuming Gamma Distribution**			95% KM (z) UCL	0.1787714
2105	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.1790208
2106	Minimum		0.0308964	95% KM (bootstrap t) UCL	0.2420374
2107	Maximum		1.2	95% KM (BCA) UCL	0.1819304
2108	Mean		0.2260698	95% KM (Percentile Bootstrap) UCL	0.1837733
2109	Median		0.2215536	95% KM (Chebyshev) UCL	0.2835751
2110	SD		0.2261859	97.5% KM (Chebyshev) UCL	0.3564074

	A	B	C	D	E
2111	k star		1.0602734	99% KM (Chebyshev) UCL	0.4994724
2112	Theta star		0.2132184		
2113	Nu star		76.339688	**Potential UCLs to Use**	
2114	AppChi2		57.214122	95% KM (BCA) UCL	0.1819304
2115	95% Gamma Approximate UCL		0.3016405		
2116	95% Adjusted Gamma UCL		0.3056585		
2117	**Note: DL/2 is not a recommended method.**				
2118					
2119	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
2120	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
2121	**For additional insight, the user may want to consult a statistician.**				
2122					
2123					
2124	**AVS/SEM|UMOLES/G|NICKEL (gi_sd_ne_2009)**				
2125					
2126	**General Statistics**				
2127	Number of Valid Data		0	Number of Detected Data	0
2128	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2129	Number of Missing Values		20	Percent Non-Detects	NaN%
2130					
2131	**Warning: This data set only has 0 observations!**				
2132	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2133	**The data set for variable AVS/SEM|UMOLES/G|NICKEL (gi_sd_ne_2009) was not processed!**				
2134					
2135	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2136	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2137					
2138					
2139					
2140	**AVS/SEM|UMOLES/G|NICKEL (gi_sd_ne_2010)**				
2141					
2142	**General Statistics**				
2143	Number of Valid Data		0	Number of Detected Data	0
2144	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2145	Number of Missing Values		16	Percent Non-Detects	NaN%
2146					
2147	**Warning: This data set only has 0 observations!**				
2148	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2149	**The data set for variable AVS/SEM|UMOLES/G|NICKEL (gi_sd_ne_2010) was not processed!**				
2150					
2151	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2152	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2153					
2154					
2155					
2156	**AVS/SEM|UMOLES/G|NICKEL (gi_sd_nw_2005)**				
2157					
2158	**General Statistics**				
2159	Number of Valid Data		18	Number of Detected Data	15
2160	Number of Distinct Detected Data		14	Number of Non-Detect Data	3
2161				Percent Non-Detects	16.67%
2162					
2163	**Raw Statistics**			**Log-transformed Statistics**	
2164	Minimum Detected		0.015	Minimum Detected	-4.199705
2165	Maximum Detected		3.2	Maximum Detected	1.1631508

	A	B	C	D	E
2166	Mean of Detected		0.2807	Mean of Detected	-2.714166
2167	SD of Detected		0.8120619	SD of Detected	1.3086156
2168	Minimum Non-Detect		0.037	Minimum Non-Detect	-3.296837
2169	Maximum Non-Detect		0.5	Maximum Non-Detect	-0.693147
2170					
2171	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	17
2172	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	1
2173	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	94.44%
2174					
2175	**UCL Statistics**				
2176	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
2177	Shapiro Wilk Test Statistic		0.3479701	Shapiro Wilk Test Statistic	0.7777895
2178	5% Shapiro Wilk Critical Value		0.881	5% Shapiro Wilk Critical Value	0.881
2179	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
2180					
2181	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
2182	DL/2 Substitution Method			DL/2 Substitution Method	
2183	Mean		0.2505278	Mean	-2.754378
2184	SD		0.7415456	SD	1.2819668
2185	95% DL/2 (t) UCL		0.5545832	95% H-Stat (DL/2) UCL	0.3762649
2186					
2187	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
2188	**MLE method failed to converge properly**			Mean in Log Scale	-2.819477
2189				SD in Log Scale	1.2240419
2190				Mean in Original Scale	0.2402525
2191				SD in Original Scale	0.7428094
2192				95% t UCL	0.5448261
2193				95% Percentile Bootstrap UCL	0.5857953
2194				95% BCA Bootstrap UCL	0.7853247
2195					
2196	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
2197	k star (bias corrected)		0.4025782	**Data do not follow a Discernable Distribution (0.05)**	
2198	Theta Star		0.6972558		
2199	nu star		12.077347		
2200					
2201	A-D Test Statistic		2.7702626	**Nonparametric Statistics**	
2202	5% A-D Critical Value		0.8041159	Kaplan-Meier (KM) Method	
2203	K-S Test Statistic		0.8041159	Mean	0.2412877
2204	5% K-S Critical Value		0.2354349	SD	0.721866
2205	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.176185
2206				95% KM (t) UCL	0.5477804
2207	**Assuming Gamma Distribution**			95% KM (z) UCL	0.5310863
2208	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.5459885
2209	Minimum		1E-12	95% KM (bootstrap t) UCL	5.2176163
2210	Maximum		3.2	95% KM (BCA) UCL	0.5885838
2211	Mean		0.2430707	95% KM (Percentile Bootstrap) UCL	0.5809659
2212	Median		0.0475	95% KM (Chebyshev) UCL	1.0092604
2213	SD		0.7426287	97.5% KM (Chebyshev) UCL	1.3415628
2214	k star		0.2507439	99% KM (Chebyshev) UCL	1.9943065
2215	Theta star		0.9693984		
2216	Nu star		9.0267799	**Potential UCLs to Use**	
2217	AppChi2		3.3431366	97.5% KM (Chebyshev) UCL	1.3415628
2218	95% Gamma Approximate UCL		0.6563135		
2219	95% Adjusted Gamma UCL		0.7268817		
2220	**Note: DL/2 is not a recommended method.**				
2221					
2222	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
2223	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
2224	**For additional insight, the user may want to consult a statistician.**				
2225					
2226					
2227	**AVS/SEM|UMOLES/G|NICKEL (gi_sd_nw_2009)**				
2228					
2229	**General Statistics**				
2230	Number of Valid Data		0	Number of Detected Data	0
2231	Number of Distinct Detected Data		0	Number of Non-Detect Data	0

	A	B	C	D	E
2232	Number of Missing Values		7	Percent Non-Detects	NaN%
2233					
2234	**Warning: This data set only has 0 observations!**				
2235	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2236	**The data set for variable AVS/SEM|UMOLES/G|NICKEL (gi_sd_nw_2009) was not processed!**				
2237					
2238	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2239	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2240					
2241					
2242					
2243	**AVS/SEM|UMOLES/G|NICKEL (gi_sd_nw_2010)**				
2244					
2245	**General Statistics**				
2246	Number of Valid Data		0	Number of Detected Data	0
2247	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2248	Number of Missing Values		4	Percent Non-Detects	NaN%
2249					
2250	**Warning: This data set only has 0 observations!**				
2251	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2252	**The data set for variable AVS/SEM|UMOLES/G|NICKEL (gi_sd_nw_2010) was not processed!**				
2253					
2254	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2255	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2256					
2257					
2258					
2259	**AVS/SEM|UMOLES/G|NICKEL (gi_sd_ref_2009)**				
2260					
2261	**General Statistics**				
2262	Number of Valid Data		0	Number of Detected Data	0
2263	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2264	Number of Missing Values		6	Percent Non-Detects	NaN%
2265					
2266	**Warning: This data set only has 0 observations!**				
2267	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2268	**The data set for variable AVS/SEM|UMOLES/G|NICKEL (gi_sd_ref_2009) was not processed!**				
2269					
2270	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2271	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2272					
2273					
2274					
2275	**AVS/SEM|UMOLES/G|NICKEL (gi_sd_ref_2010)**				
2276					
2277	**General Statistics**				
2278	Number of Valid Data		0	Number of Detected Data	0
2279	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2280	Number of Missing Values		3	Percent Non-Detects	NaN%
2281					
2282	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
2283	Data set is too small to compute reliable and meaningful statistics and estimates!				
2284	The data set for variable AVS/SEM|UMOLES/G|NICKEL (gi_sd_ref_2010) was not processed!				
2285					
2286	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
2287	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2288					
2289					
2290					
2291	AVS/SEM|UMOLES/G|NICKEL (gi_sd_s_2005)				
2292					
2293	General Statistics				
2294	Number of Valid Data		8	Number of Detected Data	0
2295	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
2296				Percent Non-Detects	100.00%
2297					
2298	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
2299	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
2300	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
2301					
2302	The data set for variable AVS/SEM|UMOLES/G|NICKEL (gi_sd_s_2005) was not processed!				
2303					
2304					
2305					
2306	AVS/SEM|UMOLES/G|NICKEL (gi_sd_s_2010)				
2307					
2308	General Statistics				
2309	Number of Valid Data		0	Number of Detected Data	0
2310	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2311	Number of Missing Values		2	Percent Non-Detects	NaN%
2312					
2313	Warning: This data set only has 0 observations!				
2314	Data set is too small to compute reliable and meaningful statistics and estimates!				
2315	The data set for variable AVS/SEM|UMOLES/G|NICKEL (gi_sd_s_2010) was not processed!				
2316					
2317	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
2318	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2319					
2320					
2321					
2322	AVS/SEM|UMOLES/G|NICKEL (gi_sd_stillwater_2005)				
2323					
2324	General Statistics				
2325	Number of Valid Observations		4	Number of Distinct Observations	4
2326					
2327					
2328	Warning: This data set only has 4 observations!				
2329	Data set is too small to compute reliable and meaningful statistics and estimates!				
2330	The data set for variable AVS/SEM|UMOLES/G|NICKEL (gi_sd_stillwater_2005) was not processed!				
2331					

	A	B	C	D	E
2332	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2333	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2334					
2335					
2336					
2337	**AVS/SEM|UMOLES/G|NICKEL (gi_sd_stillwater_2009)**				
2338					
2339	**General Statistics**				
2340	Number of Valid Data		0	Number of Detected Data	0
2341	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2342	Number of Missing Values		60	Percent Non-Detects	NaN%
2343					
2344	**Warning: This data set only has 0 observations!**				
2345	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2346	**The data set for variable AVS/SEM|UMOLES/G|NICKEL (gi_sd_stillwater_2009) was not processed!**				
2347					
2348	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2349	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2350					
2351					
2352					
2353	**AVS/SEM|UMOLES/G|NICKEL (gi_sd_stillwater_2010)**				
2354					
2355	**General Statistics**				
2356	Number of Valid Data		0	Number of Detected Data	0
2357	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2358	Number of Missing Values		11	Percent Non-Detects	NaN%
2359					
2360	**Warning: This data set only has 0 observations!**				
2361	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2362	**The data set for variable AVS/SEM|UMOLES/G|NICKEL (gi_sd_stillwater_2010) was not processed!**				
2363					
2364	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2365	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2366					
2367					
2368					
2369	**AVS/SEM|UMOLES/G|ZINC (gi_sd_ne_2005)**				
2370					
2371	**General Statistics**				
2372	Number of Valid Observations		36	Number of Distinct Observations	27
2373					
2374	**Raw Statistics**			**Log-transformed Statistics**	
2375	Minimum		0.14	Minimum of Log Data	-1.966113
2376	Maximum		1.9	Maximum of Log Data	0.6418539
2377	Mean		0.4669444	Mean of log Data	-0.899556
2378	Median		0.375	SD of log Data	0.4983688
2379	SD		0.3116346		
2380	Coefficient of Variation		0.6673911		
2381	Skewness		3.1132221		
2382					
2383	**Relevant UCL Statistics**				
2384	**Normal Distribution Test**			**Lognormal Distribution Test**	
2385	Shapiro Wilk Test Statistic		0.6953847	Shapiro Wilk Test Statistic	0.9531238
2386	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
2387	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	

	A	B	C	D	E
2388					
2389	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
2390	95% Student's-t UCL		0.5546993	95% H-UCL	0.5408706
2391	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.6325575
2392	95% Adjusted-CLT UCL (Chen-1995)		0.5811728	97.5% Chebyshev (MVUE) UCL	0.7077565
2393	95% Modified-t UCL (Johnson-1978)		0.5591909	99% Chebyshev (MVUE) UCL	0.8554703
2394					
2395	**Gamma Distribution Test**			**Data Distribution**	
2396	k star (bias corrected)		3.4848764	**Data appear Lognormal at 5% Significance Level**	
2397	Theta Star		0.1339917		
2398	MLE of Mean		0.4669444		
2399	MLE of Standard Deviation		0.2501333		
2400	nu star		250.9111		
2401	Approximate Chi Square Value (.05)		215.23565	**Nonparametric Statistics**	
2402	Adjusted Level of Significance		0.0428	95% CLT UCL	0.5523767
2403	Adjusted Chi Square Value		213.73869	95% Jackknife UCL	0.5546993
2404				95% Standard Bootstrap UCL	0.5500757
2405	Anderson-Darling Test Statistic		1.203105	95% Bootstrap-t UCL	0.6147943
2406	Anderson-Darling 5% Critical Value		0.7528748	95% Hall's Bootstrap UCL	0.9248953
2407	Kolmogorov-Smirnov Test Statistic		0.1577194	95% Percentile Bootstrap UCL	0.55875
2408	Kolmogorov-Smirnov 5% Critical Value		0.1475959	95% BCA Bootstrap UCL	0.5868056
2409	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.6933417
2410				97.5% Chebyshev(Mean, Sd) UCL	0.791304
2411	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.9837319
2412	95% Approximate Gamma UCL		0.5443408		
2413	95% Adjusted Gamma UCL		0.5481532		
2414					
2415	**Potential UCL to Use**			Use 95% Student's-t UCL	0.5546993
2416				or 95% Modified-t UCL	0.5591909
2417				or 95% H-UCL	0.5408706
2418					
2419	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
2420	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
2421	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
2422	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
2423					
2424	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
2425	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
2426	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
2427					
2428					
2429	**AVS/SEM|UMOLES/G|ZINC (gi_sd_ne_2009)**				
2430					
2431	**General Statistics**				
2432	Number of Valid Data		0	Number of Detected Data	0
2433	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2434	Number of Missing Values		20	Percent Non-Detects	NaN%
2435					
2436	**Warning: This data set only has 0 observations!**				
2437	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2438	**The data set for variable AVS/SEM|UMOLES/G|ZINC (gi_sd_ne_2009) was not processed!**				
2439					
2440	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2441	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2442					
2443					

	A	B	C	D	E
2444					
2445	**AVS/SEM|UMOLES/G|ZINC (gi_sd_ne_2010)**				
2446					
2447	**General Statistics**				
2448	Number of Valid Data		0	Number of Detected Data	0
2449	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2450	Number of Missing Values		16	Percent Non-Detects	NaN%
2451					
2452	**Warning: This data set only has 0 observations!**				
2453	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2454	**The data set for variable AVS/SEM|UMOLES/G|ZINC (gi_sd_ne_2010) was not processed!**				
2455					
2456	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2457	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2458					
2459					
2460					
2461	**AVS/SEM|UMOLES/G|ZINC (gi_sd_nw_2005)**				
2462					
2463	**General Statistics**				
2464	Number of Valid Observations		18	Number of Distinct Observations	15
2465					
2466	**Raw Statistics**			**Log-transformed Statistics**	
2467	Minimum		0.21	Minimum of Log Data	-1.560648
2468	Maximum		0.74	Maximum of Log Data	-0.301105
2469	Mean		0.3794444	Mean of log Data	-1.032192
2470	Median		0.34	SD of log Data	0.3598453
2471	SD		0.1452978		
2472	Coefficient of Variation		0.3829223		
2473	Skewness		1.0860939		
2474					
2475	**Relevant UCL Statistics**				
2476	**Normal Distribution Test**			**Lognormal Distribution Test**	
2477	Shapiro Wilk Test Statistic		0.9094842	Shapiro Wilk Test Statistic	0.9672411
2478	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
2479	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
2480					
2481	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
2482	95% Student's-t UCL		0.4390208	95% H-UCL	0.4485304
2483	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.5211792
2484	95% Adjusted-CLT UCL (Chen-1995)		0.4451435	97.5% Chebyshev (MVUE) UCL	0.5828676
2485	95% Modified-t UCL (Johnson-1978)		0.4404819	99% Chebyshev (MVUE) UCL	0.7040426
2486					
2487	**Gamma Distribution Test**			**Data Distribution**	
2488	k star (bias corrected)		6.7714455	**Data appear Normal at 5% Significance Level**	
2489	Theta Star		0.056036		
2490	MLE of Mean		0.3794444		
2491	MLE of Standard Deviation		0.1458168		
2492	nu star		243.77204		
2493	Approximate Chi Square Value (.05)		208.62506	**Nonparametric Statistics**	
2494	Adjusted Level of Significance		0.03574	95% CLT UCL	0.4357758
2495	Adjusted Chi Square Value		205.50632	95% Jackknife UCL	0.4390208
2496				95% Standard Bootstrap UCL	0.4332384
2497	Anderson-Darling Test Statistic		0.2988889	95% Bootstrap-t UCL	0.4592928
2498	Anderson-Darling 5% Critical Value		0.7406397	95% Hall's Bootstrap UCL	0.4561535
2499	Kolmogorov-Smirnov Test Statistic		0.1231393	95% Percentile Bootstrap UCL	0.4383333
2500	Kolmogorov-Smirnov 5% Critical Value		0.2036956	95% BCA Bootstrap UCL	0.4383333
2501	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.5287237
2502				97.5% Chebyshev(Mean, Sd) UCL	0.593317
2503	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.7201979
2504	95% Approximate Gamma UCL		0.4433693		
2505	95% Adjusted Gamma UCL		0.4500978		
2506					
2507	**Potential UCL to Use**			Use 95% Student's-t UCL	0.4390208
2508					

	A	B	C	D	E
2509	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
2510	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
2511	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
2512					
2513					
2514	AVS/SEM|UMOLES/G|ZINC (gi_sd_nw_2009)				
2515					
2516	General Statistics				
2517	Number of Valid Data		0	Number of Detected Data	0
2518	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2519	Number of Missing Values		7	Percent Non-Detects	NaN%
2520					
2521	Warning: This data set only has 0 observations!				
2522	Data set is too small to compute reliable and meaningful statistics and estimates!				
2523	The data set for variable AVS/SEM|UMOLES/G|ZINC (gi_sd_nw_2009) was not processed!				
2524					
2525	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
2526	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2527					
2528					
2529					
2530	AVS/SEM|UMOLES/G|ZINC (gi_sd_nw_2010)				
2531					
2532	General Statistics				
2533	Number of Valid Data		0	Number of Detected Data	0
2534	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2535	Number of Missing Values		4	Percent Non-Detects	NaN%
2536					
2537	Warning: This data set only has 0 observations!				
2538	Data set is too small to compute reliable and meaningful statistics and estimates!				
2539	The data set for variable AVS/SEM|UMOLES/G|ZINC (gi_sd_nw_2010) was not processed!				
2540					
2541	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
2542	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2543					
2544					
2545					
2546	AVS/SEM|UMOLES/G|ZINC (gi_sd_ref_2009)				
2547					
2548	General Statistics				
2549	Number of Valid Data		0	Number of Detected Data	0
2550	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2551	Number of Missing Values		6	Percent Non-Detects	NaN%
2552					
2553	Warning: This data set only has 0 observations!				
2554	Data set is too small to compute reliable and meaningful statistics and estimates!				
2555	The data set for variable AVS/SEM|UMOLES/G|ZINC (gi_sd_ref_2009) was not processed!				
2556					
2557	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
2558	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2559					
2560					
2561					
2562	**AVS/SEM|UMOLES/G|ZINC (gi_sd_ref_2010)**				
2563					
2564	**General Statistics**				
2565	Number of Valid Data		0	Number of Detected Data	0
2566	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2567	Number of Missing Values		3	Percent Non-Detects	NaN%
2568					
2569	**Warning: This data set only has 0 observations!**				
2570	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2571	**The data set for variable AVS/SEM|UMOLES/G|ZINC (gi_sd_ref_2010) was not processed!**				
2572					
2573	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2574	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2575					
2576					
2577					
2578	**AVS/SEM|UMOLES/G|ZINC (gi_sd_s_2005)**				
2579					
2580	**General Statistics**				
2581	Number of Valid Observations		8	Number of Distinct Observations	8
2582					
2583	**Raw Statistics**			**Log-transformed Statistics**	
2584	Minimum		0.11	Minimum of Log Data	-2.207275
2585	Maximum		0.4	Maximum of Log Data	-0.916291
2586	Mean		0.254375	Mean of log Data	-1.444059
2587	Median		0.265	SD of log Data	0.4321061
2588	SD		0.0981048		
2589	Coefficient of Variation		0.38567		
2590	Skewness		-0.009038		
2591					
2592					
2593	**Warning: There are only 8 Values in this data**				
2594	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
2595	**the resulting calculations may not be reliable enough to draw conclusions**				
2596					
2597	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
2598					
2599	**Relevant UCL Statistics**				
2600	**Normal Distribution Test**			**Lognormal Distribution Test**	
2601	Shapiro Wilk Test Statistic		0.9783096	Shapiro Wilk Test Statistic	0.9533637
2602	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
2603	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
2604					
2605	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
2606	95% Student's-t UCL		0.320089	95% H-UCL	0.3737133
2607	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.4275925
2608	95% Adjusted-CLT UCL (Chen-1995)		0.3113088	97.5% Chebyshev (MVUE) UCL	0.5018983
2609	95% Modified-t UCL (Johnson-1978)		0.3200705	99% Chebyshev (MVUE) UCL	0.6478576
2610					
2611	**Gamma Distribution Test**			**Data Distribution**	
2612	k star (bias corrected)		4.3451928	**Data appear Normal at 5% Significance Level**	
2613	Theta Star		0.0585417		
2614	MLE of Mean		0.254375		
2615	MLE of Standard Deviation		0.1220309		
2616	nu star		69.523085		
2617	Approximate Chi Square Value (.05)		51.329012	**Nonparametric Statistics**	
2618	Adjusted Level of Significance		0.01946	95% CLT UCL	0.3114272

	A	B	C	D	E
2619	Adjusted Chi Square Value		47.39686	95% Jackknife UCL	0.320089
2620				95% Standard Bootstrap UCL	0.307781
2621	Anderson-Darling Test Statistic		0.2051836	95% Bootstrap-t UCL	0.323297
2622	Anderson-Darling 5% Critical Value		0.7175784	95% Hall's Bootstrap UCL	0.3104049
2623	Kolmogorov-Smirnov Test Statistic		0.1831674	95% Percentile Bootstrap UCL	0.3075
2624	Kolmogorov-Smirnov 5% Critical Value		0.2948908	95% BCA Bootstrap UCL	0.304375
2625	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.4055647
2626				97.5% Chebyshev(Mean, Sd) UCL	0.4709846
2627	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.5994893
2628	95% Approximate Gamma UCL		0.3445407		
2629	95% Adjusted Gamma UCL		0.3731246		
2630					
2631	**Potential UCL to Use**			Use 95% Student's-t UCL	0.320089
2632					
2633	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
2634	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
2635	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
2636					
2637					
2638	**AVS/SEM|UMOLES/G|ZINC (gi_sd_s_2010)**				
2639					
2640	**General Statistics**				
2641	Number of Valid Data		0	Number of Detected Data	0
2642	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2643	Number of Missing Values		2	Percent Non-Detects	NaN%
2644					
2645	**Warning: This data set only has 0 observations!**				
2646	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2647	**The data set for variable AVS/SEM|UMOLES/G|ZINC (gi_sd_s_2010) was not processed!**				
2648					
2649	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2650	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2651					
2652					
2653					
2654	**AVS/SEM|UMOLES/G|ZINC (gi_sd_stillwater_2005)**				
2655					
2656	**General Statistics**				
2657	Number of Valid Observations		4	Number of Distinct Observations	4
2658					
2659					
2660	**Warning: This data set only has 4 observations!**				
2661	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2662	**The data set for variable AVS/SEM|UMOLES/G|ZINC (gi_sd_stillwater_2005) was not processed!**				
2663					
2664	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2665	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2666					
2667					
2668					
2669	**AVS/SEM|UMOLES/G|ZINC (gi_sd_stillwater_2009)**				
2670					
2671	**General Statistics**				
2672	Number of Valid Data		0	Number of Detected Data	0

	A	B	C	D	E
2673	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2674	Number of Missing Values		60	Percent Non-Detects	NaN%
2675					
2676	**Warning: This data set only has 0 observations!**				
2677	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2678	**The data set for variable AVS/SEM|UMOLES/G|ZINC (gi_sd_stillwater_2009) was not processed!**				
2679					
2680	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2681	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2682					
2683					
2684					
2685	**AVS/SEM|UMOLES/G|ZINC (gi_sd_stillwater_2010)**				
2686					
2687	**General Statistics**				
2688	Number of Valid Data		0	Number of Detected Data	0
2689	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2690	Number of Missing Values		11	Percent Non-Detects	NaN%
2691					
2692	**Warning: This data set only has 0 observations!**				
2693	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2694	**The data set for variable AVS/SEM|UMOLES/G|ZINC (gi_sd_stillwater_2010) was not processed!**				
2695					
2696	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2697	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2698					
2699					
2700					
2701	**LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_ne_2005)**				
2702					
2703	**General Statistics**				
2704	Number of Valid Data		36	Number of Detected Data	1
2705	Number of Distinct Detected Data		1	Number of Non-Detect Data	35
2706				Percent Non-Detects	97.22%
2707					
2708	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**				
2709	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**				
2710					
2711	**The data set for variable LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_ne_2005) was not processed!**				
2712					
2713					
2714					
2715	**LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_ne_2009)**				
2716					
2717	**General Statistics**				
2718	Number of Valid Data		0	Number of Detected Data	0
2719	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2720	Number of Missing Values		20	Percent Non-Detects	NaN%
2721					
2722	**Warning: This data set only has 0 observations!**				
2723	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
2724	**The data set for variable LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_ne_2009) was not processed!**				
2725					
2726	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2727	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2728					
2729					
2730					
2731	**LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_ne_2010)**				
2732					
2733	**General Statistics**				
2734	Number of Valid Data		0	Number of Detected Data	0
2735	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2736	Number of Missing Values		16	Percent Non-Detects	NaN%
2737					
2738	**Warning: This data set only has 0 observations!**				
2739	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2740	**The data set for variable LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_ne_2010) was not processed!**				
2741					
2742	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2743	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2744					
2745					
2746					
2747	**LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_nw_2005)**				
2748					
2749	**General Statistics**				
2750	Number of Valid Data		18	Number of Detected Data	0
2751	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
2752				Percent Non-Detects	100.00%
2753					
2754	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
2755	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
2756	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
2757					
2758	**The data set for variable LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_nw_2005) was not processed!**				
2759					
2760					
2761					
2762	**LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_nw_2009)**				
2763					
2764	**General Statistics**				
2765	Number of Valid Data		0	Number of Detected Data	0
2766	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2767	Number of Missing Values		7	Percent Non-Detects	NaN%
2768					
2769	**Warning: This data set only has 0 observations!**				
2770	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2771	**The data set for variable LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_nw_2009) was not processed!**				
2772					

	A	B	C	D	E
2773	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
2774	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2775					
2776					
2777					
2778	LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_nw_2010)				
2779					
2780	General Statistics				
2781	Number of Valid Data		0	Number of Detected Data	0
2782	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2783	Number of Missing Values		4	Percent Non-Detects	NaN%
2784					
2785	Warning: This data set only has 0 observations!				
2786	Data set is too small to compute reliable and meaningful statistics and estimates!				
2787	The data set for variable LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_nw_2010) was not processed!				
2788					
2789	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
2790	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2791					
2792					
2793					
2794	LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_ref_2009)				
2795					
2796	General Statistics				
2797	Number of Valid Data		0	Number of Detected Data	0
2798	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2799	Number of Missing Values		6	Percent Non-Detects	NaN%
2800					
2801	Warning: This data set only has 0 observations!				
2802	Data set is too small to compute reliable and meaningful statistics and estimates!				
2803	The data set for variable LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_ref_2009) was not processed!				
2804					
2805	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
2806	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2807					
2808					
2809					
2810	LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_ref_2010)				
2811					
2812	General Statistics				
2813	Number of Valid Data		0	Number of Detected Data	0
2814	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2815	Number of Missing Values		3	Percent Non-Detects	NaN%
2816					
2817	Warning: This data set only has 0 observations!				
2818	Data set is too small to compute reliable and meaningful statistics and estimates!				
2819	The data set for variable LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_ref_2010) was not processed!				
2820					
2821	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
2822	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2823					
2824					
2825					
2826	LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_s_2005)				
2827					
2828	General Statistics				
2829	Number of Valid Data		8	Number of Detected Data	0
2830	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
2831				Percent Non-Detects	100.00%
2832					
2833	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
2834	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
2835	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
2836					
2837	The data set for variable LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_s_2005) was not processed!				
2838					
2839					
2840					
2841	LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_s_2010)				
2842					
2843	General Statistics				
2844	Number of Valid Data		0	Number of Detected Data	0
2845	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2846	Number of Missing Values		2	Percent Non-Detects	NaN%
2847					
2848	Warning: This data set only has 0 observations!				
2849	Data set is too small to compute reliable and meaningful statistics and estimates!				
2850	The data set for variable LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_s_2010) was not processed!				
2851					
2852	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
2853	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2854					
2855					
2856					
2857	LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_stillwater_2005)				
2858					
2859	General Statistics				
2860	Number of Valid Data		4	Number of Detected Data	0
2861	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
2862				Percent Non-Detects	100.00%
2863					
2864	Warning: This data set only has 4 observations!				
2865	Data set is too small to compute reliable and meaningful statistics and estimates!				
2866	The data set for variable LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_stillwater_2005) was not processed!				
2867					
2868	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
2869	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2870					
2871					

	A	B	C	D	E
2872					
2873	LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_stillwater_2009)				
2874					
2875	General Statistics				
2876	Number of Valid Data		0	Number of Detected Data	0
2877	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2878	Number of Missing Values		60	Percent Non-Detects	NaN%
2879					
2880	Warning: This data set only has 0 observations!				
2881	Data set is too small to compute reliable and meaningful statistics and estimates!				
2882	The data set for variable LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_stillwater_2009) was not processed!				
2883					
2884	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
2885	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2886					
2887					
2888					
2889	LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_stillwater_2010)				
2890					
2891	General Statistics				
2892	Number of Valid Data		0	Number of Detected Data	0
2893	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2894	Number of Missing Values		11	Percent Non-Detects	NaN%
2895					
2896	Warning: This data set only has 0 observations!				
2897	Data set is too small to compute reliable and meaningful statistics and estimates!				
2898	The data set for variable LV|UG/KG|1,1-DICHLOROETHENE (gi_sd_stillwater_2010) was not processed!				
2899					
2900	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
2901	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2902					
2903					
2904					
2905	LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_ne_2005)				
2906					
2907	General Statistics				
2908	Number of Valid Data		36	Number of Detected Data	0
2909	Number of Distinct Detected Data		0	Number of Non-Detect Data	36
2910				Percent Non-Detects	100.00%
2911					
2912	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
2913	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
2914	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
2915					
2916	The data set for variable LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_ne_2005) was not processed!				
2917					
2918					
2919					
2920	LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_ne_2009)				
2921					
2922	General Statistics				

	A	B	C	D	E
2923	Number of Valid Data		0	Number of Detected Data	0
2924	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2925	Number of Missing Values		20	Percent Non-Detects	NaN%
2926					
2927	**Warning: This data set only has 0 observations!**				
2928	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2929	**The data set for variable LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_ne_2009) was not processed!**				
2930					
2931	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2932	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2933					
2934					
2935					
2936	**LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_ne_2010)**				
2937					
2938	**General Statistics**				
2939	Number of Valid Data		0	Number of Detected Data	0
2940	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2941	Number of Missing Values		16	Percent Non-Detects	NaN%
2942					
2943	**Warning: This data set only has 0 observations!**				
2944	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
2945	**The data set for variable LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_ne_2010) was not processed!**				
2946					
2947	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
2948	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
2949					
2950					
2951					
2952	**LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_nw_2005)**				
2953					
2954	**General Statistics**				
2955	Number of Valid Data		18	Number of Detected Data	0
2956	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
2957				Percent Non-Detects	100.00%
2958					
2959	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
2960	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
2961	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
2962					
2963	**The data set for variable LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_nw_2005) was not processed!**				
2964					
2965					
2966					
2967	**LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_nw_2009)**				
2968					
2969	**General Statistics**				
2970	Number of Valid Data		0	Number of Detected Data	0
2971	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2972	Number of Missing Values		7	Percent Non-Detects	NaN%
2973					

	A	B	C	D	E
2974	Warning: This data set only has 0 observations!				
2975	Data set is too small to compute reliable and meaningful statistics and estimates!				
2976	The data set for variable LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_nw_2009) was not processed!				
2977					
2978	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
2979	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2980					
2981					
2982					
2983	LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_nw_2010)				
2984					
2985	General Statistics				
2986	Number of Valid Data		0	Number of Detected Data	0
2987	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
2988	Number of Missing Values		4	Percent Non-Detects	NaN%
2989					
2990	Warning: This data set only has 0 observations!				
2991	Data set is too small to compute reliable and meaningful statistics and estimates!				
2992	The data set for variable LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_nw_2010) was not processed!				
2993					
2994	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
2995	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
2996					
2997					
2998					
2999	LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_ref_2009)				
3000					
3001	General Statistics				
3002	Number of Valid Data		0	Number of Detected Data	0
3003	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3004	Number of Missing Values		6	Percent Non-Detects	NaN%
3005					
3006	Warning: This data set only has 0 observations!				
3007	Data set is too small to compute reliable and meaningful statistics and estimates!				
3008	The data set for variable LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_ref_2009) was not processed!				
3009					
3010	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3011	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3012					
3013					
3014					
3015	LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_ref_2010)				
3016					
3017	General Statistics				
3018	Number of Valid Data		0	Number of Detected Data	0
3019	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3020	Number of Missing Values		3	Percent Non-Detects	NaN%
3021					
3022	Warning: This data set only has 0 observations!				
3023	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
3024	**The data set for variable LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_ref_2010) was not processed!**				
3025					
3026	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3027	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3028					
3029					
3030					
3031	**LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_s_2005)**				
3032					
3033	**General Statistics**				
3034	Number of Valid Data		8	Number of Detected Data	0
3035	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
3036				Percent Non-Detects	100.00%
3037					
3038	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
3039	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
3040	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
3041					
3042	**The data set for variable LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_s_2005) was not processed!**				
3043					
3044					
3045					
3046	**LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_s_2010)**				
3047					
3048	**General Statistics**				
3049	Number of Valid Data		0	Number of Detected Data	0
3050	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3051	Number of Missing Values		2	Percent Non-Detects	NaN%
3052					
3053	**Warning: This data set only has 0 observations!**				
3054	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3055	**The data set for variable LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_s_2010) was not processed!**				
3056					
3057	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3058	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3059					
3060					
3061					
3062	**LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_stillwater_2005)**				
3063					
3064	**General Statistics**				
3065	Number of Valid Data		4	Number of Detected Data	1
3066	Number of Distinct Detected Data		1	Number of Non-Detect Data	3
3067				Percent Non-Detects	75.00%
3068					
3069	**Warning: This data set only has 4 observations!**				
3070	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3071	**The data set for variable LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_stillwater_2005) was not processed!**				
3072					

	A	B	C	D	E
3073	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3074	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3075					
3076					
3077					
3078	LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_stillwater_2009)				
3079					
3080	General Statistics				
3081	Number of Valid Data		0	Number of Detected Data	0
3082	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3083	Number of Missing Values		60	Percent Non-Detects	NaN%
3084					
3085	Warning: This data set only has 0 observations!				
3086	Data set is too small to compute reliable and meaningful statistics and estimates!				
3087	The data set for variable LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_stillwater_2009) was not processed!				
3088					
3089	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3090	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3091					
3092					
3093					
3094	LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_stillwater_2010)				
3095					
3096	General Statistics				
3097	Number of Valid Data		0	Number of Detected Data	0
3098	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3099	Number of Missing Values		11	Percent Non-Detects	NaN%
3100					
3101	Warning: This data set only has 0 observations!				
3102	Data set is too small to compute reliable and meaningful statistics and estimates!				
3103	The data set for variable LV|UG/KG|1,3-DICHLOROBENZENE (gi_sd_stillwater_2010) was not processed!				
3104					
3105	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3106	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3107					
3108					
3109					
3110	LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_ne_2005)				
3111					
3112	General Statistics				
3113	Number of Valid Data		36	Number of Detected Data	0
3114	Number of Distinct Detected Data		0	Number of Non-Detect Data	36
3115				Percent Non-Detects	100.00%
3116					
3117	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
3118	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
3119	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
3120					

	A	B	C	D	E
3121	The data set for variable LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_ne_2005) was not processed!				
3122					
3123					
3124					
3125	LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_ne_2009)				
3126					
3127	General Statistics				
3128	Number of Valid Data		0	Number of Detected Data	0
3129	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3130	Number of Missing Values		20	Percent Non-Detects	NaN%
3131					
3132	Warning: This data set only has 0 observations!				
3133	Data set is too small to compute reliable and meaningful statistics and estimates!				
3134	The data set for variable LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_ne_2009) was not processed!				
3135					
3136	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3137	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3138					
3139					
3140					
3141	LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_ne_2010)				
3142					
3143	General Statistics				
3144	Number of Valid Data		0	Number of Detected Data	0
3145	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3146	Number of Missing Values		16	Percent Non-Detects	NaN%
3147					
3148	Warning: This data set only has 0 observations!				
3149	Data set is too small to compute reliable and meaningful statistics and estimates!				
3150	The data set for variable LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_ne_2010) was not processed!				
3151					
3152	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3153	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3154					
3155					
3156					
3157	LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_nw_2005)				
3158					
3159	General Statistics				
3160	Number of Valid Data		18	Number of Detected Data	0
3161	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
3162				Percent Non-Detects	100.00%
3163					
3164	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
3165	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
3166	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
3167					
3168	The data set for variable LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_nw_2005) was not processed!				
3169					
3170					

	A	B	C	D	E
3171					
3172	**LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_nw_2009)**				
3173					
3174	**General Statistics**				
3175	Number of Valid Data		0	Number of Detected Data	0
3176	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3177	Number of Missing Values		7	Percent Non-Detects	NaN%
3178					
3179	**Warning: This data set only has 0 observations!**				
3180	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3181	**The data set for variable LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_nw_2009) was not processed!**				
3182					
3183	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3184	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3185					
3186					
3187					
3188	**LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_nw_2010)**				
3189					
3190	**General Statistics**				
3191	Number of Valid Data		0	Number of Detected Data	0
3192	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3193	Number of Missing Values		4	Percent Non-Detects	NaN%
3194					
3195	**Warning: This data set only has 0 observations!**				
3196	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3197	**The data set for variable LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_nw_2010) was not processed!**				
3198					
3199	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3200	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3201					
3202					
3203					
3204	**LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_ref_2009)**				
3205					
3206	**General Statistics**				
3207	Number of Valid Data		0	Number of Detected Data	0
3208	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3209	Number of Missing Values		6	Percent Non-Detects	NaN%
3210					
3211	**Warning: This data set only has 0 observations!**				
3212	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3213	**The data set for variable LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_ref_2009) was not processed!**				
3214					
3215	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3216	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3217					
3218					
3219					
3220	**LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_ref_2010)**				
3221					

	A	B	C	D	E
3222	**General Statistics**				
3223	Number of Valid Data		0	Number of Detected Data	0
3224	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3225	Number of Missing Values		3	Percent Non-Detects	NaN%
3226					
3227	**Warning: This data set only has 0 observations!**				
3228	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3229	**The data set for variable LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_ref_2010) was not processed!**				
3230					
3231	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3232	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3233					
3234					
3235					
3236	**LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_s_2005)**				
3237					
3238	**General Statistics**				
3239	Number of Valid Data		8	Number of Detected Data	0
3240	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
3241				Percent Non-Detects	100.00%
3242					
3243	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
3244	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
3245	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
3246					
3247	**The data set for variable LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_s_2005) was not processed!**				
3248					
3249					
3250					
3251	**LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_s_2010)**				
3252					
3253	**General Statistics**				
3254	Number of Valid Data		0	Number of Detected Data	0
3255	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3256	Number of Missing Values		2	Percent Non-Detects	NaN%
3257					
3258	**Warning: This data set only has 0 observations!**				
3259	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3260	**The data set for variable LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_s_2010) was not processed!**				
3261					
3262	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3263	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3264					
3265					
3266					
3267	**LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_stillwater_2005)**				
3268					
3269	**General Statistics**				
3270	Number of Valid Data		4	Number of Detected Data	1
3271	Number of Distinct Detected Data		1	Number of Non-Detect Data	3
3272				Percent Non-Detects	75.00%
3273					

	A	B	C	D	E
3274	Warning: This data set only has 4 observations!				
3275	Data set is too small to compute reliable and meaningful statistics and estimates!				
3276	The data set for variable LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_stillwater_2005) was not processed!				
3277					
3278	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3279	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3280					
3281					
3282					
3283	LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_stillwater_2009)				
3284					
3285	General Statistics				
3286	Number of Valid Data		0	Number of Detected Data	0
3287	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3288	Number of Missing Values		60	Percent Non-Detects	NaN%
3289					
3290	Warning: This data set only has 0 observations!				
3291	Data set is too small to compute reliable and meaningful statistics and estimates!				
3292	The data set for variable LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_stillwater_2009) was not processed!				
3293					
3294	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3295	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3296					
3297					
3298					
3299	LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_stillwater_2010)				
3300					
3301	General Statistics				
3302	Number of Valid Data		0	Number of Detected Data	0
3303	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3304	Number of Missing Values		11	Percent Non-Detects	NaN%
3305					
3306	Warning: This data set only has 0 observations!				
3307	Data set is too small to compute reliable and meaningful statistics and estimates!				
3308	The data set for variable LV|UG/KG|1,4-DICHLOROBENZENE (gi_sd_stillwater_2010) was not processed!				
3309					
3310	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3311	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3312					
3313					
3314					
3315	LV|UG/KG|2-BUTANONE (gi_sd_ne_2005)				
3316					
3317	General Statistics				
3318	Number of Valid Data		36	Number of Detected Data	3
3319	Number of Distinct Detected Data		3	Number of Non-Detect Data	33
3320				Percent Non-Detects	91.67%
3321					
3322	Raw Statistics			Log-transformed Statistics	
3323	Minimum Detected		2	Minimum Detected	0.6931472
3324	Maximum Detected		7	Maximum Detected	1.9459101
3325	Mean of Detected		4.6666667	Mean of Detected	1.4161651
3326	SD of Detected		2.5166115	SD of Detected	0.6483591

	A	B	C	D	E
3327	Minimum Non-Detect		4	Minimum Non-Detect	1.3862944
3328	Maximum Non-Detect		9	Maximum Non-Detect	2.1972246
3329					
3330	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
3331	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
3332	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
3333					
3334	**Warning: There are only 3 Distinct Detected Values in this data set**				
3335	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
3336	**Those methods will return a 'N/A' value on your output display!**				
3337					
3338	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
3339	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
3340	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
3341					
3342					
3343	**UCL Statistics**				
3344	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
3345	Shapiro Wilk Test Statistic		0.9868232	Shapiro Wilk Test Statistic	0.9333365
3346	5% Shapiro Wilk Critical Value		0.767	5% Shapiro Wilk Critical Value	0.767
3347	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
3348					
3349	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
3350	DL/2 Substitution Method			DL/2 Substitution Method	
3351	Mean		3.2638889	Mean	1.1505069
3352	SD		0.9276399	SD	0.2492204
3353	95% DL/2 (t) UCL		3.525108	95% H-Stat (DL/2) UCL	3.5098456
3354					
3355	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
3356	**MLE method failed to converge properly**			Mean in Log Scale	0.7971956
3357				SD in Log Scale	0.4294726
3358				Mean in Original Scale	2.4407051
3359				SD in Original Scale	1.1975035
3360				95% t UCL	2.7779166
3361				95% Percentile Bootstrap UCL	2.794997
3362				95% BCA Bootstrap UCL	2.8353233
3363					
3364	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
3365	k star (bias corrected)		N/A	**Data appear Normal at 5% Significance Level**	
3366	Theta Star		N/A		
3367	nu star		N/A		
3368					
3369	A-D Test Statistic		N/A	**Nonparametric Statistics**	
3370	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
3371	K-S Test Statistic		N/A	Mean	2.4204545
3372	5% K-S Critical Value		N/A	SD	1.1819821
3373	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.3562294
3374				95% KM (t) UCL	3.0223299
3375	**Assuming Gamma Distribution**			95% KM (z) UCL	3.0063998
3376	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	4.2560729
3377	Minimum		N/A	95% KM (bootstrap t) UCL	2.7284771
3378	Maximum		N/A	95% KM (BCA) UCL	7
3379	Mean		N/A	95% KM (Percentile Bootstrap) UCL	7
3380	Median		N/A	95% KM (Chebyshev) UCL	3.9732225
3381	SD		N/A	97.5% KM (Chebyshev) UCL	4.6451064
3382	k star		N/A	99% KM (Chebyshev) UCL	5.9648923
3383	Theta star		N/A		
3384	Nu star		N/A	**Potential UCLs to Use**	
3385	AppChi2		N/A	95% KM (t) UCL	3.0223299
3386	95% Gamma Approximate UCL		N/A	95% KM (Percentile Bootstrap) UCL	7
3387	95% Adjusted Gamma UCL		N/A		
3388	**Note: DL/2 is not a recommended method.**				
3389					

	A	B	C	D	E
3390	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
3391	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).				
3392	For additional insight, the user may want to consult a statistician.				
3393					
3394					
3395	LV|UG/KG|2-BUTANONE (gi_sd_ne_2009)				
3396					
3397	General Statistics				
3398	Number of Valid Data		0	Number of Detected Data	0
3399	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3400	Number of Missing Values		20	Percent Non-Detects	NaN%
3401					
3402	Warning: This data set only has 0 observations!				
3403	Data set is too small to compute reliable and meaningful statistics and estimates!				
3404	The data set for variable LV|UG/KG|2-BUTANONE (gi_sd_ne_2009) was not processed!				
3405					
3406	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3407	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3408					
3409					
3410					
3411	LV|UG/KG|2-BUTANONE (gi_sd_ne_2010)				
3412					
3413	General Statistics				
3414	Number of Valid Data		0	Number of Detected Data	0
3415	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3416	Number of Missing Values		16	Percent Non-Detects	NaN%
3417					
3418	Warning: This data set only has 0 observations!				
3419	Data set is too small to compute reliable and meaningful statistics and estimates!				
3420	The data set for variable LV|UG/KG|2-BUTANONE (gi_sd_ne_2010) was not processed!				
3421					
3422	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3423	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3424					
3425					
3426					
3427	LV|UG/KG|2-BUTANONE (gi_sd_nw_2005)				
3428					
3429	General Statistics				
3430	Number of Valid Data		18	Number of Detected Data	0
3431	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
3432				Percent Non-Detects	100.00%
3433					
3434	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
3435	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
3436	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
3437					
3438	The data set for variable LV|UG/KG|2-BUTANONE (gi_sd_nw_2005) was not processed!				
3439					

	A	B	C	D	E
3440					
3441					
3442	LV|UG/KG|2-BUTANONE (gi_sd_nw_2009)				
3443					
3444	General Statistics				
3445	Number of Valid Data		0	Number of Detected Data	0
3446	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3447	Number of Missing Values		7	Percent Non-Detects	NaN%
3448					
3449	Warning: This data set only has 0 observations!				
3450	Data set is too small to compute reliable and meaningful statistics and estimates!				
3451	The data set for variable LV|UG/KG|2-BUTANONE (gi_sd_nw_2009) was not processed!				
3452					
3453	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3454	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3455					
3456					
3457					
3458	LV|UG/KG|2-BUTANONE (gi_sd_nw_2010)				
3459					
3460	General Statistics				
3461	Number of Valid Data		0	Number of Detected Data	0
3462	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3463	Number of Missing Values		4	Percent Non-Detects	NaN%
3464					
3465	Warning: This data set only has 0 observations!				
3466	Data set is too small to compute reliable and meaningful statistics and estimates!				
3467	The data set for variable LV|UG/KG|2-BUTANONE (gi_sd_nw_2010) was not processed!				
3468					
3469	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3470	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3471					
3472					
3473					
3474	LV|UG/KG|2-BUTANONE (gi_sd_ref_2009)				
3475					
3476	General Statistics				
3477	Number of Valid Data		0	Number of Detected Data	0
3478	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3479	Number of Missing Values		6	Percent Non-Detects	NaN%
3480					
3481	Warning: This data set only has 0 observations!				
3482	Data set is too small to compute reliable and meaningful statistics and estimates!				
3483	The data set for variable LV|UG/KG|2-BUTANONE (gi_sd_ref_2009) was not processed!				
3484					
3485	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3486	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3487					
3488					
3489					
3490	LV|UG/KG|2-BUTANONE (gi_sd_ref_2010)				
3491					
3492	General Statistics				
3493	Number of Valid Data		0	Number of Detected Data	0
3494	Number of Distinct Detected Data		0	Number of Non-Detect Data	0

	A	B	C	D	E
3495	Number of Missing Values		3	Percent Non-Detects	NaN%
3496					
3497	**Warning: This data set only has 0 observations!**				
3498	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3499	**The data set for variable LV|UG/KG|2-BUTANONE (gi_sd_ref_2010) was not processed!**				
3500					
3501	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3502	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3503					
3504					
3505					
3506	**LV|UG/KG|2-BUTANONE (gi_sd_s_2005)**				
3507					
3508	**General Statistics**				
3509	Number of Valid Data		8	Number of Detected Data	0
3510	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
3511				Percent Non-Detects	100.00%
3512					
3513	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
3514	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
3515	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
3516					
3517	**The data set for variable LV|UG/KG|2-BUTANONE (gi_sd_s_2005) was not processed!**				
3518					
3519					
3520					
3521	**LV|UG/KG|2-BUTANONE (gi_sd_s_2010)**				
3522					
3523	**General Statistics**				
3524	Number of Valid Data		0	Number of Detected Data	0
3525	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3526	Number of Missing Values		2	Percent Non-Detects	NaN%
3527					
3528	**Warning: This data set only has 0 observations!**				
3529	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3530	**The data set for variable LV|UG/KG|2-BUTANONE (gi_sd_s_2010) was not processed!**				
3531					
3532	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3533	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3534					
3535					
3536					
3537	**LV|UG/KG|2-BUTANONE (gi_sd_stillwater_2005)**				
3538					
3539	**General Statistics**				
3540	Number of Valid Data		4	Number of Detected Data	0
3541	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
3542				Percent Non-Detects	100.00%
3543					
3544	**Warning: This data set only has 4 observations!**				
3545	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
3546	**The data set for variable LV|UG/KG|2-BUTANONE (gi_sd_stillwater_2005) was not processed!**				
3547					
3548	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3549	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3550					
3551					
3552					
3553	**LV|UG/KG|2-BUTANONE (gi_sd_stillwater_2009)**				
3554					
3555	**General Statistics**				
3556	Number of Valid Data		0	Number of Detected Data	0
3557	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3558	Number of Missing Values		60	Percent Non-Detects	NaN%
3559					
3560	**Warning: This data set only has 0 observations!**				
3561	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3562	**The data set for variable LV|UG/KG|2-BUTANONE (gi_sd_stillwater_2009) was not processed!**				
3563					
3564	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3565	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3566					
3567					
3568					
3569	**LV|UG/KG|2-BUTANONE (gi_sd_stillwater_2010)**				
3570					
3571	**General Statistics**				
3572	Number of Valid Data		0	Number of Detected Data	0
3573	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3574	Number of Missing Values		11	Percent Non-Detects	NaN%
3575					
3576	**Warning: This data set only has 0 observations!**				
3577	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3578	**The data set for variable LV|UG/KG|2-BUTANONE (gi_sd_stillwater_2010) was not processed!**				
3579					
3580	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3581	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3582					
3583					
3584					
3585	**LV|UG/KG|ACETONE (gi_sd_ne_2005)**				
3586					
3587	**General Statistics**				
3588	Number of Valid Data		36	Number of Detected Data	30
3589	Number of Distinct Detected Data		26	Number of Non-Detect Data	6
3590				Percent Non-Detects	16.67%
3591					
3592	**Raw Statistics**			**Log-transformed Statistics**	
3593	Minimum Detected		12	Minimum Detected	2.4849066
3594	Maximum Detected		240	Maximum Detected	5.4806389
3595	Mean of Detected		61.4	Mean of Detected	3.8086515
3596	SD of Detected		53.486608	SD of Detected	0.7907772
3597	Minimum Non-Detect		34	Minimum Non-Detect	3.5263605
3598	Maximum Non-Detect		700	Maximum Non-Detect	6.5510803
3599					

	A	B	C	D	E
3600	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
3601	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
3602	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
3603					
3604	**UCL Statistics**				
3605	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
3606	Shapiro Wilk Test Statistic		0.799279	Shapiro Wilk Test Statistic	0.9636559
3607	5% Shapiro Wilk Critical Value		0.927	5% Shapiro Wilk Critical Value	0.927
3608	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
3609					
3610	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
3611	DL/2 Substitution Method			DL/2 Substitution Method	
3612	Mean		63.652778	Mean	3.7506176
3613	SD		70.654776	SD	0.8574539
3614	95% DL/2 (t) UCL		83.548839	95% H-Stat (DL/2) UCL	84.883097
3615					
3616	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
3617	**MLE method failed to converge properly**			Mean in Log Scale	3.7184518
3618				SD in Log Scale	0.7530993
3619				Mean in Original Scale	55.642854
3620				SD in Original Scale	50.475201
3621				95% t UCL	69.856439
3622				95% Percentile Bootstrap UCL	70.454652
3623				95% BCA Bootstrap UCL	73.100255
3624					
3625	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
3626	k star (bias corrected)		1.6132054	**Data appear Gamma Distributed at 5% Significance Level**	
3627	Theta Star		38.060868		
3628	nu star		96.792327		
3629					
3630	A-D Test Statistic		0.5655949	**Nonparametric Statistics**	
3631	5% A-D Critical Value		0.760588	Kaplan-Meier (KM) Method	
3632	K-S Test Statistic		0.760588	Mean	55.942577
3633	5% K-S Critical Value		0.1624791	SD	50.575114
3634	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	8.7128156
3635				95% KM (t) UCL	70.66351
3636	**Assuming Gamma Distribution**			95% KM (z) UCL	70.273883
3637	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	70.637889
3638	Minimum		12	95% KM (bootstrap t) UCL	74.554434
3639	Maximum		240	95% KM (BCA) UCL	70.08
3640	Mean		58.313306	95% KM (Percentile Bootstrap) UCL	70.7625
3641	Median		41.5	95% KM (Chebyshev) UCL	93.92086
3642	SD		49.63365	97.5% KM (Chebyshev) UCL	110.35409
3643	k star		1.8243547	99% KM (Chebyshev) UCL	142.634
3644	Theta star		31.963799		
3645	Nu star		131.35354	**Potential UCLs to Use**	
3646	AppChi2		105.87782	95% KM (BCA) UCL	70.08
3647	95% Gamma Approximate UCL		72.344323		
3648	95% Adjusted Gamma UCL		73.060312		
3649	**Note: DL/2 is not a recommended method.**				
3650					
3651	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
3652	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
3653	**For additional insight, the user may want to consult a statistician.**				
3654					
3655					
3656	**LV|UG/KG|ACETONE (gi_sd_ne_2009)**				
3657					
3658	**General Statistics**				
3659	Number of Valid Data		0	Number of Detected Data	0
3660	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3661	Number of Missing Values		20	Percent Non-Detects	NaN%
3662					
3663	**Warning: This data set only has 0 observations!**				
3664	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
3665	**The data set for variable LV|UG/KG|ACETONE (gi_sd_ne_2009) was not processed!**				
3666					
3667	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3668	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3669					
3670					
3671					
3672	**LV|UG/KG|ACETONE (gi_sd_ne_2010)**				
3673					
3674	**General Statistics**				
3675	Number of Valid Data		0	Number of Detected Data	0
3676	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3677	Number of Missing Values		16	Percent Non-Detects	NaN%
3678					
3679	**Warning: This data set only has 0 observations!**				
3680	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3681	**The data set for variable LV|UG/KG|ACETONE (gi_sd_ne_2010) was not processed!**				
3682					
3683	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3684	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3685					
3686					
3687					
3688	**LV|UG/KG|ACETONE (gi_sd_nw_2005)**				
3689					
3690	**General Statistics**				
3691	Number of Valid Data		18	Number of Detected Data	16
3692	Number of Distinct Detected Data		14	Number of Non-Detect Data	2
3693				Percent Non-Detects	11.11%
3694					
3695	**Raw Statistics**			**Log-transformed Statistics**	
3696	Minimum Detected		14	Minimum Detected	2.6390573
3697	Maximum Detected		240	Maximum Detected	5.4806389
3698	Mean of Detected		74.875	Mean of Detected	3.9976933
3699	SD of Detected		64.638353	SD of Detected	0.827953
3700	Minimum Non-Detect		50	Minimum Non-Detect	3.912023
3701	Maximum Non-Detect		66	Maximum Non-Detect	4.1896547
3702					
3703	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	11
3704	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	7
3705	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	61.11%
3706					
3707	**UCL Statistics**				
3708	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
3709	Shapiro Wilk Test Statistic		0.8078298	Shapiro Wilk Test Statistic	0.9632073
3710	5% Shapiro Wilk Critical Value		0.887	5% Shapiro Wilk Critical Value	0.887
3711	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
3712					
3713	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
3714	DL/2 Substitution Method			DL/2 Substitution Method	
3715	Mean		69.777778	Mean	3.926582
3716	SD		62.518285	SD	0.8062007
3717	95% DL/2 (t) UCL		95.412103	95% H-Stat (DL/2) UCL	111.60627
3718					
3719	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
3720	Mean		36.156851	Mean in Log Scale	3.9291169
3721	SD		96.647128	SD in Log Scale	0.8034208
3722	95% MLE (t) UCL		75.784999	Mean in Original Scale	69.831619
3723	95% MLE (Tiku) UCL		93.426336	SD in Original Scale	62.471706
3724				95% t UCL	95.446845
3725				95% Percentile Bootstrap UCL	95.388889
3726				95% BCA Bootstrap UCL	100.44444
3727					

	A	B	C	D	E
3728	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
3729	k star (bias corrected)		1.4387794	**Data appear Gamma Distributed at 5% Significance Level**	
3730	Theta Star		52.040638		
3731	nu star		46.040942		
3732					
3733	A-D Test Statistic		0.4061018	**Nonparametric Statistics**	
3734	5% A-D Critical Value		0.7527538	Kaplan-Meier (KM) Method	
3735	K-S Test Statistic		0.7527538	Mean	69.795238
3736	5% K-S Critical Value		0.2184478	SD	60.849549
3737	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	14.844437
3738				95% KM (t) UCL	95.61872
3739	**Assuming Gamma Distribution**			95% KM (z) UCL	94.212164
3740	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	95.538118
3741	Minimum		14	95% KM (bootstrap t) UCL	109.94542
3742	Maximum		240	95% KM (BCA) UCL	96.055556
3743	Mean		71.265447	95% KM (Percentile Bootstrap) UCL	96.5
3744	Median		50.15478	95% KM (Chebyshev) UCL	134.50064
3745	SD		61.664984	97.5% KM (Chebyshev) UCL	162.49872
3746	k star		1.5590057	99% KM (Chebyshev) UCL	217.49552
3747	Theta star		45.712115		
3748	Nu star		56.124204	**Potential UCLs to Use**	
3749	AppChi2		39.906149	95% KM (BCA) UCL	96.055556
3750	95% Gamma Approximate UCL		100.22808		
3751	95% Adjusted Gamma UCL		103.63452		
3752	**Note: DL/2 is not a recommended method.**				
3753					
3754	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
3755	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
3756	**For additional insight, the user may want to consult a statistician.**				
3757					
3758					
3759	**LV|UG/KG|ACETONE (gi_sd_nw_2009)**				
3760					
3761	**General Statistics**				
3762	Number of Valid Data		0	Number of Detected Data	0
3763	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3764	Number of Missing Values		7	Percent Non-Detects	NaN%
3765					
3766	**Warning: This data set only has 0 observations!**				
3767	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3768	**The data set for variable LV|UG/KG|ACETONE (gi_sd_nw_2009) was not processed!**				
3769					
3770	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3771	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3772					
3773					
3774					
3775	**LV|UG/KG|ACETONE (gi_sd_nw_2010)**				
3776					
3777	**General Statistics**				
3778	Number of Valid Data		0	Number of Detected Data	0
3779	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3780	Number of Missing Values		4	Percent Non-Detects	NaN%
3781					
3782	**Warning: This data set only has 0 observations!**				
3783	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3784	**The data set for variable LV|UG/KG|ACETONE (gi_sd_nw_2010) was not processed!**				
3785					
3786	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
3787	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3788					
3789					
3790					
3791	**LV|UG/KG|ACETONE (gi_sd_ref_2009)**				
3792					
3793	**General Statistics**				
3794	Number of Valid Data		0	Number of Detected Data	0
3795	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3796	Number of Missing Values		6	Percent Non-Detects	NaN%
3797					
3798	**Warning: This data set only has 0 observations!**				
3799	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3800	**The data set for variable LV|UG/KG|ACETONE (gi_sd_ref_2009) was not processed!**				
3801					
3802	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3803	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3804					
3805					
3806					
3807	**LV|UG/KG|ACETONE (gi_sd_ref_2010)**				
3808					
3809	**General Statistics**				
3810	Number of Valid Data		0	Number of Detected Data	0
3811	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3812	Number of Missing Values		3	Percent Non-Detects	NaN%
3813					
3814	**Warning: This data set only has 0 observations!**				
3815	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
3816	**The data set for variable LV|UG/KG|ACETONE (gi_sd_ref_2010) was not processed!**				
3817					
3818	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
3819	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
3820					
3821					
3822					
3823	**LV|UG/KG|ACETONE (gi_sd_s_2005)**				
3824					
3825	**General Statistics**				
3826	Number of Valid Data		8	Number of Detected Data	4
3827	Number of Distinct Detected Data		4	Number of Non-Detect Data	4
3828				Percent Non-Detects	50.00%
3829					
3830	**Raw Statistics**			**Log-transformed Statistics**	
3831	Minimum Detected		120	Minimum Detected	4.7874917
3832	Maximum Detected		230	Maximum Detected	5.4380793
3833	Mean of Detected		172.5	Mean of Detected	5.1163827
3834	SD of Detected		51.234754	SD of Detected	0.3029259
3835	Minimum Non-Detect		11	Minimum Non-Detect	2.3978953
3836	Maximum Non-Detect		340	Maximum Non-Detect	5.8289456
3837					
3838	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	8
3839	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
3840	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
3841					
3842	**Warning: There are only 4 Distinct Detected Values in this data**				
3843	**Note: It should be noted that even though bootstrap may be performed on this data set**				
3844	**the resulting calculations may not be reliable enough to draw conclusions**				
3845					

	A	B	C	D	E
3846	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
3847					
3848					
3849	**UCL Statistics**				
3850	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
3851	Shapiro Wilk Test Statistic		0.9316327	Shapiro Wilk Test Statistic	0.9333559
3852	5% Shapiro Wilk Critical Value		0.748	5% Shapiro Wilk Critical Value	0.748
3853	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
3854					
3855	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
3856	DL/2 Substitution Method			DL/2 Substitution Method	
3857	Mean		113.75	Mean	4.1341043
3858	SD		87.553249	SD	1.4692166
3859	95% DL/2 (t) UCL		172.3962	95% H-Stat (DL/2) UCL	2438.6222
3860					
3861	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
3862	**MLE method failed to converge properly**			Mean in Log Scale	4.7379534
3863				SD in Log Scale	0.4788755
3864				Mean in Original Scale	126.34401
3865				SD in Original Scale	61.403265
3866				95% t UCL	167.47404
3867				95% Percentile Bootstrap UCL	162.16364
3868				95% BCA Bootstrap UCL	164.77576
3869					
3870	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
3871	k star (bias corrected)		3.8827534	**Data appear Normal at 5% Significance Level**	
3872	Theta Star		44.427235		
3873	nu star		31.062027		
3874					
3875	A-D Test Statistic		0.3166938	**Nonparametric Statistics**	
3876	5% A-D Critical Value		0.6570951	Kaplan-Meier (KM) Method	
3877	K-S Test Statistic		0.6570951	Mean	150
3878	5% K-S Critical Value		0.3945944	SD	42.426407
3879	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	18.516402
3880				95% KM (t) UCL	185.08078
3881	**Assuming Gamma Distribution**			95% KM (z) UCL	180.45677
3882	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	182.33714
3883	Minimum		120	95% KM (bootstrap t) UCL	181.12312
3884	Maximum		230	95% KM (BCA) UCL	230
3885	Mean		171.48006	95% KM (Percentile Bootstrap) UCL	207.5
3886	Median		153.33333	95% KM (Chebyshev) UCL	230.71113
3887	SD		40.361308	97.5% KM (Chebyshev) UCL	265.63489
3888	k star		13.316643	99% KM (Chebyshev) UCL	334.23587
3889	Theta star		12.877124		
3890	Nu star		213.06629	**Potential UCLs to Use**	
3891	AppChi2		180.28606	95% KM (t) UCL	185.08078
3892	95% Gamma Approximate UCL		202.65916	95% KM (Percentile Bootstrap) UCL	207.5
3893	95% Adjusted Gamma UCL		N/A		
3894	**Note: DL/2 is not a recommended method.**				
3895					
3896	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
3897	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
3898	**For additional insight, the user may want to consult a statistician.**				
3899					
3900					
3901	**LV|UG/KG|ACETONE (gi_sd_s_2010)**				
3902					
3903	**General Statistics**				
3904	Number of Valid Data		0	Number of Detected Data	0
3905	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3906	Number of Missing Values		2	Percent Non-Detects	NaN%
3907					
3908	**Warning: This data set only has 0 observations!**				
3909	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
3910	The data set for variable LV|UG/KG|ACETONE (gi_sd_s_2010) was not processed!				
3911					
3912	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3913	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3914					
3915					
3916					
3917	LV|UG/KG|ACETONE (gi_sd_stillwater_2005)				
3918					
3919	General Statistics				
3920	Number of Valid Observations		4	Number of Distinct Observations	4
3921					
3922					
3923	Warning: This data set only has 4 observations!				
3924	Data set is too small to compute reliable and meaningful statistics and estimates!				
3925	The data set for variable LV|UG/KG|ACETONE (gi_sd_stillwater_2005) was not processed!				
3926					
3927	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3928	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3929					
3930					
3931					
3932	LV|UG/KG|ACETONE (gi_sd_stillwater_2009)				
3933					
3934	General Statistics				
3935	Number of Valid Data		0	Number of Detected Data	0
3936	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3937	Number of Missing Values		60	Percent Non-Detects	NaN%
3938					
3939	Warning: This data set only has 0 observations!				
3940	Data set is too small to compute reliable and meaningful statistics and estimates!				
3941	The data set for variable LV|UG/KG|ACETONE (gi_sd_stillwater_2009) was not processed!				
3942					
3943	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3944	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3945					
3946					
3947					
3948	LV|UG/KG|ACETONE (gi_sd_stillwater_2010)				
3949					
3950	General Statistics				
3951	Number of Valid Data		0	Number of Detected Data	0
3952	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
3953	Number of Missing Values		11	Percent Non-Detects	NaN%
3954					
3955	Warning: This data set only has 0 observations!				
3956	Data set is too small to compute reliable and meaningful statistics and estimates!				
3957	The data set for variable LV|UG/KG|ACETONE (gi_sd_stillwater_2010) was not processed!				
3958					
3959	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
3960	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
3961					
3962					

	A	B	C	D	E
3963					
3964	**LV|UG/KG|CARBON DISULFIDE (gi_sd_ne_2005)**				
3965					
3966	**General Statistics**				
3967	Number of Valid Data		36	Number of Detected Data	26
3968	Number of Distinct Detected Data		10	Number of Non-Detect Data	10
3969				Percent Non-Detects	27.78%
3970					
3971	**Raw Statistics**			**Log-transformed Statistics**	
3972	Minimum Detected		1	Minimum Detected	0
3973	Maximum Detected		12	Maximum Detected	2.4849066
3974	Mean of Detected		3.4903846	Mean of Detected	1.0513061
3975	SD of Detected		2.4984803	SD of Detected	0.6281719
3976	Minimum Non-Detect		5	Minimum Non-Detect	1.6094379
3977	Maximum Non-Detect		7	Maximum Non-Detect	1.9459101
3978					
3979	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	33
3980	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	3
3981	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	91.67%
3982					
3983	**UCL Statistics**				
3984	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
3985	Shapiro Wilk Test Statistic		0.7913183	Shapiro Wilk Test Statistic	0.9378815
3986	5% Shapiro Wilk Critical Value		0.92	5% Shapiro Wilk Critical Value	0.92
3987	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
3988					
3989	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
3990	DL/2 Substitution Method			DL/2 Substitution Method	
3991	Mean		3.375	Mean	1.069387
3992	SD		2.1284636	SD	0.5355
3993	95% DL/2 (t) UCL		3.9743656	95% H-Stat (DL/2) UCL	4.0070924
3994					
3995	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
3996	Mean		1.0039636	Mean in Log Scale	1.0018344
3997	SD		4.2809727	SD in Log Scale	0.5585658
3998	95% MLE (t) UCL		2.2094658	Mean in Original Scale	3.2136114
3999	95% MLE (Tiku) UCL		6.92663	SD in Original Scale	2.1921674
4000				95% t UCL	3.8309156
4001				95% Percentile Bootstrap UCL	3.823487
4002				95% BCA Bootstrap UCL	3.9686753
4003					
4004	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
4005	k star (bias corrected)		2.3886354	**Data appear Lognormal at 5% Significance Level**	
4006	Theta Star		1.4612463		
4007	nu star		124.20904		
4008					
4009	A-D Test Statistic		0.9387951	**Nonparametric Statistics**	
4010	5% A-D Critical Value		0.7527626	Kaplan-Meier (KM) Method	
4011	K-S Test Statistic		0.7527626	Mean	3.2250662
4012	5% K-S Critical Value		0.1727188	SD	2.2056495
4013	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.3922314
4014				95% KM (t) UCL	3.8877697
4015	**Assuming Gamma Distribution**			95% KM (z) UCL	3.8702295
4016	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	3.8867301
4017	Minimum		1	95% KM (bootstrap t) UCL	4.0769323
4018	Maximum		12	95% KM (BCA) UCL	3.9031647
4019	Mean		3.5268209	95% KM (Percentile Bootstrap) UCL	3.9084541
4020	Median		3	95% KM (Chebyshev) UCL	4.9347635
4021	SD		2.1384317	97.5% KM (Chebyshev) UCL	5.6745508
4022	k star		3.2605768	99% KM (Chebyshev) UCL	7.1277198
4023	Theta star		1.0816555		
4024	Nu star		234.76153	**Potential UCLs to Use**	
4025	AppChi2		200.29276	95% KM (BCA) UCL	3.9031647
4026	95% Gamma Approximate UCL		4.1337584		
4027	95% Adjusted Gamma UCL		4.1637474		
4028	**Note: DL/2 is not a recommended method.**				
4029					
4030	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
4031	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
4032	**For additional insight, the user may want to consult a statistician.**				
4033					
4034					
4035	**LV|UG/KG|CARBON DISULFIDE (gi_sd_ne_2009)**				
4036					
4037	**General Statistics**				
4038	Number of Valid Data		0	Number of Detected Data	0
4039	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4040	Number of Missing Values		20	Percent Non-Detects	NaN%
4041					
4042	**Warning: This data set only has 0 observations!**				
4043	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4044	**The data set for variable LV|UG/KG|CARBON DISULFIDE (gi_sd_ne_2009) was not processed!**				
4045					
4046	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4047	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4048					
4049					
4050					
4051	**LV|UG/KG|CARBON DISULFIDE (gi_sd_ne_2010)**				
4052					
4053	**General Statistics**				
4054	Number of Valid Data		0	Number of Detected Data	0
4055	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4056	Number of Missing Values		16	Percent Non-Detects	NaN%
4057					
4058	**Warning: This data set only has 0 observations!**				
4059	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4060	**The data set for variable LV|UG/KG|CARBON DISULFIDE (gi_sd_ne_2010) was not processed!**				
4061					
4062	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4063	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4064					
4065					
4066					
4067	**LV|UG/KG|CARBON DISULFIDE (gi_sd_nw_2005)**				
4068					
4069	**General Statistics**				
4070	Number of Valid Data		18	Number of Detected Data	10
4071	Number of Distinct Detected Data		5	Number of Non-Detect Data	8
4072				Percent Non-Detects	44.44%
4073					
4074	**Raw Statistics**			**Log-transformed Statistics**	
4075	Minimum Detected		1	Minimum Detected	0
4076	Maximum Detected		6	Maximum Detected	1.7917595
4077	Mean of Detected		2.15	Mean of Detected	0.5780744
4078	SD of Detected		1.56436	SD of Detected	0.6153507
4079	Minimum Non-Detect		2	Minimum Non-Detect	0.6931472
4080	Maximum Non-Detect		4	Maximum Non-Detect	1.3862944
4081					
4082	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	17
4083	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	1
4084	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	94.44%
4085					
4086	**UCL Statistics**				

	A	B	C	D	E
4087	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
4088	Shapiro Wilk Test Statistic		0.7625722	Shapiro Wilk Test Statistic	0.8694887
4089	5% Shapiro Wilk Critical Value		0.842	5% Shapiro Wilk Critical Value	0.842
4090	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
4091					
4092	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
4093	DL/2 Substitution Method			DL/2 Substitution Method	
4094	Mean		1.8611111	Mean	0.4948156
4095	SD		1.1981058	SD	0.4733676
4096	95% DL/2 (t) UCL		2.3523695	95% H-Stat (DL/2) UCL	2.3071099
4097					
4098	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
4099	**MLE method failed to converge properly**			Mean in Log Scale	0.4370764
4100				SD in Log Scale	0.5184568
4101				Mean in Original Scale	1.7970477
4102				SD in Original Scale	1.2385627
4103				95% t UCL	2.3048946
4104				95% Percentile Bootstrap UCL	2.2962926
4105				95% BCA Bootstrap UCL	2.4589271
4106					
4107	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
4108	k star (bias corrected)		2.0433228	**Data appear Gamma Distributed at 5% Significance Level**	
4109	Theta Star		1.0522077		
4110	nu star		40.866457		
4111					
4112	A-D Test Statistic		0.6305782	**Nonparametric Statistics**	
4113	5% A-D Critical Value		0.7327791	Kaplan-Meier (KM) Method	
4114	K-S Test Statistic		0.7327791	Mean	1.7824653
4115	5% K-S Critical Value		0.2686896	SD	1.2191989
4116	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.3184591
4117				95% KM (t) UCL	2.3364589
4118	**Assuming Gamma Distribution**			95% KM (z) UCL	2.3062839
4119	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	2.3309065
4120	Minimum		1	95% KM (bootstrap t) UCL	2.6642416
4121	Maximum		6	95% KM (BCA) UCL	2.3333333
4122	Mean		2.1476957	95% KM (Percentile Bootstrap) UCL	2.3255208
4123	Median		2.1315337	95% KM (Chebyshev) UCL	3.1705964
4124	SD		1.1383141	97.5% KM (Chebyshev) UCL	3.7712418
4125	k star		4.1724952	99% KM (Chebyshev) UCL	4.9510935
4126	Theta star		0.5147269		
4127	Nu star		150.20983	**Potential UCLs to Use**	
4128	AppChi2		122.88166	95% KM (t) UCL	2.3364589
4129	95% Gamma Approximate UCL		2.6253308		
4130	95% Adjusted Gamma UCL		2.6769892		
4131	**Note: DL/2 is not a recommended method.**				
4132					
4133	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
4134	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
4135	**For additional insight, the user may want to consult a statistician.**				
4136					
4137					
4138	**LV|UG/KG|CARBON DISULFIDE (gi_sd_nw_2009)**				
4139					
4140	**General Statistics**				
4141	Number of Valid Data		0	Number of Detected Data	0
4142	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4143	Number of Missing Values		7	Percent Non-Detects	NaN%
4144					
4145	**Warning: This data set only has 0 observations!**				
4146	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4147	**The data set for variable LV|UG/KG|CARBON DISULFIDE (gi_sd_nw_2009) was not processed!**				
4148					

	A	B	C	D	E
4149	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4150	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4151					
4152					
4153					
4154	LV|UG/KG|CARBON DISULFIDE (gi_sd_nw_2010)				
4155					
4156	General Statistics				
4157	Number of Valid Data		0	Number of Detected Data	0
4158	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4159	Number of Missing Values		4	Percent Non-Detects	NaN%
4160					
4161	Warning: This data set only has 0 observations!				
4162	Data set is too small to compute reliable and meaningful statistics and estimates!				
4163	The data set for variable LV|UG/KG|CARBON DISULFIDE (gi_sd_nw_2010) was not processed!				
4164					
4165	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4166	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4167					
4168					
4169					
4170	LV|UG/KG|CARBON DISULFIDE (gi_sd_ref_2009)				
4171					
4172	General Statistics				
4173	Number of Valid Data		0	Number of Detected Data	0
4174	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4175	Number of Missing Values		6	Percent Non-Detects	NaN%
4176					
4177	Warning: This data set only has 0 observations!				
4178	Data set is too small to compute reliable and meaningful statistics and estimates!				
4179	The data set for variable LV|UG/KG|CARBON DISULFIDE (gi_sd_ref_2009) was not processed!				
4180					
4181	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4182	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4183					
4184					
4185					
4186	LV|UG/KG|CARBON DISULFIDE (gi_sd_ref_2010)				
4187					
4188	General Statistics				
4189	Number of Valid Data		0	Number of Detected Data	0
4190	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4191	Number of Missing Values		3	Percent Non-Detects	NaN%
4192					
4193	Warning: This data set only has 0 observations!				
4194	Data set is too small to compute reliable and meaningful statistics and estimates!				
4195	The data set for variable LV|UG/KG|CARBON DISULFIDE (gi_sd_ref_2010) was not processed!				
4196					
4197	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
4198	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4199					
4200					
4201					
4202	**LV|UG/KG|CARBON DISULFIDE (gi_sd_s_2005)**				
4203					
4204	**General Statistics**				
4205	Number of Valid Data		8	Number of Detected Data	3
4206	Number of Distinct Detected Data		2	Number of Non-Detect Data	5
4207				Percent Non-Detects	62.50%
4208					
4209	**Raw Statistics**			**Log-transformed Statistics**	
4210	Minimum Detected		1	Minimum Detected	0
4211	Maximum Detected		3	Maximum Detected	1.0986123
4212	Mean of Detected		1.6666667	Mean of Detected	0.3662041
4213	SD of Detected		1.1547005	SD of Detected	0.6342841
4214	Minimum Non-Detect		4	Minimum Non-Detect	1.3862944
4215	Maximum Non-Detect		6	Maximum Non-Detect	1.7917595
4216					
4217	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	8
4218	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
4219	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
4220					
4221	**Warning: Data set has only 2 Distinct Detected Values.**				
4222	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
4223	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
4224					
4225	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
4226					
4227	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
4228	**Those methods will return a 'N/A' value on your output display!**				
4229					
4230	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
4231	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
4232	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
4233					
4234					
4235	**UCL Statistics**				
4236	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
4237	Shapiro Wilk Test Statistic		0.7499856	Shapiro Wilk Test Statistic	0.7499856
4238	5% Shapiro Wilk Critical Value		0.767	5% Shapiro Wilk Critical Value	0.767
4239	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
4240					
4241	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
4242	DL/2 Substitution Method			DL/2 Substitution Method	
4243	Mean		2.3125	Mean	0.7504859
4244	SD		0.8838835	SD	0.4843265
4245	95% DL/2 (t) UCL		2.9045558	95% H-Stat (DL/2) UCL	3.6468467
4246					
4247	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
4248	**MLE method failed to converge properly**			Mean in Log Scale	0.3662041
4249				SD in Log Scale	0.4485066
4250				Mean in Original Scale	1.5821852
4251				SD in Original Scale	0.7697295
4252				95% t UCL	2.0977767
4253				95% Percentile Bootstrap UCL	2.040356
4254				95% BCA Bootstrap UCL	2.040356
4255					

	A	B	C	D	E
4256	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
4257	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
4258	Theta Star		N/A		
4259	nu star		N/A		
4260					
4261	A-D Test Statistic		N/A	**Nonparametric Statistics**	
4262	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
4263	K-S Test Statistic		N/A	Mean	1.6666667
4264	5% K-S Critical Value		N/A	SD	0.942809
4265	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.6666667
4266				95% KM (t) UCL	2.9297191
4267	**Assuming Gamma Distribution**			95% KM (z) UCL	2.7632358
4268	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	3.113675
4269	Minimum		N/A	95% KM (bootstrap t) UCL	N/A
4270	Maximum		N/A	95% KM (BCA) UCL	3
4271	Mean		N/A	95% KM (Percentile Bootstrap) UCL	3
4272	Median		N/A	95% KM (Chebyshev) UCL	4.5725993
4273	SD		N/A	97.5% KM (Chebyshev) UCL	5.8299987
4274	k star		N/A	99% KM (Chebyshev) UCL	8.2999162
4275	Theta star		N/A		
4276	Nu star		N/A	**Potential UCLs to Use**	
4277	AppChi2		N/A	95% KM (t) UCL	2.9297191
4278	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	3
4279	95% Adjusted Gamma UCL		N/A		
4280	**Note: DL/2 is not a recommended method.**				
4281					
4282	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
4283	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
4284	**For additional insight, the user may want to consult a statistician.**				
4285					
4286					
4287	**LV|UG/KG|CARBON DISULFIDE (gi_sd_s_2010)**				
4288					
4289	**General Statistics**				
4290	Number of Valid Data		0	Number of Detected Data	0
4291	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4292	Number of Missing Values		2	Percent Non-Detects	NaN%
4293					
4294	**Warning: This data set only has 0 observations!**				
4295	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4296	**The data set for variable LV|UG/KG|CARBON DISULFIDE (gi_sd_s_2010) was not processed!**				
4297					
4298	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4299	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4300					
4301					
4302					
4303	**LV|UG/KG|CARBON DISULFIDE (gi_sd_stillwater_2005)**				
4304					
4305	**General Statistics**				
4306	Number of Valid Observations		4	Number of Distinct Observations	4
4307					
4308					
4309	**Warning: This data set only has 4 observations!**				
4310	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4311	**The data set for variable LV|UG/KG|CARBON DISULFIDE (gi_sd_stillwater_2005) was not processed!**				
4312					

	A	B	C	D	E
4313	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4314	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4315					
4316					
4317					
4318	**LV|UG/KG|CARBON DISULFIDE (gi_sd_stillwater_2009)**				
4319					
4320	**General Statistics**				
4321	Number of Valid Data		0	Number of Detected Data	0
4322	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4323	Number of Missing Values		60	Percent Non-Detects	NaN%
4324					
4325	**Warning: This data set only has 0 observations!**				
4326	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4327	**The data set for variable LV|UG/KG|CARBON DISULFIDE (gi_sd_stillwater_2009) was not processed!**				
4328					
4329	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4330	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4331					
4332					
4333					
4334	**LV|UG/KG|CARBON DISULFIDE (gi_sd_stillwater_2010)**				
4335					
4336	**General Statistics**				
4337	Number of Valid Data		0	Number of Detected Data	0
4338	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4339	Number of Missing Values		11	Percent Non-Detects	NaN%
4340					
4341	**Warning: This data set only has 0 observations!**				
4342	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4343	**The data set for variable LV|UG/KG|CARBON DISULFIDE (gi_sd_stillwater_2010) was not processed!**				
4344					
4345	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4346	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4347					
4348					
4349					
4350	**LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_ne_2005)**				
4351					
4352	**General Statistics**				
4353	Number of Valid Data		36	Number of Detected Data	3
4354	Number of Distinct Detected Data		3	Number of Non-Detect Data	33
4355				Percent Non-Detects	91.67%
4356					
4357	**Raw Statistics**			**Log-transformed Statistics**	
4358	Minimum Detected		2	Minimum Detected	0.6931472
4359	Maximum Detected		6	Maximum Detected	1.7917595
4360	Mean of Detected		3.5833333	Mean of Detected	1.1655025
4361	SD of Detected		2.1262251	SD of Detected	0.5652447
4362	Minimum Non-Detect		4	Minimum Non-Detect	1.3862944
4363	Maximum Non-Detect		9	Maximum Non-Detect	2.1972246
4364					
4365	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
4366	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
4367	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%

	A	B	C	D	E
4368					
4369	**Warning: There are only 3 Distinct Detected Values in this data set**				
4370	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
4371	**Those methods will return a 'N/A' value on your output display!**				
4372					
4373	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
4374	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
4375	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
4376					
4377					
4378	**UCL Statistics**				
4379	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
4380	Shapiro Wilk Test Statistic		0.8847757	Shapiro Wilk Test Statistic	0.9443819
4381	5% Shapiro Wilk Critical Value		0.767	5% Shapiro Wilk Critical Value	0.767
4382	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
4383					
4384	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
4385	DL/2 Substitution Method			DL/2 Substitution Method	
4386	Mean		3.1666667	Mean	1.1281775
4387	SD		0.7582875	SD	0.2194225
4388	95% DL/2 (t) UCL		3.380197	95% H-Stat (DL/2) UCL	3.3766604
4389					
4390	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
4391	**MLE method failed to converge properly**			Mean in Log Scale	0.887342
4392				SD in Log Scale	0.3359825
4393				Mean in Original Scale	2.5706387
4394				SD in Original Scale	0.9375836
4395				95% t UCL	2.8346579
4396				95% Percentile Bootstrap UCL	2.8347943
4397				95% BCA Bootstrap UCL	2.8602286
4398					
4399	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
4400	k star (bias corrected)		N/A	**Data appear Normal at 5% Significance Level**	
4401	Theta Star		N/A		
4402	nu star		N/A		
4403					
4404	A-D Test Statistic		N/A	**Nonparametric Statistics**	
4405	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
4406	K-S Test Statistic		N/A	Mean	2.5260417
4407	5% K-S Critical Value		N/A	SD	0.8120826
4408	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.3600796
4409				95% KM (t) UCL	3.1344223
4410	**Assuming Gamma Distribution**			95% KM (z) UCL	3.1183199
4411	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	3.4093527
4412	Minimum		N/A	95% KM (bootstrap t) UCL	3.1761854
4413	Maximum		N/A	95% KM (BCA) UCL	6
4414	Mean		N/A	95% KM (Percentile Bootstrap) UCL	6
4415	Median		N/A	95% KM (Chebyshev) UCL	4.0955923
4416	SD		N/A	97.5% KM (Chebyshev) UCL	4.7747381
4417	k star		N/A	99% KM (Chebyshev) UCL	6.1087885
4418	Theta star		N/A		
4419	Nu star		N/A	**Potential UCLs to Use**	
4420	AppChi2		N/A	95% KM (t) UCL	3.1344223
4421	95% Gamma Approximate UCL		N/A	95% KM (Percentile Bootstrap) UCL	6
4422	95% Adjusted Gamma UCL		N/A		
4423	**Note: DL/2 is not a recommended method.**				
4424					
4425	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
4426	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
4427	**For additional insight, the user may want to consult a statistician.**				

	A	B	C	D	E
4428					
4429					
4430	LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_ne_2009)				
4431					
4432	General Statistics				
4433	Number of Valid Data		0	Number of Detected Data	0
4434	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4435	Number of Missing Values		20	Percent Non-Detects	NaN%
4436					
4437	Warning: This data set only has 0 observations!				
4438	Data set is too small to compute reliable and meaningful statistics and estimates!				
4439	The data set for variable LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_ne_2009) was not processed!				
4440					
4441	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4442	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4443					
4444					
4445					
4446	LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_ne_2010)				
4447					
4448	General Statistics				
4449	Number of Valid Data		0	Number of Detected Data	0
4450	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4451	Number of Missing Values		16	Percent Non-Detects	NaN%
4452					
4453	Warning: This data set only has 0 observations!				
4454	Data set is too small to compute reliable and meaningful statistics and estimates!				
4455	The data set for variable LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_ne_2010) was not processed!				
4456					
4457	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4458	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4459					
4460					
4461					
4462	LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_nw_2005)				
4463					
4464	General Statistics				
4465	Number of Valid Data		18	Number of Detected Data	0
4466	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
4467				Percent Non-Detects	100.00%
4468					
4469	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
4470	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
4471	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
4472					
4473	The data set for variable LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_nw_2005) was not processed!				
4474					
4475					
4476					
4477	LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_nw_2009)				
4478					

	A	B	C	D	E
4479	**General Statistics**				
4480	Number of Valid Data		0	Number of Detected Data	0
4481	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4482	Number of Missing Values		7	Percent Non-Detects	NaN%
4483					
4484	**Warning: This data set only has 0 observations!**				
4485	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4486	**The data set for variable LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_nw_2009) was not processed!**				
4487					
4488	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4489	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4490					
4491					
4492					
4493	**LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_nw_2010)**				
4494					
4495	**General Statistics**				
4496	Number of Valid Data		0	Number of Detected Data	0
4497	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4498	Number of Missing Values		4	Percent Non-Detects	NaN%
4499					
4500	**Warning: This data set only has 0 observations!**				
4501	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4502	**The data set for variable LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_nw_2010) was not processed!**				
4503					
4504	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4505	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4506					
4507					
4508					
4509	**LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_ref_2009)**				
4510					
4511	**General Statistics**				
4512	Number of Valid Data		0	Number of Detected Data	0
4513	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4514	Number of Missing Values		6	Percent Non-Detects	NaN%
4515					
4516	**Warning: This data set only has 0 observations!**				
4517	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4518	**The data set for variable LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_ref_2009) was not processed!**				
4519					
4520	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4521	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4522					
4523					
4524					
4525	**LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_ref_2010)**				
4526					
4527	**General Statistics**				
4528	Number of Valid Data		0	Number of Detected Data	0
4529	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4530	Number of Missing Values		3	Percent Non-Detects	NaN%

	A	B	C	D	E
4531					
4532	Warning: This data set only has 0 observations!				
4533	Data set is too small to compute reliable and meaningful statistics and estimates!				
4534	The data set for variable LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_ref_2010) was not processed!				
4535					
4536	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4537	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4538					
4539					
4540					
4541	LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_s_2005)				
4542					
4543	General Statistics				
4544	Number of Valid Data		8	Number of Detected Data	0
4545	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
4546				Percent Non-Detects	100.00%
4547					
4548	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
4549	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
4550	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
4551					
4552	The data set for variable LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_s_2005) was not processed!				
4553					
4554					
4555					
4556	LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_s_2010)				
4557					
4558	General Statistics				
4559	Number of Valid Data		0	Number of Detected Data	0
4560	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4561	Number of Missing Values		2	Percent Non-Detects	NaN%
4562					
4563	Warning: This data set only has 0 observations!				
4564	Data set is too small to compute reliable and meaningful statistics and estimates!				
4565	The data set for variable LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_s_2010) was not processed!				
4566					
4567	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4568	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4569					
4570					
4571					
4572	LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_stillwater_2005)				
4573					
4574	General Statistics				
4575	Number of Valid Data		4	Number of Detected Data	0
4576	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
4577				Percent Non-Detects	100.00%
4578					
4579	Warning: This data set only has 4 observations!				
4580	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
4581	**The data set for variable LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_stillwater_2005) was not processed!**				
4582					
4583	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4584	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4585					
4586					
4587					
4588	**LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_stillwater_2009)**				
4589					
4590	**General Statistics**				
4591	Number of Valid Data		0	Number of Detected Data	0
4592	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4593	Number of Missing Values		60	Percent Non-Detects	NaN%
4594					
4595	**Warning: This data set only has 0 observations!**				
4596	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4597	**The data set for variable LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_stillwater_2009) was not processed!**				
4598					
4599	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4600	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4601					
4602					
4603					
4604	**LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_stillwater_2010)**				
4605					
4606	**General Statistics**				
4607	Number of Valid Data		0	Number of Detected Data	0
4608	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4609	Number of Missing Values		11	Percent Non-Detects	NaN%
4610					
4611	**Warning: This data set only has 0 observations!**				
4612	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4613	**The data set for variable LV|UG/KG|TOTAL CHLORINATED ETHENES (gi_sd_stillwater_2010) was not processed!**				
4614					
4615	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4616	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4617					
4618					
4619					
4620	**LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_ne_2005)**				
4621					
4622	**General Statistics**				
4623	Number of Valid Data		36	Number of Detected Data	3
4624	Number of Distinct Detected Data		3	Number of Non-Detect Data	33
4625				Percent Non-Detects	91.67%
4626					
4627	**Raw Statistics**			**Log-transformed Statistics**	
4628	Minimum Detected		2	Minimum Detected	0.6931472
4629	Maximum Detected		6	Maximum Detected	1.7917595
4630	Mean of Detected		3.5833333	Mean of Detected	1.1655025
4631	SD of Detected		2.1262251	SD of Detected	0.5652447
4632	Minimum Non-Detect		4	Minimum Non-Detect	1.3862944
4633	Maximum Non-Detect		9	Maximum Non-Detect	2.1972246
4634					

	A	B	C	D	E
4635	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
4636	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
4637	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
4638					
4639	**Warning: There are only 3 Distinct Detected Values in this data set**				
4640	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
4641	**Those methods will return a 'N/A' value on your output display!**				
4642					
4643	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
4644	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
4645	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
4646					
4647					
4648	**UCL Statistics**				
4649	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
4650	Shapiro Wilk Test Statistic		0.8847757	Shapiro Wilk Test Statistic	0.9443819
4651	5% Shapiro Wilk Critical Value		0.767	5% Shapiro Wilk Critical Value	0.767
4652	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
4653					
4654	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
4655	DL/2 Substitution Method			DL/2 Substitution Method	
4656	Mean		3.1666667	Mean	1.1281775
4657	SD		0.7582875	SD	0.2194225
4658	95% DL/2 (t) UCL		3.380197	95% H-Stat (DL/2) UCL	3.3766604
4659					
4660	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
4661	**MLE method failed to converge properly**			Mean in Log Scale	0.887342
4662				SD in Log Scale	0.3359825
4663				Mean in Original Scale	2.5706387
4664				SD in Original Scale	0.9375836
4665				95% t UCL	2.8346579
4666				95% Percentile Bootstrap UCL	2.8309674
4667				95% BCA Bootstrap UCL	2.8663206
4668					
4669	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
4670	k star (bias corrected)		N/A	**Data appear Normal at 5% Significance Level**	
4671	Theta Star		N/A		
4672	nu star		N/A		
4673					
4674	A-D Test Statistic		N/A	**Nonparametric Statistics**	
4675	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
4676	K-S Test Statistic		N/A	Mean	2.5260417
4677	5% K-S Critical Value		N/A	SD	0.8120826
4678	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.3600796
4679				95% KM (t) UCL	3.1344223
4680	**Assuming Gamma Distribution**			95% KM (z) UCL	3.1183199
4681	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	3.4093527
4682	Minimum		N/A	95% KM (bootstrap t) UCL	3.1761854
4683	Maximum		N/A	95% KM (BCA) UCL	N/A
4684	Mean		N/A	95% KM (Percentile Bootstrap) UCL	6
4685	Median		N/A	95% KM (Chebyshev) UCL	4.0955923
4686	SD		N/A	97.5% KM (Chebyshev) UCL	4.7747381
4687	k star		N/A	99% KM (Chebyshev) UCL	6.1087885
4688	Theta star		N/A		
4689	Nu star		N/A	**Potential UCLs to Use**	
4690	AppChi2		N/A	95% KM (t) UCL	3.1344223
4691	95% Gamma Approximate UCL		N/A	95% KM (Percentile Bootstrap) UCL	6
4692	95% Adjusted Gamma UCL		N/A		
4693	**Note: DL/2 is not a recommended method.**				
4694					
4695	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
4696	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).				
4697	For additional insight, the user may want to consult a statistician.				
4698					
4699					
4700	LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_ne_2009)				
4701					
4702	General Statistics				
4703	Number of Valid Data		0	Number of Detected Data	0
4704	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4705	Number of Missing Values		20	Percent Non-Detects	NaN%
4706					
4707	Warning: This data set only has 0 observations!				
4708	Data set is too small to compute reliable and meaningful statistics and estimates!				
4709	The data set for variable LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_ne_2009) was not processed!				
4710					
4711	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4712	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4713					
4714					
4715					
4716	LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_ne_2010)				
4717					
4718	General Statistics				
4719	Number of Valid Data		0	Number of Detected Data	0
4720	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4721	Number of Missing Values		16	Percent Non-Detects	NaN%
4722					
4723	Warning: This data set only has 0 observations!				
4724	Data set is too small to compute reliable and meaningful statistics and estimates!				
4725	The data set for variable LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_ne_2010) was not processed!				
4726					
4727	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4728	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4729					
4730					
4731					
4732	LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_nw_2005)				
4733					
4734	General Statistics				
4735	Number of Valid Data		18	Number of Detected Data	0
4736	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
4737				Percent Non-Detects	100.00%
4738					
4739	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
4740	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
4741	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
4742					
4743	The data set for variable LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_nw_2005) was not processed!				
4744					

	A	B	C	D	E
4745					
4746					
4747	LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_nw_2009)				
4748					
4749	General Statistics				
4750	Number of Valid Data		0	Number of Detected Data	0
4751	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4752	Number of Missing Values		7	Percent Non-Detects	NaN%
4753					
4754	Warning: This data set only has 0 observations!				
4755	Data set is too small to compute reliable and meaningful statistics and estimates!				
4756	The data set for variable LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_nw_2009) was not processed!				
4757					
4758	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4759	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4760					
4761					
4762					
4763	LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_nw_2010)				
4764					
4765	General Statistics				
4766	Number of Valid Data		0	Number of Detected Data	0
4767	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4768	Number of Missing Values		4	Percent Non-Detects	NaN%
4769					
4770	Warning: This data set only has 0 observations!				
4771	Data set is too small to compute reliable and meaningful statistics and estimates!				
4772	The data set for variable LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_nw_2010) was not processed!				
4773					
4774	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4775	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4776					
4777					
4778					
4779	LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_ref_2009)				
4780					
4781	General Statistics				
4782	Number of Valid Data		0	Number of Detected Data	0
4783	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4784	Number of Missing Values		6	Percent Non-Detects	NaN%
4785					
4786	Warning: This data set only has 0 observations!				
4787	Data set is too small to compute reliable and meaningful statistics and estimates!				
4788	The data set for variable LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_ref_2009) was not processed!				
4789					
4790	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4791	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4792					
4793					
4794					
4795	LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_ref_2010)				

	A	B	C	D	E
4796					
4797	General Statistics				
4798	Number of Valid Data		0	Number of Detected Data	0
4799	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4800	Number of Missing Values		3	Percent Non-Detects	NaN%
4801					
4802	Warning: This data set only has 0 observations!				
4803	Data set is too small to compute reliable and meaningful statistics and estimates!				
4804	The data set for variable LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_ref_2010) was not processed!				
4805					
4806	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4807	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4808					
4809					
4810					
4811	LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_s_2005)				
4812					
4813	General Statistics				
4814	Number of Valid Data		8	Number of Detected Data	0
4815	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
4816				Percent Non-Detects	100.00%
4817					
4818	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
4819	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
4820	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
4821					
4822	The data set for variable LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_s_2005) was not processed!				
4823					
4824					
4825					
4826	LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_s_2010)				
4827					
4828	General Statistics				
4829	Number of Valid Data		0	Number of Detected Data	0
4830	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4831	Number of Missing Values		2	Percent Non-Detects	NaN%
4832					
4833	Warning: This data set only has 0 observations!				
4834	Data set is too small to compute reliable and meaningful statistics and estimates!				
4835	The data set for variable LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_s_2010) was not processed!				
4836					
4837	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
4838	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
4839					
4840					
4841					
4842	LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_stillwater_2005)				
4843					
4844	General Statistics				
4845	Number of Valid Data		4	Number of Detected Data	1
4846	Number of Distinct Detected Data		1	Number of Non-Detect Data	3
4847				Percent Non-Detects	75.00%

	A	B	C	D	E
4848					
4849	**Warning: This data set only has 4 observations!**				
4850	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4851	**The data set for variable LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_stillwater_2005) was not processed!**				
4852					
4853	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4854	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4855					
4856					
4857					
4858	**LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_stillwater_2009)**				
4859					
4860	**General Statistics**				
4861	Number of Valid Data		0	Number of Detected Data	0
4862	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4863	Number of Missing Values		60	Percent Non-Detects	NaN%
4864					
4865	**Warning: This data set only has 0 observations!**				
4866	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4867	**The data set for variable LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_stillwater_2009) was not processed!**				
4868					
4869	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4870	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4871					
4872					
4873					
4874	**LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_stillwater_2010)**				
4875					
4876	**General Statistics**				
4877	Number of Valid Data		0	Number of Detected Data	0
4878	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4879	Number of Missing Values		11	Percent Non-Detects	NaN%
4880					
4881	**Warning: This data set only has 0 observations!**				
4882	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4883	**The data set for variable LV|UG/KG|TOTAL CHLORINATED VOCS (gi_sd_stillwater_2010) was not processed!**				
4884					
4885	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4886	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4887					
4888					
4889					
4890	**LV|UG/KG|TRICHLOROETHENE (gi_sd_ne_2005)**				
4891					
4892	**General Statistics**				
4893	Number of Valid Data		36	Number of Detected Data	2
4894	Number of Distinct Detected Data		2	Number of Non-Detect Data	34
4895				Percent Non-Detects	94.44%
4896					
4897	**Raw Statistics**			**Log-transformed Statistics**	
4898	Minimum Detected		2	Minimum Detected	0.6931472
4899	Maximum Detected		2.75	Maximum Detected	1.0116009

	A	B	C	D	E
4900	Mean of Detected		2.375	Mean of Detected	0.852374
4901	SD of Detected		0.5303301	SD of Detected	0.2251808
4902	Minimum Non-Detect		4	Minimum Non-Detect	1.3862944
4903	Maximum Non-Detect		9	Maximum Non-Detect	2.1972246
4904					
4905	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
4906	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
4907	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
4908					
4909	**Warning: Data set has only 2 Distinct Detected Values.**				
4910	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
4911	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
4912					
4913	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
4914					
4915	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
4916	**Those methods will return a 'N/A' value on your output display!**				
4917					
4918	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
4919	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
4920	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
4921					
4922					
4923	**UCL Statistics**				
4924	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
4925	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
4926	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
4927	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
4928					
4929	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
4930	DL/2 Substitution Method			DL/2 Substitution Method	
4931	Mean		3.0694444	Mean	1.1038589
4932	SD		0.590433	SD	0.1903668
4933	95% DL/2 (t) UCL		3.2357077	95% H-Stat (DL/2) UCL	3.2467034
4934					
4935	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
4936	**MLE method failed to converge properly**			Mean in Log Scale	N/A
4937				SD in Log Scale	N/A
4938				Mean in Original Scale	N/A
4939				SD in Original Scale	N/A
4940				95% t UCL	N/A
4941				95% Percentile Bootstrap UCL	N/A
4942				95% BCA Bootstrap UCL	N/A
4943					
4944	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
4945	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
4946	Theta Star		N/A		
4947	nu star		N/A		
4948					
4949	A-D Test Statistic		N/A	**Nonparametric Statistics**	
4950	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
4951	K-S Test Statistic		N/A	Mean	2.375
4952	5% K-S Critical Value		N/A	SD	0.375
4953	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.375
4954				95% KM (t) UCL	3.0085897
4955	**Assuming Gamma Distribution**			95% KM (z) UCL	2.9918201
4956	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	3.2584986
4957	Minimum		N/A	95% KM (bootstrap t) UCL	N/A

	A	B	C	D	E
4958	Maximum		N/A	95% KM (BCA) UCL	2.75
4959	Mean		N/A	95% KM (Percentile Bootstrap) UCL	2.75
4960	Median		N/A	95% KM (Chebyshev) UCL	4.0095871
4961	SD		N/A	97.5% KM (Chebyshev) UCL	4.7168742
4962	k star		N/A	99% KM (Chebyshev) UCL	6.1062029
4963	Theta star		N/A		
4964	Nu star		N/A	**Potential UCLs to Use**	
4965	AppChi2		N/A	95% KM (t) UCL	3.0085897
4966	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	2.75
4967	95% Adjusted Gamma UCL		N/A		
4968	**Warning: Recommended UCL exceeds the maximum observation**				
4969	**Note: DL/2 is not a recommended method.**				
4970					
4971	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
4972	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
4973	**For additional insight, the user may want to consult a statistician.**				
4974					
4975					
4976	**LV|UG/KG|TRICHLOROETHENE (gi_sd_ne_2009)**				
4977					
4978	**General Statistics**				
4979	Number of Valid Data		0	Number of Detected Data	0
4980	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4981	Number of Missing Values		20	Percent Non-Detects	NaN%
4982					
4983	**Warning: This data set only has 0 observations!**				
4984	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
4985	**The data set for variable LV|UG/KG|TRICHLOROETHENE (gi_sd_ne_2009) was not processed!**				
4986					
4987	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
4988	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
4989					
4990					
4991					
4992	**LV|UG/KG|TRICHLOROETHENE (gi_sd_ne_2010)**				
4993					
4994	**General Statistics**				
4995	Number of Valid Data		0	Number of Detected Data	0
4996	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
4997	Number of Missing Values		16	Percent Non-Detects	NaN%
4998					
4999	**Warning: This data set only has 0 observations!**				
5000	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
5001	**The data set for variable LV|UG/KG|TRICHLOROETHENE (gi_sd_ne_2010) was not processed!**				
5002					
5003	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
5004	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
5005					
5006					
5007					
5008	**LV|UG/KG|TRICHLOROETHENE (gi_sd_nw_2005)**				
5009					
5010	**General Statistics**				
5011	Number of Valid Data		18	Number of Detected Data	0

	A	B	C	D	E
5012	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
5013				Percent Non-Detects	100.00%
5014					
5015	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
5016	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
5017	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
5018					
5019	**The data set for variable LV|UG/KG|TRICHLOROETHENE (gi_sd_nw_2005) was not processed!**				
5020					
5021					
5022					
5023	LV|UG/KG|TRICHLOROETHENE (gi_sd_nw_2009)				
5024					
5025	**General Statistics**				
5026	Number of Valid Data		0	Number of Detected Data	0
5027	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
5028	Number of Missing Values		7	Percent Non-Detects	NaN%
5029					
5030	**Warning: This data set only has 0 observations!**				
5031	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
5032	**The data set for variable LV|UG/KG|TRICHLOROETHENE (gi_sd_nw_2009) was not processed!**				
5033					
5034	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
5035	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
5036					
5037					
5038					
5039	LV|UG/KG|TRICHLOROETHENE (gi_sd_nw_2010)				
5040					
5041	**General Statistics**				
5042	Number of Valid Data		0	Number of Detected Data	0
5043	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
5044	Number of Missing Values		4	Percent Non-Detects	NaN%
5045					
5046	**Warning: This data set only has 0 observations!**				
5047	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
5048	**The data set for variable LV|UG/KG|TRICHLOROETHENE (gi_sd_nw_2010) was not processed!**				
5049					
5050	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
5051	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
5052					
5053					
5054					
5055	LV|UG/KG|TRICHLOROETHENE (gi_sd_ref_2009)				
5056					
5057	**General Statistics**				
5058	Number of Valid Data		0	Number of Detected Data	0
5059	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
5060	Number of Missing Values		6	Percent Non-Detects	NaN%
5061					
5062	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
5063	Data set is too small to compute reliable and meaningful statistics and estimates!				
5064	The data set for variable LV|UG/KG|TRICHLOROETHENE (gi_sd_ref_2009) was not processed!				
5065					
5066	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
5067	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
5068					
5069					
5070					
5071	LV|UG/KG|TRICHLOROETHENE (gi_sd_ref_2010)				
5072					
5073	General Statistics				
5074	Number of Valid Data		0	Number of Detected Data	0
5075	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
5076	Number of Missing Values		3	Percent Non-Detects	NaN%
5077					
5078	Warning: This data set only has 0 observations!				
5079	Data set is too small to compute reliable and meaningful statistics and estimates!				
5080	The data set for variable LV|UG/KG|TRICHLOROETHENE (gi_sd_ref_2010) was not processed!				
5081					
5082	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
5083	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
5084					
5085					
5086					
5087	LV|UG/KG|TRICHLOROETHENE (gi_sd_s_2005)				
5088					
5089	General Statistics				
5090	Number of Valid Data		8	Number of Detected Data	0
5091	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
5092				Percent Non-Detects	100.00%
5093					
5094	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
5095	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
5096	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
5097					
5098	The data set for variable LV|UG/KG|TRICHLOROETHENE (gi_sd_s_2005) was not processed!				
5099					
5100					
5101					
5102	LV|UG/KG|TRICHLOROETHENE (gi_sd_s_2010)				
5103					
5104	General Statistics				
5105	Number of Valid Data		0	Number of Detected Data	0
5106	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
5107	Number of Missing Values		2	Percent Non-Detects	NaN%
5108					
5109	Warning: This data set only has 0 observations!				
5110	Data set is too small to compute reliable and meaningful statistics and estimates!				
5111	The data set for variable LV|UG/KG|TRICHLOROETHENE (gi_sd_s_2010) was not processed!				
5112					

	A	B	C	D	E
5113	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
5114	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
5115					
5116					
5117					
5118	LV|UG/KG|TRICHLOROETHENE (gi_sd_stillwater_2005)				
5119					
5120	General Statistics				
5121	Number of Valid Data		4	Number of Detected Data	0
5122	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
5123				Percent Non-Detects	100.00%
5124					
5125	Warning: This data set only has 4 observations!				
5126	Data set is too small to compute reliable and meaningful statistics and estimates!				
5127	The data set for variable LV|UG/KG|TRICHLOROETHENE (gi_sd_stillwater_2005) was not processed!				
5128					
5129	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
5130	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
5131					
5132					
5133					
5134	LV|UG/KG|TRICHLOROETHENE (gi_sd_stillwater_2009)				
5135					
5136	General Statistics				
5137	Number of Valid Data		0	Number of Detected Data	0
5138	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
5139	Number of Missing Values		60	Percent Non-Detects	NaN%
5140					
5141	Warning: This data set only has 0 observations!				
5142	Data set is too small to compute reliable and meaningful statistics and estimates!				
5143	The data set for variable LV|UG/KG|TRICHLOROETHENE (gi_sd_stillwater_2009) was not processed!				
5144					
5145	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
5146	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
5147					
5148					
5149					
5150	LV|UG/KG|TRICHLOROETHENE (gi_sd_stillwater_2010)				
5151					
5152	General Statistics				
5153	Number of Valid Data		0	Number of Detected Data	0
5154	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
5155	Number of Missing Values		11	Percent Non-Detects	NaN%
5156					
5157	Warning: This data set only has 0 observations!				
5158	Data set is too small to compute reliable and meaningful statistics and estimates!				
5159	The data set for variable LV|UG/KG|TRICHLOROETHENE (gi_sd_stillwater_2010) was not processed!				
5160					
5161	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
5162	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
5163					
5164					
5165					
5166	**M|MG/KG|ALUMINUM (gi_sd_ne_2005)**				
5167					
5168	**General Statistics**				
5169	Number of Valid Observations		36	Number of Distinct Observations	36
5170					
5171	**Raw Statistics**			**Log-transformed Statistics**	
5172	Minimum		4290	Minimum of Log Data	8.364042
5173	Maximum		7640	Maximum of Log Data	8.9411529
5174	Mean		5713.0556	Mean of log Data	8.6405502
5175	Median		5635	SD of log Data	0.1432581
5176	SD		818.45087		
5177	Coefficient of Variation		0.1432597		
5178	Skewness		0.2754526		
5179					
5180	**Relevant UCL Statistics**				
5181	**Normal Distribution Test**			**Lognormal Distribution Test**	
5182	Shapiro Wilk Test Statistic		0.9782957	Shapiro Wilk Test Statistic	0.9817505
5183	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
5184	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
5185					
5186	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
5187	95% Student's-t UCL		5943.5276	95% H-UCL	5956.48
5188	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	6310.1256
5189	95% Adjusted-CLT UCL (Chen-1995)		5944.1189	97.5% Chebyshev (MVUE) UCL	6568.4421
5190	95% Modified-t UCL (Johnson-1978)		5944.5713	99% Chebyshev (MVUE) UCL	7075.8547
5191					
5192	**Gamma Distribution Test**			**Data Distribution**	
5193	k star (bias corrected)		46.192558	**Data appear Normal at 5% Significance Level**	
5194	Theta Star		123.67913		
5195	MLE of Mean		5713.0556		
5196	MLE of Standard Deviation		840.58656		
5197	nu star		3325.8642		
5198	Approximate Chi Square Value (.05)		3192.8596	**Nonparametric Statistics**	
5199	Adjusted Level of Significance		0.0428	95% CLT UCL	5937.4275
5200	Adjusted Chi Square Value		3186.9722	95% Jackknife UCL	5943.5276
5201				95% Standard Bootstrap UCL	5929.7509
5202	Anderson-Darling Test Statistic		0.1520241	95% Bootstrap-t UCL	5946.6093
5203	Anderson-Darling 5% Critical Value		0.7449683	95% Hall's Bootstrap UCL	5956.6605
5204	Kolmogorov-Smirnov Test Statistic		0.0703865	95% Percentile Bootstrap UCL	5936.1111
5205	Kolmogorov-Smirnov 5% Critical Value		0.1463695	95% BCA Bootstrap UCL	5948.0556
5206	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	6307.6463
5207				97.5% Chebyshev(Mean, Sd) UCL	6564.9262
5208	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	7070.3028
5209	95% Approximate Gamma UCL		5951.0436		
5210	95% Adjusted Gamma UCL		5962.0371		
5211					
5212	**Potential UCL to Use**			Use 95% Student's-t UCL	5943.5276
5213					
5214	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
5215	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
5216	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
5217					
5218					
5219	**M|MG/KG|ALUMINUM (gi_sd_ne_2009)**				
5220					
5221	**General Statistics**				
5222	Number of Valid Observations		20	Number of Distinct Observations	19
5223					
5224	**Raw Statistics**			**Log-transformed Statistics**	
5225	Minimum		3220	Minimum of Log Data	8.0771366
5226	Maximum		7800	Maximum of Log Data	8.961879
5227	Mean		5403.5	Mean of log Data	8.5502378
5228	Median		5195	SD of log Data	0.3103542

	A	B	C	D	E
5229	SD		1612.8637		
5230	Coefficient of Variation		0.298485		
5231	Skewness		0.0782002		
5232					
5233	**Relevant UCL Statistics**				
5234	**Normal Distribution Test**			**Lognormal Distribution Test**	
5235	Shapiro Wilk Test Statistic		0.8927028	Shapiro Wilk Test Statistic	0.8967494
5236	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
5237	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
5238					
5239	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
5240	95% Student's-t UCL		6027.107	95% H-UCL	6190.1908
5241	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	7069.925
5242	95% Adjusted-CLT UCL (Chen-1995)		6003.4504	97.5% Chebyshev (MVUE) UCL	7788.4424
5243	95% Modified-t UCL (Johnson-1978)		6028.1581	99% Chebyshev (MVUE) UCL	9199.8306
5244					
5245	**Gamma Distribution Test**			**Data Distribution**	
5246	k star (bias corrected)		9.7096199	**Data do not follow a Discernable Distribution (0.05)**	
5247	Theta Star		556.50994		
5248	MLE of Mean		5403.5		
5249	MLE of Standard Deviation		1734.0996		
5250	nu star		388.3848		
5251	Approximate Chi Square Value (.05)		343.70662	**Nonparametric Statistics**	
5252	Adjusted Level of Significance		0.038	95% CLT UCL	5996.712
5253	Adjusted Chi Square Value		340.39079	95% Jackknife UCL	6027.107
5254				95% Standard Bootstrap UCL	5982.5481
5255	Anderson-Darling Test Statistic		0.7977906	95% Bootstrap-t UCL	6046.1243
5256	Anderson-Darling 5% Critical Value		0.7416864	95% Hall's Bootstrap UCL	5984.7471
5257	Kolmogorov-Smirnov Test Statistic		0.2182925	95% Percentile Bootstrap UCL	5966
5258	Kolmogorov-Smirnov 5% Critical Value		0.1937988	95% BCA Bootstrap UCL	6006.5
5259	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	6975.525
5260				97.5% Chebyshev(Mean, Sd) UCL	7655.7415
5261	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	8991.8951
5262	95% Approximate Gamma UCL		6105.897		
5263	95% Adjusted Gamma UCL		6165.376		
5264					
5265	**Potential UCL to Use**			Use 95% Student's-t UCL	6027.107
5266				or 95% Modified-t UCL	6028.1581
5267					
5268	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
5269	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
5270	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
5271					
5272					
5273	**M|MG/KG|ALUMINUM (gi_sd_ne_2010)**				
5274					
5275	**General Statistics**				
5276	Number of Valid Observations		16	Number of Distinct Observations	14
5277					
5278	**Raw Statistics**			**Log-transformed Statistics**	
5279	Minimum		3860	Minimum of Log Data	8.2584225
5280	Maximum		8070	Maximum of Log Data	8.9959088
5281	Mean		5141.875	Mean of log Data	8.5278134
5282	Median		4805	SD of log Data	0.1873603
5283	SD		1050.4743		
5284	Coefficient of Variation		0.2042979		
5285	Skewness		1.5068244		
5286					
5287	**Relevant UCL Statistics**				
5288	**Normal Distribution Test**			**Lognormal Distribution Test**	
5289	Shapiro Wilk Test Statistic		0.8629953	Shapiro Wilk Test Statistic	0.9210157
5290	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
5291	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
5292					
5293	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
5294	95% Student's-t UCL		5602.2586	95% H-UCL	5608.6014
5295	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	6191.0133

	A	B	C	D	E
5296	95% Adjusted-CLT UCL (Chen-1995)		5679.5523	97.5% Chebyshev (MVUE) UCL	6647.0235
5297	95% Modified-t UCL (Johnson-1978)		5618.7469	99% Chebyshev (MVUE) UCL	7542.7673
5298					
5299	**Gamma Distribution Test**			**Data Distribution**	
5300	k star (bias corrected)		23.57826	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
5301	Theta Star		218.07695		
5302	MLE of Mean		5141.875		
5303	MLE of Standard Deviation		1058.9261		
5304	nu star		754.50433		
5305	Approximate Chi Square Value (.05)		691.76548	**Nonparametric Statistics**	
5306	Adjusted Level of Significance		0.03348	95% CLT UCL	5573.8441
5307	Adjusted Chi Square Value		684.93026	95% Jackknife UCL	5602.2586
5308				95% Standard Bootstrap UCL	5562.7542
5309	Anderson-Darling Test Statistic		0.6102535	95% Bootstrap-t UCL	5797.0235
5310	Anderson-Darling 5% Critical Value		0.7361652	95% Hall's Bootstrap UCL	5925.6045
5311	Kolmogorov-Smirnov Test Statistic		0.2276061	95% Percentile Bootstrap UCL	5583.125
5312	Kolmogorov-Smirnov 5% Critical Value		0.2145662	95% BCA Bootstrap UCL	5661.25
5313	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	6286.6028
5314				97.5% Chebyshev(Mean, Sd) UCL	6781.9275
5315	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	7754.8968
5316	95% Approximate Gamma UCL		5608.2113		
5317	95% Adjusted Gamma UCL		5664.1781		
5318					
5319	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	5608.2113
5320					
5321	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
5322	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
5323	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
5324					
5325					
5326	**M|MG/KG|ALUMINUM (gi_sd_nw_2005)**				
5327					
5328	**General Statistics**				
5329	Number of Valid Observations		18	Number of Distinct Observations	16
5330					
5331	**Raw Statistics**			**Log-transformed Statistics**	
5332	Minimum		3880	Minimum of Log Data	8.2635904
5333	Maximum		9100	Maximum of Log Data	9.1160297
5334	Mean		5856.1111	Mean of log Data	8.6584072
5335	Median		5550	SD of log Data	0.1865483
5336	SD		1147.2019		
5337	Coefficient of Variation		0.1958982		
5338	Skewness		1.2336828		
5339					
5340	**Relevant UCL Statistics**				
5341	**Normal Distribution Test**			**Lognormal Distribution Test**	
5342	Shapiro Wilk Test Statistic		0.8830458	Shapiro Wilk Test Statistic	0.9269276
5343	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
5344	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
5345					
5346	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
5347	95% Student's-t UCL		6326.4974	95% H-UCL	6350.5661
5348	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	6981.3579
5349	95% Adjusted-CLT UCL (Chen-1995)		6384.8903	97.5% Chebyshev (MVUE) UCL	7469.3033
5350	95% Modified-t UCL (Johnson-1978)		6339.6019	99% Chebyshev (MVUE) UCL	8427.7775
5351					
5352	**Gamma Distribution Test**			**Data Distribution**	
5353	k star (bias corrected)		24.92692	**Data appear Lognormal at 5% Significance Level**	
5354	Theta Star		234.93119		
5355	MLE of Mean		5856.1111		
5356	MLE of Standard Deviation		1172.9378		
5357	nu star		897.36913		
5358	Approximate Chi Square Value (.05)		828.84138	**Nonparametric Statistics**	
5359	Adjusted Level of Significance		0.03574	95% CLT UCL	6300.8764
5360	Adjusted Chi Square Value		822.5276	95% Jackknife UCL	6326.4974
5361				95% Standard Bootstrap UCL	6294.5496
5362	Anderson-Darling Test Statistic		0.764362	95% Bootstrap-t UCL	6442.7747

	A	B	C	D	E
5363	Anderson-Darling 5% Critical Value		0.7390887	95% Hall's Bootstrap UCL	6766.0283
5364	Kolmogorov-Smirnov Test Statistic		0.2116409	95% Percentile Bootstrap UCL	6293.8889
5365	Kolmogorov-Smirnov 5% Critical Value		0.2031909	95% BCA Bootstrap UCL	6338.8889
5366	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	7034.749
5367				97.5% Chebyshev(Mean, Sd) UCL	7544.7466
5368	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	8546.5381
5369	95% Approximate Gamma UCL		6340.2883		
5370	95% Adjusted Gamma UCL		6388.9568		
5371					
5372	**Potential UCL to Use**			Use 95% Student's-t UCL	6326.4974
5373				or 95% Modified-t UCL	6339.6019
5374				or 95% H-UCL	6350.5661
5375					
5376	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
5377	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
5378	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
5379	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
5380					
5381	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
5382	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
5383	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
5384					
5385					
5386	**M|MG/KG|ALUMINUM (gi_sd_nw_2009)**				
5387					
5388	**General Statistics**				
5389	Number of Valid Observations		7	Number of Distinct Observations	7
5390					
5391	**Raw Statistics**			**Log-transformed Statistics**	
5392	Minimum		4010	Minimum of Log Data	8.2965465
5393	Maximum		7870	Maximum of Log Data	8.9708133
5394	Mean		5517.1429	Mean of log Data	8.5956202
5395	Median		5630	SD of log Data	0.21341
5396	SD		1228.7218		
5397	Coefficient of Variation		0.2227098		
5398	Skewness		1.0836922		
5399					
5400					
5401	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
5402					
5403	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
5404	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
5405					
5406					
5407	**Warning: There are only 7 Values in this data**				
5408	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
5409	**the resulting calculations may not be reliable enough to draw conclusions**				
5410					
5411	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
5412					
5413	**Relevant UCL Statistics**				
5414	**Normal Distribution Test**			**Lognormal Distribution Test**	
5415	Shapiro Wilk Test Statistic		0.9065186	Shapiro Wilk Test Statistic	0.9482522
5416	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
5417	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	

	A	B	C	D	E
5418					
5419	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
5420	95% Student's-t UCL		6419.5814	95% H-UCL	6594.2759
5421	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	7455.2771
5422	95% Adjusted-CLT UCL (Chen-1995)		6484.2898	97.5% Chebyshev (MVUE) UCL	8295.1594
5423	95% Modified-t UCL (Johnson-1978)		6451.2851	99% Chebyshev (MVUE) UCL	9944.9455
5424					
5425	**Gamma Distribution Test**			**Data Distribution**	
5426	k star (bias corrected)		14.478999	**Data appear Normal at 5% Significance Level**	
5427	Theta Star		381.0445		
5428	MLE of Mean		5517.1429		
5429	MLE of Standard Deviation		1449.9231		
5430	nu star		202.70598		
5431	Approximate Chi Square Value (.05)		170.76249	**Nonparametric Statistics**	
5432	Adjusted Level of Significance		0.01584	95% CLT UCL	6281.0345
5433	Adjusted Chi Square Value		161.88447	95% Jackknife UCL	6419.5814
5434				95% Standard Bootstrap UCL	6212.1285
5435	Anderson-Darling Test Statistic		0.3259979	95% Bootstrap-t UCL	6650.192
5436	Anderson-Darling 5% Critical Value		0.7068507	95% Hall's Bootstrap UCL	7902.6083
5437	Kolmogorov-Smirnov Test Statistic		0.2419913	95% Percentile Bootstrap UCL	6312.8571
5438	Kolmogorov-Smirnov 5% Critical Value		0.3114497	95% BCA Bootstrap UCL	6390
5439	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	7541.4729
5440				97.5% Chebyshev(Mean, Sd) UCL	8417.4022
5441	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	10137.996
5442	95% Approximate Gamma UCL		6549.2011		
5443	95% Adjusted Gamma UCL		6908.3701		
5444					
5445	**Potential UCL to Use**			Use 95% Student's-t UCL	6419.5814
5446					
5447	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
5448	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
5449	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
5450					
5451					
5452	**M|MG/KG|ALUMINUM (gi_sd_nw_2010)**				
5453					
5454	**General Statistics**				
5455	Number of Valid Observations		4	Number of Distinct Observations	4
5456					
5457					
5458	**Warning: This data set only has 4 observations!**				
5459	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
5460	**The data set for variable M|MG/KG|ALUMINUM (gi_sd_nw_2010) was not processed!**				
5461					
5462	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
5463	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
5464					
5465					
5466					
5467	**M|MG/KG|ALUMINUM (gi_sd_ref_2009)**				
5468					
5469	**General Statistics**				
5470	Number of Valid Observations		6	Number of Distinct Observations	6
5471					
5472	**Raw Statistics**			**Log-transformed Statistics**	
5473	Minimum		3500	Minimum of Log Data	8.1605182
5474	Maximum		5290	Maximum of Log Data	8.5735735
5475	Mean		4445.8333	Mean of log Data	8.3889542
5476	Median		4610	SD of log Data	0.1623771
5477	SD		700.60272		
5478	Coefficient of Variation		0.1575864		
5479	Skewness		-0.329916		
5480					

	A	B	C	D	E
5481					
5482	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
5483					
5484	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
5485	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
5486					
5487					
5488	**Warning: There are only 6 Values in this data**				
5489	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
5490	**the resulting calculations may not be reliable enough to draw conclusions**				
5491					
5492	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
5493					
5494	**Relevant UCL Statistics**				
5495	**Normal Distribution Test**			**Lognormal Distribution Test**	
5496	Shapiro Wilk Test Statistic		0.9306135	Shapiro Wilk Test Statistic	0.9213421
5497	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
5498	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
5499					
5500	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
5501	95% Student's-t UCL		5022.1772	95% H-UCL	5159.8207
5502	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5731.5939
5503	95% Adjusted-CLT UCL (Chen-1995)		4875.1313	97.5% Chebyshev (MVUE) UCL	6287.558
5504	95% Modified-t UCL (Johnson-1978)		5015.7566	99% Chebyshev (MVUE) UCL	7379.6419
5505					
5506	**Gamma Distribution Test**			**Data Distribution**	
5507	k star (bias corrected)		23.410185	**Data appear Normal at 5% Significance Level**	
5508	Theta Star		189.91022		
5509	MLE of Mean		4445.8333		
5510	MLE of Standard Deviation		918.86299		
5511	nu star		280.92222		
5512	Approximate Chi Square Value (.05)		243.10351	**Nonparametric Statistics**	
5513	Adjusted Level of Significance		0.01222	95% CLT UCL	4916.2941
5514	Adjusted Chi Square Value		230.31396	95% Jackknife UCL	5022.1772
5515				95% Standard Bootstrap UCL	4878.859
5516	Anderson-Darling Test Statistic		0.341566	95% Bootstrap-t UCL	4945.889
5517	Anderson-Darling 5% Critical Value		0.6969038	95% Hall's Bootstrap UCL	4814.7594
5518	Kolmogorov-Smirnov Test Statistic		0.2563353	95% Percentile Bootstrap UCL	4863.3333
5519	Kolmogorov-Smirnov 5% Critical Value		0.3318009	95% BCA Bootstrap UCL	4835.8333
5520	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	5692.565
5521				97.5% Chebyshev(Mean, Sd) UCL	6232.0268
5522	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	7291.695
5523	95% Approximate Gamma UCL		5137.455		
5524	95% Adjusted Gamma UCL		5422.7427		
5525					
5526	**Potential UCL to Use**			Use 95% Student's-t UCL	5022.1772
5527					
5528	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
5529	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
5530	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
5531					
5532					
5533	**M|MG/KG|ALUMINUM (gi_sd_ref_2010)**				
5534					
5535	**General Statistics**				
5536	Number of Valid Observations		3	Number of Distinct Observations	3
5537					
5538					

	A	B	C	D	E
5539	**Warning: This data set only has 3 observations!**				
5540	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
5541	**The data set for variable M|MG/KG|ALUMINUM (gi_sd_ref_2010) was not processed!**				
5542					
5543	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
5544	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
5545					
5546					
5547					
5548	**M|MG/KG|ALUMINUM (gi_sd_s_2005)**				
5549					
5550	**General Statistics**				
5551	Number of Valid Observations		8	Number of Distinct Observations	8
5552					
5553	**Raw Statistics**			**Log-transformed Statistics**	
5554	Minimum		4710	Minimum of Log Data	8.4574432
5555	Maximum		8520	Maximum of Log Data	9.0501716
5556	Mean		6185	Mean of log Data	8.7054509
5557	Median		5905	SD of log Data	0.2349575
5558	SD		1477.5172		
5559	Coefficient of Variation		0.2388872		
5560	Skewness		0.4857967		
5561					
5562					
5563	**Warning: There are only 8 Values in this data**				
5564	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
5565	**the resulting calculations may not be reliable enough to draw conclusions**				
5566					
5567	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
5568					
5569	**Relevant UCL Statistics**				
5570	**Normal Distribution Test**			**Lognormal Distribution Test**	
5571	Shapiro Wilk Test Statistic		0.8852029	Shapiro Wilk Test Statistic	0.8864521
5572	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
5573	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
5574					
5575	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
5576	95% Student's-t UCL		7174.6923	95% H-UCL	7397.9688
5577	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	8427.4144
5578	95% Adjusted-CLT UCL (Chen-1995)		7140.1095	97.5% Chebyshev (MVUE) UCL	9398.6283
5579	95% Modified-t UCL (Johnson-1978)		7189.6459	99% Chebyshev (MVUE) UCL	11306.39
5580					
5581	**Gamma Distribution Test**			**Data Distribution**	
5582	k star (bias corrected)		12.97759	**Data appear Normal at 5% Significance Level**	
5583	Theta Star		476.59081		
5584	MLE of Mean		6185		
5585	MLE of Standard Deviation		1716.8908		
5586	nu star		207.64144		
5587	Approximate Chi Square Value (.05)		175.29673	**Nonparametric Statistics**	
5588	Adjusted Level of Significance		0.01946	95% CLT UCL	7044.2407
5589	Adjusted Chi Square Value		167.76454	95% Jackknife UCL	7174.6923
5590				95% Standard Bootstrap UCL	6985.5747
5591	Anderson-Darling Test Statistic		0.4749603	95% Bootstrap-t UCL	7289.438
5592	Anderson-Darling 5% Critical Value		0.7162087	95% Hall's Bootstrap UCL	6971.7918
5593	Kolmogorov-Smirnov Test Statistic		0.2474907	95% Percentile Bootstrap UCL	7002.5
5594	Kolmogorov-Smirnov 5% Critical Value		0.2938505	95% BCA Bootstrap UCL	7058.75
5595	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	8462.007
5596				97.5% Chebyshev(Mean, Sd) UCL	9447.2697
5597	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	11382.628
5598	95% Approximate Gamma UCL		7326.2194		
5599	95% Adjusted Gamma UCL		7655.1476		
5600					
5601	**Potential UCL to Use**			Use 95% Student's-t UCL	7174.6923

	A	B	C	D	E
5602					
5603	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
5604	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
5605	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
5606					
5607					
5608	M|MG/KG|ALUMINUM (gi_sd_s_2010)				
5609					
5610	General Statistics				
5611	Number of Valid Observations		2	Number of Distinct Observations	2
5612					
5613					
5614	Warning: This data set only has 2 observations!				
5615	Data set is too small to compute reliable and meaningful statistics and estimates!				
5616	The data set for variable M|MG/KG|ALUMINUM (gi_sd_s_2010) was not processed!				
5617					
5618	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
5619	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
5620					
5621					
5622					
5623	M|MG/KG|ALUMINUM (gi_sd_stillwater_2005)				
5624					
5625	General Statistics				
5626	Number of Valid Observations		4	Number of Distinct Observations	4
5627					
5628					
5629	Warning: This data set only has 4 observations!				
5630	Data set is too small to compute reliable and meaningful statistics and estimates!				
5631	The data set for variable M|MG/KG|ALUMINUM (gi_sd_stillwater_2005) was not processed!				
5632					
5633	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
5634	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
5635					
5636					
5637					
5638	M|MG/KG|ALUMINUM (gi_sd_stillwater_2009)				
5639					
5640	General Statistics				
5641	Number of Valid Observations		60	Number of Distinct Observations	54
5642					
5643	Raw Statistics			Log-transformed Statistics	
5644	Minimum		2680	Minimum of Log Data	7.8935721
5645	Maximum		7810	Maximum of Log Data	8.9631602
5646	Mean		5153.6667	Mean of log Data	8.5197251
5647	Median		5165	SD of log Data	0.2430407
5648	SD		1181.7166		
5649	Coefficient of Variation		0.2292963		
5650	Skewness		0.0104194		
5651					
5652	Relevant UCL Statistics				
5653	Normal Distribution Test			Lognormal Distribution Test	
5654	Lilliefors Test Statistic		0.0449535	Lilliefors Test Statistic	0.0792117
5655	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
5656	Data appear Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
5657					
5658	Assuming Normal Distribution			Assuming Lognormal Distribution	

	A	B	C	D	E
5659	95% Student's-t UCL		5408.6069	95% H-UCL	5451.0354
5660	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5875.0493
5661	95% Adjusted-CLT UCL (Chen-1995)		5404.8231	97.5% Chebyshev (MVUE) UCL	6184.3141
5662	95% Modified-t UCL (Johnson-1978)		5408.6411	99% Chebyshev (MVUE) UCL	6791.805
5663					
5664	**Gamma Distribution Test**			**Data Distribution**	
5665	k star (bias corrected)		17.29212	**Data appear Normal at 5% Significance Level**	
5666	Theta Star		298.03555		
5667	MLE of Mean		5153.6667		
5668	MLE of Standard Deviation		1239.3449		
5669	nu star		2075.0544		
5670	Approximate Chi Square Value (.05)		1970.2399	**Nonparametric Statistics**	
5671	Adjusted Level of Significance		0.046	95% CLT UCL	5404.6038
5672	Adjusted Chi Square Value		1967.7463	95% Jackknife UCL	5408.6069
5673				95% Standard Bootstrap UCL	5398.2745
5674	Anderson-Darling Test Statistic		0.4085727	95% Bootstrap-t UCL	5416.005
5675	Anderson-Darling 5% Critical Value		0.7493207	95% Hall's Bootstrap UCL	5410.9938
5676	Kolmogorov-Smirnov Test Statistic		0.0632799	95% Percentile Bootstrap UCL	5406.3333
5677	Kolmogorov-Smirnov 5% Critical Value		0.1144607	95% BCA Bootstrap UCL	5404.3333
5678	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	5818.6557
5679				97.5% Chebyshev(Mean, Sd) UCL	6106.397
5680	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	6671.6091
5681	95% Approximate Gamma UCL		5427.8359		
5682	95% Adjusted Gamma UCL		5434.7142		
5683					
5684	**Potential UCL to Use**			Use 95% Student's-t UCL	5408.6069
5685					
5686	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
5687	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
5688	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
5689					
5690					
5691	**M|MG/KG|ALUMINUM (gi_sd_stillwater_2010)**				
5692					
5693	**General Statistics**				
5694	Number of Valid Observations		11	Number of Distinct Observations	11
5695					
5696	**Raw Statistics**			**Log-transformed Statistics**	
5697	Minimum		3770	Minimum of Log Data	8.2348303
5698	Maximum		5510	Maximum of Log Data	8.6143199
5699	Mean		4581.8182	Mean of log Data	8.4237116
5700	Median		4500	SD of log Data	0.1162657
5701	SD		532.76295		
5702	Coefficient of Variation		0.1162776		
5703	Skewness		0.2205079		
5704					
5705	**Relevant UCL Statistics**				
5706	**Normal Distribution Test**			**Lognormal Distribution Test**	
5707	Shapiro Wilk Test Statistic		0.9801671	Shapiro Wilk Test Statistic	0.9830132
5708	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
5709	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
5710					
5711	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
5712	95% Student's-t UCL		4872.9612	95% H-UCL	4897.933
5713	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5282.8332
5714	95% Adjusted-CLT UCL (Chen-1995)		4857.4493	97.5% Chebyshev (MVUE) UCL	5586.1597
5715	95% Modified-t UCL (Johnson-1978)		4874.7412	99% Chebyshev (MVUE) UCL	6181.9859
5716					
5717	**Gamma Distribution Test**			**Data Distribution**	
5718	k star (bias corrected)		59.409325	**Data appear Normal at 5% Significance Level**	
5719	Theta Star		77.122879		
5720	MLE of Mean		4581.8182		
5721	MLE of Standard Deviation		594.44344		
5722	nu star		1307.0052		
5723	Approximate Chi Square Value (.05)		1224.0604	**Nonparametric Statistics**	
5724	Adjusted Level of Significance		0.02783	95% CLT UCL	4846.0377
5725	Adjusted Chi Square Value		1210.9518	95% Jackknife UCL	4872.9612
5726				95% Standard Bootstrap UCL	4834.6264

	A	B	C	D	E
5727	Anderson-Darling Test Statistic		0.1433516	95% Bootstrap-t UCL	4893.059
5728	Anderson-Darling 5% Critical Value		0.7266744	95% Hall's Bootstrap UCL	4867.8642
5729	Kolmogorov-Smirnov Test Statistic		0.1059274	95% Percentile Bootstrap UCL	4833.6364
5730	Kolmogorov-Smirnov 5% Critical Value		0.2545109	95% BCA Bootstrap UCL	4841.8182
5731	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	5282.0059
5732				97.5% Chebyshev(Mean, Sd) UCL	5584.9777
5733	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	6180.107
5734	95% Approximate Gamma UCL		4892.2914		
5735	95% Adjusted Gamma UCL		4945.2507		
5736					
5737	**Potential UCL to Use**			Use 95% Student's-t UCL	4872.9612
5738					
5739	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
5740	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
5741	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
5742					
5743					
5744	**M|MG/KG|ANTIMONY (gi_sd_ne_2005)**				
5745					
5746	**General Statistics**				
5747	Number of Valid Data		36	Number of Detected Data	17
5748	Number of Distinct Detected Data		13	Number of Non-Detect Data	19
5749				Percent Non-Detects	52.78%
5750					
5751	**Raw Statistics**			**Log-transformed Statistics**	
5752	Minimum Detected		1.9	Minimum Detected	0.6418539
5753	Maximum Detected		43.5	Maximum Detected	3.7727609
5754	Mean of Detected		5.1676471	Mean of Detected	1.1646133
5755	SD of Detected		9.892373	SD of Detected	0.6981485
5756	Minimum Non-Detect		0.054	Minimum Non-Detect	-2.918771
5757	Maximum Non-Detect		0.92	Maximum Non-Detect	-0.083382
5758					
5759	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	19
5760	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	17
5761	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	52.78%
5762					
5763	**UCL Statistics**				
5764	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
5765	Shapiro Wilk Test Statistic		0.3078527	Shapiro Wilk Test Statistic	0.5158033
5766	5% Shapiro Wilk Critical Value		0.892	5% Shapiro Wilk Critical Value	0.892
5767	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
5768					
5769	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
5770	DL/2 Substitution Method			DL/2 Substitution Method	
5771	Mean		2.5106458	Mean	-0.76808
5772	SD		7.1583223	SD	2.0507841
5773	95% DL/2 (t) UCL		4.5263965	95% H-Stat (DL/2) UCL	14.130168
5774					
5775	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
5776	**MLE yields a negative mean**			Mean in Log Scale	0.3904869
5777				SD in Log Scale	0.8969739
5778				Mean in Original Scale	2.8407543
5779				SD in Original Scale	7.0522177
5780				95% t UCL	4.8266264
5781				95% Percentile Bootstrap UCL	5.1390376
5782				95% BCA Bootstrap UCL	6.4180518
5783					
5784	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
5785	k star (bias corrected)		1.0153885	**Data do not follow a Discernable Distribution (0.05)**	
5786	Theta Star		5.0893301		
5787	nu star		34.523208		
5788					
5789	A-D Test Statistic		4.2864015	**Nonparametric Statistics**	
5790	5% A-D Critical Value		0.7621606	Kaplan-Meier (KM) Method	
5791	K-S Test Statistic		0.7621606	Mean	3.4430556
5792	5% K-S Critical Value		0.2142893	SD	6.7936771

	A	B	C	D	E
5793	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	1.167127
5794				95% KM (t) UCL	5.4150012
5795	**Assuming Gamma Distribution**			95% KM (z) UCL	5.3628087
5796	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	5.3359481
5797	Minimum		1.9	95% KM (bootstrap t) UCL	22.291702
5798	Maximum		43.5	95% KM (BCA) UCL	5.8930556
5799	Mean		5.1676545	95% KM (Percentile Bootstrap) UCL	5.7541667
5800	Median		5.030578	95% KM (Chebyshev) UCL	8.5304443
5801	SD		6.6889468	97.5% KM (Chebyshev) UCL	10.731761
5802	k star		2.1893376	99% KM (Chebyshev) UCL	15.055823
5803	Theta star		2.3603735		
5804	Nu star		157.63231	**Potential UCLs to Use**	
5805	AppChi2		129.60721	95% KM (t) UCL	5.4150012
5806	95% Gamma Approximate UCL		6.2850619	95% KM (% Bootstrap) UCL	5.7541667
5807	95% Adjusted Gamma UCL		6.3414444		
5808	**Note: DL/2 is not a recommended method.**				
5809					
5810	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
5811	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
5812	**For additional insight, the user may want to consult a statistician.**				
5813					
5814					
5815	**M|MG/KG|ANTIMONY (gi_sd_ne_2009)**				
5816					
5817	**General Statistics**				
5818	Number of Valid Data		20	Number of Detected Data	15
5819	Number of Distinct Detected Data		12	Number of Non-Detect Data	5
5820				Percent Non-Detects	25.00%
5821					
5822	**Raw Statistics**			**Log-transformed Statistics**	
5823	Minimum Detected		0.089	Minimum Detected	-2.419119
5824	Maximum Detected		0.39	Maximum Detected	-0.941609
5825	Mean of Detected		0.208	Mean of Detected	-1.654322
5826	SD of Detected		0.0869294	SD of Detected	0.4333424
5827	Minimum Non-Detect		0.079	Minimum Non-Detect	-2.538307
5828	Maximum Non-Detect		0.085	Maximum Non-Detect	-2.465104
5829					
5830	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	5
5831	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	15
5832	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	25.00%
5833					
5834	**UCL Statistics**				
5835	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
5836	Shapiro Wilk Test Statistic		0.9271382	Shapiro Wilk Test Statistic	0.948083
5837	5% Shapiro Wilk Critical Value		0.881	5% Shapiro Wilk Critical Value	0.881
5838	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
5839					
5840	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
5841	DL/2 Substitution Method			DL/2 Substitution Method	
5842	Mean		0.166275	Mean	-2.038763
5843	SD		0.1051961	SD	0.7779891
5844	95% DL/2 (t) UCL		0.2069486	95% H-Stat (DL/2) UCL	0.2671342
5845					
5846	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
5847	Mean		0.1601964	Mean in Log Scale	-1.90025
5848	SD		0.1137224	SD in Log Scale	0.5738979
5849	95% MLE (t) UCL		0.2041666	Mean in Original Scale	0.1738755
5850	95% MLE (Tiku) UCL		0.2061435	SD in Original Scale	0.0961531
5851				95% t UCL	0.2110527
5852				95% Percentile Bootstrap UCL	0.2089504
5853				95% BCA Bootstrap UCL	0.2140255
5854					
5855	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
5856	k star (bias corrected)		4.9298612	**Data appear Normal at 5% Significance Level**	
5857	Theta Star		0.0421919		
5858	nu star		147.89583		
5859					

	A	B	C	D	E
5860	A-D Test Statistic		0.3587887	**Nonparametric Statistics**	
5861	5% A-D Critical Value		0.7382932	Kaplan-Meier (KM) Method	
5862	K-S Test Statistic		0.7382932	Mean	0.17825
5863	5% K-S Critical Value		0.2219538	SD	0.0891341
5864	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.0206305
5865				95% KM (t) UCL	0.2139229
5866	**Assuming Gamma Distribution**			95% KM (z) UCL	0.2121842
5867	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.2124496
5868	Minimum		0.089	95% KM (bootstrap t) UCL	0.2199974
5869	Maximum		0.39	95% KM (BCA) UCL	0.2167
5870	Mean		0.1834452	95% KM (Percentile Bootstrap) UCL	0.214
5871	Median		0.17	95% KM (Chebyshev) UCL	0.2681764
5872	SD		0.0864414	97.5% KM (Chebyshev) UCL	0.3070876
5873	k star		4.5417617	99% KM (Chebyshev) UCL	0.3835212
5874	Theta star		0.0403908		
5875	Nu star		181.67047	**Potential UCLs to Use**	
5876	AppChi2		151.49458	95% KM (t) UCL	0.2139229
5877	95% Gamma Approximate UCL		0.2199853	95% KM (Percentile Bootstrap) UCL	0.214
5878	95% Adjusted Gamma UCL		0.2231902		
5879	**Note: DL/2 is not a recommended method.**				
5880					
5881	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
5882	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
5883	**For additional insight, the user may want to consult a statistician.**				
5884					
5885					
5886	**M|MG/KG|ANTIMONY (gi_sd_ne_2010)**				
5887					
5888	**General Statistics**				
5889	Number of Valid Data		16	Number of Detected Data	1
5890	Number of Distinct Detected Data		1	Number of Non-Detect Data	15
5891				Percent Non-Detects	93.75%
5892					
5893	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**				
5894	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**				
5895					
5896	**The data set for variable M|MG/KG|ANTIMONY (gi_sd_ne_2010) was not processed!**				
5897					
5898					
5899					
5900	**M|MG/KG|ANTIMONY (gi_sd_nw_2005)**				
5901					
5902	**General Statistics**				
5903	Number of Valid Data		18	Number of Detected Data	0
5904	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
5905				Percent Non-Detects	100.00%
5906					
5907	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
5908	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
5909	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
5910					
5911	**The data set for variable M|MG/KG|ANTIMONY (gi_sd_nw_2005) was not processed!**				
5912					
5913					
5914					
5915	**M|MG/KG|ANTIMONY (gi_sd_nw_2009)**				
5916					
5917	**General Statistics**				
5918	Number of Valid Data		7	Number of Detected Data	6
5919	Number of Distinct Detected Data		6	Number of Non-Detect Data	1

	A	B	C	D	E
5920				Percent Non-Detects	14.29%
5921					
5922	**Raw Statistics**			**Log-transformed Statistics**	
5923	Minimum Detected		0.0762	Minimum Detected	-2.574394
5924	Maximum Detected		2.6	Maximum Detected	0.9555114
5925	Mean of Detected		0.6527	Mean of Detected	-1.116023
5926	SD of Detected		0.9673368	SD of Detected	1.2042072
5927	Minimum Non-Detect		0.081	Minimum Non-Detect	-2.513306
5928	Maximum Non-Detect		0.081	Maximum Non-Detect	-2.513306
5929					
5930					
5931	**Warning: There are only 6 Detected Values in this data**				
5932	**Note: It should be noted that even though bootstrap may be performed on this data set**				
5933	**the resulting calculations may not be reliable enough to draw conclusions**				
5934					
5935	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
5936					
5937					
5938	**UCL Statistics**				
5939	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
5940	Shapiro Wilk Test Statistic		0.6432055	Shapiro Wilk Test Statistic	0.9429198
5941	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788
5942	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
5943					
5944	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
5945	DL/2 Substitution Method			DL/2 Substitution Method	
5946	Mean		0.5652429	Mean	-1.414656
5947	SD		0.9128664	SD	1.3537727
5948	95% DL/2 (t) UCL		1.2357004	95% H-Stat (DL/2) UCL	8.3287707
5949					
5950	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
5951	Mean		0.3546411	Mean in Log Scale	-1.372665
5952	SD		1.0676861	SD in Log Scale	1.292085
5953	95% MLE (t) UCL		1.1388065	Mean in Original Scale	0.5672198
5954	95% MLE (Tiku) UCL		1.1655479	SD in Original Scale	0.9115546
5955				95% t UCL	1.236714
5956				95% Percentile Bootstrap UCL	1.2057913
5957				95% BCA Bootstrap UCL	1.5620484
5958					
5959	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
5960	k star (bias corrected)		0.5379507	**Data appear Gamma Distributed at 5% Significance Level**	
5961	Theta Star		1.2133081		
5962	nu star		6.4554087		
5963					
5964	A-D Test Statistic		0.5461928	**Nonparametric Statistics**	
5965	5% A-D Critical Value		0.7185473	Kaplan-Meier (KM) Method	
5966	K-S Test Statistic		0.7185473	Mean	0.5703429
5967	5% K-S Critical Value		0.3423717	SD	0.8420702
5968	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.3486502
5969				95% KM (t) UCL	1.2478331
5970	**Assuming Gamma Distribution**			95% KM (z) UCL	1.1438214
5971	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	1.2310112
5972	Minimum		1E-12	95% KM (bootstrap t) UCL	4.8777165
5973	Maximum		2.6	95% KM (BCA) UCL	1.2255143
5974	Mean		0.5594571	95% KM (Percentile Bootstrap) UCL	1.2089143
5975	Median		0.21	95% KM (Chebyshev) UCL	2.0900739
5976	SD		0.9168661	97.5% KM (Chebyshev) UCL	2.7476627
5977	k star		0.1946234	99% KM (Chebyshev) UCL	4.0393686
5978	Theta star		2.8745621		
5979	Nu star		2.724728	**Potential UCLs to Use**	
5980	AppChi2		0.2957677	95% KM (Chebyshev) UCL	2.0900739
5981	95% Gamma Approximate UCL		5.1539378		
5982	95% Adjusted Gamma UCL		9.9648636		
5983	**Note: DL/2 is not a recommended method.**				
5984					
5985	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
5986	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
5987	**For additional insight, the user may want to consult a statistician.**				
5988					
5989					
5990	**M|MG/KG|ANTIMONY (gi_sd_nw_2010)**				
5991					
5992	**General Statistics**				
5993	Number of Valid Data		4	Number of Detected Data	0
5994	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
5995				Percent Non-Detects	100.00%
5996					
5997	**Warning: This data set only has 4 observations!**				
5998	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
5999	**The data set for variable M|MG/KG|ANTIMONY (gi_sd_nw_2010) was not processed!**				
6000					
6001	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
6002	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
6003					
6004					
6005					
6006	**M|MG/KG|ANTIMONY (gi_sd_ref_2009)**				
6007					
6008	**General Statistics**				
6009	Number of Valid Data		6	Number of Detected Data	4
6010	Number of Distinct Detected Data		4	Number of Non-Detect Data	2
6011				Percent Non-Detects	33.33%
6012					
6013	**Raw Statistics**			**Log-transformed Statistics**	
6014	Minimum Detected		0.108	Minimum Detected	-2.225624
6015	Maximum Detected		0.2	Maximum Detected	-1.609438
6016	Mean of Detected		0.167	Mean of Detected	-1.816938
6017	SD of Detected		0.0412634	SD of Detected	0.2807754
6018	Minimum Non-Detect		0.082	Minimum Non-Detect	-2.501036
6019	Maximum Non-Detect		0.09	Maximum Non-Detect	-2.407946
6020					
6021	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	2
6022	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	4
6023	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	33.33%
6024					
6025	**Warning: There are only 4 Distinct Detected Values in this data**				
6026	**Note: It should be noted that even though bootstrap may be performed on this data set**				
6027	**the resulting calculations may not be reliable enough to draw conclusions**				
6028					
6029	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
6030					
6031					
6032	**UCL Statistics**				
6033	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
6034	Shapiro Wilk Test Statistic		0.8677402	Shapiro Wilk Test Statistic	0.8264055
6035	5% Shapiro Wilk Critical Value		0.748	5% Shapiro Wilk Critical Value	0.748
6036	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
6037					
6038	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6039	DL/2 Substitution Method			DL/2 Substitution Method	
6040	Mean		0.1256667	Mean	-2.260504
6041	SD		0.0715784	SD	0.7213676
6042	95% DL/2 (t) UCL		0.1845499	95% H-Stat (DL/2) UCL	0.384171
6043					
6044	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
6045	Mean		0.1277581	Mean in Log Scale	-2.04509

	A	B	C	D	E
6046	SD		0.0655639	SD in Log Scale	0.4150051
6047	95% MLE (t) UCL		0.1816936	Mean in Original Scale	0.1386569
6048	95% MLE (Tiku) UCL		0.1870213	SD in Original Scale	0.0543102
6049				95% t UCL	0.1833346
6050				95% Percentile Bootstrap UCL	0.1719951
6051				95% BCA Bootstrap UCL	0.1703284
6052					
6053	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
6054	k star (bias corrected)		4.8075913	**Data appear Normal at 5% Significance Level**	
6055	Theta Star		0.0347367		
6056	nu star		38.46073		
6057					
6058	A-D Test Statistic		0.4817402	**Nonparametric Statistics**	
6059	5% A-D Critical Value		0.6570914	Kaplan-Meier (KM) Method	
6060	K-S Test Statistic		0.6570914	Mean	0.1473333
6061	5% K-S Critical Value		0.3943391	SD	0.0403099
6062	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.0190023
6063				95% KM (t) UCL	0.1856238
6064	**Assuming Gamma Distribution**			95% KM (z) UCL	0.1785893
6065	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.1928034
6066	Minimum		0.108	95% KM (bootstrap t) UCL	0.165286
6067	Maximum		0.2	95% KM (BCA) UCL	0.1933333
6068	Mean		0.1577886	95% KM (Percentile Bootstrap) UCL	0.1933333
6069	Median		0.1546829	95% KM (Chebyshev) UCL	0.2301623
6070	SD		0.0350034	97.5% KM (Chebyshev) UCL	0.2660025
6071	k star		11.726836	99% KM (Chebyshev) UCL	0.3364036
6072	Theta star		0.0134553		
6073	Nu star		140.72203	**Potential UCLs to Use**	
6074	AppChi2		114.31037	95% KM (t) UCL	0.1856238
6075	95% Gamma Approximate UCL		0.194246	95% KM (Percentile Bootstrap) UCL	0.1933333
6076	95% Adjusted Gamma UCL		N/A		
6077	**Note: DL/2 is not a recommended method.**				
6078					
6079	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
6080	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
6081	**For additional insight, the user may want to consult a statistician.**				
6082					
6083					
6084	**M|MG/KG|ANTIMONY (gi_sd_ref_2010)**				
6085					
6086	**General Statistics**				
6087	Number of Valid Data		3	Number of Detected Data	0
6088	Number of Distinct Detected Data		0	Number of Non-Detect Data	3
6089				Percent Non-Detects	100.00%
6090					
6091	**Warning: This data set only has 3 observations!**				
6092	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
6093	**The data set for variable M|MG/KG|ANTIMONY (gi_sd_ref_2010) was not processed!**				
6094					
6095	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
6096	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
6097					
6098					
6099					
6100	**M|MG/KG|ANTIMONY (gi_sd_s_2005)**				
6101					
6102	**General Statistics**				
6103	Number of Valid Data		8	Number of Detected Data	1
6104	Number of Distinct Detected Data		1	Number of Non-Detect Data	7
6105				Percent Non-Detects	87.50%
6106					
6107	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**				

	A	B	C	D	E
6108	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**				
6109					
6110	**The data set for variable M|MG/KG|ANTIMONY (gi_sd_s_2005) was not processed!**				
6111					
6112					
6113					
6114	**M|MG/KG|ANTIMONY (gi_sd_s_2010)**				
6115					
6116	**General Statistics**				
6117	Number of Valid Data		2	Number of Detected Data	0
6118	Number of Distinct Detected Data		0	Number of Non-Detect Data	2
6119				Percent Non-Detects	100.00%
6120					
6121	**Warning: This data set only has 2 observations!**				
6122	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
6123	**The data set for variable M|MG/KG|ANTIMONY (gi_sd_s_2010) was not processed!**				
6124					
6125	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
6126	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
6127					
6128					
6129					
6130	**M|MG/KG|ANTIMONY (gi_sd_stillwater_2005)**				
6131					
6132	**General Statistics**				
6133	Number of Valid Data		4	Number of Detected Data	0
6134	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
6135				Percent Non-Detects	100.00%
6136					
6137	**Warning: This data set only has 4 observations!**				
6138	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
6139	**The data set for variable M|MG/KG|ANTIMONY (gi_sd_stillwater_2005) was not processed!**				
6140					
6141	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
6142	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
6143					
6144					
6145					
6146	**M|MG/KG|ANTIMONY (gi_sd_stillwater_2009)**				
6147					
6148	**General Statistics**				
6149	Number of Valid Data		60	Number of Detected Data	50
6150	Number of Distinct Detected Data		39	Number of Non-Detect Data	10
6151				Percent Non-Detects	16.67%
6152					
6153	**Raw Statistics**			**Log-transformed Statistics**	
6154	Minimum Detected		0.081	Minimum Detected	-2.513306
6155	Maximum Detected		8.9	Maximum Detected	2.1860513
6156	Mean of Detected		0.6461	Mean of Detected	-1.358759
6157	SD of Detected		1.5588473	SD of Detected	1.0875798
6158	Minimum Non-Detect		0.074	Minimum Non-Detect	-2.60369
6159	Maximum Non-Detect		0.1	Maximum Non-Detect	-2.302585
6160					
6161	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	19
6162	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	41
6163	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	31.67%
6164					
6165	**UCL Statistics**				
6166	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	

	A	B	C	D	E
6167	Shapiro Wilk Test Statistic		0.3819747	Shapiro Wilk Test Statistic	0.8453122
6168	5% Shapiro Wilk Critical Value		0.947	5% Shapiro Wilk Critical Value	0.947
6169	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
6170					
6171	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6172	DL/2 Substitution Method			DL/2 Substitution Method	
6173	Mean		0.5453	Mean	-1.663962
6174	SD		1.4386819	SD	1.2070648
6175	95% DL/2 (t) UCL		0.8556772	95% H-Stat (DL/2) UCL	0.6044525
6176					
6177	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
6178	Mean		0.0999305	Mean in Log Scale	-1.733594
6179	SD		1.8077203	SD in Log Scale	1.3066532
6180	95% MLE (t) UCL		0.489923	Mean in Original Scale	0.5430883
6181	95% MLE (Tiku) UCL		0.5108263	SD in Original Scale	1.4394811
6182				95% t UCL	0.8536379
6183				95% Percentile Bootstrap UCL	0.8674081
6184				95% BCA Bootstrap UCL	0.9995848
6185					
6186	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
6187	k star (bias corrected)		0.6345299	**Data do not follow a Discernable Distribution (0.05)**	
6188	Theta Star		1.0182341		
6189	nu star		63.452992		
6190					
6191	A-D Test Statistic		5.5683451	**Nonparametric Statistics**	
6192	5% A-D Critical Value		0.8008103	Kaplan-Meier (KM) Method	
6193	K-S Test Statistic		0.8008103	Mean	0.5519939
6194	5% K-S Critical Value		0.1311004	SD	1.4243541
6195	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.1857502
6196				95% KM (t) UCL	0.8623999
6197	**Assuming Gamma Distribution**			95% KM (z) UCL	0.8575259
6198	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.8615871
6199	Minimum		1E-12	95% KM (bootstrap t) UCL	1.4220187
6200	Maximum		8.9	95% KM (BCA) UCL	0.9171833
6201	Mean		0.5384167	95% KM (Percentile Bootstrap) UCL	0.8974533
6202	Median		0.15	95% KM (Chebyshev) UCL	1.3616605
6203	SD		1.441215	97.5% KM (Chebyshev) UCL	1.7120038
6204	k star		0.1537454	99% KM (Chebyshev) UCL	2.4001855
6205	Theta star		3.5020007		
6206	Nu star		18.449454	**Potential UCLs to Use**	
6207	AppChi2		9.716466	95% KM (Chebyshev) UCL	1.3616605
6208	95% Gamma Approximate UCL		1.022336		
6209	95% Adjusted Gamma UCL		1.0390698		
6210	**Note: DL/2 is not a recommended method.**				
6211					
6212	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
6213	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
6214	**For additional insight, the user may want to consult a statistician.**				
6215					
6216					
6217	**M|MG/KG|ANTIMONY (gi_sd_stillwater_2010)**				
6218					
6219	**General Statistics**				
6220	Number of Valid Data		11	Number of Detected Data	2
6221	Number of Distinct Detected Data		2	Number of Non-Detect Data	9
6222				Percent Non-Detects	81.82%
6223					
6224	**Raw Statistics**			**Log-transformed Statistics**	
6225	Minimum Detected		0.208	Minimum Detected	-1.570217
6226	Maximum Detected		0.81	Maximum Detected	-0.210721
6227	Mean of Detected		0.509	Mean of Detected	-0.890469
6228	SD of Detected		0.4256783	SD of Detected	0.961309
6229	Minimum Non-Detect		0.65	Minimum Non-Detect	-0.430783
6230	Maximum Non-Detect		0.79	Maximum Non-Detect	-0.235722
6231					
6232	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	10
6233	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	1
6234	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	90.91%

	A	B	C	D	E
6235					
6236	**Warning: Data set has only 2 Distinct Detected Values.**				
6237	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
6238	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
6239					
6240	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
6241					
6242	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
6243	**Those methods will return a 'N/A' value on your output display!**				
6244					
6245	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
6246	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
6247	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
6248					
6249					
6250	**UCL Statistics**				
6251	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
6252	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
6253	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
6254	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
6255					
6256	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6257	DL/2 Substitution Method			DL/2 Substitution Method	
6258	Mean		0.3808182	Mean	-1.016438
6259	SD		0.1497523	SD	0.3138693
6260	95% DL/2 (t) UCL		0.4626545	95% H-Stat (DL/2) UCL	0.4619103
6261					
6262	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
6263	**MLE method failed to converge properly**			Mean in Log Scale	N/A
6264				SD in Log Scale	N/A
6265				Mean in Original Scale	N/A
6266				SD in Original Scale	N/A
6267				95% t UCL	N/A
6268				95% Percentile Bootstrap UCL	N/A
6269				95% BCA Bootstrap UCL	N/A
6270					
6271	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
6272	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
6273	Theta Star		N/A		
6274	nu star		N/A		
6275					
6276	A-D Test Statistic		N/A	**Nonparametric Statistics**	
6277	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
6278	K-S Test Statistic		N/A	Mean	0.2627273
6279	5% K-S Critical Value		N/A	SD	0.1730628
6280	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0737942
6281				95% KM (t) UCL	0.3964765
6282	**Assuming Gamma Distribution**			95% KM (z) UCL	0.384108
6283	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.6781999
6284	Minimum		N/A	95% KM (bootstrap t) UCL	N/A
6285	Maximum		N/A	95% KM (BCA) UCL	0.81
6286	Mean		N/A	95% KM (Percentile Bootstrap) UCL	0.81
6287	Median		N/A	95% KM (Chebyshev) UCL	0.5843889
6288	SD		N/A	97.5% KM (Chebyshev) UCL	0.7235722
6289	k star		N/A	99% KM (Chebyshev) UCL	0.9969707
6290	Theta star		N/A		
6291	Nu star		N/A	**Potential UCLs to Use**	
6292	AppChi2		N/A	95% KM (t) UCL	0.3964765
6293	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	0.81

	A	B	C	D	E
6294	95% Adjusted Gamma UCL		N/A		
6295	**Note: DL/2 is not a recommended method.**				
6296					
6297	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
6298	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
6299	**For additional insight, the user may want to consult a statistician.**				
6300					
6301					
6302	**M|MG/KG|ARSENIC (gi_sd_ne_2005)**				
6303					
6304	**General Statistics**				
6305	Number of Valid Data		36	Number of Detected Data	35
6306	Number of Distinct Detected Data		20	Number of Non-Detect Data	1
6307				Percent Non-Detects	2.78%
6308					
6309	**Raw Statistics**			**Log-transformed Statistics**	
6310	Minimum Detected		1.6	Minimum Detected	0.4700036
6311	Maximum Detected		5.2	Maximum Detected	1.6486586
6312	Mean of Detected		2.5842857	Mean of Detected	0.8952386
6313	SD of Detected		0.9482004	SD of Detected	0.3199224
6314	Minimum Non-Detect		0.076	Minimum Non-Detect	-2.577022
6315	Maximum Non-Detect		0.076	Maximum Non-Detect	-2.577022
6316					
6317					
6318	**UCL Statistics**				
6319	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
6320	Shapiro Wilk Test Statistic		0.8161616	Shapiro Wilk Test Statistic	0.8978676
6321	5% Shapiro Wilk Critical Value		0.934	5% Shapiro Wilk Critical Value	0.934
6322	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
6323					
6324	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6325	DL/2 Substitution Method			DL/2 Substitution Method	
6326	Mean		2.5135556	Mean	0.7795328
6327	SD		1.0263991	SD	0.7624879
6328	95% DL/2 (t) UCL		2.8025848	95% H-Stat (DL/2) UCL	3.8391714
6329					
6330	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
6331	Mean		2.5049159	Mean in Log Scale	0.8732292
6332	SD		1.0356052	SD in Log Scale	0.3418551
6333	95% MLE (t) UCL		2.7965375	Mean in Original Scale	2.5432884
6334	95% MLE (Tiku) UCL		2.799402	SD in Original Scale	0.9663871
6335				95% t UCL	2.8154186
6336				95% Percentile Bootstrap UCL	2.8083333
6337				95% BCA Bootstrap UCL	2.859955
6338					
6339	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
6340	k star (bias corrected)		8.6013359	**Data do not follow a Discernable Distribution (0.05)**	
6341	Theta Star		0.3004517		
6342	nu star		602.09351		
6343					
6344	A-D Test Statistic		1.5551781	**Nonparametric Statistics**	
6345	5% A-D Critical Value		0.7484478	Kaplan-Meier (KM) Method	
6346	K-S Test Statistic		0.7484478	Mean	2.5569444
6347	5% K-S Critical Value		0.148679	SD	0.9355742
6348	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.1582055
6349				95% KM (t) UCL	2.8242441
6350	**Assuming Gamma Distribution**			95% KM (z) UCL	2.8171693
6351	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	2.8222085
6352	Minimum		0.4630224	95% KM (bootstrap t) UCL	2.903007
6353	Maximum		5.2	95% KM (BCA) UCL	2.8138889
6354	Mean		2.5253617	95% KM (Percentile Bootstrap) UCL	2.8152778
6355	Median		2.25	95% KM (Chebyshev) UCL	3.2465462
6356	SD		0.9991943	97.5% KM (Chebyshev) UCL	3.5449374
6357	k star		6.0887022	99% KM (Chebyshev) UCL	4.1310691
6358	Theta star		0.4147619		
6359	Nu star		438.38656	**Potential UCLs to Use**	
6360	AppChi2		390.8451	95% KM (Chebyshev) UCL	3.2465462
6361	95% Gamma Approximate UCL		2.8325406		

	A	B	C	D	E
6362	95% Adjusted Gamma UCL		2.8473429		
6363	**Note: DL/2 is not a recommended method.**				
6364					
6365	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
6366	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
6367	**For additional insight, the user may want to consult a statistician.**				
6368					
6369					
6370	**M|MG/KG|ARSENIC (gi_sd_ne_2009)**				
6371					
6372	**General Statistics**				
6373	Number of Valid Observations		20	Number of Distinct Observations	15
6374					
6375	**Raw Statistics**			**Log-transformed Statistics**	
6376	Minimum		1.7	Minimum of Log Data	0.5306283
6377	Maximum		7.6	Maximum of Log Data	2.0281482
6378	Mean		2.9125	Mean of log Data	1.002996
6379	Median		2.55	SD of log Data	0.3430894
6380	SD		1.3140811		
6381	Coefficient of Variation		0.4511867		
6382	Skewness		2.6836358		
6383					
6384	**Relevant UCL Statistics**				
6385	**Normal Distribution Test**			**Lognormal Distribution Test**	
6386	Shapiro Wilk Test Statistic		0.6935634	Shapiro Wilk Test Statistic	0.8648838
6387	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
6388	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
6389					
6390	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6391	95% Student's-t UCL		3.420584	95% H-UCL	3.3536975
6392	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3.8641361
6393	95% Adjusted-CLT UCL (Chen-1995)		3.5842263	97.5% Chebyshev (MVUE) UCL	4.288763
6394	95% Modified-t UCL (Johnson-1978)		3.4499716	99% Chebyshev (MVUE) UCL	5.1228603
6395					
6396	**Gamma Distribution Test**			**Data Distribution**	
6397	k star (bias corrected)		6.6096356	**Data do not follow a Discernable Distribution (0.05)**	
6398	Theta Star		0.4406446		
6399	MLE of Mean		2.9125		
6400	MLE of Standard Deviation		1.1328624		
6401	nu star		264.38542		
6402	Approximate Chi Square Value (.05)		227.73266	**Nonparametric Statistics**	
6403	Adjusted Level of Significance		0.038	95% CLT UCL	3.3958196
6404	Adjusted Chi Square Value		225.04809	95% Jackknife UCL	3.420584
6405				95% Standard Bootstrap UCL	3.3886246
6406	Anderson-Darling Test Statistic		1.3227421	95% Bootstrap-t UCL	3.9083242
6407	Anderson-Darling 5% Critical Value		0.7433744	95% Hall's Bootstrap UCL	5.3646041
6408	Kolmogorov-Smirnov Test Statistic		0.2568885	95% Percentile Bootstrap UCL	3.4175
6409	Kolmogorov-Smirnov 5% Critical Value		0.1941306	95% BCA Bootstrap UCL	3.6025
6410	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	4.1933079
6411				97.5% Chebyshev(Mean, Sd) UCL	4.7475144
6412	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	5.8361459
6413	95% Approximate Gamma UCL		3.3812565		
6414	95% Adjusted Gamma UCL		3.4215911		
6415					
6416	**Potential UCL to Use**			Use 95% Student's-t UCL	3.420584
6417				or 95% Modified-t UCL	3.4499716
6418					
6419	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
6420	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
6421	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
6422					
6423					
6424	**M|MG/KG|ARSENIC (gi_sd_ne_2010)**				
6425					

	A	B	C	D	E
6426	**General Statistics**				
6427	Number of Valid Data		16	Number of Detected Data	14
6428	Number of Distinct Detected Data		13	Number of Non-Detect Data	2
6429				Percent Non-Detects	12.50%
6430					
6431	**Raw Statistics**			**Log-transformed Statistics**	
6432	Minimum Detected		0.278	Minimum Detected	-1.280134
6433	Maximum Detected		5.6	Maximum Detected	1.7227666
6434	Mean of Detected		1.6587857	Mean of Detected	0.1796772
6435	SD of Detected		1.4423975	SD of Detected	0.849492
6436	Minimum Non-Detect		0.13	Minimum Non-Detect	-2.040221
6437	Maximum Non-Detect		0.59	Maximum Non-Detect	-0.527633
6438					
6439	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	5
6440	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	11
6441	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	31.25%
6442					
6443	**UCL Statistics**				
6444	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
6445	Shapiro Wilk Test Statistic		0.821083	Shapiro Wilk Test Statistic	0.9695604
6446	5% Shapiro Wilk Critical Value		0.874	5% Shapiro Wilk Critical Value	0.874
6447	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
6448					
6449	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6450	DL/2 Substitution Method			DL/2 Substitution Method	
6451	Mean		1.4739375	Mean	-0.089917
6452	SD		1.43527	SD	1.1155117
6453	95% DL/2 (t) UCL		2.1029627	95% H-Stat (DL/2) UCL	3.909645
6454					
6455	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
6456	Mean		1.1776069	Mean in Log Scale	-0.030276
6457	SD		1.7543708	SD in Log Scale	0.9879411
6458	95% MLE (t) UCL		1.946482	Mean in Original Scale	1.481607
6459	95% MLE (Tiku) UCL		1.9920441	SD in Original Scale	1.427807
6460				95% t UCL	2.1073615
6461				95% Percentile Bootstrap UCL	2.0825
6462				95% BCA Bootstrap UCL	2.2070867
6463					
6464	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
6465	k star (bias corrected)		1.3669614	**Data appear Gamma Distributed at 5% Significance Level**	
6466	Theta Star		1.213484		
6467	nu star		38.274918		
6468					
6469	A-D Test Statistic		0.3629288	**Nonparametric Statistics**	
6470	5% A-D Critical Value		0.7489587	Kaplan-Meier (KM) Method	
6471	K-S Test Statistic		0.7489587	Mean	1.4934531
6472	5% K-S Critical Value		0.2323394	SD	1.3722555
6473	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.356121
6474				95% KM (t) UCL	2.1177511
6475	**Assuming Gamma Distribution**			95% KM (z) UCL	2.07922
6476	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	2.1062348
6477	Minimum		1E-12	95% KM (bootstrap t) UCL	2.4047672
6478	Maximum		5.6	95% KM (BCA) UCL	2.0969375
6479	Mean		1.470656	95% KM (Percentile Bootstrap) UCL	2.094625
6480	Median		0.8405	95% KM (Chebyshev) UCL	3.0457484
6481	SD		1.4389327	97.5% KM (Chebyshev) UCL	3.7174279
6482	k star		0.3129917	99% KM (Chebyshev) UCL	5.036812
6483	Theta star		4.6987057		
6484	Nu star		10.015735	**Potential UCLs to Use**	
6485	AppChi2		3.9515985	95% KM (BCA) UCL	2.0969375
6486	95% Gamma Approximate UCL		3.7275298		
6487	95% Adjusted Gamma UCL		4.1748388		
6488	**Note: DL/2 is not a recommended method.**				
6489					
6490	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
6491	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
6492	**For additional insight, the user may want to consult a statistician.**				

	A	B	C	D	E
6493					
6494					
6495	**M|MG/KG|ARSENIC (gi_sd_nw_2005)**				
6496					
6497	**General Statistics**				
6498	Number of Valid Observations		18	Number of Distinct Observations	16
6499					
6500	**Raw Statistics**			**Log-transformed Statistics**	
6501	Minimum		2.1	Minimum of Log Data	0.7419373
6502	Maximum		7.3	Maximum of Log Data	1.9878743
6503	Mean		4.075	Mean of log Data	1.3463622
6504	Median		3.85	SD of log Data	0.3428393
6505	SD		1.5318434		
6506	Coefficient of Variation		0.3759125		
6507	Skewness		1.2338573		
6508					
6509	**Relevant UCL Statistics**				
6510	**Normal Distribution Test**			**Lognormal Distribution Test**	
6511	Shapiro Wilk Test Statistic		0.8380564	Shapiro Wilk Test Statistic	0.9303381
6512	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
6513	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
6514					
6515	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6516	95% Student's-t UCL		4.7031006	95% H-UCL	4.7677105
6517	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5.5170696
6518	95% Adjusted-CLT UCL (Chen-1995)		4.7810877	97.5% Chebyshev (MVUE) UCL	6.1466265
6519	95% Modified-t UCL (Johnson-1978)		4.7206013	99% Chebyshev (MVUE) UCL	7.3832689
6520					
6521	**Gamma Distribution Test**			**Data Distribution**	
6522	k star (bias corrected)		7.2946071	**Data appear Gamma Distributed at 5% Significance Level**	
6523	Theta Star		0.5586319		
6524	MLE of Mean		4.075		
6525	MLE of Standard Deviation		1.5087826		
6526	nu star		262.60585		
6527	Approximate Chi Square Value (.05)		226.08071	**Nonparametric Statistics**	
6528	Adjusted Level of Significance		0.03574	95% CLT UCL	4.6688891
6529	Adjusted Chi Square Value		222.83016	95% Jackknife UCL	4.7031006
6530				95% Standard Bootstrap UCL	4.6579063
6531	Anderson-Darling Test Statistic		0.7359706	95% Bootstrap-t UCL	4.8424197
6532	Anderson-Darling 5% Critical Value		0.7401588	95% Hall's Bootstrap UCL	4.7394342
6533	Kolmogorov-Smirnov Test Statistic		0.1843155	95% Percentile Bootstrap UCL	4.6861111
6534	Kolmogorov-Smirnov 5% Critical Value		0.2036152	95% BCA Bootstrap UCL	4.7638889
6535	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	5.6488195
6536				97.5% Chebyshev(Mean, Sd) UCL	6.3298124
6537	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	7.6674911
6538	95% Approximate Gamma UCL		4.7333487		
6539	95% Adjusted Gamma UCL		4.8023969		
6540					
6541	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	4.7333487
6542					
6543	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
6544	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
6545	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
6546					
6547					
6548	**M|MG/KG|ARSENIC (gi_sd_nw_2009)**				
6549					
6550	**General Statistics**				
6551	Number of Valid Observations		7	Number of Distinct Observations	7
6552					
6553	**Raw Statistics**			**Log-transformed Statistics**	
6554	Minimum		1.7	Minimum of Log Data	0.5306283
6555	Maximum		6.8	Maximum of Log Data	1.9169226
6556	Mean		3.4214286	Mean of log Data	1.1050225
6557	Median		2.7	SD of log Data	0.5337858
6558	SD		1.8946981		
6559	Coefficient of Variation		0.553774		
6560	Skewness		0.9844366		
6561					

	A	B	C	D	E
6562					
6563	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
6564					
6565	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
6566	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
6567					
6568					
6569	**Warning: There are only 7 Values in this data**				
6570	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
6571	**the resulting calculations may not be reliable enough to draw conclusions**				
6572					
6573	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
6574					
6575	**Relevant UCL Statistics**				
6576	**Normal Distribution Test**			**Lognormal Distribution Test**	
6577	Shapiro Wilk Test Statistic		0.8690186	Shapiro Wilk Test Statistic	0.9035764
6578	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
6579	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
6580					
6581	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6582	95% Student's-t UCL		4.8129955	95% H-UCL	6.0457551
6583	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	6.415831
6584	95% Adjusted-CLT UCL (Chen-1995)		4.8840701	97.5% Chebyshev (MVUE) UCL	7.7184967
6585	95% Modified-t UCL (Johnson-1978)		4.8574053	99% Chebyshev (MVUE) UCL	10.277331
6586					
6587	**Gamma Distribution Test**			**Data Distribution**	
6588	k star (bias corrected)		2.4713714	**Data appear Normal at 5% Significance Level**	
6589	Theta Star		1.3844251		
6590	MLE of Mean		3.4214286		
6591	MLE of Standard Deviation		2.1763987		
6592	nu star		34.5992		
6593	Approximate Chi Square Value (.05)		22.143834	**Nonparametric Statistics**	
6594	Adjusted Level of Significance		0.01584	95% CLT UCL	4.5993553
6595	Adjusted Chi Square Value		19.193415	95% Jackknife UCL	4.8129955
6596				95% Standard Bootstrap UCL	4.51354
6597	Anderson-Darling Test Statistic		0.4245427	95% Bootstrap-t UCL	5.4367212
6598	Anderson-Darling 5% Critical Value		0.7097001	95% Hall's Bootstrap UCL	4.6653995
6599	Kolmogorov-Smirnov Test Statistic		0.2384693	95% Percentile Bootstrap UCL	4.6214286
6600	Kolmogorov-Smirnov 5% Critical Value		0.3129006	95% BCA Bootstrap UCL	4.8071429
6601	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	6.5429607
6602				97.5% Chebyshev(Mean, Sd) UCL	7.8936501
6603	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	10.546818
6604	95% Approximate Gamma UCL		5.3458987		
6605	95% Adjusted Gamma UCL		6.1676723		
6606					
6607	**Potential UCL to Use**			Use 95% Student's-t UCL	4.8129955
6608					
6609	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
6610	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
6611	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
6612					
6613					
6614	**M|MG/KG|ARSENIC (gi_sd_nw_2010)**				
6615					
6616	**General Statistics**				
6617	Number of Valid Observations		4	Number of Distinct Observations	4
6618					
6619					

	A	B	C	D	E
6620	**Warning: This data set only has 4 observations!**				
6621	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
6622	**The data set for variable M|MG/KG|ARSENIC (gi_sd_nw_2010) was not processed!**				
6623					
6624	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
6625	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
6626					
6627					
6628					
6629	**M|MG/KG|ARSENIC (gi_sd_ref_2009)**				
6630					
6631	**General Statistics**				
6632	Number of Valid Observations		6	Number of Distinct Observations	6
6633					
6634	**Raw Statistics**			**Log-transformed Statistics**	
6635	Minimum		1.1	Minimum of Log Data	0.0953102
6636	Maximum		2.7	Maximum of Log Data	0.9932518
6637	Mean		1.9583333	Mean of log Data	0.6240004
6638	Median		1.975	SD of log Data	0.3486771
6639	SD		0.6327849		
6640	Coefficient of Variation		0.3231242		
6641	Skewness		-0.178998		
6642					
6643					
6644	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
6645					
6646	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
6647	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
6648					
6649					
6650	**Warning: There are only 6 Values in this data**				
6651	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
6652	**the resulting calculations may not be reliable enough to draw conclusions**				
6653					
6654	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
6655					
6656	**Relevant UCL Statistics**				
6657	**Normal Distribution Test**			**Lognormal Distribution Test**	
6658	Shapiro Wilk Test Statistic		0.9326008	Shapiro Wilk Test Statistic	0.9250178
6659	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
6660	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
6661					
6662	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6663	95% Student's-t UCL		2.4788875	95% H-UCL	2.8451559
6664	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3.1800169
6665	95% Adjusted-CLT UCL (Chen-1995)		2.3630825	97.5% Chebyshev (MVUE) UCL	3.7067725
6666	95% Modified-t UCL (Johnson-1978)		2.4757412	99% Chebyshev (MVUE) UCL	4.7414817
6667					
6668	**Gamma Distribution Test**			**Data Distribution**	
6669	k star (bias corrected)		5.3912956	**Data appear Normal at 5% Significance Level**	
6670	Theta Star		0.3632398		
6671	MLE of Mean		1.9583333		
6672	MLE of Standard Deviation		0.8434125		
6673	nu star		64.695547		
6674	Approximate Chi Square Value (.05)		47.189281	**Nonparametric Statistics**	
6675	Adjusted Level of Significance		0.01222	95% CLT UCL	2.3832539
6676	Adjusted Chi Square Value		41.843432	95% Jackknife UCL	2.4788875
6677				95% Standard Bootstrap UCL	2.3462192
6678	Anderson-Darling Test Statistic		0.3177322	95% Bootstrap-t UCL	2.4767261

	A	B	C	D	E
6679	Anderson-Darling 5% Critical Value		0.6982605	95% Hall's Bootstrap UCL	2.2691167
6680	Kolmogorov-Smirnov Test Statistic		0.2383879	95% Percentile Bootstrap UCL	2.3583333
6681	Kolmogorov-Smirnov 5% Critical Value		0.332438	95% BCA Bootstrap UCL	2.3333333
6682	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3.0843822
6683				97.5% Chebyshev(Mean, Sd) UCL	3.5716245
6684	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4.5287175
6685	95% Approximate Gamma UCL		2.6848353		
6686	95% Adjusted Gamma UCL		3.0278455		
6687					
6688	**Potential UCL to Use**			Use 95% Student's-t UCL	2.4788875
6689					
6690	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
6691	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
6692	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
6693					
6694					
6695	**M|MG/KG|ARSENIC (gi_sd_ref_2010)**				
6696					
6697	**General Statistics**				
6698	Number of Valid Observations		3	Number of Distinct Observations	3
6699					
6700					
6701	**Warning: This data set only has 3 observations!**				
6702	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
6703	**The data set for variable M|MG/KG|ARSENIC (gi_sd_ref_2010) was not processed!**				
6704					
6705	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
6706	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
6707					
6708					
6709					
6710	**M|MG/KG|ARSENIC (gi_sd_s_2005)**				
6711					
6712	**General Statistics**				
6713	Number of Valid Observations		8	Number of Distinct Observations	5
6714					
6715	**Raw Statistics**			**Log-transformed Statistics**	
6716	Minimum		1.2	Minimum of Log Data	0.1823216
6717	Maximum		2.6	Maximum of Log Data	0.9555114
6718	Mean		1.8	Mean of log Data	0.5309142
6719	Median		1.5	SD of log Data	0.3578413
6720	SD		0.6546537		
6721	Coefficient of Variation		0.3636965		
6722	Skewness		0.4643677		
6723					
6724					
6725	**Warning: There are only 8 Values in this data**				
6726	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
6727	**the resulting calculations may not be reliable enough to draw conclusions**				
6728					
6729	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
6730					
6731	**Relevant UCL Statistics**				
6732	**Normal Distribution Test**			**Lognormal Distribution Test**	
6733	Shapiro Wilk Test Statistic		0.771999	Shapiro Wilk Test Statistic	0.7901934
6734	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
6735	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
6736					

	A	B	C	D	E
6737	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6738	95% Student's-t UCL		2.2385097	95% H-UCL	2.4196947
6739	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	2.7949044
6740	95% Adjusted-CLT UCL (Chen-1995)		2.2213132	97.5% Chebyshev (MVUE) UCL	3.2263301
6741	95% Modified-t UCL (Johnson-1978)		2.2448431	99% Chebyshev (MVUE) UCL	4.0737824
6742					
6743	**Gamma Distribution Test**			**Data Distribution**	
6744	k star (bias corrected)		5.6802217	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
6745	Theta Star		0.316889		
6746	MLE of Mean		1.8		
6747	MLE of Standard Deviation		0.7552485		
6748	nu star		90.883547		
6749	Approximate Chi Square Value (.05)		69.901262	**Nonparametric Statistics**	
6750	Adjusted Level of Significance		0.01946	95% CLT UCL	2.1807096
6751	Adjusted Chi Square Value		65.261369	95% Jackknife UCL	2.2385097
6752				95% Standard Bootstrap UCL	2.1594986
6753	Anderson-Darling Test Statistic		0.8553633	95% Bootstrap-t UCL	2.3017094
6754	Anderson-Darling 5% Critical Value		0.7158269	95% Hall's Bootstrap UCL	2.055896
6755	Kolmogorov-Smirnov Test Statistic		0.2908249	95% Percentile Bootstrap UCL	2.1375
6756	Kolmogorov-Smirnov 5% Critical Value		0.2944806	95% BCA Bootstrap UCL	2.175
6757	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	2.8088891
6758				97.5% Chebyshev(Mean, Sd) UCL	3.2454362
6759	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4.1029484
6760	95% Approximate Gamma UCL		2.3403066		
6761	95% Adjusted Gamma UCL		2.5066955		
6762					
6763	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	2.3403066
6764					
6765	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
6766	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
6767	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
6768					
6769					
6770	**M|MG/KG|ARSENIC (gi_sd_s_2010)**				
6771					
6772	**General Statistics**				
6773	Number of Valid Observations		2	Number of Distinct Observations	2
6774					
6775					
6776	**Warning: This data set only has 2 observations!**				
6777	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
6778	**The data set for variable M|MG/KG|ARSENIC (gi_sd_s_2010) was not processed!**				
6779					
6780	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
6781	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
6782					
6783					
6784					
6785	**M|MG/KG|ARSENIC (gi_sd_stillwater_2005)**				
6786					
6787	**General Statistics**				
6788	Number of Valid Observations		4	Number of Distinct Observations	4
6789					
6790					
6791	**Warning: This data set only has 4 observations!**				
6792	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
6793	**The data set for variable M|MG/KG|ARSENIC (gi_sd_stillwater_2005) was not processed!**				
6794					

	A	B	C	D	E
6795	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
6796	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
6797					
6798					
6799					
6800	**M|MG/KG|ARSENIC (gi_sd_stillwater_2009)**				
6801					
6802	**General Statistics**				
6803	Number of Valid Observations		60	Number of Distinct Observations	40
6804					
6805	**Raw Statistics**			**Log-transformed Statistics**	
6806	Minimum		1.5	Minimum of Log Data	0.4054651
6807	Maximum		11.3	Maximum of Log Data	2.4248027
6808	Mean		3.9833333	Mean of log Data	1.2340415
6809	Median		3.525	SD of log Data	0.5364686
6810	SD		2.3530663		
6811	Coefficient of Variation		0.5907279		
6812	Skewness		1.3708707		
6813					
6814	**Relevant UCL Statistics**				
6815	**Normal Distribution Test**			**Lognormal Distribution Test**	
6816	Lilliefors Test Statistic		0.1550287	Lilliefors Test Statistic	0.1315198
6817	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
6818	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
6819					
6820	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6821	95% Student's-t UCL		4.4909772	95% H-UCL	4.5344078
6822	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5.221145
6823	95% Adjusted-CLT UCL (Chen-1995)		4.5404522	97.5% Chebyshev (MVUE) UCL	5.7686038
6824	95% Modified-t UCL (Johnson-1978)		4.4999376	99% Chebyshev (MVUE) UCL	6.8439804
6825					
6826	**Gamma Distribution Test**			**Data Distribution**	
6827	k star (bias corrected)		3.3689797	**Data do not follow a Discernable Distribution (0.05)**	
6828	Theta Star		1.182356		
6829	MLE of Mean		3.9833333		
6830	MLE of Standard Deviation		2.1701885		
6831	nu star		404.27756		
6832	Approximate Chi Square Value (.05)		358.67029	**Nonparametric Statistics**	
6833	Adjusted Level of Significance		0.046	95% CLT UCL	4.4830062
6834	Adjusted Chi Square Value		357.61915	95% Jackknife UCL	4.4909772
6835				95% Standard Bootstrap UCL	4.4733282
6836	Anderson-Darling Test Statistic		1.1494206	95% Bootstrap-t UCL	4.5591749
6837	Anderson-Darling 5% Critical Value		0.755635	95% Hall's Bootstrap UCL	4.553256
6838	Kolmogorov-Smirnov Test Statistic		0.1472841	95% Percentile Bootstrap UCL	4.4958333
6839	Kolmogorov-Smirnov 5% Critical Value		0.115328	95% BCA Bootstrap UCL	4.5216667
6840	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	5.3074777
6841				97.5% Chebyshev(Mean, Sd) UCL	5.880436
6842	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	7.0059017
6843	95% Approximate Gamma UCL		4.4898401		
6844	95% Adjusted Gamma UCL		4.503037		
6845					
6846	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	5.3074777
6847					
6848	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
6849	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
6850	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
6851					
6852					
6853	**M|MG/KG|ARSENIC (gi_sd_stillwater_2010)**				
6854					
6855	**General Statistics**				
6856	Number of Valid Data		11	Number of Detected Data	10
6857	Number of Distinct Detected Data		10	Number of Non-Detect Data	1
6858				Percent Non-Detects	9.09%
6859					

	A	B	C	D	E
6860	**Raw Statistics**			**Log-transformed Statistics**	
6861	Minimum Detected		0.795	Minimum Detected	-0.229413
6862	Maximum Detected		2.7	Maximum Detected	0.9932518
6863	Mean of Detected		1.4175	Mean of Detected	0.2702059
6864	SD of Detected		0.6205611	SD of Detected	0.4096445
6865	Minimum Non-Detect		0.543	Minimum Non-Detect	-0.610646
6866	Maximum Non-Detect		0.543	Maximum Non-Detect	-0.610646
6867					
6868					
6869	**UCL Statistics**				
6870	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
6871	Shapiro Wilk Test Statistic		0.8791457	Shapiro Wilk Test Statistic	0.9268828
6872	5% Shapiro Wilk Critical Value		0.842	5% Shapiro Wilk Critical Value	0.842
6873	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
6874					
6875	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6876	DL/2 Substitution Method			DL/2 Substitution Method	
6877	Mean		1.3133182	Mean	0.1271151
6878	SD		0.6826264	SD	0.6133943
6879	95% DL/2 (t) UCL		1.6863582	95% H-Stat (DL/2) UCL	2.155203
6880					
6881	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
6882	Mean		1.3079789	Mean in Log Scale	0.1788774
6883	SD		0.6651035	SD in Log Scale	0.4927247
6884	95% MLE (t) UCL		1.6714431	Mean in Original Scale	1.3322536
6885	95% MLE (Tiku) UCL		1.669569	SD in Original Scale	0.6530872
6886				95% t UCL	1.6891511
6887				95% Percentile Bootstrap UCL	1.6409091
6888				95% BCA Bootstrap UCL	1.6876364
6889					
6890	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
6891	k star (bias corrected)		4.6280626	**Data appear Normal at 5% Significance Level**	
6892	Theta Star		0.3062837		
6893	nu star		92.561252		
6894					
6895	A-D Test Statistic		0.4389184	**Nonparametric Statistics**	
6896	5% A-D Critical Value		0.7281187	Kaplan-Meier (KM) Method	
6897	K-S Test Statistic		0.7281187	Mean	1.3609091
6898	5% K-S Critical Value		0.2671874	SD	0.5891552
6899	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.1872458
6900				95% KM (t) UCL	1.7002849
6901	**Assuming Gamma Distribution**			95% KM (z) UCL	1.6689011
6902	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	1.6955105
6903	Minimum		0.3435634	95% KM (bootstrap t) UCL	1.8585099
6904	Maximum		2.7	95% KM (BCA) UCL	1.7073636
6905	Mean		1.3198694	95% KM (Percentile Bootstrap) UCL	1.6752727
6906	Median		1.03	95% KM (Chebyshev) UCL	2.1770947
6907	SD		0.6718895	97.5% KM (Chebyshev) UCL	2.5302589
6908	k star		2.9948597	99% KM (Chebyshev) UCL	3.2239816
6909	Theta star		0.4407116		
6910	Nu star		65.886914	**Potential UCLs to Use**	
6911	AppChi2		48.208571	95% KM (t) UCL	1.7002849
6912	95% Gamma Approximate UCL		1.8038726	95% KM (Percentile Bootstrap) UCL	1.6752727
6913	95% Adjusted Gamma UCL		1.90074		
6914	**Note: DL/2 is not a recommended method.**				
6915					
6916	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
6917	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
6918	**For additional insight, the user may want to consult a statistician.**				
6919					
6920					
6921	**M|MG/KG|BARIUM (gi_sd_ne_2005)**				
6922					
6923	**General Statistics**				
6924	Number of Valid Observations		36	Number of Distinct Observations	31
6925					
6926	**Raw Statistics**			**Log-transformed Statistics**	
6927	Minimum		7.5	Minimum of Log Data	2.014903

	A	B	C	D	E
6928	Maximum		27	Maximum of Log Data	3.2958369
6929	Mean		11.775	Mean of log Data	2.4209907
6930	Median		10.85	SD of log Data	0.2894936
6931	SD		4.0350872		
6932	Coefficient of Variation		0.3426826		
6933	Skewness		2.037746		
6934					
6935	**Relevant UCL Statistics**				
6936	**Normal Distribution Test**			**Lognormal Distribution Test**	
6937	Shapiro Wilk Test Statistic		0.8135404	Shapiro Wilk Test Statistic	0.9279906
6938	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
6939	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
6940					
6941	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6942	95% Student's-t UCL		12.911262	95% H-UCL	12.805403
6943	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	14.230324
6944	95% Adjusted-CLT UCL (Chen-1995)		13.125239	97.5% Chebyshev (MVUE) UCL	15.314573
6945	95% Modified-t UCL (Johnson-1978)		12.949329	99% Chebyshev (MVUE) UCL	17.44437
6946					
6947	**Gamma Distribution Test**			**Data Distribution**	
6948	k star (bias corrected)		10.356864	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
6949	Theta Star		1.1369272		
6950	MLE of Mean		11.775		
6951	MLE of Standard Deviation		3.6588683		
6952	nu star		745.69421		
6953	Approximate Chi Square Value (.05)		683.32962	**Nonparametric Statistics**	
6954	Adjusted Level of Significance		0.0428	95% CLT UCL	12.881188
6955	Adjusted Chi Square Value		680.62925	95% Jackknife UCL	12.911262
6956				95% Standard Bootstrap UCL	12.843504
6957	Anderson-Darling Test Statistic		0.9534398	95% Bootstrap-t UCL	13.370803
6958	Anderson-Darling 5% Critical Value		0.7480303	95% Hall's Bootstrap UCL	13.673303
6959	Kolmogorov-Smirnov Test Statistic		0.1314627	95% Percentile Bootstrap UCL	12.955556
6960	Kolmogorov-Smirnov 5% Critical Value		0.1467503	95% BCA Bootstrap UCL	13.166667
6961	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	14.706423
6962				97.5% Chebyshev(Mean, Sd) UCL	15.974852
6963	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	18.466435
6964	95% Approximate Gamma UCL		12.849654		
6965	95% Adjusted Gamma UCL		12.900635		
6966					
6967	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	12.849654
6968					
6969	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
6970	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
6971	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
6972					
6973					
6974	**M|MG/KG|BARIUM (gi_sd_ne_2009)**				
6975					
6976	**General Statistics**				
6977	Number of Valid Observations		20	Number of Distinct Observations	18
6978					
6979	**Raw Statistics**			**Log-transformed Statistics**	
6980	Minimum		5.4	Minimum of Log Data	1.686399
6981	Maximum		26.7	Maximum of Log Data	3.2846636
6982	Mean		12.8275	Mean of log Data	2.4382187
6983	Median		10.8	SD of log Data	0.4857729
6984	SD		6.4437541		
6985	Coefficient of Variation		0.502339		
6986	Skewness		0.9321673		
6987					
6988	**Relevant UCL Statistics**				
6989	**Normal Distribution Test**			**Lognormal Distribution Test**	
6990	Shapiro Wilk Test Statistic		0.8897251	Shapiro Wilk Test Statistic	0.9545701
6991	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
6992	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
6993					

	A	B	C	D	E
6994	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
6995	95% Student's-t UCL		15.318951	95% H-UCL	16.114237
6996	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	19.076372
6997	95% Adjusted-CLT UCL (Chen-1995)		15.518426	97.5% Chebyshev (MVUE) UCL	21.790661
6998	95% Modified-t UCL (Johnson-1978)		15.369006	99% Chebyshev (MVUE) UCL	27.122357
6999					
7000	**Gamma Distribution Test**			**Data Distribution**	
7001	k star (bias corrected)		3.9181002	**Data appear Gamma Distributed at 5% Significance Level**	
7002	Theta Star		3.2739081		
7003	MLE of Mean		12.8275		
7004	MLE of Standard Deviation		6.4804364		
7005	nu star		156.72401		
7006	Approximate Chi Square Value (.05)		128.78329	**Nonparametric Statistics**	
7007	Adjusted Level of Significance		0.038	95% CLT UCL	15.197516
7008	Adjusted Chi Square Value		126.78352	95% Jackknife UCL	15.318951
7009				95% Standard Bootstrap UCL	15.132203
7010	Anderson-Darling Test Statistic		0.4212292	95% Bootstrap-t UCL	15.981062
7011	Anderson-Darling 5% Critical Value		0.7453589	95% Hall's Bootstrap UCL	15.410276
7012	Kolmogorov-Smirnov Test Statistic		0.121369	95% Percentile Bootstrap UCL	15.2075
7013	Kolmogorov-Smirnov 5% Critical Value		0.194543	95% BCA Bootstrap UCL	15.54
7014	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	19.108095
7015				97.5% Chebyshev(Mean, Sd) UCL	21.825713
7016	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	27.163948
7017	95% Approximate Gamma UCL		15.610544		
7018	95% Adjusted Gamma UCL		15.856771		
7019					
7020	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	15.610544
7021					
7022	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7023	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7024	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7025					
7026					
7027	**M|MG/KG|BARIUM (gi_sd_ne_2010)**				
7028					
7029	**General Statistics**				
7030	Number of Valid Observations		16	Number of Distinct Observations	16
7031					
7032	**Raw Statistics**			**Log-transformed Statistics**	
7033	Minimum		7.6	Minimum of Log Data	2.0281482
7034	Maximum		19.3	Maximum of Log Data	2.9601051
7035	Mean		11.303125	Mean of log Data	2.3893307
7036	Median		10.6	SD of log Data	0.2704327
7037	SD		3.2792514		
7038	Coefficient of Variation		0.290119		
7039	Skewness		1.1153223		
7040					
7041	**Relevant UCL Statistics**				
7042	**Normal Distribution Test**			**Lognormal Distribution Test**	
7043	Shapiro Wilk Test Statistic		0.8991391	Shapiro Wilk Test Statistic	0.9480218
7044	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
7045	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7046					
7047	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7048	95% Student's-t UCL		12.740298	95% H-UCL	12.870956
7049	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	14.644337
7050	95% Adjusted-CLT UCL (Chen-1995)		12.895848	97.5% Chebyshev (MVUE) UCL	16.097589
7051	95% Modified-t UCL (Johnson-1978)		12.778396	99% Chebyshev (MVUE) UCL	18.952219
7052					
7053	**Gamma Distribution Test**			**Data Distribution**	
7054	k star (bias corrected)		11.539534	**Data appear Normal at 5% Significance Level**	
7055	Theta Star		0.9795132		
7056	MLE of Mean		11.303125		
7057	MLE of Standard Deviation		3.3273953		
7058	nu star		369.26507		
7059	Approximate Chi Square Value (.05)		325.73024	**Nonparametric Statistics**	
7060	Adjusted Level of Significance		0.03348	95% CLT UCL	12.651597

	A	B	C	D	E
7061	Adjusted Chi Square Value		321.07776	95% Jackknife UCL	12.740298
7062				95% Standard Bootstrap UCL	12.631835
7063	Anderson-Darling Test Statistic		0.3881449	95% Bootstrap-t UCL	13.224546
7064	Anderson-Darling 5% Critical Value		0.7379505	95% Hall's Bootstrap UCL	13.099673
7065	Kolmogorov-Smirnov Test Statistic		0.1525507	95% Percentile Bootstrap UCL	12.640625
7066	Kolmogorov-Smirnov 5% Critical Value		0.21493	95% BCA Bootstrap UCL	12.828125
7067	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	14.876606
7068				97.5% Chebyshev(Mean, Sd) UCL	16.422855
7069	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	19.46016
7070	95% Approximate Gamma UCL		12.813822		
7071	95% Adjusted Gamma UCL		12.999496		
7072					
7073	**Potential UCL to Use**			Use 95% Student's-t UCL	12.740298
7074					
7075	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7076	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7077	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7078					
7079					
7080	**M|MG/KG|BARIUM (gi_sd_nw_2005)**				
7081					
7082	**General Statistics**				
7083	Number of Valid Observations		18	Number of Distinct Observations	18
7084					
7085	**Raw Statistics**			**Log-transformed Statistics**	
7086	Minimum		9.2	Minimum of Log Data	2.2192035
7087	Maximum		24.9	Maximum of Log Data	3.2148678
7088	Mean		13.083333	Mean of log Data	2.5401007
7089	Median		12.4	SD of log Data	0.2468997
7090	SD		3.7071076		
7091	Coefficient of Variation		0.2833458		
7092	Skewness		1.9715305		
7093					
7094	**Relevant UCL Statistics**				
7095	**Normal Distribution Test**			**Lognormal Distribution Test**	
7096	Shapiro Wilk Test Statistic		0.8136328	Shapiro Wilk Test Statistic	0.9120625
7097	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
7098	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7099					
7100	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7101	95% Student's-t UCL		14.603356	95% H-UCL	14.575669
7102	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	16.390737
7103	95% Adjusted-CLT UCL (Chen-1995)		14.95442	97.5% Chebyshev (MVUE) UCL	17.835962
7104	95% Modified-t UCL (Johnson-1978)		14.671029	99% Chebyshev (MVUE) UCL	20.674828
7105					
7106	**Gamma Distribution Test**			**Data Distribution**	
7107	k star (bias corrected)		13.512723	**Data appear Gamma Distributed at 5% Significance Level**	
7108	Theta Star		0.9682233		
7109	MLE of Mean		13.083333		
7110	MLE of Standard Deviation		3.5591556		
7111	nu star		486.45803		
7112	Approximate Chi Square Value (.05)		436.31434	**Nonparametric Statistics**	
7113	Adjusted Level of Significance		0.03574	95% CLT UCL	14.520563
7114	Adjusted Chi Square Value		431.76061	95% Jackknife UCL	14.603356
7115				95% Standard Bootstrap UCL	14.492111
7116	Anderson-Darling Test Statistic		0.5758744	95% Bootstrap-t UCL	15.387022
7117	Anderson-Darling 5% Critical Value		0.7393675	95% Hall's Bootstrap UCL	21.072033
7118	Kolmogorov-Smirnov Test Statistic		0.1564817	95% Percentile Bootstrap UCL	14.611111
7119	Kolmogorov-Smirnov 5% Critical Value		0.2033328	95% BCA Bootstrap UCL	15.055556
7120	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	16.892024
7121				97.5% Chebyshev(Mean, Sd) UCL	18.540048
7122	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	21.777271
7123	95% Approximate Gamma UCL		14.586943		
7124	95% Adjusted Gamma UCL		14.74079		
7125					
7126	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	14.586943
7127					

	A	B	C	D	E
7128	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7129	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7130	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7131					
7132					
7133	**M|MG/KG|BARIUM (gi_sd_nw_2009)**				
7134					
7135	**General Statistics**				
7136	Number of Valid Observations		7	Number of Distinct Observations	7
7137					
7138	**Raw Statistics**			**Log-transformed Statistics**	
7139	Minimum		9.35	Minimum of Log Data	2.2353763
7140	Maximum		25.3	Maximum of Log Data	3.2308044
7141	Mean		13.778571	Mean of log Data	2.5723402
7142	Median		12.4	SD of log Data	0.3245013
7143	SD		5.3589378		
7144	Coefficient of Variation		0.3889328		
7145	Skewness		2.106639		
7146					
7147					
7148	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
7149					
7150	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
7151	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
7152					
7153					
7154	**Warning: There are only 7 Values in this data**				
7155	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
7156	**the resulting calculations may not be reliable enough to draw conclusions**				
7157					
7158	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
7159					
7160	**Relevant UCL Statistics**				
7161	**Normal Distribution Test**			**Lognormal Distribution Test**	
7162	Shapiro Wilk Test Statistic		0.7544415	Shapiro Wilk Test Statistic	0.8622925
7163	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
7164	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7165					
7166	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7167	95% Student's-t UCL		17.71446	95% H-UCL	18.587955
7168	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	21.038709
7169	95% Adjusted-CLT UCL (Chen-1995)		18.833464	97.5% Chebyshev (MVUE) UCL	24.21523
7170	95% Modified-t UCL (Johnson-1978)		17.983254	99% Chebyshev (MVUE) UCL	30.45489
7171					
7172	**Gamma Distribution Test**			**Data Distribution**	
7173	k star (bias corrected)		5.8159637	**Data appear Gamma Distributed at 5% Significance Level**	
7174	Theta Star		2.3690951		
7175	MLE of Mean		13.778571		
7176	MLE of Standard Deviation		5.7133831		
7177	nu star		81.423492		
7178	Approximate Chi Square Value (.05)		61.630183	**Nonparametric Statistics**	
7179	Adjusted Level of Significance		0.01584	95% CLT UCL	17.110203
7180	Adjusted Chi Square Value		56.456936	95% Jackknife UCL	17.71446
7181				95% Standard Bootstrap UCL	16.85739
7182	Anderson-Darling Test Statistic		0.6022639	95% Bootstrap-t UCL	23.389454
7183	Anderson-Darling 5% Critical Value		0.708478	95% Hall's Bootstrap UCL	31.757445
7184	Kolmogorov-Smirnov Test Statistic		0.2514911	95% Percentile Bootstrap UCL	17.357143
7185	Kolmogorov-Smirnov 5% Critical Value		0.3119295	95% BCA Bootstrap UCL	18.142857
7186	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	22.607469

	A	B	C	D	E
7187				97.5% Chebyshev(Mean, Sd) UCL	26.427741
7188	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	33.931924
7189	95% Approximate Gamma UCL		18.203733		
7190	95% Adjusted Gamma UCL		19.871773		
7191					
7192	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	18.203733
7193					
7194	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7195	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7196	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7197					
7198					
7199	**M|MG/KG|BARIUM (gi_sd_nw_2010)**				
7200					
7201	**General Statistics**				
7202	Number of Valid Observations		4	Number of Distinct Observations	4
7203					
7204					
7205	**Warning: This data set only has 4 observations!**				
7206	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
7207	**The data set for variable M|MG/KG|BARIUM (gi_sd_nw_2010) was not processed!**				
7208					
7209	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
7210	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
7211					
7212					
7213					
7214	**M|MG/KG|BARIUM (gi_sd_ref_2009)**				
7215					
7216	**General Statistics**				
7217	Number of Valid Observations		6	Number of Distinct Observations	6
7218					
7219	**Raw Statistics**			**Log-transformed Statistics**	
7220	Minimum		6	Minimum of Log Data	1.7917595
7221	Maximum		11	Maximum of Log Data	2.3978953
7222	Mean		8.175	Mean of log Data	2.0842274
7223	Median		8.15	SD of log Data	0.2004561
7224	SD		1.6642566		
7225	Coefficient of Variation		0.2035788		
7226	Skewness		0.7405428		
7227					
7228					
7229	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
7230					
7231	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
7232	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
7233					
7234					
7235	**Warning: There are only 6 Values in this data**				
7236	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
7237	**the resulting calculations may not be reliable enough to draw conclusions**				
7238					
7239	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
7240					
7241	**Relevant UCL Statistics**				
7242	**Normal Distribution Test**			**Lognormal Distribution Test**	

	A	B	C	D	E
7243	Shapiro Wilk Test Statistic		0.9465443	Shapiro Wilk Test Statistic	0.9690751
7244	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
7245	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7246					
7247	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7248	95% Student's-t UCL		9.5440841	95% H-UCL	9.8735141
7249	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	11.089361
7250	95% Adjusted-CLT UCL (Chen-1995)		9.5120451	97.5% Chebyshev (MVUE) UCL	12.350939
7251	95% Modified-t UCL (Johnson-1978)		9.5783189	99% Chebyshev (MVUE) UCL	14.829065
7252					
7253	**Gamma Distribution Test**			**Data Distribution**	
7254	k star (bias corrected)		15.027805	**Data appear Normal at 5% Significance Level**	
7255	Theta Star		0.5439916		
7256	MLE of Mean		8.175		
7257	MLE of Standard Deviation		2.1088223		
7258	nu star		180.33366		
7259	Approximate Chi Square Value (.05)		150.27348	**Nonparametric Statistics**	
7260	Adjusted Level of Significance		0.01222	95% CLT UCL	9.2925627
7261	Adjusted Chi Square Value		140.33215	95% Jackknife UCL	9.5440841
7262				95% Standard Bootstrap UCL	9.2021077
7263	Anderson-Darling Test Statistic		0.2562629	95% Bootstrap-t UCL	9.7402601
7264	Anderson-Darling 5% Critical Value		0.6970212	95% Hall's Bootstrap UCL	10.566928
7265	Kolmogorov-Smirnov Test Statistic		0.2125017	95% Percentile Bootstrap UCL	9.2583333
7266	Kolmogorov-Smirnov 5% Critical Value		0.3317562	95% BCA Bootstrap UCL	9.325
7267	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	11.136566
7268				97.5% Chebyshev(Mean, Sd) UCL	12.418038
7269	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	14.935242
7270	95% Approximate Gamma UCL		9.8102979		
7271	95% Adjusted Gamma UCL		10.505274		
7272					
7273	**Potential UCL to Use**			Use 95% Student's-t UCL	9.5440841
7274					
7275	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7276	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7277	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7278					
7279					
7280	**M|MG/KG|BARIUM (gi_sd_ref_2010)**				
7281					
7282	**General Statistics**				
7283	Number of Valid Observations		3	Number of Distinct Observations	3
7284					
7285					
7286	**Warning: This data set only has 3 observations!**				
7287	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
7288	**The data set for variable M|MG/KG|BARIUM (gi_sd_ref_2010) was not processed!**				
7289					
7290	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
7291	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
7292					
7293					
7294					
7295	**M|MG/KG|BARIUM (gi_sd_s_2005)**				
7296					
7297	**General Statistics**				
7298	Number of Valid Observations		8	Number of Distinct Observations	8
7299					
7300	**Raw Statistics**			**Log-transformed Statistics**	
7301	Minimum		5.5	Minimum of Log Data	1.7047481
7302	Maximum		18	Maximum of Log Data	2.8903718
7303	Mean		9.86875	Mean of log Data	2.2065034
7304	Median		8.85	SD of log Data	0.4310208

	A	B	C	D	E
7305	SD		4.392765		
7306	Coefficient of Variation		0.4451187		
7307	Skewness		0.862278		
7308					
7309					
7310	**Warning: There are only 8 Values in this data**				
7311	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
7312	**the resulting calculations may not be reliable enough to draw conclusions**				
7313					
7314	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
7315					
7316	**Relevant UCL Statistics**				
7317	**Normal Distribution Test**			**Lognormal Distribution Test**	
7318	Shapiro Wilk Test Statistic		0.8859084	Shapiro Wilk Test Statistic	0.9106
7319	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
7320	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7321					
7322	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7323	95% Student's-t UCL		12.811176	95% H-UCL	14.362681
7324	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	16.437286
7325	95% Adjusted-CLT UCL (Chen-1995)		12.929247	97.5% Chebyshev (MVUE) UCL	19.289356
7326	95% Modified-t UCL (Johnson-1978)		12.890088	99% Chebyshev (MVUE) UCL	24.891695
7327					
7328	**Gamma Distribution Test**			**Data Distribution**	
7329	k star (bias corrected)		3.9554929	**Data appear Normal at 5% Significance Level**	
7330	Theta Star		2.4949482		
7331	MLE of Mean		9.86875		
7332	MLE of Standard Deviation		4.9620581		
7333	nu star		63.287886		
7334	Approximate Chi Square Value (.05)		45.987006	**Nonparametric Statistics**	
7335	Adjusted Level of Significance		0.01946	95% CLT UCL	12.423334
7336	Adjusted Chi Square Value		42.281262	95% Jackknife UCL	12.811176
7337				95% Standard Bootstrap UCL	12.254403
7338	Anderson-Darling Test Statistic		0.4389821	95% Bootstrap-t UCL	13.976483
7339	Anderson-Darling 5% Critical Value		0.7180897	95% Hall's Bootstrap UCL	12.71111
7340	Kolmogorov-Smirnov Test Statistic		0.2687495	95% Percentile Bootstrap UCL	12.36875
7341	Kolmogorov-Smirnov 5% Critical Value		0.2950105	95% BCA Bootstrap UCL	12.475
7342	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	16.638455
7343				97.5% Chebyshev(Mean, Sd) UCL	19.567712
7344	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	25.32167
7345	95% Approximate Gamma UCL		13.581496		
7346	95% Adjusted Gamma UCL		14.771847		
7347					
7348	**Potential UCL to Use**			Use 95% Student's-t UCL	12.811176
7349					
7350	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7351	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7352	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7353					
7354					
7355	**M|MG/KG|BARIUM (gi_sd_s_2010)**				
7356					
7357	**General Statistics**				
7358	Number of Valid Observations		2	Number of Distinct Observations	2
7359					
7360					
7361	**Warning: This data set only has 2 observations!**				
7362	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
7363	**The data set for variable M|MG/KG|BARIUM (gi_sd_s_2010) was not processed!**				
7364					

	A	B	C	D	E
7365	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
7366	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
7367					
7368					
7369					
7370	**M|MG/KG|BARIUM (gi_sd_stillwater_2005)**				
7371					
7372	**General Statistics**				
7373	Number of Valid Observations		4	Number of Distinct Observations	4
7374					
7375					
7376	**Warning: This data set only has 4 observations!**				
7377	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
7378	**The data set for variable M|MG/KG|BARIUM (gi_sd_stillwater_2005) was not processed!**				
7379					
7380	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
7381	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
7382					
7383					
7384					
7385	**M|MG/KG|BARIUM (gi_sd_stillwater_2009)**				
7386					
7387	**General Statistics**				
7388	Number of Valid Observations		60	Number of Distinct Observations	52
7389					
7390	**Raw Statistics**			**Log-transformed Statistics**	
7391	Minimum		4.6	Minimum of Log Data	1.5260563
7392	Maximum		29.8	Maximum of Log Data	3.3945084
7393	Mean		14.759167	Mean of log Data	2.6174657
7394	Median		14.2	SD of log Data	0.3991207
7395	SD		5.6065526		
7396	Coefficient of Variation		0.3798692		
7397	Skewness		0.5562854		
7398					
7399	**Relevant UCL Statistics**				
7400	**Normal Distribution Test**			**Lognormal Distribution Test**	
7401	Lilliefors Test Statistic		0.0918726	Lilliefors Test Statistic	0.0976582
7402	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
7403	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7404					
7405	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7406	95% Student's-t UCL		15.968708	95% H-UCL	16.309207
7407	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	18.255254
7408	95% Adjusted-CLT UCL (Chen-1995)		16.005259	97.5% Chebyshev (MVUE) UCL	19.743557
7409	95% Modified-t UCL (Johnson-1978)		15.977372	99% Chebyshev (MVUE) UCL	22.66704
7410					
7411	**Gamma Distribution Test**			**Data Distribution**	
7412	k star (bias corrected)		6.5499061	**Data appear Normal at 5% Significance Level**	
7413	Theta Star		2.2533402		
7414	MLE of Mean		14.759167		
7415	MLE of Standard Deviation		5.766925		
7416	nu star		785.98873		
7417	Approximate Chi Square Value (.05)		721.92996	**Nonparametric Statistics**	
7418	Adjusted Level of Significance		0.046	95% CLT UCL	15.949716
7419	Adjusted Chi Square Value		720.4294	95% Jackknife UCL	15.968708
7420				95% Standard Bootstrap UCL	15.890191
7421	Anderson-Darling Test Statistic		0.2844609	95% Bootstrap-t UCL	16.031486
7422	Anderson-Darling 5% Critical Value		0.7525266	95% Hall's Bootstrap UCL	16.057361
7423	Kolmogorov-Smirnov Test Statistic		0.071791	95% Percentile Bootstrap UCL	15.979167
7424	Kolmogorov-Smirnov 5% Critical Value		0.1148957	95% BCA Bootstrap UCL	15.955833
7425	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	17.91415
7426				97.5% Chebyshev(Mean, Sd) UCL	19.279314
7427	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	21.960914
7428	95% Approximate Gamma UCL		16.068787		

	A	B	C	D	E
7429	95% Adjusted Gamma UCL		16.102256		
7430					
7431	**Potential UCL to Use**			Use 95% Student's-t UCL	15.968708
7432					
7433	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7434	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7435	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7436					
7437					
7438	**M|MG/KG|BARIUM (gi_sd_stillwater_2010)**				
7439					
7440	**General Statistics**				
7441	Number of Valid Observations		11	Number of Distinct Observations	11
7442					
7443	**Raw Statistics**			**Log-transformed Statistics**	
7444	Minimum		7.4	Minimum of Log Data	2.00148
7445	Maximum		32.5	Maximum of Log Data	3.4812401
7446	Mean		15.409091	Mean of log Data	2.6125872
7447	Median		11.4	SD of log Data	0.5019194
7448	SD		8.5379687		
7449	Coefficient of Variation		0.5540865		
7450	Skewness		1.1384232		
7451					
7452	**Relevant UCL Statistics**				
7453	**Normal Distribution Test**			**Lognormal Distribution Test**	
7454	Shapiro Wilk Test Statistic		0.822389	Shapiro Wilk Test Statistic	0.8977736
7455	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
7456	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7457					
7458	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7459	95% Student's-t UCL		20.0749	95% H-UCL	21.852643
7460	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	25.559479
7461	95% Adjusted-CLT UCL (Chen-1995)		20.587589	97.5% Chebyshev (MVUE) UCL	30.010832
7462	95% Modified-t UCL (Johnson-1978)		20.22217	99% Chebyshev (MVUE) UCL	38.754654
7463					
7464	**Gamma Distribution Test**			**Data Distribution**	
7465	k star (bias corrected)		3.1482361	**Data appear Gamma Distributed at 5% Significance Level**	
7466	Theta Star		4.8945157		
7467	MLE of Mean		15.409091		
7468	MLE of Standard Deviation		8.684471		
7469	nu star		69.261194		
7470	Approximate Chi Square Value (.05)		51.103806	**Nonparametric Statistics**	
7471	Adjusted Level of Significance		0.02783	95% CLT UCL	19.643428
7472	Adjusted Chi Square Value		48.569183	95% Jackknife UCL	20.0749
7473				95% Standard Bootstrap UCL	19.421618
7474	Anderson-Darling Test Statistic		0.6724296	95% Bootstrap-t UCL	21.866907
7475	Anderson-Darling 5% Critical Value		0.7323154	95% Hall's Bootstrap UCL	19.486113
7476	Kolmogorov-Smirnov Test Statistic		0.2100129	95% Percentile Bootstrap UCL	19.590909
7477	Kolmogorov-Smirnov 5% Critical Value		0.2563622	95% BCA Bootstrap UCL	20.572727
7478	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	26.63018
7479				97.5% Chebyshev(Mean, Sd) UCL	31.485554
7480	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	41.022997
7481	95% Approximate Gamma UCL		20.884003		
7482	95% Adjusted Gamma UCL		21.973852		
7483					
7484	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	20.884003
7485					
7486	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7487	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7488	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7489					
7490					
7491	**M|MG/KG|BERYLLIUM (gi_sd_ne_2005)**				

	A	B	C	D	E
7492					
7493	**General Statistics**				
7494	Number of Valid Observations		36	Number of Distinct Observations	28
7495					
7496	**Raw Statistics**			**Log-transformed Statistics**	
7497	Minimum		0.13	Minimum of Log Data	-2.040221
7498	Maximum		0.79	Maximum of Log Data	-0.235722
7499	Mean		0.3709722	Mean of log Data	-1.054313
7500	Median		0.385	SD of log Data	0.3696919
7501	SD		0.1300539		
7502	Coefficient of Variation		0.350576		
7503	Skewness		0.6943581		
7504					
7505	**Relevant UCL Statistics**				
7506	**Normal Distribution Test**			**Lognormal Distribution Test**	
7507	Shapiro Wilk Test Statistic		0.9577441	Shapiro Wilk Test Statistic	0.9679663
7508	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
7509	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7510					
7511	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7512	95% Student's-t UCL		0.4075948	95% H-UCL	0.4180758
7513	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.4749303
7514	95% Adjusted-CLT UCL (Chen-1995)		0.4093058	97.5% Chebyshev (MVUE) UCL	0.5193287
7515	95% Modified-t UCL (Johnson-1978)		0.4080129	99% Chebyshev (MVUE) UCL	0.6065408
7516					
7517	**Gamma Distribution Test**			**Data Distribution**	
7518	k star (bias corrected)		7.4796561	**Data appear Normal at 5% Significance Level**	
7519	Theta Star		0.0495975		
7520	MLE of Mean		0.3709722		
7521	MLE of Standard Deviation		0.135644		
7522	nu star		538.53524		
7523	Approximate Chi Square Value (.05)		485.7139	**Nonparametric Statistics**	
7524	Adjusted Level of Significance		0.0428	95% CLT UCL	0.4066255
7525	Adjusted Chi Square Value		483.44395	95% Jackknife UCL	0.4075948
7526				95% Standard Bootstrap UCL	0.4060018
7527	Anderson-Darling Test Statistic		0.4054431	95% Bootstrap-t UCL	0.4099729
7528	Anderson-Darling 5% Critical Value		0.7489119	95% Hall's Bootstrap UCL	0.4119484
7529	Kolmogorov-Smirnov Test Statistic		0.103069	95% Percentile Bootstrap UCL	0.4080556
7530	Kolmogorov-Smirnov 5% Critical Value		0.1469383	95% BCA Bootstrap UCL	0.40875
7531	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.4654542
7532				97.5% Chebyshev(Mean, Sd) UCL	0.5063367
7533	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.5866423
7534	95% Approximate Gamma UCL		0.4113154		
7535	95% Adjusted Gamma UCL		0.4132467		
7536					
7537	**Potential UCL to Use**			Use 95% Student's-t UCL	0.4075948
7538					
7539	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7540	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7541	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7542					
7543					
7544	**M|MG/KG|BERYLLIUM (gi_sd_ne_2009)**				
7545					
7546	**General Statistics**				
7547	Number of Valid Observations		20	Number of Distinct Observations	17
7548					
7549	**Raw Statistics**			**Log-transformed Statistics**	
7550	Minimum		0.065	Minimum of Log Data	-2.733368
7551	Maximum		0.37	Maximum of Log Data	-0.994252
7552	Mean		0.17485	Mean of log Data	-1.915045
7553	Median		0.15	SD of log Data	0.6087235
7554	SD		0.102095		
7555	Coefficient of Variation		0.5839007		
7556	Skewness		0.5586479		
7557					
7558	**Relevant UCL Statistics**				
7559	**Normal Distribution Test**			**Lognormal Distribution Test**	
7560	Shapiro Wilk Test Statistic		0.8798292	Shapiro Wilk Test Statistic	0.8949928

	A	B	C	D	E
7561	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
7562	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
7563					
7564	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7565	95% Student's-t UCL		0.2143246	95% H-UCL	0.238822
7566	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.2849866
7567	95% Adjusted-CLT UCL (Chen-1995)		0.2154477	97.5% Chebyshev (MVUE) UCL	0.3323893
7568	95% Modified-t UCL (Johnson-1978)		0.2147999	99% Chebyshev (MVUE) UCL	0.4255028
7569					
7570	**Gamma Distribution Test**			**Data Distribution**	
7571	k star (bias corrected)		2.648649	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
7572	Theta Star		0.0660148		
7573	MLE of Mean		0.17485		
7574	MLE of Standard Deviation		0.1074369		
7575	nu star		105.94596		
7576	Approximate Chi Square Value (.05)		83.19235	**Nonparametric Statistics**	
7577	Adjusted Level of Significance		0.038	95% CLT UCL	0.2124006
7578	Adjusted Chi Square Value		81.599831	95% Jackknife UCL	0.2143246
7579				95% Standard Bootstrap UCL	0.211436
7580	Anderson-Darling Test Statistic		0.8119635	95% Bootstrap-t UCL	0.2176718
7581	Anderson-Darling 5% Critical Value		0.7473763	95% Hall's Bootstrap UCL	0.214084
7582	Kolmogorov-Smirnov Test Statistic		0.1709983	95% Percentile Bootstrap UCL	0.21475
7583	Kolmogorov-Smirnov 5% Critical Value		0.195	95% BCA Bootstrap UCL	0.21575
7584	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.2743599
7585				97.5% Chebyshev(Mean, Sd) UCL	0.317418
7586	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.4019971
7587	95% Approximate Gamma UCL		0.2226725		
7588	95% Adjusted Gamma UCL		0.2270183		
7589					
7590	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	0.2226725
7591					
7592	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7593	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7594	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7595					
7596					
7597	**M|MG/KG|BERYLLIUM (gi_sd_ne_2010)**				
7598					
7599	**General Statistics**				
7600	Number of Valid Observations		16	Number of Distinct Observations	15
7601					
7602	**Raw Statistics**			**Log-transformed Statistics**	
7603	Minimum		0.204	Minimum of Log Data	-1.589635
7604	Maximum		0.333	Maximum of Log Data	-1.099613
7605	Mean		0.246	Mean of log Data	-1.411106
7606	Median		0.24	SD of log Data	0.1342757
7607	SD		0.0344886		
7608	Coefficient of Variation		0.1401977		
7609	Skewness		1.0334416		
7610					
7611	**Relevant UCL Statistics**				
7612	**Normal Distribution Test**			**Lognormal Distribution Test**	
7613	Shapiro Wilk Test Statistic		0.9233086	Shapiro Wilk Test Statistic	0.9507922
7614	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
7615	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7616					
7617	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7618	95% Student's-t UCL		0.2611151	95% H-UCL	0.2615738
7619	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.2820182
7620	95% Adjusted-CLT UCL (Chen-1995)		0.2625624	97.5% Chebyshev (MVUE) UCL	0.2976284
7621	95% Modified-t UCL (Johnson-1978)		0.2614864	99% Chebyshev (MVUE) UCL	0.3282914
7622					
7623	**Gamma Distribution Test**			**Data Distribution**	
7624	k star (bias corrected)		46.96748	**Data appear Normal at 5% Significance Level**	
7625	Theta Star		0.0052377		

	A	B	C	D	E
7626	MLE of Mean		0.246		
7627	MLE of Standard Deviation		0.0358952		
7628	nu star		1502.9594		
7629	Approximate Chi Square Value (.05)		1413.9295	**Nonparametric Statistics**	
7630	Adjusted Level of Significance		0.03348	95% CLT UCL	0.2601822
7631	Adjusted Chi Square Value		1404.1049	95% Jackknife UCL	0.2611151
7632				95% Standard Bootstrap UCL	0.2602321
7633	Anderson-Darling Test Statistic		0.3043103	95% Bootstrap-t UCL	0.2653573
7634	Anderson-Darling 5% Critical Value		0.7354808	95% Hall's Bootstrap UCL	0.2649739
7635	Kolmogorov-Smirnov Test Statistic		0.1400887	95% Percentile Bootstrap UCL	0.26025
7636	Kolmogorov-Smirnov 5% Critical Value		0.21444	95% BCA Bootstrap UCL	0.2626875
7637	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.2835831
7638				97.5% Chebyshev(Mean, Sd) UCL	0.2998454
7639	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.3317894
7640	95% Approximate Gamma UCL		0.2614897		
7641	95% Adjusted Gamma UCL		0.2633194		
7642					
7643	**Potential UCL to Use**			Use 95% Student's-t UCL	0.2611151
7644					
7645	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7646	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7647	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7648					
7649					
7650	**M|MG/KG|BERYLLIUM (gi_sd_nw_2005)**				
7651					
7652	**General Statistics**				
7653	Number of Valid Observations		18	Number of Distinct Observations	14
7654					
7655	**Raw Statistics**			**Log-transformed Statistics**	
7656	Minimum		0.11	Minimum of Log Data	-2.207275
7657	Maximum		0.45	Maximum of Log Data	-0.798508
7658	Mean		0.2047222	Mean of log Data	-1.66426
7659	Median		0.185	SD of log Data	0.3960641
7660	SD		0.0895162		
7661	Coefficient of Variation		0.437257		
7662	Skewness		1.3968044		
7663					
7664	**Relevant UCL Statistics**				
7665	**Normal Distribution Test**			**Lognormal Distribution Test**	
7666	Shapiro Wilk Test Statistic		0.8709914	Shapiro Wilk Test Statistic	0.9517997
7667	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
7668	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7669					
7670	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7671	95% Student's-t UCL		0.2414265	95% H-UCL	0.2464361
7672	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.2886147
7673	95% Adjusted-CLT UCL (Chen-1995)		0.2468497	97.5% Chebyshev (MVUE) UCL	0.3253012
7674	95% Modified-t UCL (Johnson-1978)		0.2425842	99% Chebyshev (MVUE) UCL	0.3973648
7675					
7676	**Gamma Distribution Test**			**Data Distribution**	
7677	k star (bias corrected)		5.5031921	**Data appear Gamma Distributed at 5% Significance Level**	
7678	Theta Star		0.0372006		
7679	MLE of Mean		0.2047222		
7680	MLE of Standard Deviation		0.0872685		
7681	nu star		198.11492		
7682	Approximate Chi Square Value (.05)		166.54906	**Nonparametric Statistics**	
7683	Adjusted Level of Significance		0.03574	95% CLT UCL	0.2394273
7684	Adjusted Chi Square Value		163.77276	95% Jackknife UCL	0.2414265
7685				95% Standard Bootstrap UCL	0.2376425
7686	Anderson-Darling Test Statistic		0.4017263	95% Bootstrap-t UCL	0.2544123
7687	Anderson-Darling 5% Critical Value		0.7418055	95% Hall's Bootstrap UCL	0.2585433
7688	Kolmogorov-Smirnov Test Statistic		0.1340029	95% Percentile Bootstrap UCL	0.24
7689	Kolmogorov-Smirnov 5% Critical Value		0.2038904	95% BCA Bootstrap UCL	0.2461111
7690	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.2966914
7691				97.5% Chebyshev(Mean, Sd) UCL	0.3364865
7692	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.4146564
7693	95% Approximate Gamma UCL		0.243523		

	A	B	C	D	E
7694	95% Adjusted Gamma UCL		0.2476512		
7695					
7696	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	0.243523
7697					
7698	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7699	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7700	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7701					
7702					
7703	**M|MG/KG|BERYLLIUM (gi_sd_nw_2009)**				
7704					
7705	**General Statistics**				
7706	Number of Valid Observations		7	Number of Distinct Observations	6
7707					
7708	**Raw Statistics**			**Log-transformed Statistics**	
7709	Minimum		0.061	Minimum of Log Data	-2.796881
7710	Maximum		0.73	Maximum of Log Data	-0.314711
7711	Mean		0.3050714	Mean of log Data	-1.462817
7712	Median		0.31	SD of log Data	0.8704742
7713	SD		0.2220665		
7714	Coefficient of Variation		0.7279165		
7715	Skewness		1.0966989		
7716					
7717					
7718	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
7719					
7720	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
7721	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
7722					
7723					
7724	**Warning: There are only 7 Values in this data**				
7725	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
7726	**the resulting calculations may not be reliable enough to draw conclusions**				
7727					
7728	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
7729					
7730	**Relevant UCL Statistics**				
7731	**Normal Distribution Test**			**Lognormal Distribution Test**	
7732	Shapiro Wilk Test Statistic		0.8841465	Shapiro Wilk Test Statistic	0.9019923
7733	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
7734	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7735					
7736	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7737	95% Student's-t UCL		0.4681689	95% H-UCL	1.1085878
7738	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.7733509
7739	95% Adjusted-CLT UCL (Chen-1995)		0.4803045	97.5% Chebyshev (MVUE) UCL	0.9710026
7740	95% Modified-t UCL (Johnson-1978)		0.4739674	99% Chebyshev (MVUE) UCL	1.359251
7741					
7742	**Gamma Distribution Test**			**Data Distribution**	
7743	k star (bias corrected)		1.2178077	**Data appear Normal at 5% Significance Level**	
7744	Theta Star		0.2505087		
7745	MLE of Mean		0.3050714		
7746	MLE of Standard Deviation		0.2764472		
7747	nu star		17.049308		
7748	Approximate Chi Square Value (.05)		8.7074648	**Nonparametric Statistics**	
7749	Adjusted Level of Significance		0.01584	95% CLT UCL	0.4431293
7750	Adjusted Chi Square Value		6.9843332	95% Jackknife UCL	0.4681689
7751				95% Standard Bootstrap UCL	0.435709
7752	Anderson-Darling Test Statistic		0.386211	95% Bootstrap-t UCL	0.5106535
7753	Anderson-Darling 5% Critical Value		0.7153502	95% Hall's Bootstrap UCL	0.6637354

	A	B	C	D	E
7754	Kolmogorov-Smirnov Test Statistic		0.2036902	95% Percentile Bootstrap UCL	0.437
7755	Kolmogorov-Smirnov 5% Critical Value		0.3152449	95% BCA Bootstrap UCL	0.4785714
7756	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.670928
7757				97.5% Chebyshev(Mean, Sd) UCL	0.8292344
7758	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1.1401967
7759	95% Approximate Gamma UCL		0.5973331		
7760	95% Adjusted Gamma UCL		0.7447034		
7761					
7762	**Potential UCL to Use**			Use 95% Student's-t UCL	0.4681689
7763					
7764	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7765	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7766	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7767					
7768					
7769	**M|MG/KG|BERYLLIUM (gi_sd_nw_2010)**				
7770					
7771	**General Statistics**				
7772	Number of Valid Observations		4	Number of Distinct Observations	3
7773					
7774					
7775	**Warning: This data set only has 4 observations!**				
7776	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
7777	**The data set for variable M|MG/KG|BERYLLIUM (gi_sd_nw_2010) was not processed!**				
7778					
7779	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
7780	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
7781					
7782					
7783					
7784	**M|MG/KG|BERYLLIUM (gi_sd_ref_2009)**				
7785					
7786	**General Statistics**				
7787	Number of Valid Observations		6	Number of Distinct Observations	5
7788					
7789	**Raw Statistics**			**Log-transformed Statistics**	
7790	Minimum		0.11	Minimum of Log Data	-2.207275
7791	Maximum		0.24	Maximum of Log Data	-1.427116
7792	Mean		0.1833333	Mean of log Data	-1.733441
7793	Median		0.18	SD of log Data	0.3046915
7794	SD		0.0524087		
7795	Coefficient of Variation		0.2858654		
7796	Skewness		-0.157463		
7797					
7798					
7799	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
7800					
7801	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
7802	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
7803					
7804					
7805	**Warning: There are only 6 Values in this data**				
7806	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
7807	**the resulting calculations may not be reliable enough to draw conclusions**				
7808					

	A	B	C	D	E
7809	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
7810					
7811	**Relevant UCL Statistics**				
7812	**Normal Distribution Test**			**Lognormal Distribution Test**	
7813	Shapiro Wilk Test Statistic		0.9192303	Shapiro Wilk Test Statistic	0.9189798
7814	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
7815	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7816					
7817	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7818	95% Student's-t UCL		0.2264468	95% H-UCL	0.2509272
7819	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.2831358
7820	95% Adjusted-CLT UCL (Chen-1995)		0.2170566	97.5% Chebyshev (MVUE) UCL	0.326203
7821	95% Modified-t UCL (Johnson-1978)		0.2262176	99% Chebyshev (MVUE) UCL	0.4108002
7822					
7823	**Gamma Distribution Test**			**Data Distribution**	
7824	k star (bias corrected)		6.951639	**Data appear Normal at 5% Significance Level**	
7825	Theta Star		0.0263727		
7826	MLE of Mean		0.1833333		
7827	MLE of Standard Deviation		0.0695341		
7828	nu star		83.419668		
7829	Approximate Chi Square Value (.05)		63.369918	**Nonparametric Statistics**	
7830	Adjusted Level of Significance		0.01222	95% CLT UCL	0.2185262
7831	Adjusted Chi Square Value		57.095502	95% Jackknife UCL	0.2264468
7832				95% Standard Bootstrap UCL	0.2151725
7833	Anderson-Darling Test Statistic		0.3110641	95% Bootstrap-t UCL	0.2268874
7834	Anderson-Darling 5% Critical Value		0.6978735	95% Hall's Bootstrap UCL	0.2168712
7835	Kolmogorov-Smirnov Test Statistic		0.2043414	95% Percentile Bootstrap UCL	0.2133333
7836	Kolmogorov-Smirnov 5% Critical Value		0.3322039	95% BCA Bootstrap UCL	0.2133333
7837	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.2765952
7838				97.5% Chebyshev(Mean, Sd) UCL	0.3169497
7839	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.3962183
7840	95% Approximate Gamma UCL		0.2413386		
7841	95% Adjusted Gamma UCL		0.2678601		
7842					
7843	**Potential UCL to Use**			Use 95% Student's-t UCL	0.2264468
7844					
7845	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7846	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7847	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7848					
7849					
7850	**M|MG/KG|BERYLLIUM (gi_sd_ref_2010)**				
7851					
7852	**General Statistics**				
7853	Number of Valid Observations		3	Number of Distinct Observations	3
7854					
7855					
7856	**Warning: This data set only has 3 observations!**				
7857	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
7858	**The data set for variable M|MG/KG|BERYLLIUM (gi_sd_ref_2010) was not processed!**				
7859					
7860	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
7861	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
7862					
7863					
7864					
7865	**M|MG/KG|BERYLLIUM (gi_sd_s_2005)**				
7866					
7867	**General Statistics**				

	A	B	C	D	E
7868	Number of Valid Observations		8	Number of Distinct Observations	5
7869					
7870	**Raw Statistics**			**Log-transformed Statistics**	
7871	Minimum		0.23	Minimum of Log Data	-1.469676
7872	Maximum		0.4	Maximum of Log Data	-0.916291
7873	Mean		0.299375	Mean of log Data	-1.223462
7874	Median		0.3	SD of log Data	0.1995218
7875	SD		0.0597876		
7876	Coefficient of Variation		0.199708		
7877	Skewness		0.3545399		
7878					
7879					
7880	**Warning: There are only 8 Values in this data**				
7881	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
7882	**the resulting calculations may not be reliable enough to draw conclusions**				
7883					
7884	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
7885					
7886	**Relevant UCL Statistics**				
7887	**Normal Distribution Test**			**Lognormal Distribution Test**	
7888	Shapiro Wilk Test Statistic		0.9294794	Shapiro Wilk Test Statistic	0.9287142
7889	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
7890	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7891					
7892	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7893	95% Student's-t UCL		0.3394228	95% H-UCL	0.3474725
7894	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.3915924
7895	95% Adjusted-CLT UCL (Chen-1995)		0.3369753	97.5% Chebyshev (MVUE) UCL	0.4314977
7896	95% Modified-t UCL (Johnson-1978)		0.3398644	99% Chebyshev (MVUE) UCL	0.5098839
7897					
7898	**Gamma Distribution Test**			**Data Distribution**	
7899	k star (bias corrected)		18.142423	**Data appear Normal at 5% Significance Level**	
7900	Theta Star		0.0165014		
7901	MLE of Mean		0.299375		
7902	MLE of Standard Deviation		0.0702858		
7903	nu star		290.27877		
7904	Approximate Chi Square Value (.05)		251.81557	**Nonparametric Statistics**	
7905	Adjusted Level of Significance		0.01946	95% CLT UCL	0.3341441
7906	Adjusted Chi Square Value		242.7234	95% Jackknife UCL	0.3394228
7907				95% Standard Bootstrap UCL	0.3322287
7908	Anderson-Darling Test Statistic		0.3228465	95% Bootstrap-t UCL	0.3455957
7909	Anderson-Darling 5% Critical Value		0.7157982	95% Hall's Bootstrap UCL	0.3363214
7910	Kolmogorov-Smirnov Test Statistic		0.1564412	95% Percentile Bootstrap UCL	0.33375
7911	Kolmogorov-Smirnov 5% Critical Value		0.2937266	95% BCA Bootstrap UCL	0.33375
7912	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.3915138
7913				97.5% Chebyshev(Mean, Sd) UCL	0.4313824
7914	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.5096964
7915	95% Approximate Gamma UCL		0.3451026		
7916	95% Adjusted Gamma UCL		0.3580298		
7917					
7918	**Potential UCL to Use**			Use 95% Student's-t UCL	0.3394228
7919					
7920	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
7921	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
7922	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
7923					
7924					
7925	**M|MG/KG|BERYLLIUM (gi_sd_s_2010)**				
7926					
7927	**General Statistics**				
7928	Number of Valid Observations		2	Number of Distinct Observations	2
7929					
7930					

	A	B	C	D	E
7931	**Warning: This data set only has 2 observations!**				
7932	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
7933	**The data set for variable M|MG/KG|BERYLLIUM (gi_sd_s_2010) was not processed!**				
7934					
7935	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
7936	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
7937					
7938					
7939					
7940	**M|MG/KG|BERYLLIUM (gi_sd_stillwater_2005)**				
7941					
7942	**General Statistics**				
7943	Number of Valid Observations		4	Number of Distinct Observations	4
7944					
7945					
7946	**Warning: This data set only has 4 observations!**				
7947	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
7948	**The data set for variable M|MG/KG|BERYLLIUM (gi_sd_stillwater_2005) was not processed!**				
7949					
7950	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
7951	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
7952					
7953					
7954					
7955	**M|MG/KG|BERYLLIUM (gi_sd_stillwater_2009)**				
7956					
7957	**General Statistics**				
7958	Number of Valid Observations		60	Number of Distinct Observations	29
7959					
7960	**Raw Statistics**			**Log-transformed Statistics**	
7961	Minimum		0.175	Minimum of Log Data	-1.742969
7962	Maximum		0.63	Maximum of Log Data	-0.462035
7963	Mean		0.3291667	Mean of log Data	-1.145604
7964	Median		0.315	SD of log Data	0.2602025
7965	SD		0.0918601		
7966	Coefficient of Variation		0.2790686		
7967	Skewness		1.3191229		
7968					
7969	**Relevant UCL Statistics**				
7970	**Normal Distribution Test**			**Lognormal Distribution Test**	
7971	Lilliefors Test Statistic		0.1397443	Lilliefors Test Statistic	0.0905411
7972	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
7973	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
7974					
7975	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
7976	95% Student's-t UCL		0.3489843	95% H-UCL	0.3485897
7977	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.377634
7978	95% Adjusted-CLT UCL (Chen-1995)		0.3508311	97.5% Chebyshev (MVUE) UCL	0.3987685
7979	95% Modified-t UCL (Johnson-1978)		0.3493209	99% Chebyshev (MVUE) UCL	0.4402832
7980					
7981	**Gamma Distribution Test**			**Data Distribution**	
7982	k star (bias corrected)		13.970453	**Data appear Gamma Distributed at 5% Significance Level**	
7983	Theta Star		0.0235616		
7984	MLE of Mean		0.3291667		
7985	MLE of Standard Deviation		0.0880665		
7986	nu star		1676.4543		
7987	Approximate Chi Square Value (.05)		1582.3607	**Nonparametric Statistics**	
7988	Adjusted Level of Significance		0.046	95% CLT UCL	0.3486731
7989	Adjusted Chi Square Value		1580.1284	95% Jackknife UCL	0.3489843
7990				95% Standard Bootstrap UCL	0.3488183

	A	B	C	D	E
7991	Anderson-Darling Test Statistic		0.6666667	95% Bootstrap-t UCL	0.3504452
7992	Anderson-Darling 5% Critical Value		0.7501145	95% Hall's Bootstrap UCL	0.3509224
7993	Kolmogorov-Smirnov Test Statistic		0.1081616	95% Percentile Bootstrap UCL	0.3490833
7994	Kolmogorov-Smirnov 5% Critical Value		0.1145586	95% BCA Bootstrap UCL	0.3510833
7995	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.3808592
7996				97.5% Chebyshev(Mean, Sd) UCL	0.4032266
7997	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.4471631
7998	95% Approximate Gamma UCL		0.3487403		
7999	95% Adjusted Gamma UCL		0.3492329		
8000					
8001	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	0.3487403
8002					
8003	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8004	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
8005	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
8006					
8007					
8008	**M|MG/KG|BERYLLIUM (gi_sd_stillwater_2010)**				
8009					
8010	**General Statistics**				
8011	Number of Valid Observations		11	Number of Distinct Observations	11
8012					
8013	**Raw Statistics**			**Log-transformed Statistics**	
8014	Minimum		0.206	Minimum of Log Data	-1.579879
8015	Maximum		0.359	Maximum of Log Data	-1.024433
8016	Mean		0.2734545	Mean of log Data	-1.312134
8017	Median		0.27	SD of log Data	0.1845106
8018	SD		0.0507215		
8019	Coefficient of Variation		0.1854843		
8020	Skewness		0.3520086		
8021					
8022	**Relevant UCL Statistics**				
8023	**Normal Distribution Test**			**Lognormal Distribution Test**	
8024	Shapiro Wilk Test Statistic		0.9516277	Shapiro Wilk Test Statistic	0.9602457
8025	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
8026	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
8027					
8028	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8029	95% Student's-t UCL		0.3011727	95% H-UCL	0.3050416
8030	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.3399557
8031	95% Adjusted-CLT UCL (Chen-1995)		0.3003438	97.5% Chebyshev (MVUE) UCL	0.3687379
8032	95% Modified-t UCL (Johnson-1978)		0.3014432	99% Chebyshev (MVUE) UCL	0.4252749
8033					
8034	**Gamma Distribution Test**			**Data Distribution**	
8035	k star (bias corrected)		23.619796	**Data appear Normal at 5% Significance Level**	
8036	Theta Star		0.0115773		
8037	MLE of Mean		0.2734545		
8038	MLE of Standard Deviation		0.0562661		
8039	nu star		519.63551		
8040	Approximate Chi Square Value (.05)		467.7703	**Nonparametric Statistics**	
8041	Adjusted Level of Significance		0.02783	95% CLT UCL	0.2986095
8042	Adjusted Chi Square Value		459.73888	95% Jackknife UCL	0.3011727
8043				95% Standard Bootstrap UCL	0.2980242
8044	Anderson-Darling Test Statistic		0.2355712	95% Bootstrap-t UCL	0.3037839
8045	Anderson-Darling 5% Critical Value		0.7285761	95% Hall's Bootstrap UCL	0.3006197
8046	Kolmogorov-Smirnov Test Statistic		0.133407	95% Percentile Bootstrap UCL	0.2975455
8047	Kolmogorov-Smirnov 5% Critical Value		0.254873	95% BCA Bootstrap UCL	0.2996364
8048	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.3401157
8049				97.5% Chebyshev(Mean, Sd) UCL	0.36896
8050	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.4256191
8051	95% Approximate Gamma UCL		0.3037745		
8052	95% Adjusted Gamma UCL		0.3090813		
8053					
8054	**Potential UCL to Use**			Use 95% Student's-t UCL	0.3011727
8055					
8056	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
8057	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
8058	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
8059					
8060					
8061	**M|MG/KG|CADMIUM (gi_sd_ne_2005)**				
8062					
8063	**General Statistics**				
8064	Number of Valid Data		36	Number of Detected Data	7
8065	Number of Distinct Detected Data		7	Number of Non-Detect Data	29
8066				Percent Non-Detects	80.56%
8067					
8068	**Raw Statistics**			**Log-transformed Statistics**	
8069	Minimum Detected		0.097	Minimum Detected	-2.333044
8070	Maximum Detected		398	Maximum Detected	5.986452
8071	Mean of Detected		57.872714	Mean of Detected	0.618441
8072	SD of Detected		149.98541	SD of Detected	2.6002482
8073	Minimum Non-Detect		0.0053	Minimum Non-Detect	-5.240048
8074	Maximum Non-Detect		0.47	Maximum Non-Detect	-0.755023
8075					
8076	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	30
8077	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	6
8078	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	83.33%
8079					
8080	**Warning: There are only 7 Detected Values in this data**				
8081	**Note: It should be noted that even though bootstrap may be performed on this data set**				
8082	**the resulting calculations may not be reliable enough to draw conclusions**				
8083					
8084	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
8085					
8086					
8087	**UCL Statistics**				
8088	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
8089	Shapiro Wilk Test Statistic		0.4590811	Shapiro Wilk Test Statistic	0.8308746
8090	5% Shapiro Wilk Critical Value		0.803	5% Shapiro Wilk Critical Value	0.803
8091	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
8092					
8093	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8094	DL/2 Substitution Method			DL/2 Substitution Method	
8095	Mean		11.285403	Mean	-3.420608
8096	SD		66.296663	SD	2.7240678
8097	95% DL/2 (t) UCL		29.954239	95% H-Stat (DL/2) UCL	12.21228
8098					
8099	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
8100	**MLE yields a negative mean**			Mean in Log Scale	-7.920066
8101				SD in Log Scale	4.8019395
8102				Mean in Original Scale	11.25326
8103				SD in Original Scale	66.302251
8104				95% t UCL	29.92367
8105				95% Percentile Bootstrap UCL	33.316426
8106				95% BCA Bootstrap UCL	55.3168
8107					
8108	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
8109	k star (bias corrected)		0.2163792	**Data appear Lognormal at 5% Significance Level**	
8110	Theta Star		267.45963		
8111	nu star		3.0293095		
8112					
8113	A-D Test Statistic		1.3128824	**Nonparametric Statistics**	
8114	5% A-D Critical Value		0.8166787	Kaplan-Meier (KM) Method	
8115	K-S Test Statistic		0.8166787	Mean	11.331167
8116	5% K-S Critical Value		0.3410742	SD	65.361501
8117	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	11.766415
8118				95% KM (t) UCL	31.211378
8119	**Assuming Gamma Distribution**			95% KM (z) UCL	30.685197

	A	B	C	D	E
8120	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	29.617813
8121	Minimum		0.097	95% KM (bootstrap t) UCL	2982.8172
8122	Maximum		398	95% KM (BCA) UCL	44.523417
8123	Mean		61.14089	95% KM (Percentile Bootstrap) UCL	33.472472
8124	Median		67.69822	95% KM (Chebyshev) UCL	62.619781
8125	SD		64.950767	97.5% KM (Chebyshev) UCL	84.812405
8126	k star		0.6388717	99% KM (Chebyshev) UCL	128.40552
8127	Theta star		95.701361		
8128	Nu star		45.998761	**Potential UCLs to Use**	
8129	AppChi2		31.438027	99% KM (Chebyshev) UCL	128.40552
8130	95% Gamma Approximate UCL		89.458706		
8131	95% Adjusted Gamma UCL		91.044175		
8132	**Note: DL/2 is not a recommended method.**				
8133					
8134	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8135	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
8136	**For additional insight, the user may want to consult a statistician.**				
8137					
8138					
8139	**M|MG/KG|CADMIUM (gi_sd_ne_2009)**				
8140					
8141	**General Statistics**				
8142	Number of Valid Data		20	Number of Detected Data	18
8143	Number of Distinct Detected Data		16	Number of Non-Detect Data	2
8144				Percent Non-Detects	10.00%
8145					
8146	**Raw Statistics**			**Log-transformed Statistics**	
8147	Minimum Detected		0.011	Minimum Detected	-4.50986
8148	Maximum Detected		0.615	Maximum Detected	-0.486133
8149	Mean of Detected		0.1856667	Mean of Detected	-2.167905
8150	SD of Detected		0.1828899	SD of Detected	1.0814064
8151	Minimum Non-Detect		0.0056	Minimum Non-Detect	-5.184989
8152	Maximum Non-Detect		0.0059	Maximum Non-Detect	-5.132803
8153					
8154	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	2
8155	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	18
8156	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	10.00%
8157					
8158	**UCL Statistics**				
8159	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
8160	Shapiro Wilk Test Statistic		0.8122751	Shapiro Wilk Test Statistic	0.9764752
8161	5% Shapiro Wilk Critical Value		0.897	5% Shapiro Wilk Critical Value	0.897
8162	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
8163					
8164	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8165	DL/2 Substitution Method			DL/2 Substitution Method	
8166	Mean		0.1673875	Mean	-2.536319
8167	SD		0.1819154	SD	1.527175
8168	95% DL/2 (t) UCL		0.2377243	95% H-Stat (DL/2) UCL	0.8576381
8169					
8170	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
8171	Mean		0.1567486	Mean in Log Scale	-2.419185
8172	SD		0.1918045	SD in Log Scale	1.2823896
8173	95% MLE (t) UCL		0.230909	Mean in Original Scale	0.1680273
8174	95% MLE (Tiku) UCL		0.2284104	SD in Original Scale	0.1813161
8175				95% t UCL	0.2381324
8176				95% Percentile Bootstrap UCL	0.2384
8177				95% BCA Bootstrap UCL	0.2430545
8178					
8179	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
8180	k star (bias corrected)		1.0132054	**Data appear Gamma Distributed at 5% Significance Level**	
8181	Theta Star		0.1832468		
8182	nu star		36.475393		
8183					
8184	A-D Test Statistic		0.2861877	**Nonparametric Statistics**	
8185	5% A-D Critical Value		0.763052	Kaplan-Meier (KM) Method	
8186	K-S Test Statistic		0.763052	Mean	0.1682
8187	5% K-S Critical Value		0.2086824	SD	0.1765706

	A	B	C	D	E
8188	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.040627
8189				95% KM (t) UCL	0.2384495
8190	**Assuming Gamma Distribution**			95% KM (z) UCL	0.2350255
8191	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.2372028
8192	Minimum		1E-12	95% KM (bootstrap t) UCL	0.2584525
8193	Maximum		0.615	95% KM (BCA) UCL	0.23805
8194	Mean		0.1671	95% KM (Percentile Bootstrap) UCL	0.23695
8195	Median		0.1005	95% KM (Chebyshev) UCL	0.3452891
8196	SD		0.182191	97.5% KM (Chebyshev) UCL	0.4219157
8197	k star		0.2405734	99% KM (Chebyshev) UCL	0.5724338
8198	Theta star		0.6945906		
8199	Nu star		9.6229341	**Potential UCLs to Use**	
8200	AppChi2		3.7074904	95% KM (Chebyshev) UCL	0.3452891
8201	95% Gamma Approximate UCL		0.4337145		
8202	95% Adjusted Gamma UCL		0.4699366		
8203	**Note: DL/2 is not a recommended method.**				
8204					
8205	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8206	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
8207	**For additional insight, the user may want to consult a statistician.**				
8208					
8209					
8210	**M|MG/KG|CADMIUM (gi_sd_ne_2010)**				
8211					
8212	**General Statistics**				
8213	Number of Valid Data		16	Number of Detected Data	15
8214	Number of Distinct Detected Data		15	Number of Non-Detect Data	1
8215				Percent Non-Detects	6.25%
8216					
8217	**Raw Statistics**			**Log-transformed Statistics**	
8218	Minimum Detected		0.166	Minimum Detected	-1.795767
8219	Maximum Detected		0.724	Maximum Detected	-0.322964
8220	Mean of Detected		0.3196	Mean of Detected	-1.238446
8221	SD of Detected		0.1595546	SD of Detected	0.4414908
8222	Minimum Non-Detect		0.327	Minimum Non-Detect	-1.117795
8223	Maximum Non-Detect		0.327	Maximum Non-Detect	-1.117795
8224					
8225					
8226	**UCL Statistics**				
8227	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
8228	Shapiro Wilk Test Statistic		0.8361705	Shapiro Wilk Test Statistic	0.9285317
8229	5% Shapiro Wilk Critical Value		0.881	5% Shapiro Wilk Critical Value	0.881
8230	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
8231					
8232	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8233	DL/2 Substitution Method			DL/2 Substitution Method	
8234	Mean		0.3098438	Mean	-1.274227
8235	SD		0.1590077	SD	0.4498937
8236	95% DL/2 (t) UCL		0.3795309	95% H-Stat (DL/2) UCL	0.3903665
8237					
8238	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
8239	Mean		0.1170575	Mean in Log Scale	-1.248905
8240	SD		0.3265859	SD in Log Scale	0.4285673
8241	95% MLE (t) UCL		0.2601879	Mean in Original Scale	0.3149485
8242	95% MLE (Tiku) UCL		0.400768	SD in Original Scale	0.1552633
8243				95% t UCL	0.3829946
8244				95% Percentile Bootstrap UCL	0.3775
8245				95% BCA Bootstrap UCL	0.396636
8246					
8247	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
8248	k star (bias corrected)		4.2648559	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
8249	Theta Star		0.0749381		
8250	nu star		127.94568		
8251					
8252	A-D Test Statistic		0.5987043	**Nonparametric Statistics**	
8253	5% A-D Critical Value		0.7384861	Kaplan-Meier (KM) Method	
8254	K-S Test Statistic		0.7384861	Mean	0.3144375

	A	B	C	D	E
8255	5% K-S Critical Value		0.2220486	SD	0.1510734
8256	**Data follow Appr. Gamma Distribution at 5% Significance Level**			SE of Mean	0.0392319
8257				95% KM (t) UCL	0.3832131
8258	**Assuming Gamma Distribution**			95% KM (z) UCL	0.3789683
8259	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.3831084
8260	Minimum		0.166	95% KM (bootstrap t) UCL	0.4153987
8261	Maximum		0.724	95% KM (BCA) UCL	0.3762679
8262	Mean		0.3183938	95% KM (Percentile Bootstrap) UCL	0.3785625
8263	Median		0.2825	95% KM (Chebyshev) UCL	0.4854455
8264	SD		0.1542199	97.5% KM (Chebyshev) UCL	0.5594408
8265	k star		4.5999566	99% KM (Chebyshev) UCL	0.7047903
8266	Theta star		0.0692167		
8267	Nu star		147.19861	**Potential UCLs to Use**	
8268	AppChi2		120.15809	95% KM (BCA) UCL	0.3762679
8269	95% Gamma Approximate UCL		0.3900455		
8270	95% Adjusted Gamma UCL		0.3992818		
8271	**Note: DL/2 is not a recommended method.**				
8272					
8273	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8274	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
8275	**For additional insight, the user may want to consult a statistician.**				
8276					
8277					
8278	**M|MG/KG|CADMIUM (gi_sd_nw_2005)**				
8279					
8280	**General Statistics**				
8281	Number of Valid Data		18	Number of Detected Data	7
8282	Number of Distinct Detected Data		7	Number of Non-Detect Data	11
8283				Percent Non-Detects	61.11%
8284					
8285	**Raw Statistics**			**Log-transformed Statistics**	
8286	Minimum Detected		0.5	Minimum Detected	-0.693147
8287	Maximum Detected		12.3	Maximum Detected	2.5095993
8288	Mean of Detected		2.3185714	Mean of Detected	-0.015494
8289	SD of Detected		4.402694	SD of Detected	1.1252613
8290	Minimum Non-Detect		0.31	Minimum Non-Detect	-1.171183
8291	Maximum Non-Detect		1.2	Maximum Non-Detect	0.1823216
8292					
8293	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	17
8294	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	1
8295	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	94.44%
8296					
8297	**Warning: There are only 7 Detected Values in this data**				
8298	**Note: It should be noted that even though bootstrap may be performed on this data set**				
8299	**the resulting calculations may not be reliable enough to draw conclusions**				
8300					
8301	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
8302					
8303					
8304	**UCL Statistics**				
8305	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
8306	Shapiro Wilk Test Statistic		0.4763127	Shapiro Wilk Test Statistic	0.5923033
8307	5% Shapiro Wilk Critical Value		0.803	5% Shapiro Wilk Critical Value	0.803
8308	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
8309					
8310	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8311	DL/2 Substitution Method			DL/2 Substitution Method	
8312	Mean		1.0725	Mean	-0.820341
8313	SD		2.8098688	SD	0.9745857
8314	95% DL/2 (t) UCL		2.2246284	95% H-Stat (DL/2) UCL	1.3091873
8315					
8316	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
8317	**MLE method failed to converge properly**			Mean in Log Scale	-1.454244
8318				SD in Log Scale	1.3870344

	A	B	C	D	E
8319				Mean in Original Scale	0.9626226
8320				SD in Original Scale	2.8427208
8321				95% t UCL	2.1282213
8322				95% Percentile Bootstrap UCL	2.2838007
8323				95% BCA Bootstrap UCL	3.0173869
8324					
8325	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
8326	k star (bias corrected)		0.4980666	**Data do not follow a Discernable Distribution (0.05)**	
8327	Theta Star		4.6551431		
8328	nu star		6.9729328		
8329					
8330	A-D Test Statistic		1.7472708	**Nonparametric Statistics**	
8331	5% A-D Critical Value		0.7389151	Kaplan-Meier (KM) Method	
8332	K-S Test Statistic		0.7389151	Mean	1.2120406
8333	5% K-S Critical Value		0.3234853	SD	2.6909657
8334	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.6851219
8335				95% KM (t) UCL	2.4038832
8336	**Assuming Gamma Distribution**			95% KM (z) UCL	2.3389658
8337	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	2.3005974
8338	Minimum		1E-12	95% KM (bootstrap t) UCL	30.594696
8339	Maximum		12.3	95% KM (BCA) UCL	2.5979167
8340	Mean		2.1170287	95% KM (Percentile Bootstrap) UCL	2.5310606
8341	Median		0.7061624	95% KM (Chebyshev) UCL	4.1984175
8342	SD		3.0327053	97.5% KM (Chebyshev) UCL	5.4906252
8343	k star		0.3136929	99% KM (Chebyshev) UCL	8.028917
8344	Theta star		6.7487303		
8345	Nu star		11.292944	**Potential UCLs to Use**	
8346	AppChi2		4.7650777	95% KM (BCA) UCL	2.5979167
8347	95% Gamma Approximate UCL		5.0172292		
8348	95% Adjusted Gamma UCL		5.478289		
8349	**Note: DL/2 is not a recommended method.**				
8350					
8351	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8352	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
8353	**For additional insight, the user may want to consult a statistician.**				
8354					
8355					
8356	**M|MG/KG|CADMIUM (gi_sd_nw_2009)**				
8357					
8358	**General Statistics**				
8359	Number of Valid Observations		7	Number of Distinct Observations	7
8360					
8361	**Raw Statistics**			**Log-transformed Statistics**	
8362	Minimum		0.052	Minimum of Log Data	-2.956512
8363	Maximum		0.9	Maximum of Log Data	-0.105361
8364	Mean		0.3435	Mean of log Data	-1.533817
8365	Median		0.25	SD of log Data	1.1098621
8366	SD		0.319639		
8367	Coefficient of Variation		0.9305356		
8368	Skewness		0.9416428		
8369					
8370					
8371	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
8372					
8373	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
8374	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
8375					
8376					
8377	**Warning: There are only 7 Values in this data**				
8378	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
8379	**the resulting calculations may not be reliable enough to draw conclusions**				
8380					

	A	B	C	D	E
8381	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
8382					
8383	**Relevant UCL Statistics**				
8384	**Normal Distribution Test**			**Lognormal Distribution Test**	
8385	Shapiro Wilk Test Statistic		0.8843959	Shapiro Wilk Test Statistic	0.931436
8386	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
8387	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
8388					
8389	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8390	95% Student's-t UCL		0.5782598	95% H-UCL	2.4595175
8391	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1.0034853
8392	95% Adjusted-CLT UCL (Chen-1995)		0.5881623	97.5% Chebyshev (MVUE) UCL	1.2842259
8393	95% Modified-t UCL (Johnson-1978)		0.5854262	99% Chebyshev (MVUE) UCL	1.8356865
8394					
8395	**Gamma Distribution Test**			**Data Distribution**	
8396	k star (bias corrected)		0.7891038	**Data appear Normal at 5% Significance Level**	
8397	Theta Star		0.435304		
8398	MLE of Mean		0.3435		
8399	MLE of Standard Deviation		0.3866871		
8400	nu star		11.047453		
8401	Approximate Chi Square Value (.05)		4.6065334	**Nonparametric Statistics**	
8402	Adjusted Level of Significance		0.01584	95% CLT UCL	0.5422184
8403	Adjusted Chi Square Value		3.4364385	95% Jackknife UCL	0.5782598
8404				95% Standard Bootstrap UCL	0.5303231
8405	Anderson-Darling Test Statistic		0.2933058	95% Bootstrap-t UCL	0.6984432
8406	Anderson-Darling 5% Critical Value		0.7248174	95% Hall's Bootstrap UCL	0.6619283
8407	Kolmogorov-Smirnov Test Statistic		0.217693	95% Percentile Bootstrap UCL	0.5457143
8408	Kolmogorov-Smirnov 5% Critical Value		0.3184901	95% BCA Bootstrap UCL	0.5842857
8409	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.8701081
8410				97.5% Chebyshev(Mean, Sd) UCL	1.0979718
8411	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1.545566
8412	95% Approximate Gamma UCL		0.8237865		
8413	95% Adjusted Gamma UCL		1.1042829		
8414					
8415	**Potential UCL to Use**			Use 95% Student's-t UCL	0.5782598
8416					
8417	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8418	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
8419	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
8420					
8421					
8422	**M|MG/KG|CADMIUM (gi_sd_nw_2010)**				
8423					
8424	**General Statistics**				
8425	Number of Valid Observations		4	Number of Distinct Observations	4
8426					
8427					
8428	**Warning: This data set only has 4 observations!**				
8429	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
8430	**The data set for variable M|MG/KG|CADMIUM (gi_sd_nw_2010) was not processed!**				
8431					
8432	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
8433	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
8434					
8435					
8436					
8437	**M|MG/KG|CADMIUM (gi_sd_ref_2009)**				
8438					
8439	**General Statistics**				
8440	Number of Valid Observations		6	Number of Distinct Observations	6

	A	B	C	D	E
8441					
8442	**Raw Statistics**			**Log-transformed Statistics**	
8443	Minimum		0.048	Minimum of Log Data	-3.036554
8444	Maximum		0.18	Maximum of Log Data	-1.714798
8445	Mean		0.0775	Mean of log Data	-2.676671
8446	Median		0.0595	SD of log Data	0.4805807
8447	SD		0.0504807		
8448	Coefficient of Variation		0.6513637		
8449	Skewness		2.3905981		
8450					
8451					
8452	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
8453					
8454	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
8455	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
8456					
8457					
8458	**Warning: There are only 6 Values in this data**				
8459	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
8460	**the resulting calculations may not be reliable enough to draw conclusions**				
8461					
8462	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
8463					
8464	**Relevant UCL Statistics**				
8465	**Normal Distribution Test**			**Lognormal Distribution Test**	
8466	Shapiro Wilk Test Statistic		0.5970718	Shapiro Wilk Test Statistic	0.6853063
8467	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
8468	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
8469					
8470	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8471	95% Student's-t UCL		0.1190274	95% H-UCL	0.1347807
8472	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.1402584
8473	95% Adjusted-CLT UCL (Chen-1995)		0.1328894	97.5% Chebyshev (MVUE) UCL	0.1682174
8474	95% Modified-t UCL (Johnson-1978)		0.1223796	99% Chebyshev (MVUE) UCL	0.2231373
8475					
8476	**Gamma Distribution Test**			**Data Distribution**	
8477	k star (bias corrected)		2.2884077	**Data do not follow a Discernable Distribution (0.05)**	
8478	Theta Star		0.0338663		
8479	MLE of Mean		0.0775		
8480	MLE of Standard Deviation		0.0512313		
8481	nu star		27.460893		
8482	Approximate Chi Square Value (.05)		16.508925	**Nonparametric Statistics**	
8483	Adjusted Level of Significance		0.01222	95% CLT UCL	0.1113982
8484	Adjusted Chi Square Value		13.539554	95% Jackknife UCL	0.1190274
8485				95% Standard Bootstrap UCL	0.1087542
8486	Anderson-Darling Test Statistic		1.1529248	95% Bootstrap-t UCL	0.3801685
8487	Anderson-Darling 5% Critical Value		0.6992956	95% Hall's Bootstrap UCL	0.3710506
8488	Kolmogorov-Smirnov Test Statistic		0.4338749	95% Percentile Bootstrap UCL	0.117
8489	Kolmogorov-Smirnov 5% Critical Value		0.3332741	95% BCA Bootstrap UCL	0.1195
8490	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.167331
8491				97.5% Chebyshev(Mean, Sd) UCL	0.206201
8492	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.2825535
8493	95% Approximate Gamma UCL		0.1289133		
8494	95% Adjusted Gamma UCL		0.1571853		
8495					
8496	**Potential UCL to Use**			Use 95% Student's-t UCL	0.1190274
8497				or 95% Modified-t UCL	0.1223796
8498					
8499	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8500	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				

	A	B	C	D	E
8501	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
8502					
8503					
8504	M|MG/KG|CADMIUM (gi_sd_ref_2010)				
8505					
8506	General Statistics				
8507	Number of Valid Observations		3	Number of Distinct Observations	3
8508					
8509					
8510	Warning: This data set only has 3 observations!				
8511	Data set is too small to compute reliable and meaningful statistics and estimates!				
8512	The data set for variable M|MG/KG|CADMIUM (gi_sd_ref_2010) was not processed!				
8513					
8514	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
8515	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
8516					
8517					
8518					
8519	M|MG/KG|CADMIUM (gi_sd_s_2005)				
8520					
8521	General Statistics				
8522	Number of Valid Data		8	Number of Detected Data	0
8523	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
8524				Percent Non-Detects	100.00%
8525					
8526	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
8527	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
8528	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
8529					
8530	The data set for variable M|MG/KG|CADMIUM (gi_sd_s_2005) was not processed!				
8531					
8532					
8533					
8534	M|MG/KG|CADMIUM (gi_sd_s_2010)				
8535					
8536	General Statistics				
8537	Number of Valid Observations		2	Number of Distinct Observations	2
8538					
8539					
8540	Warning: This data set only has 2 observations!				
8541	Data set is too small to compute reliable and meaningful statistics and estimates!				
8542	The data set for variable M|MG/KG|CADMIUM (gi_sd_s_2010) was not processed!				
8543					
8544	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
8545	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
8546					
8547					
8548					
8549	M|MG/KG|CADMIUM (gi_sd_stillwater_2005)				
8550					
8551	General Statistics				
8552	Number of Valid Data		4	Number of Detected Data	0
8553	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
8554				Percent Non-Detects	100.00%
8555					

	A	B	C	D	E
8556	**Warning: This data set only has 4 observations!**				
8557	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
8558	**The data set for variable M|MG/KG|CADMIUM (gi_sd_stillwater_2005) was not processed!**				
8559					
8560	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
8561	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
8562					
8563					
8564					
8565	**M|MG/KG|CADMIUM (gi_sd_stillwater_2009)**				
8566					
8567	**General Statistics**				
8568	Number of Valid Observations		60	Number of Distinct Observations	46
8569					
8570	**Raw Statistics**			**Log-transformed Statistics**	
8571	Minimum		0.0083	Minimum of Log Data	-4.7915
8572	Maximum		2.1	Maximum of Log Data	0.7419373
8573	Mean		0.2938333	Mean of log Data	-1.90321
8574	Median		0.125	SD of log Data	1.2018989
8575	SD		0.3948851		
8576	Coefficient of Variation		1.3439083		
8577	Skewness		2.5669563		
8578					
8579	**Relevant UCL Statistics**				
8580	**Normal Distribution Test**			**Lognormal Distribution Test**	
8581	Lilliefors Test Statistic		0.2642094	Lilliefors Test Statistic	0.0716561
8582	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
8583	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
8584					
8585	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8586	95% Student's-t UCL		0.3790247	95% H-UCL	0.4711169
8587	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.554911
8588	95% Adjusted-CLT UCL (Chen-1995)		0.3957388	97.5% Chebyshev (MVUE) UCL	0.6648246
8589	95% Modified-t UCL (Johnson-1978)		0.3818404	99% Chebyshev (MVUE) UCL	0.8807284
8590					
8591	**Gamma Distribution Test**			**Data Distribution**	
8592	k star (bias corrected)		0.8336735	**Data appear Lognormal at 5% Significance Level**	
8593	Theta Star		0.3524561		
8594	MLE of Mean		0.2938333		
8595	MLE of Standard Deviation		0.3218126		
8596	nu star		100.04082		
8597	Approximate Chi Square Value (.05)		77.965543	**Nonparametric Statistics**	
8598	Adjusted Level of Significance		0.046	95% CLT UCL	0.3776871
8599	Adjusted Chi Square Value		77.486915	95% Jackknife UCL	0.3790247
8600				95% Standard Bootstrap UCL	0.3747787
8601	Anderson-Darling Test Statistic		1.483343	95% Bootstrap-t UCL	0.3989451
8602	Anderson-Darling 5% Critical Value		0.7860726	95% Hall's Bootstrap UCL	0.4070212
8603	Kolmogorov-Smirnov Test Statistic		0.1434302	95% Percentile Bootstrap UCL	0.3799567
8604	Kolmogorov-Smirnov 5% Critical Value		0.1186754	95% BCA Bootstrap UCL	0.4017033
8605	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.5160476
8606				97.5% Chebyshev(Mean, Sd) UCL	0.6121998
8607	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.8010724
8608	95% Approximate Gamma UCL		0.3770297		
8609	95% Adjusted Gamma UCL		0.3793586		
8610					
8611	**Potential UCL to Use**			Use 95% H-UCL	0.4711169
8612					
8613	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
8614	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
8615	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
8616	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
8617					

	A	B	C	D	E
8618	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8619	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
8620	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
8621					
8622					
8623	**M|MG/KG|CADMIUM (gi_sd_stillwater_2010)**				
8624					
8625	**General Statistics**				
8626	Number of Valid Observations		11	Number of Distinct Observations	11
8627					
8628	**Raw Statistics**			**Log-transformed Statistics**	
8629	Minimum		0.103	Minimum of Log Data	-2.273026
8630	Maximum		0.507	Maximum of Log Data	-0.679244
8631	Mean		0.272	Mean of log Data	-1.40232
8632	Median		0.288	SD of log Data	0.484461
8633	SD		0.122987		
8634	Coefficient of Variation		0.4521581		
8635	Skewness		0.5323551		
8636					
8637	**Relevant UCL Statistics**				
8638	**Normal Distribution Test**			**Lognormal Distribution Test**	
8639	Shapiro Wilk Test Statistic		0.9524949	Shapiro Wilk Test Statistic	0.9621674
8640	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
8641	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
8642					
8643	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8644	95% Student's-t UCL		0.3392096	95% H-UCL	0.3849352
8645	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.4510482
8646	95% Adjusted-CLT UCL (Chen-1995)		0.3393543	97.5% Chebyshev (MVUE) UCL	0.5278868
8647	95% Modified-t UCL (Johnson-1978)		0.3402016	99% Chebyshev (MVUE) UCL	0.6788213
8648					
8649	**Gamma Distribution Test**			**Data Distribution**	
8650	k star (bias corrected)		3.8006823	**Data appear Normal at 5% Significance Level**	
8651	Theta Star		0.0715661		
8652	MLE of Mean		0.272		
8653	MLE of Standard Deviation		0.1395205		
8654	nu star		83.61501		
8655	Approximate Chi Square Value (.05)		63.540332	**Nonparametric Statistics**	
8656	Adjusted Level of Significance		0.02783	95% CLT UCL	0.3329944
8657	Adjusted Chi Square Value		60.694193	95% Jackknife UCL	0.3392096
8658				95% Standard Bootstrap UCL	0.3303298
8659	Anderson-Darling Test Statistic		0.2326892	95% Bootstrap-t UCL	0.3449421
8660	Anderson-Darling 5% Critical Value		0.7313518	95% Hall's Bootstrap UCL	0.3522295
8661	Kolmogorov-Smirnov Test Statistic		0.1548668	95% Percentile Bootstrap UCL	0.3304545
8662	Kolmogorov-Smirnov 5% Critical Value		0.2559823	95% BCA Bootstrap UCL	0.3408182
8663	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.4336366
8664				97.5% Chebyshev(Mean, Sd) UCL	0.5035768
8665	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.640961
8666	95% Approximate Gamma UCL		0.3579346		
8667	95% Adjusted Gamma UCL		0.3747193		
8668					
8669	**Potential UCL to Use**			Use 95% Student's-t UCL	0.3392096
8670					
8671	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8672	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
8673	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
8674					
8675					
8676	**M|MG/KG|CALCIUM (gi_sd_ne_2005)**				
8677					
8678	**General Statistics**				
8679	Number of Valid Observations		36	Number of Distinct Observations	34
8680					

	A	B	C	D	E
8681	**Raw Statistics**			**Log-transformed Statistics**	
8682	Minimum		5630	Minimum of Log Data	8.6358647
8683	Maximum		55200	Maximum of Log Data	10.918718
8684	Mean		26752.778	Mean of log Data	10.053458
8685	Median		24700	SD of log Data	0.575829
8686	SD		13070.268		
8687	Coefficient of Variation		0.4885574		
8688	Skewness		0.2888161		
8689					
8690	**Relevant UCL Statistics**				
8691	**Normal Distribution Test**			**Lognormal Distribution Test**	
8692	Shapiro Wilk Test Statistic		0.9611146	Shapiro Wilk Test Statistic	0.9408292
8693	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
8694	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
8695					
8696	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8697	95% Student's-t UCL		30433.305	95% H-UCL	33217.41
8698	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	39386.294
8699	95% Adjusted-CLT UCL (Chen-1995)		30447.934	97.5% Chebyshev (MVUE) UCL	44624.248
8700	95% Modified-t UCL (Johnson-1978)		30450.782	99% Chebyshev (MVUE) UCL	54913.193
8701					
8702	**Gamma Distribution Test**			**Data Distribution**	
8703	k star (bias corrected)		3.4158008	**Data appear Normal at 5% Significance Level**	
8704	Theta Star		7832.0662		
8705	MLE of Mean		26752.778		
8706	MLE of Standard Deviation		14475.135		
8707	nu star		245.93766		
8708	Approximate Chi Square Value (.05)		210.62956	**Nonparametric Statistics**	
8709	Adjusted Level of Significance		0.0428	95% CLT UCL	30335.891
8710	Adjusted Chi Square Value		209.14915	95% Jackknife UCL	30433.305
8711				95% Standard Bootstrap UCL	30251.372
8712	Anderson-Darling Test Statistic		0.3994376	95% Bootstrap-t UCL	30527.94
8713	Anderson-Darling 5% Critical Value		0.752971	95% Hall's Bootstrap UCL	30571.088
8714	Kolmogorov-Smirnov Test Statistic		0.1153513	95% Percentile Bootstrap UCL	30350
8715	Kolmogorov-Smirnov 5% Critical Value		0.1476165	95% BCA Bootstrap UCL	30195.278
8716	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	36248.107
8717				97.5% Chebyshev(Mean, Sd) UCL	40356.744
8718	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	48427.365
8719	95% Approximate Gamma UCL		31237.38		
8720	95% Adjusted Gamma UCL		31458.485		
8721					
8722	**Potential UCL to Use**			Use 95% Student's-t UCL	30433.305
8723					
8724	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8725	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
8726	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
8727					
8728					
8729	**M|MG/KG|CALCIUM (gi_sd_ne_2009)**				
8730					
8731	**General Statistics**				
8732	Number of Valid Observations		20	Number of Distinct Observations	20
8733					
8734	**Raw Statistics**			**Log-transformed Statistics**	
8735	Minimum		414	Minimum of Log Data	6.025866
8736	Maximum		140000	Maximum of Log Data	11.849398
8737	Mean		32486.7	Mean of log Data	9.6884848
8738	Median		24800	SD of log Data	1.4741161
8739	SD		34368.599		
8740	Coefficient of Variation		1.0579283		
8741	Skewness		1.8462891		
8742					
8743	**Relevant UCL Statistics**				
8744	**Normal Distribution Test**			**Lognormal Distribution Test**	
8745	Shapiro Wilk Test Statistic		0.8118986	Shapiro Wilk Test Statistic	0.9310733
8746	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
8747	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
8748					

	A	B	C	D	E
8749	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8750	95% Student's-t UCL		45775.176	95% H-UCL	150070.17
8751	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	117396.76
8752	95% Adjusted-CLT UCL (Chen-1995)		48517.582	97.5% Chebyshev (MVUE) UCL	149471.88
8753	95% Modified-t UCL (Johnson-1978)		46303.963	99% Chebyshev (MVUE) UCL	212477.25
8754					
8755	**Gamma Distribution Test**			**Data Distribution**	
8756	k star (bias corrected)		0.7491066	**Data appear Gamma Distributed at 5% Significance Level**	
8757	Theta Star		43367.256		
8758	MLE of Mean		32486.7		
8759	MLE of Standard Deviation		37534.771		
8760	nu star		29.964266		
8761	Approximate Chi Square Value (.05)		18.464711	**Nonparametric Statistics**	
8762	Adjusted Level of Significance		0.038	95% CLT UCL	45127.486
8763	Adjusted Chi Square Value		17.751905	95% Jackknife UCL	45775.176
8764				95% Standard Bootstrap UCL	44498.295
8765	Anderson-Darling Test Statistic		0.2365903	95% Bootstrap-t UCL	53874.458
8766	Anderson-Darling 5% Critical Value		0.7752482	95% Hall's Bootstrap UCL	57695.466
8767	Kolmogorov-Smirnov Test Statistic		0.1227066	95% Percentile Bootstrap UCL	46224.5
8768	Kolmogorov-Smirnov 5% Critical Value		0.2006196	95% BCA Bootstrap UCL	48653
8769	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	65985.067
8770				97.5% Chebyshev(Mean, Sd) UCL	80479.837
8771	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	108952.01
8772	95% Approximate Gamma UCL		52718.947		
8773	95% Adjusted Gamma UCL		54835.812		
8774					
8775	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	52718.947
8776					
8777	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8778	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
8779	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
8780					
8781					
8782	**M|MG/KG|CALCIUM (gi_sd_ne_2010)**				
8783					
8784	**General Statistics**				
8785	Number of Valid Observations		16	Number of Distinct Observations	16
8786					
8787	**Raw Statistics**			**Log-transformed Statistics**	
8788	Minimum		1390	Minimum of Log Data	7.237059
8789	Maximum		206000	Maximum of Log Data	12.235631
8790	Mean		48355.625	Mean of log Data	10.259294
8791	Median		31800	SD of log Data	1.1444585
8792	SD		55634.904		
8793	Coefficient of Variation		1.1505363		
8794	Skewness		2.0532886		
8795					
8796	**Relevant UCL Statistics**				
8797	**Normal Distribution Test**			**Lognormal Distribution Test**	
8798	Shapiro Wilk Test Statistic		0.6930312	Shapiro Wilk Test Statistic	0.9022123
8799	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
8800	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
8801					
8802	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8803	95% Student's-t UCL		72738.322	95% H-UCL	130721.11
8804	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	123721.66
8805	95% Adjusted-CLT UCL (Chen-1995)		78862.271	97.5% Chebyshev (MVUE) UCL	154894.68
8806	95% Modified-t UCL (Johnson-1978)		73928.265	99% Chebyshev (MVUE) UCL	216128.03
8807					
8808	**Gamma Distribution Test**			**Data Distribution**	
8809	k star (bias corrected)		0.9232328	**Data appear Lognormal at 5% Significance Level**	
8810	Theta Star		52376.416		
8811	MLE of Mean		48355.625		
8812	MLE of Standard Deviation		50325.881		
8813	nu star		29.543449		
8814	Approximate Chi Square Value (.05)		18.134275	**Nonparametric Statistics**	
8815	Adjusted Level of Significance		0.03348	95% CLT UCL	71233.444

	A	B	C	D	E
8816	Adjusted Chi Square Value		17.121068	95% Jackknife UCL	72738.322
8817				95% Standard Bootstrap UCL	70568.675
8818	Anderson-Darling Test Statistic		0.8390742	95% Bootstrap-t UCL	91936.759
8819	Anderson-Darling 5% Critical Value		0.7618362	95% Hall's Bootstrap UCL	78931.421
8820	Kolmogorov-Smirnov Test Statistic		0.2658177	95% Percentile Bootstrap UCL	70236.875
8821	Kolmogorov-Smirnov 5% Critical Value		0.2207758	95% BCA Bootstrap UCL	79187.5
8822	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	108982.36
8823				97.5% Chebyshev(Mean, Sd) UCL	135215.59
8824	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	186745.7
8825	95% Approximate Gamma UCL		78778.553		
8826	95% Adjusted Gamma UCL		83440.589		
8827					
8828	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	108982.36
8829					
8830	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8831	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
8832	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
8833					
8834					
8835	**M|MG/KG|CALCIUM (gi_sd_nw_2005)**				
8836					
8837	**General Statistics**				
8838	Number of Valid Observations		18	Number of Distinct Observations	18
8839					
8840	**Raw Statistics**			**Log-transformed Statistics**	
8841	Minimum		8860	Minimum of Log Data	9.089302
8842	Maximum		39200	Maximum of Log Data	10.576432
8843	Mean		25020	Mean of log Data	10.052198
8844	Median		23150	SD of log Data	0.4146007
8845	SD		9416.3887		
8846	Coefficient of Variation		0.3763545		
8847	Skewness		0.1086056		
8848					
8849	**Relevant UCL Statistics**				
8850	**Normal Distribution Test**			**Lognormal Distribution Test**	
8851	Shapiro Wilk Test Statistic		0.9367518	Shapiro Wilk Test Statistic	0.9355856
8852	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
8853	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
8854					
8855	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8856	95% Student's-t UCL		28880.995	95% H-UCL	30747.485
8857	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	36137.495
8858	95% Adjusted-CLT UCL (Chen-1995)		28731.401	97.5% Chebyshev (MVUE) UCL	40887.292
8859	95% Modified-t UCL (Johnson-1978)		28890.464	99% Chebyshev (MVUE) UCL	50217.348
8860					
8861	**Gamma Distribution Test**			**Data Distribution**	
8862	k star (bias corrected)		5.7106828	**Data appear Normal at 5% Significance Level**	
8863	Theta Star		4381.2625		
8864	MLE of Mean		25020		
8865	MLE of Standard Deviation		10469.918		
8866	nu star		205.58458		
8867	Approximate Chi Square Value (.05)		173.40649	**Nonparametric Statistics**	
8868	Adjusted Level of Significance		0.03574	95% CLT UCL	28670.694
8869	Adjusted Chi Square Value		170.57166	95% Jackknife UCL	28880.995
8870				95% Standard Bootstrap UCL	28547.939
8871	Anderson-Darling Test Statistic		0.3878025	95% Bootstrap-t UCL	28896.537
8872	Anderson-Darling 5% Critical Value		0.7416148	95% Hall's Bootstrap UCL	28634.025
8873	Kolmogorov-Smirnov Test Statistic		0.1276148	95% Percentile Bootstrap UCL	28516.667
8874	Kolmogorov-Smirnov 5% Critical Value		0.2038585	95% BCA Bootstrap UCL	28858.889
8875	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	34694.42
8876				97.5% Chebyshev(Mean, Sd) UCL	38880.549
8877	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	47103.389
8878	95% Approximate Gamma UCL		29662.824		
8879	95% Adjusted Gamma UCL		30155.808		
8880					
8881	**Potential UCL to Use**			Use 95% Student's-t UCL	28880.995
8882					

	A	B	C	D	E
8883	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8884	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
8885	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
8886					
8887					
8888	**M|MG/KG|CALCIUM (gi_sd_nw_2009)**				
8889					
8890	**General Statistics**				
8891	Number of Valid Observations		7	Number of Distinct Observations	7
8892					
8893	**Raw Statistics**			**Log-transformed Statistics**	
8894	Minimum		9000	Minimum of Log Data	9.1049799
8895	Maximum		57800	Maximum of Log Data	10.964744
8896	Mean		33157.143	Mean of log Data	10.267648
8897	Median		31200	SD of log Data	0.6256795
8898	SD		16619.552		
8899	Coefficient of Variation		0.501236		
8900	Skewness		0.0479693		
8901					
8902					
8903	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
8904					
8905	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
8906	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
8907					
8908					
8909	**Warning: There are only 7 Values in this data**				
8910	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
8911	**the resulting calculations may not be reliable enough to draw conclusions**				
8912					
8913	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
8914					
8915	**Relevant UCL Statistics**				
8916	**Normal Distribution Test**			**Lognormal Distribution Test**	
8917	Shapiro Wilk Test Statistic		0.988805	Shapiro Wilk Test Statistic	0.9297193
8918	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
8919	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
8920					
8921	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
8922	95% Student's-t UCL		45363.425	95% H-UCL	70315.574
8923	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	69123.834
8924	95% Adjusted-CLT UCL (Chen-1995)		43611.149	97.5% Chebyshev (MVUE) UCL	84352.246
8925	95% Modified-t UCL (Johnson-1978)		45382.406	99% Chebyshev (MVUE) UCL	114265.51
8926					
8927	**Gamma Distribution Test**			**Data Distribution**	
8928	k star (bias corrected)		2.2068583	**Data appear Normal at 5% Significance Level**	
8929	Theta Star		15024.591		
8930	MLE of Mean		33157.143		
8931	MLE of Standard Deviation		22319.779		
8932	nu star		30.896016		
8933	Approximate Chi Square Value (.05)		19.198606	**Nonparametric Statistics**	
8934	Adjusted Level of Significance		0.01584	95% CLT UCL	43489.456
8935	Adjusted Chi Square Value		16.476053	95% Jackknife UCL	45363.425
8936				95% Standard Bootstrap UCL	42695.002
8937	Anderson-Darling Test Statistic		0.2077923	95% Bootstrap-t UCL	45424.905
8938	Anderson-Darling 5% Critical Value		0.7104408	95% Hall's Bootstrap UCL	43467.676
8939	Kolmogorov-Smirnov Test Statistic		0.1703805	95% Percentile Bootstrap UCL	42771.429
8940	Kolmogorov-Smirnov 5% Critical Value		0.3131359	95% BCA Bootstrap UCL	42214.286
8941	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	60538.004

	A	B	C	D	E
8942				97.5% Chebyshev(Mean, Sd) UCL	72385.725
8943	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	95658.278
8944	95% Approximate Gamma UCL		53359.27		
8945	95% Adjusted Gamma UCL		62176.519		
8946					
8947	**Potential UCL to Use**			Use 95% Student's-t UCL	45363.425
8948					
8949	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
8950	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
8951	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
8952					
8953					
8954	**M|MG/KG|CALCIUM (gi_sd_nw_2010)**				
8955					
8956	**General Statistics**				
8957	Number of Valid Observations		4	Number of Distinct Observations	4
8958					
8959					
8960	**Warning: This data set only has 4 observations!**				
8961	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
8962	**The data set for variable M|MG/KG|CALCIUM (gi_sd_nw_2010) was not processed!**				
8963					
8964	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
8965	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
8966					
8967					
8968					
8969	**M|MG/KG|CALCIUM (gi_sd_ref_2009)**				
8970					
8971	**General Statistics**				
8972	Number of Valid Observations		6	Number of Distinct Observations	6
8973					
8974	**Raw Statistics**			**Log-transformed Statistics**	
8975	Minimum		633	Minimum of Log Data	6.4504704
8976	Maximum		12500	Maximum of Log Data	9.4334839
8977	Mean		3559.6667	Mean of log Data	7.7160362
8978	Median		2140	SD of log Data	0.9813816
8979	SD		4434.6669		
8980	Coefficient of Variation		1.2458096		
8981	Skewness		2.3123813		
8982					
8983					
8984	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
8985					
8986	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
8987	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
8988					
8989					
8990	**Warning: There are only 6 Values in this data**				
8991	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
8992	**the resulting calculations may not be reliable enough to draw conclusions**				
8993					
8994	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
8995					
8996	**Relevant UCL Statistics**				
8997	**Normal Distribution Test**			**Lognormal Distribution Test**	

	A	B	C	D	E
8998	Shapiro Wilk Test Statistic		0.6493532	Shapiro Wilk Test Statistic	0.9183268
8999	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
9000	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
9001					
9002	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9003	95% Student's-t UCL		7207.8013	95% H-UCL	21534.907
9004	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	8928.6237
9005	95% Adjusted-CLT UCL (Chen-1995)		8363.7894	97.5% Chebyshev (MVUE) UCL	11371.196
9006	95% Modified-t UCL (Johnson-1978)		7492.6524	99% Chebyshev (MVUE) UCL	16169.155
9007					
9008	**Gamma Distribution Test**			**Data Distribution**	
9009	k star (bias corrected)		0.722846	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
9010	Theta Star		4924.516		
9011	MLE of Mean		3559.6667		
9012	MLE of Standard Deviation		4186.8407		
9013	nu star		8.674152		
9014	Approximate Chi Square Value (.05)		3.1313645	**Nonparametric Statistics**	
9015	Adjusted Level of Significance		0.01222	95% CLT UCL	6537.584
9016	Adjusted Chi Square Value		2.058172	95% Jackknife UCL	7207.8013
9017				95% Standard Bootstrap UCL	6344.9512
9018	Anderson-Darling Test Statistic		0.6086306	95% Bootstrap-t UCL	18480.94
9019	Anderson-Darling 5% Critical Value		0.7118329	95% Hall's Bootstrap UCL	23969.922
9020	Kolmogorov-Smirnov Test Statistic		0.3522308	95% Percentile Bootstrap UCL	7013
9021	Kolmogorov-Smirnov 5% Critical Value		0.3393304	95% BCA Bootstrap UCL	7495
9022	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	11451.214
9023				97.5% Chebyshev(Mean, Sd) UCL	14865.893
9024	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	21573.369
9025	95% Approximate Gamma UCL		9860.5861		
9026	95% Adjusted Gamma UCL		15002.191		
9027					
9028	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	9860.5861
9029					
9030	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9031	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9032	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9033					
9034					
9035	**M|MG/KG|CALCIUM (gi_sd_ref_2010)**				
9036					
9037	**General Statistics**				
9038	Number of Valid Observations		3	Number of Distinct Observations	3
9039					
9040					
9041	**Warning: This data set only has 3 observations!**				
9042	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
9043	**The data set for variable M|MG/KG|CALCIUM (gi_sd_ref_2010) was not processed!**				
9044					
9045	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
9046	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
9047					
9048					
9049					
9050	**M|MG/KG|CALCIUM (gi_sd_s_2005)**				
9051					
9052	**General Statistics**				
9053	Number of Valid Observations		8	Number of Distinct Observations	8
9054					
9055	**Raw Statistics**			**Log-transformed Statistics**	
9056	Minimum		1410	Minimum of Log Data	7.251345
9057	Maximum		35000	Maximum of Log Data	10.463103
9058	Mean		14861.25	Mean of log Data	9.0942726

	A	B	C	D	E
9059	Median		10110	SD of log Data	1.2285932
9060	SD		13171.422		
9061	Coefficient of Variation		0.886293		
9062	Skewness		0.6418747		
9063					
9064					
9065	**Warning: There are only 8 Values in this data**				
9066	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
9067	**the resulting calculations may not be reliable enough to draw conclusions**				
9068					
9069	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
9070					
9071	**Relevant UCL Statistics**				
9072	**Normal Distribution Test**			**Lognormal Distribution Test**	
9073	Shapiro Wilk Test Statistic		0.8816614	Shapiro Wilk Test Statistic	0.905994
9074	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
9075	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
9076					
9077	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9078	95% Student's-t UCL		23683.925	95% H-UCL	121971.2
9079	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	48393.896
9080	95% Adjusted-CLT UCL (Chen-1995)		23650.212	97.5% Chebyshev (MVUE) UCL	62183.188
9081	95% Modified-t UCL (Johnson-1978)		23860.059	99% Chebyshev (MVUE) UCL	89269.583
9082					
9083	**Gamma Distribution Test**			**Data Distribution**	
9084	k star (bias corrected)		0.779077	**Data appear Normal at 5% Significance Level**	
9085	Theta Star		19075.458		
9086	MLE of Mean		14861.25		
9087	MLE of Standard Deviation		16837.017		
9088	nu star		12.465232		
9089	Approximate Chi Square Value (.05)		5.5349954	**Nonparametric Statistics**	
9090	Adjusted Level of Significance		0.01946	95% CLT UCL	22521.006
9091	Adjusted Chi Square Value		4.4236791	95% Jackknife UCL	23683.925
9092				95% Standard Bootstrap UCL	22088.001
9093	Anderson-Darling Test Statistic		0.2894063	95% Bootstrap-t UCL	28093.307
9094	Anderson-Darling 5% Critical Value		0.7338972	95% Hall's Bootstrap UCL	23413.233
9095	Kolmogorov-Smirnov Test Statistic		0.1582009	95% Percentile Bootstrap UCL	22566.25
9096	Kolmogorov-Smirnov 5% Critical Value		0.3008805	95% BCA Bootstrap UCL	22717.5
9097	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	35159.774
9098				97.5% Chebyshev(Mean, Sd) UCL	43942.962
9099	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	61195.834
9100	95% Approximate Gamma UCL		33468.669		
9101	95% Adjusted Gamma UCL		41876.665		
9102					
9103	**Potential UCL to Use**			Use 95% Student's-t UCL	23683.925
9104					
9105	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9106	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9107	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9108					
9109					
9110	**M|MG/KG|CALCIUM (gi_sd_s_2010)**				
9111					
9112	**General Statistics**				
9113	Number of Valid Observations		2	Number of Distinct Observations	2
9114					
9115					
9116	**Warning: This data set only has 2 observations!**				
9117	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
9118	**The data set for variable M|MG/KG|CALCIUM (gi_sd_s_2010) was not processed!**				
9119					

	A	B	C	D	E
9120	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
9121	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
9122					
9123					
9124					
9125	**M|MG/KG|CALCIUM (gi_sd_stillwater_2005)**				
9126					
9127	**General Statistics**				
9128	Number of Valid Observations		4	Number of Distinct Observations	4
9129					
9130					
9131	**Warning: This data set only has 4 observations!**				
9132	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
9133	**The data set for variable M|MG/KG|CALCIUM (gi_sd_stillwater_2005) was not processed!**				
9134					
9135	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
9136	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
9137					
9138					
9139					
9140	**M|MG/KG|CALCIUM (gi_sd_stillwater_2009)**				
9141					
9142	**General Statistics**				
9143	Number of Valid Observations		60	Number of Distinct Observations	58
9144					
9145	**Raw Statistics**			**Log-transformed Statistics**	
9146	Minimum		722	Minimum of Log Data	6.5820251
9147	Maximum		135000	Maximum of Log Data	11.81303
9148	Mean		26940.367	Mean of log Data	9.1045581
9149	Median		6725	SD of log Data	1.5353991
9150	SD		39386.341		
9151	Coefficient of Variation		1.4619824		
9152	Skewness		1.7020764		
9153					
9154	**Relevant UCL Statistics**				
9155	**Normal Distribution Test**			**Lognormal Distribution Test**	
9156	Lilliefors Test Statistic		0.2866032	Lilliefors Test Statistic	0.1501776
9157	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
9158	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
9159					
9160	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9161	95% Student's-t UCL		35437.465	95% H-UCL	55855.658
9162	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	60998.323
9163	95% Adjusted-CLT UCL (Chen-1995)		36497.905	97.5% Chebyshev (MVUE) UCL	75244.365
9164	95% Modified-t UCL (Johnson-1978)		35623.683	99% Chebyshev (MVUE) UCL	103227.96
9165					
9166	**Gamma Distribution Test**			**Data Distribution**	
9167	k star (bias corrected)		0.5506663	**Data do not follow a Discernable Distribution (0.05)**	
9168	Theta Star		48923.213		
9169	MLE of Mean		26940.367		
9170	MLE of Standard Deviation		36304.398		
9171	nu star		66.07996		
9172	Approximate Chi Square Value (.05)		48.373882	**Nonparametric Statistics**	
9173	Adjusted Level of Significance		0.046	95% CLT UCL	35304.044
9174	Adjusted Chi Square Value		48.001257	95% Jackknife UCL	35437.465
9175				95% Standard Bootstrap UCL	35464.256
9176	Anderson-Darling Test Statistic		3.0471961	95% Bootstrap-t UCL	36947.586
9177	Anderson-Darling 5% Critical Value		0.8094783	95% Hall's Bootstrap UCL	36347.305
9178	Kolmogorov-Smirnov Test Statistic		0.1936878	95% Percentile Bootstrap UCL	35510.7
9179	Kolmogorov-Smirnov 5% Critical Value		0.1207865	95% BCA Bootstrap UCL	35978.4
9180	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	49104.299
9181				97.5% Chebyshev(Mean, Sd) UCL	58694.65
9182	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	77533.038
9183	95% Approximate Gamma UCL		36801.23		

	A	B	C	D	E
9184	95% Adjusted Gamma UCL		37086.911		
9185					
9186	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	49104.299
9187					
9188	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9189	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9190	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9191					
9192					
9193	**M|MG/KG|CALCIUM (gi_sd_stillwater_2010)**				
9194					
9195	**General Statistics**				
9196	Number of Valid Observations		11	Number of Distinct Observations	11
9197					
9198	**Raw Statistics**			**Log-transformed Statistics**	
9199	Minimum		3810	Minimum of Log Data	8.2453845
9200	Maximum		165000	Maximum of Log Data	12.013701
9201	Mean		49554.545	Mean of log Data	10.274467
9202	Median		30000	SD of log Data	1.1614276
9203	SD		51716.233		
9204	Coefficient of Variation		1.0436224		
9205	Skewness		1.466143		
9206					
9207	**Relevant UCL Statistics**				
9208	**Normal Distribution Test**			**Lognormal Distribution Test**	
9209	Shapiro Wilk Test Statistic		0.8189334	Shapiro Wilk Test Statistic	0.9794663
9210	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
9211	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
9212					
9213	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9214	95% Student's-t UCL		77816.308	95% H-UCL	192364.45
9215	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	136902.83
9216	95% Adjusted-CLT UCL (Chen-1995)		82568.108	97.5% Chebyshev (MVUE) UCL	173629.68
9217	95% Modified-t UCL (Johnson-1978)		78965.147	99% Chebyshev (MVUE) UCL	245772.47
9218					
9219	**Gamma Distribution Test**			**Data Distribution**	
9220	k star (bias corrected)		0.8373651	**Data appear Gamma Distributed at 5% Significance Level**	
9221	Theta Star		59179.14		
9222	MLE of Mean		49554.545		
9223	MLE of Standard Deviation		54153.443		
9224	nu star		18.422032		
9225	Approximate Chi Square Value (.05)		9.696556	**Nonparametric Statistics**	
9226	Adjusted Level of Significance		0.02783	95% CLT UCL	75202.799
9227	Adjusted Chi Square Value		8.6822318	95% Jackknife UCL	77816.308
9228				95% Standard Bootstrap UCL	73511.472
9229	Anderson-Darling Test Statistic		0.2012579	95% Bootstrap-t UCL	104165.92
9230	Anderson-Darling 5% Critical Value		0.7502776	95% Hall's Bootstrap UCL	120577
9231	Kolmogorov-Smirnov Test Statistic		0.1224323	95% Percentile Bootstrap UCL	78145.455
9232	Kolmogorov-Smirnov 5% Critical Value		0.2620166	95% BCA Bootstrap UCL	82408.182
9233	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	117522.99
9234				97.5% Chebyshev(Mean, Sd) UCL	146932.99
9235	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	204703.24
9236	95% Approximate Gamma UCL		94146.355		
9237	95% Adjusted Gamma UCL		105145.25		
9238					
9239	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	94146.355
9240					
9241	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9242	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9243	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9244					
9245					
9246	**M|MG/KG|CHROMIUM (gi_sd_ne_2005)**				

	A	B	C	D	E
9247					
9248	**General Statistics**				
9249	Number of Valid Observations		36	Number of Distinct Observations	31
9250					
9251	**Raw Statistics**			**Log-transformed Statistics**	
9252	Minimum		8.8	Minimum of Log Data	2.1747517
9253	Maximum		3910	Maximum of Log Data	8.2712927
9254	Mean		123.46111	Mean of log Data	2.7881392
9255	Median		13.2	SD of log Data	1.0065089
9256	SD		649.20291		
9257	Coefficient of Variation		5.2583595		
9258	Skewness		5.9976145		
9259					
9260	**Relevant UCL Statistics**				
9261	**Normal Distribution Test**			**Lognormal Distribution Test**	
9262	Shapiro Wilk Test Statistic		0.1771881	Shapiro Wilk Test Statistic	0.4222579
9263	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
9264	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
9265					
9266	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9267	95% Student's-t UCL		306.27367	95% H-UCL	40.501621
9268	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	48.866034
9269	95% Adjusted-CLT UCL (Chen-1995)		417.00289	97.5% Chebyshev (MVUE) UCL	58.576915
9270	95% Modified-t UCL (Johnson-1978)		324.29992	99% Chebyshev (MVUE) UCL	77.65206
9271					
9272	**Gamma Distribution Test**			**Data Distribution**	
9273	k star (bias corrected)		0.3248039	**Data do not follow a Discernable Distribution (0.05)**	
9274	Theta Star		380.10974		
9275	MLE of Mean		123.46111		
9276	MLE of Standard Deviation		216.63049		
9277	nu star		23.385878		
9278	Approximate Chi Square Value (.05)		13.382589	**Nonparametric Statistics**	
9279	Adjusted Level of Significance		0.0428	95% CLT UCL	301.43507
9280	Adjusted Chi Square Value		13.038162	95% Jackknife UCL	306.27367
9281				95% Standard Bootstrap UCL	295.74661
9282	Anderson-Darling Test Statistic		12.066187	95% Bootstrap-t UCL	22180.609
9283	Anderson-Darling 5% Critical Value		0.8491397	95% Hall's Bootstrap UCL	8293.9815
9284	Kolmogorov-Smirnov Test Statistic		0.4905021	95% Percentile Bootstrap UCL	338.71389
9285	Kolmogorov-Smirnov 5% Critical Value		0.1586409	95% BCA Bootstrap UCL	450.49722
9286	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	595.09609
9287				97.5% Chebyshev(Mean, Sd) UCL	799.17292
9288	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1200.0423
9289	95% Approximate Gamma UCL		215.74648		
9290	95% Adjusted Gamma UCL		221.44581		
9291					
9292	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	595.09609
9293					
9294	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9295	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9296	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9297					
9298					
9299	**M|MG/KG|CHROMIUM (gi_sd_ne_2009)**				
9300					
9301	**General Statistics**				
9302	Number of Valid Observations		20	Number of Distinct Observations	14
9303					
9304	**Raw Statistics**			**Log-transformed Statistics**	
9305	Minimum		6.2	Minimum of Log Data	1.8245493
9306	Maximum		25.8	Maximum of Log Data	3.2503745
9307	Mean		11.235	Mean of log Data	2.3678913
9308	Median		10.3	SD of log Data	0.3077265
9309	SD		4.2918865		
9310	Coefficient of Variation		0.3820104		
9311	Skewness		2.3991434		
9312					
9313	**Relevant UCL Statistics**				
9314	**Normal Distribution Test**			**Lognormal Distribution Test**	
9315	Shapiro Wilk Test Statistic		0.7147212	Shapiro Wilk Test Statistic	0.8553862

	A	B	C	D	E
9316	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
9317	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
9318					
9319	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9320	95% Student's-t UCL		12.89444	95% H-UCL	12.759901
9321	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	14.56242
9322	95% Adjusted-CLT UCL (Chen-1995)		13.363675	97.5% Chebyshev (MVUE) UCL	16.032524
9323	95% Modified-t UCL (Johnson-1978)		12.980247	99% Chebyshev (MVUE) UCL	18.920261
9324					
9325	**Gamma Distribution Test**			**Data Distribution**	
9326	k star (bias corrected)		8.4826279	**Data do not follow a Discernable Distribution (0.05)**	
9327	Theta Star		1.3244716		
9328	MLE of Mean		11.235		
9329	MLE of Standard Deviation		3.8575172		
9330	nu star		339.30511		
9331	Approximate Chi Square Value (.05)		297.62322	**Nonparametric Statistics**	
9332	Adjusted Level of Significance		0.038	95% CLT UCL	12.813558
9333	Adjusted Chi Square Value		294.5431	95% Jackknife UCL	12.89444
9334				95% Standard Bootstrap UCL	12.759305
9335	Anderson-Darling Test Statistic		1.6066704	95% Bootstrap-t UCL	14.128016
9336	Anderson-Darling 5% Critical Value		0.7418804	95% Hall's Bootstrap UCL	19.644784
9337	Kolmogorov-Smirnov Test Statistic		0.2915691	95% Percentile Bootstrap UCL	12.885
9338	Kolmogorov-Smirnov 5% Critical Value		0.1938574	95% BCA Bootstrap UCL	13.655
9339	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	15.418213
9340				97.5% Chebyshev(Mean, Sd) UCL	17.228293
9341	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	20.783845
9342	95% Approximate Gamma UCL		12.808453		
9343	95% Adjusted Gamma UCL		12.942394		
9344					
9345	**Potential UCL to Use**			Use 95% Student's-t UCL	12.89444
9346				or 95% Modified-t UCL	12.980247
9347					
9348	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9349	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9350	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9351					
9352					
9353	**M|MG/KG|CHROMIUM (gi_sd_ne_2010)**				
9354					
9355	**General Statistics**				
9356	Number of Valid Observations		16	Number of Distinct Observations	14
9357					
9358	**Raw Statistics**			**Log-transformed Statistics**	
9359	Minimum		8.4	Minimum of Log Data	2.1282317
9360	Maximum		28.1	Maximum of Log Data	3.3357696
9361	Mean		13.76875	Mean of log Data	2.5629449
9362	Median		11.95	SD of log Data	0.3443377
9363	SD		5.3167307		
9364	Coefficient of Variation		0.3861448		
9365	Skewness		1.4765697		
9366					
9367	**Relevant UCL Statistics**				
9368	**Normal Distribution Test**			**Lognormal Distribution Test**	
9369	Shapiro Wilk Test Statistic		0.857547	Shapiro Wilk Test Statistic	0.9371842
9370	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
9371	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
9372					
9373	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9374	95% Student's-t UCL		16.098874	95% H-UCL	16.308973
9375	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	18.939211
9376	95% Adjusted-CLT UCL (Chen-1995)		16.479336	97.5% Chebyshev (MVUE) UCL	21.200601
9377	95% Modified-t UCL (Johnson-1978)		16.18065	99% Chebyshev (MVUE) UCL	25.642664
9378					
9379	**Gamma Distribution Test**			**Data Distribution**	
9380	k star (bias corrected)		7.0070376	**Data appear Gamma Distributed at 5% Significance Level**	
9381	Theta Star		1.9649887		

	A	B	C	D	E
9382	MLE of Mean		13.76875		
9383	MLE of Standard Deviation		5.2014843		
9384	nu star		224.2252		
9385	Approximate Chi Square Value (.05)		190.56624	**Nonparametric Statistics**	
9386	Adjusted Level of Significance		0.03348	95% CLT UCL	15.955061
9387	Adjusted Chi Square Value		187.03555	95% Jackknife UCL	16.098874
9388				95% Standard Bootstrap UCL	15.984182
9389	Anderson-Darling Test Statistic		0.4659578	95% Bootstrap-t UCL	16.866579
9390	Anderson-Darling 5% Critical Value		0.7396565	95% Hall's Bootstrap UCL	17.256418
9391	Kolmogorov-Smirnov Test Statistic		0.1720543	95% Percentile Bootstrap UCL	15.9375
9392	Kolmogorov-Smirnov 5% Critical Value		0.2153298	95% BCA Bootstrap UCL	16.4875
9393	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	19.562523
9394				97.5% Chebyshev(Mean, Sd) UCL	22.069493
9395	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	26.993951
9396	95% Approximate Gamma UCL		16.20067		
9397	95% Adjusted Gamma UCL		16.506491		
9398					
9399	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	16.20067
9400					
9401	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9402	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9403	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9404					
9405					
9406	**M|MG/KG|CHROMIUM (gi_sd_nw_2005)**				
9407					
9408	**General Statistics**				
9409	Number of Valid Observations		18	Number of Distinct Observations	18
9410					
9411	**Raw Statistics**			**Log-transformed Statistics**	
9412	Minimum		9.3	Minimum of Log Data	2.2300144
9413	Maximum		37.7	Maximum of Log Data	3.6296601
9414	Mean		15.755556	Mean of log Data	2.6785278
9415	Median		12.9	SD of log Data	0.3800703
9416	SD		7.4709022		
9417	Coefficient of Variation		0.4741757		
9418	Skewness		1.9594086		
9419					
9420	**Relevant UCL Statistics**				
9421	**Normal Distribution Test**			**Lognormal Distribution Test**	
9422	Shapiro Wilk Test Statistic		0.7339425	Shapiro Wilk Test Statistic	0.8424733
9423	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
9424	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
9425					
9426	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9427	95% Student's-t UCL		18.818844	95% H-UCL	18.675901
9428	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	21.799895
9429	95% Adjusted-CLT UCL (Chen-1995)		19.520965	97.5% Chebyshev (MVUE) UCL	24.487802
9430	95% Modified-t UCL (Johnson-1978)		18.954386	99% Chebyshev (MVUE) UCL	29.767675
9431					
9432	**Gamma Distribution Test**			**Data Distribution**	
9433	k star (bias corrected)		5.4688592	**Data do not follow a Discernable Distribution (0.05)**	
9434	Theta Star		2.8809583		
9435	MLE of Mean		15.755556		
9436	MLE of Standard Deviation		6.7372917		
9437	nu star		196.87893		
9438	Approximate Chi Square Value (.05)		165.41548	**Nonparametric Statistics**	
9439	Adjusted Level of Significance		0.03574	95% CLT UCL	18.651992
9440	Adjusted Chi Square Value		162.64898	95% Jackknife UCL	18.818844
9441				95% Standard Bootstrap UCL	18.551049
9442	Anderson-Darling Test Statistic		1.5006027	95% Bootstrap-t UCL	20.968228
9443	Anderson-Darling 5% Critical Value		0.7418371	95% Hall's Bootstrap UCL	19.935531
9444	Kolmogorov-Smirnov Test Statistic		0.2799665	95% Percentile Bootstrap UCL	18.838889
9445	Kolmogorov-Smirnov 5% Critical Value		0.2038957	95% BCA Bootstrap UCL	19.694444
9446	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	23.431178
9447				97.5% Chebyshev(Mean, Sd) UCL	26.752426
9448	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	33.276374
9449	95% Approximate Gamma UCL		18.752398		

	A	B	C	D	E
9450	95% Adjusted Gamma UCL		19.071358		
9451					
9452	**Potential UCL to Use**			Use 95% Student's-t UCL	18.818844
9453				or 95% Modified-t UCL	18.954386
9454					
9455	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9456	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9457	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9458					
9459					
9460	**M|MG/KG|CHROMIUM (gi_sd_nw_2009)**				
9461					
9462	**General Statistics**				
9463	Number of Valid Observations		7	Number of Distinct Observations	7
9464					
9465	**Raw Statistics**			**Log-transformed Statistics**	
9466	Minimum		9.7	Minimum of Log Data	2.2721259
9467	Maximum		21.8	Maximum of Log Data	3.08191
9468	Mean		17.014286	Mean of log Data	2.7973109
9469	Median		19.2	SD of log Data	0.3037099
9470	SD		4.640197		
9471	Coefficient of Variation		0.2727236		
9472	Skewness		-0.59497		
9473					
9474					
9475	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
9476					
9477	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
9478	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
9479					
9480					
9481	**Warning: There are only 7 Values in this data**				
9482	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
9483	**the resulting calculations may not be reliable enough to draw conclusions**				
9484					
9485	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
9486					
9487	**Relevant UCL Statistics**				
9488	**Normal Distribution Test**			**Lognormal Distribution Test**	
9489	Shapiro Wilk Test Statistic		0.9044302	Shapiro Wilk Test Statistic	0.8831547
9490	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
9491	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
9492					
9493	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9494	95% Student's-t UCL		20.422293	95% H-UCL	22.617414
9495	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	25.612839
9496	95% Adjusted-CLT UCL (Chen-1995)		19.47766	97.5% Chebyshev (MVUE) UCL	29.314306
9497	95% Modified-t UCL (Johnson-1978)		20.35656	99% Chebyshev (MVUE) UCL	36.585121
9498					
9499	**Gamma Distribution Test**			**Data Distribution**	
9500	k star (bias corrected)		7.9654359	**Data appear Normal at 5% Significance Level**	
9501	Theta Star		2.1360144		
9502	MLE of Mean		17.014286		
9503	MLE of Standard Deviation		6.0284956		
9504	nu star		111.5161		
9505	Approximate Chi Square Value (.05)		88.139841	**Nonparametric Statistics**	
9506	Adjusted Level of Significance		0.01584	95% CLT UCL	19.899079
9507	Adjusted Chi Square Value		81.875753	95% Jackknife UCL	20.422293
9508				95% Standard Bootstrap UCL	19.674079
9509	Anderson-Darling Test Statistic		0.4291742	95% Bootstrap-t UCL	19.984534

	A	B	C	D	E
9510	Anderson-Darling 5% Critical Value		0.7078009	95% Hall's Bootstrap UCL	19.125577
9511	Kolmogorov-Smirnov Test Statistic		0.2791682	95% Percentile Bootstrap UCL	19.385714
9512	Kolmogorov-Smirnov 5% Critical Value		0.3117527	95% BCA Bootstrap UCL	19.342857
9513	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	24.659052
9514				97.5% Chebyshev(Mean, Sd) UCL	27.966948
9515	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	34.46467
9516	95% Approximate Gamma UCL		21.526778		
9517	95% Adjusted Gamma UCL		23.173733		
9518					
9519	**Potential UCL to Use**			Use 95% Student's-t UCL	20.422293
9520					
9521	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9522	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9523	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9524					
9525					
9526	**M|MG/KG|CHROMIUM (gi_sd_nw_2010)**				
9527					
9528	**General Statistics**				
9529	Number of Valid Observations		4	Number of Distinct Observations	4
9530					
9531					
9532	**Warning: This data set only has 4 observations!**				
9533	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
9534	**The data set for variable M|MG/KG|CHROMIUM (gi_sd_nw_2010) was not processed!**				
9535					
9536	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
9537	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
9538					
9539					
9540					
9541	**M|MG/KG|CHROMIUM (gi_sd_ref_2009)**				
9542					
9543	**General Statistics**				
9544	Number of Valid Observations		6	Number of Distinct Observations	6
9545					
9546	**Raw Statistics**			**Log-transformed Statistics**	
9547	Minimum		7.8	Minimum of Log Data	2.0541237
9548	Maximum		13.5	Maximum of Log Data	2.6026897
9549	Mean		11.075	Mean of log Data	2.3887154
9550	Median		11.4	SD of log Data	0.2002776
9551	SD		2.0769569		
9552	Coefficient of Variation		0.1875356		
9553	Skewness		-0.646976		
9554					
9555					
9556	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
9557					
9558	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
9559	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
9560					
9561					
9562	**Warning: There are only 6 Values in this data**				
9563	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
9564	**the resulting calculations may not be reliable enough to draw conclusions**				
9565					

	A	B	C	D	E
9566	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
9567					
9568	**Relevant UCL Statistics**				
9569	**Normal Distribution Test**			**Lognormal Distribution Test**	
9570	Shapiro Wilk Test Statistic		0.9625821	Shapiro Wilk Test Statistic	0.9344959
9571	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
9572	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
9573					
9574	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9575	95% Student's-t UCL		12.783588	95% H-UCL	13.384804
9576	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	15.032436
9577	95% Adjusted-CLT UCL (Chen-1995)		12.230393	97.5% Chebyshev (MVUE) UCL	16.741474
9578	95% Modified-t UCL (Johnson-1978)		12.746262	99% Chebyshev (MVUE) UCL	20.098549
9579					
9580	**Gamma Distribution Test**			**Data Distribution**	
9581	k star (bias corrected)		15.8435	**Data appear Normal at 5% Significance Level**	
9582	Theta Star		0.6990248		
9583	MLE of Mean		11.075		
9584	MLE of Standard Deviation		2.7823911		
9585	nu star		190.122		
9586	Approximate Chi Square Value (.05)		159.22421	**Nonparametric Statistics**	
9587	Adjusted Level of Significance		0.01222	95% CLT UCL	12.469695
9588	Adjusted Chi Square Value		148.97555	95% Jackknife UCL	12.783588
9589				95% Standard Bootstrap UCL	12.370967
9590	Anderson-Darling Test Statistic		0.263777	95% Bootstrap-t UCL	12.533542
9591	Anderson-Darling 5% Critical Value		0.6970097	95% Hall's Bootstrap UCL	12.258405
9592	Kolmogorov-Smirnov Test Statistic		0.2154105	95% Percentile Bootstrap UCL	12.283333
9593	Kolmogorov-Smirnov 5% Critical Value		0.3317606	95% BCA Bootstrap UCL	12.208333
9594	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	14.770972
9595				97.5% Chebyshev(Mean, Sd) UCL	16.370222
9596	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	19.511639
9597	95% Approximate Gamma UCL		13.224127		
9598	95% Adjusted Gamma UCL		14.133871		
9599					
9600	**Potential UCL to Use**			Use 95% Student's-t UCL	12.783588
9601					
9602	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9603	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9604	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9605					
9606					
9607	**M|MG/KG|CHROMIUM (gi_sd_ref_2010)**				
9608					
9609	**General Statistics**				
9610	Number of Valid Observations		3	Number of Distinct Observations	3
9611					
9612					
9613	**Warning: This data set only has 3 observations!**				
9614	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
9615	**The data set for variable M|MG/KG|CHROMIUM (gi_sd_ref_2010) was not processed!**				
9616					
9617	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
9618	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
9619					
9620					
9621					
9622	**M|MG/KG|CHROMIUM (gi_sd_s_2005)**				
9623					
9624	**General Statistics**				
9625	Number of Valid Observations		8	Number of Distinct Observations	8

	A	B	C	D	E
9626					
9627	**Raw Statistics**			**Log-transformed Statistics**	
9628	Minimum		10.1	Minimum of Log Data	2.3125354
9629	Maximum		18.2	Maximum of Log Data	2.9014216
9630	Mean		13.3	Mean of log Data	2.5653263
9631	Median		12.8	SD of log Data	0.2241298
9632	SD		3.0775686		
9633	Coefficient of Variation		0.2313961		
9634	Skewness		0.7043228		
9635					
9636					
9637	**Warning: There are only 8 Values in this data**				
9638	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
9639	**the resulting calculations may not be reliable enough to draw conclusions**				
9640					
9641	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
9642					
9643	**Relevant UCL Statistics**				
9644	**Normal Distribution Test**			**Lognormal Distribution Test**	
9645	Shapiro Wilk Test Statistic		0.8922952	Shapiro Wilk Test Statistic	0.9141343
9646	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
9647	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
9648					
9649	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9650	95% Student's-t UCL		15.361462	95% H-UCL	15.756119
9651	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	17.895514
9652	95% Adjusted-CLT UCL (Chen-1995)		15.379255	97.5% Chebyshev (MVUE) UCL	19.886952
9653	95% Modified-t UCL (Johnson-1978)		15.406621	99% Chebyshev (MVUE) UCL	23.798747
9654					
9655	**Gamma Distribution Test**			**Data Distribution**	
9656	k star (bias corrected)		14.114116	**Data appear Normal at 5% Significance Level**	
9657	Theta Star		0.942319		
9658	MLE of Mean		13.3		
9659	MLE of Standard Deviation		3.5401756		
9660	nu star		225.82585		
9661	Approximate Chi Square Value (.05)		192.04265	**Nonparametric Statistics**	
9662	Adjusted Level of Significance		0.01946	95% CLT UCL	15.08974
9663	Adjusted Chi Square Value		184.1438	95% Jackknife UCL	15.361462
9664				95% Standard Bootstrap UCL	14.924632
9665	Anderson-Darling Test Statistic		0.3670233	95% Bootstrap-t UCL	16.102557
9666	Anderson-Darling 5% Critical Value		0.7161184	95% Hall's Bootstrap UCL	16.567922
9667	Kolmogorov-Smirnov Test Statistic		0.1649262	95% Percentile Bootstrap UCL	15.1125
9668	Kolmogorov-Smirnov 5% Critical Value		0.2938233	95% BCA Bootstrap UCL	15.2625
9669	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	18.042852
9670				97.5% Chebyshev(Mean, Sd) UCL	20.095088
9671	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	24.126307
9672	95% Approximate Gamma UCL		15.639671		
9673	95% Adjusted Gamma UCL		16.310535		
9674					
9675	**Potential UCL to Use**			Use 95% Student's-t UCL	15.361462
9676					
9677	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9678	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9679	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9680					
9681					
9682	**M|MG/KG|CHROMIUM (gi_sd_s_2010)**				
9683					
9684	**General Statistics**				
9685	Number of Valid Observations		2	Number of Distinct Observations	2
9686					
9687					
9688	**Warning: This data set only has 2 observations!**				

	A	B	C	D	E
9689	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
9690	**The data set for variable M|MG/KG|CHROMIUM (gi_sd_s_2010) was not processed!**				
9691					
9692	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
9693	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
9694					
9695					
9696					
9697	**M|MG/KG|CHROMIUM (gi_sd_stillwater_2005)**				
9698					
9699	**General Statistics**				
9700	Number of Valid Observations		4	Number of Distinct Observations	4
9701					
9702					
9703	**Warning: This data set only has 4 observations!**				
9704	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
9705	**The data set for variable M|MG/KG|CHROMIUM (gi_sd_stillwater_2005) was not processed!**				
9706					
9707	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
9708	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
9709					
9710					
9711					
9712	**M|MG/KG|CHROMIUM (gi_sd_stillwater_2009)**				
9713					
9714	**General Statistics**				
9715	Number of Valid Observations		60	Number of Distinct Observations	51
9716					
9717	**Raw Statistics**			**Log-transformed Statistics**	
9718	Minimum		6	Minimum of Log Data	1.7917595
9719	Maximum		62.3	Maximum of Log Data	4.1319614
9720	Mean		15.705	Mean of log Data	2.5731447
9721	Median		11.75	SD of log Data	0.5637582
9722	SD		11.431408		
9723	Coefficient of Variation		0.7278834		
9724	Skewness		2.1884802		
9725					
9726	**Relevant UCL Statistics**				
9727	**Normal Distribution Test**			**Lognormal Distribution Test**	
9728	Lilliefors Test Statistic		0.2285109	Lilliefors Test Statistic	0.1291022
9729	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
9730	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
9731					
9732	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9733	95% Student's-t UCL		18.17118	95% H-UCL	17.708632
9734	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	20.494387
9735	95% Adjusted-CLT UCL (Chen-1995)		18.57798	97.5% Chebyshev (MVUE) UCL	22.734335
9736	95% Modified-t UCL (Johnson-1978)		18.240673	99% Chebyshev (MVUE) UCL	27.134281
9737					
9738	**Gamma Distribution Test**			**Data Distribution**	
9739	k star (bias corrected)		2.786032	**Data do not follow a Discernable Distribution (0.05)**	
9740	Theta Star		5.6370494		
9741	MLE of Mean		15.705		
9742	MLE of Standard Deviation		9.4090308		
9743	nu star		334.32384		
9744	Approximate Chi Square Value (.05)		292.95785	**Nonparametric Statistics**	
9745	Adjusted Level of Significance		0.046	95% CLT UCL	18.132456
9746	Adjusted Chi Square Value		292.00998	95% Jackknife UCL	18.17118
9747				95% Standard Bootstrap UCL	18.14554
9748	Anderson-Darling Test Statistic		2.6040305	95% Bootstrap-t UCL	18.85257
9749	Anderson-Darling 5% Critical Value		0.7584133	95% Hall's Bootstrap UCL	18.768068
9750	Kolmogorov-Smirnov Test Statistic		0.1713567	95% Percentile Bootstrap UCL	18.311667
9751	Kolmogorov-Smirnov 5% Critical Value		0.1156319	95% BCA Bootstrap UCL	18.685

	A	B	C	D	E
9752	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	22.137813
9753				97.5% Chebyshev(Mean, Sd) UCL	24.921296
9754	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	30.38891
9755	95% Approximate Gamma UCL		17.922564		
9756	95% Adjusted Gamma UCL		17.980741		
9757					
9758	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	22.137813
9759					
9760	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9761	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9762	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9763					
9764					
9765	**M|MG/KG|CHROMIUM (gi_sd_stillwater_2010)**				
9766					
9767	**General Statistics**				
9768	Number of Valid Observations		11	Number of Distinct Observations	11
9769					
9770	**Raw Statistics**			**Log-transformed Statistics**	
9771	Minimum		9.8	Minimum of Log Data	2.2823824
9772	Maximum		18.8	Maximum of Log Data	2.9338569
9773	Mean		12.55	Mean of log Data	2.5091948
9774	Median		12.4	SD of log Data	0.20913
9775	SD		2.766496		
9776	Coefficient of Variation		0.2204379		
9777	Skewness		1.0512018		
9778					
9779	**Relevant UCL Statistics**				
9780	**Normal Distribution Test**			**Lognormal Distribution Test**	
9781	Shapiro Wilk Test Statistic		0.8628297	Shapiro Wilk Test Statistic	0.8886851
9782	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
9783	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
9784					
9785	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9786	95% Student's-t UCL		14.061828	95% H-UCL	14.218768
9787	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	16.002494
9788	95% Adjusted-CLT UCL (Chen-1995)		14.204512	97.5% Chebyshev (MVUE) UCL	17.500077
9789	95% Modified-t UCL (Johnson-1978)		14.105891	99% Chebyshev (MVUE) UCL	20.441788
9790					
9791	**Gamma Distribution Test**			**Data Distribution**	
9792	k star (bias corrected)		17.896995	**Data appear Normal at 5% Significance Level**	
9793	Theta Star		0.701235		
9794	MLE of Mean		12.55		
9795	MLE of Standard Deviation		2.9665636		
9796	nu star		393.7339		
9797	Approximate Chi Square Value (.05)		348.74093	**Nonparametric Statistics**	
9798	Adjusted Level of Significance		0.02783	95% CLT UCL	13.922022
9799	Adjusted Chi Square Value		341.8317	95% Jackknife UCL	14.061828
9800				95% Standard Bootstrap UCL	13.851043
9801	Anderson-Darling Test Statistic		0.5522078	95% Bootstrap-t UCL	14.474378
9802	Anderson-Darling 5% Critical Value		0.7286547	95% Hall's Bootstrap UCL	14.558694
9803	Kolmogorov-Smirnov Test Statistic		0.197479	95% Percentile Bootstrap UCL	13.922727
9804	Kolmogorov-Smirnov 5% Critical Value		0.2549727	95% BCA Bootstrap UCL	14.131818
9805	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	16.185888
9806				97.5% Chebyshev(Mean, Sd) UCL	17.75914
9807	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	20.849488
9808	95% Approximate Gamma UCL		14.169144		
9809	95% Adjusted Gamma UCL		14.455536		
9810					
9811	**Potential UCL to Use**			Use 95% Student's-t UCL	14.061828
9812					
9813	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9814	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				

	A	B	C	D	E
9815	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
9816					
9817					
9818	M|MG/KG|COBALT (gi_sd_ne_2005)				
9819					
9820	General Statistics				
9821	Number of Valid Observations		36	Number of Distinct Observations	22
9822					
9823	Raw Statistics			Log-transformed Statistics	
9824	Minimum		2	Minimum of Log Data	0.6931472
9825	Maximum		5	Maximum of Log Data	1.6094379
9826	Mean		2.9486111	Mean of log Data	1.0603753
9827	Median		2.9	SD of log Data	0.2050977
9828	SD		0.6336387		
9829	Coefficient of Variation		0.214894		
9830	Skewness		1.0255293		
9831					
9832	Relevant UCL Statistics				
9833	Normal Distribution Test			Lognormal Distribution Test	
9834	Shapiro Wilk Test Statistic		0.9385868	Shapiro Wilk Test Statistic	0.9776637
9835	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
9836	Data appear Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
9837					
9838	Assuming Normal Distribution			Assuming Lognormal Distribution	
9839	95% Student's-t UCL		3.1270409	95% H-UCL	3.1317755
9840	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	3.3897917
9841	95% Adjusted-CLT UCL (Chen-1995)		3.1416054	97.5% Chebyshev (MVUE) UCL	3.5813567
9842	95% Modified-t UCL (Johnson-1978)		3.1300493	99% Chebyshev (MVUE) UCL	3.9576489
9843					
9844	Gamma Distribution Test			Data Distribution	
9845	k star (bias corrected)		22.038372	Data appear Normal at 5% Significance Level	
9846	Theta Star		0.1337944		
9847	MLE of Mean		2.9486111		
9848	MLE of Standard Deviation		0.6280985		
9849	nu star		1586.7628		
9850	Approximate Chi Square Value (.05)		1495.2524	Nonparametric Statistics	
9851	Adjusted Level of Significance		0.0428	95% CLT UCL	3.1223183
9852	Adjusted Chi Square Value		1491.2372	95% Jackknife UCL	3.1270409
9853				95% Standard Bootstrap UCL	3.1175925
9854	Anderson-Darling Test Statistic		0.2989225	95% Bootstrap-t UCL	3.1401163
9855	Anderson-Darling 5% Critical Value		0.7464858	95% Hall's Bootstrap UCL	3.1757167
9856	Kolmogorov-Smirnov Test Statistic		0.1059024	95% Percentile Bootstrap UCL	3.1236111
9857	Kolmogorov-Smirnov 5% Critical Value		0.146512	95% BCA Bootstrap UCL	3.1416667
9858	Data appear Gamma Distributed at 5% Significance Level			95% Chebyshev(Mean, Sd) UCL	3.408939
9859				97.5% Chebyshev(Mean, Sd) UCL	3.6081232
9860	Assuming Gamma Distribution			99% Chebyshev(Mean, Sd) UCL	3.999382
9861	95% Approximate Gamma UCL		3.129068		
9862	95% Adjusted Gamma UCL		3.1374931		
9863					
9864	Potential UCL to Use			Use 95% Student's-t UCL	3.1270409
9865					
9866	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
9867	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
9868	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
9869					
9870					
9871	M|MG/KG|COBALT (gi_sd_ne_2009)				
9872					
9873	General Statistics				
9874	Number of Valid Observations		20	Number of Distinct Observations	17
9875					
9876	Raw Statistics			Log-transformed Statistics	
9877	Minimum		1.8	Minimum of Log Data	0.5877867
9878	Maximum		10.8	Maximum of Log Data	2.3795461
9879	Mean		3.93	Mean of log Data	1.255262
9880	Median		3.15	SD of log Data	0.4694751
9881	SD		2.1528683		

	A	B	C	D	E
9882	Coefficient of Variation		0.5478036		
9883	Skewness		1.8847035		
9884					
9885	**Relevant UCL Statistics**				
9886	**Normal Distribution Test**			**Lognormal Distribution Test**	
9887	Shapiro Wilk Test Statistic		0.8213252	Shapiro Wilk Test Statistic	0.9569365
9888	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
9889	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
9890					
9891	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9892	95% Student's-t UCL		4.7623976	95% H-UCL	4.85411
9893	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5.7340049
9894	95% Adjusted-CLT UCL (Chen-1995)		4.9386018	97.5% Chebyshev (MVUE) UCL	6.530172
9895	95% Modified-t UCL (Johnson-1978)		4.7962103	99% Chebyshev (MVUE) UCL	8.0940882
9896					
9897	**Gamma Distribution Test**			**Data Distribution**	
9898	k star (bias corrected)		3.9179387	**Data appear Gamma Distributed at 5% Significance Level**	
9899	Theta Star		1.0030785		
9900	MLE of Mean		3.93		
9901	MLE of Standard Deviation		1.9854718		
9902	nu star		156.71755		
9903	Approximate Chi Square Value (.05)		128.77744	**Nonparametric Statistics**	
9904	Adjusted Level of Significance		0.038	95% CLT UCL	4.721826
9905	Adjusted Chi Square Value		126.77771	95% Jackknife UCL	4.7623976
9906				95% Standard Bootstrap UCL	4.6999293
9907	Anderson-Darling Test Statistic		0.4649188	95% Bootstrap-t UCL	5.1571183
9908	Anderson-Darling 5% Critical Value		0.745359	95% Hall's Bootstrap UCL	5.622406
9909	Kolmogorov-Smirnov Test Statistic		0.1765802	95% Percentile Bootstrap UCL	4.75
9910	Kolmogorov-Smirnov 5% Critical Value		0.1945431	95% BCA Bootstrap UCL	5.015
9911	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	6.0283565
9912				97.5% Chebyshev(Mean, Sd) UCL	6.936317
9913	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	8.7198297
9914	95% Approximate Gamma UCL		4.7826699		
9915	95% Adjusted Gamma UCL		4.8581094		
9916					
9917	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	4.7826699
9918					
9919	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9920	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9921	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9922					
9923					
9924	**M|MG/KG|COBALT (gi_sd_ne_2010)**				
9925					
9926	**General Statistics**				
9927	Number of Valid Observations		16	Number of Distinct Observations	11
9928					
9929	**Raw Statistics**			**Log-transformed Statistics**	
9930	Minimum		2.6	Minimum of Log Data	0.9555114
9931	Maximum		6	Maximum of Log Data	1.7917595
9932	Mean		3.8875	Mean of log Data	1.3235311
9933	Median		3.7	SD of log Data	0.2697389
9934	SD		1.0569611		
9935	Coefficient of Variation		0.2718871		
9936	Skewness		0.4546669		
9937					
9938	**Relevant UCL Statistics**				
9939	**Normal Distribution Test**			**Lognormal Distribution Test**	
9940	Shapiro Wilk Test Statistic		0.9210143	Shapiro Wilk Test Statistic	0.930695
9941	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
9942	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
9943					
9944	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9945	95% Student's-t UCL		4.3507265	95% H-UCL	4.4309746
9946	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5.0403702
9947	95% Adjusted-CLT UCL (Chen-1995)		4.3542297	97.5% Chebyshev (MVUE) UCL	5.5395502
9948	95% Modified-t UCL (Johnson-1978)		4.3557324	99% Chebyshev (MVUE) UCL	6.5200927

	A	B	C	D	E
9949					
9950	**Gamma Distribution Test**			**Data Distribution**	
9951	k star (bias corrected)		12.041957	**Data appear Normal at 5% Significance Level**	
9952	Theta Star		0.3228296		
9953	MLE of Mean		3.8875		
9954	MLE of Standard Deviation		1.1202678		
9955	nu star		385.34262		
9956	Approximate Chi Square Value (.05)		340.84445	**Nonparametric Statistics**	
9957	Adjusted Level of Significance		0.03348	95% CLT UCL	4.3221366
9958	Adjusted Chi Square Value		336.08251	95% Jackknife UCL	4.3507265
9959				95% Standard Bootstrap UCL	4.2965379
9960	Anderson-Darling Test Statistic		0.4932303	95% Bootstrap-t UCL	4.4069288
9961	Anderson-Darling 5% Critical Value		0.7377971	95% Hall's Bootstrap UCL	4.3413126
9962	Kolmogorov-Smirnov Test Statistic		0.1817825	95% Percentile Bootstrap UCL	4.30625
9963	Kolmogorov-Smirnov 5% Critical Value		0.2148972	95% BCA Bootstrap UCL	4.31875
9964	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	5.0392966
9965				97.5% Chebyshev(Mean, Sd) UCL	5.5376799
9966	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	6.5166574
9967	95% Approximate Gamma UCL		4.3950237		
9968	95% Adjusted Gamma UCL		4.4572966		
9969					
9970	**Potential UCL to Use**			Use 95% Student's-t UCL	4.3507265
9971					
9972	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
9973	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
9974	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
9975					
9976					
9977	**M|MG/KG|COBALT (gi_sd_nw_2005)**				
9978					
9979	**General Statistics**				
9980	Number of Valid Observations		18	Number of Distinct Observations	12
9981					
9982	**Raw Statistics**			**Log-transformed Statistics**	
9983	Minimum		1.8	Minimum of Log Data	0.5877867
9984	Maximum		4.5	Maximum of Log Data	1.5040774
9985	Mean		3.2666667	Mean of log Data	1.1676833
9986	Median		3.3	SD of log Data	0.1914732
9987	SD		0.5698297		
9988	Coefficient of Variation		0.1744377		
9989	Skewness		-0.366719		
9990					
9991	**Relevant UCL Statistics**				
9992	**Normal Distribution Test**			**Lognormal Distribution Test**	
9993	Shapiro Wilk Test Statistic		0.9433424	Shapiro Wilk Test Statistic	0.8809133
9994	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
9995	**Data appear Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
9996					
9997	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
9998	95% Student's-t UCL		3.5003135	95% H-UCL	3.5564589
9999	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3.9174939
10000	95% Adjusted-CLT UCL (Chen-1995)		3.4751825	97.5% Chebyshev (MVUE) UCL	4.1973959
10001	95% Modified-t UCL (Johnson-1978)		3.4983786	99% Chebyshev (MVUE) UCL	4.7472092
10002					
10003	**Gamma Distribution Test**			**Data Distribution**	
10004	k star (bias corrected)		26.076316	**Data appear Normal at 5% Significance Level**	
10005	Theta Star		0.1252733		
10006	MLE of Mean		3.2666667		
10007	MLE of Standard Deviation		0.6397079		
10008	nu star		938.74738		
10009	Approximate Chi Square Value (.05)		868.63077	**Nonparametric Statistics**	
10010	Adjusted Level of Significance		0.03574	95% CLT UCL	3.4875872
10011	Adjusted Chi Square Value		862.16484	95% Jackknife UCL	3.5003135
10012				95% Standard Bootstrap UCL	3.4823571
10013	Anderson-Darling Test Statistic		0.6033113	95% Bootstrap-t UCL	3.4858217
10014	Anderson-Darling 5% Critical Value		0.7390326	95% Hall's Bootstrap UCL	3.4998745
10015	Kolmogorov-Smirnov Test Statistic		0.1867201	95% Percentile Bootstrap UCL	3.4833333
10016	Kolmogorov-Smirnov 5% Critical Value		0.2031813	95% BCA Bootstrap UCL	3.4666667

	A	B	C	D	E
10017	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3.852111
10018				97.5% Chebyshev(Mean, Sd) UCL	4.1054333
10019	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4.6030358
10020	95% Approximate Gamma UCL		3.5303548		
10021	95% Adjusted Gamma UCL		3.5568311		
10022					
10023	**Potential UCL to Use**			Use 95% Student's-t UCL	3.5003135
10024					
10025	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10026	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10027	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10028					
10029					
10030	**M|MG/KG|COBALT (gi_sd_nw_2009)**				
10031					
10032	**General Statistics**				
10033	Number of Valid Observations		7	Number of Distinct Observations	7
10034					
10035	**Raw Statistics**			**Log-transformed Statistics**	
10036	Minimum		2.2	Minimum of Log Data	0.7884574
10037	Maximum		5.7	Maximum of Log Data	1.7404662
10038	Mean		3.4285714	Mean of log Data	1.190628
10039	Median		3.3	SD of log Data	0.30415
10040	SD		1.1309499		
10041	Coefficient of Variation		0.3298604		
10042	Skewness		1.4630392		
10043					
10044					
10045	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
10046					
10047	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
10048	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
10049					
10050					
10051	**Warning: There are only 7 Values in this data**				
10052	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
10053	**the resulting calculations may not be reliable enough to draw conclusions**				
10054					
10055	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
10056					
10057	**Relevant UCL Statistics**				
10058	**Normal Distribution Test**			**Lognormal Distribution Test**	
10059	Shapiro Wilk Test Statistic		0.8628583	Shapiro Wilk Test Statistic	0.9358205
10060	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
10061	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
10062					
10063	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10064	95% Student's-t UCL		4.2592011	95% H-UCL	4.5387232
10065	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5.139779
10066	95% Adjusted-CLT UCL (Chen-1995)		4.3842487	97.5% Chebyshev (MVUE) UCL	5.8832791
10067	95% Modified-t UCL (Johnson-1978)		4.2985969	99% Chebyshev (MVUE) UCL	7.3437409
10068					
10069	**Gamma Distribution Test**			**Data Distribution**	
10070	k star (bias corrected)		7.0712078	**Data appear Normal at 5% Significance Level**	
10071	Theta Star		0.4848636		
10072	MLE of Mean		3.4285714		
10073	MLE of Standard Deviation		1.2893369		
10074	nu star		98.996909		
10075	Approximate Chi Square Value (.05)		77.043614	**Nonparametric Statistics**	

	A	B	C	D	E
10076	Adjusted Level of Significance		0.01584	95% CLT UCL	4.1316787
10077	Adjusted Chi Square Value		71.212995	95% Jackknife UCL	4.2592011
10078				95% Standard Bootstrap UCL	4.0747041
10079	Anderson-Darling Test Statistic		0.3777682	95% Bootstrap-t UCL	4.6353295
10080	Anderson-Darling 5% Critical Value		0.7080826	95% Hall's Bootstrap UCL	7.849658
10081	Kolmogorov-Smirnov Test Statistic		0.2148473	95% Percentile Bootstrap UCL	4.1571429
10082	Kolmogorov-Smirnov 5% Critical Value		0.3118262	95% BCA Bootstrap UCL	4.2857143
10083	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	5.2918215
10084				97.5% Chebyshev(Mean, Sd) UCL	6.0980512
10085	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	7.6817335
10086	95% Approximate Gamma UCL		4.4055302		
10087	95% Adjusted Gamma UCL		4.7662364		
10088					
10089	**Potential UCL to Use**			Use 95% Student's-t UCL	4.2592011
10090					
10091	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10092	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10093	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10094					
10095					
10096	**M|MG/KG|COBALT (gi_sd_nw_2010)**				
10097					
10098	**General Statistics**				
10099	Number of Valid Observations		4	Number of Distinct Observations	4
10100					
10101					
10102	**Warning: This data set only has 4 observations!**				
10103	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
10104	**The data set for variable M|MG/KG|COBALT (gi_sd_nw_2010) was not processed!**				
10105					
10106	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
10107	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
10108					
10109					
10110					
10111	**M|MG/KG|COBALT (gi_sd_ref_2009)**				
10112					
10113	**General Statistics**				
10114	Number of Valid Observations		6	Number of Distinct Observations	6
10115					
10116	**Raw Statistics**			**Log-transformed Statistics**	
10117	Minimum		2.2	Minimum of Log Data	0.7884574
10118	Maximum		4.1	Maximum of Log Data	1.410987
10119	Mean		3.0083333	Mean of log Data	1.0809279
10120	Median		3	SD of log Data	0.2210078
10121	SD		0.6726193		
10122	Coefficient of Variation		0.2235853		
10123	Skewness		0.6142566		
10124					
10125					
10126	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
10127					
10128	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
10129	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
10130					
10131					
10132	**Warning: There are only 6 Values in this data**				
10133	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				

	A	B	C	D	E
10134	**the resulting calculations may not be reliable enough to draw conclusions**				
10135					
10136	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
10137					
10138	**Relevant UCL Statistics**				
10139	**Normal Distribution Test**			**Lognormal Distribution Test**	
10140	Shapiro Wilk Test Statistic		0.965565	Shapiro Wilk Test Statistic	0.9821448
10141	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
10142	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
10143					
10144	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10145	95% Student's-t UCL		3.5616569	95% H-UCL	3.7167856
10146	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	4.1907108
10147	95% Adjusted-CLT UCL (Chen-1995)		3.5335811	97.5% Chebyshev (MVUE) UCL	4.7025416
10148	95% Modified-t UCL (Johnson-1978)		3.5731336	99% Chebyshev (MVUE) UCL	5.7079339
10149					
10150	**Gamma Distribution Test**			**Data Distribution**	
10151	k star (bias corrected)		12.413868	**Data appear Normal at 5% Significance Level**	
10152	Theta Star		0.2423365		
10153	MLE of Mean		3.0083333		
10154	MLE of Standard Deviation		0.853832		
10155	nu star		148.96641		
10156	Approximate Chi Square Value (.05)		121.75667	**Nonparametric Statistics**	
10157	Adjusted Level of Significance		0.01222	95% CLT UCL	3.460003
10158	Adjusted Chi Square Value		112.86075	95% Jackknife UCL	3.5616569
10159				95% Standard Bootstrap UCL	3.4207202
10160	Anderson-Darling Test Statistic		0.1869747	95% Bootstrap-t UCL	3.6224424
10161	Anderson-Darling 5% Critical Value		0.6970578	95% Hall's Bootstrap UCL	3.7225488
10162	Kolmogorov-Smirnov Test Statistic		0.1535819	95% Percentile Bootstrap UCL	3.425
10163	Kolmogorov-Smirnov 5% Critical Value		0.3317423	95% BCA Bootstrap UCL	3.4333333
10164	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	4.2052681
10165				97.5% Chebyshev(Mean, Sd) UCL	4.7231827
10166	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	5.7405257
10167	95% Approximate Gamma UCL		3.6806249		
10168	95% Adjusted Gamma UCL		3.9707392		
10169					
10170	**Potential UCL to Use**			Use 95% Student's-t UCL	3.5616569
10171					
10172	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10173	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10174	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10175					
10176					
10177	**M|MG/KG|COBALT (gi_sd_ref_2010)**				
10178					
10179	**General Statistics**				
10180	Number of Valid Observations		3	Number of Distinct Observations	3
10181					
10182					
10183	**Warning: This data set only has 3 observations!**				
10184	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
10185	**The data set for variable M|MG/KG|COBALT (gi_sd_ref_2010) was not processed!**				
10186					
10187	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
10188	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
10189					
10190					
10191					
10192	**M|MG/KG|COBALT (gi_sd_s_2005)**				

	A	B	C	D	E
10193					
10194	**General Statistics**				
10195	Number of Valid Observations		8	Number of Distinct Observations	6
10196					
10197	**Raw Statistics**			**Log-transformed Statistics**	
10198	Minimum		2.2	Minimum of Log Data	0.7884574
10199	Maximum		3.2	Maximum of Log Data	1.1631508
10200	Mean		2.74375	Mean of log Data	0.998935
10201	Median		2.775	SD of log Data	0.1555113
10202	SD		0.4152774		
10203	Coefficient of Variation		0.151354		
10204	Skewness		-0.26527		
10205					
10206					
10207	**Warning: There are only 8 Values in this data**				
10208	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
10209	**the resulting calculations may not be reliable enough to draw conclusions**				
10210					
10211	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
10212					
10213	**Relevant UCL Statistics**				
10214	**Normal Distribution Test**			**Lognormal Distribution Test**	
10215	Shapiro Wilk Test Statistic		0.8866782	Shapiro Wilk Test Statistic	0.8794336
10216	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
10217	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
10218					
10219	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10220	95% Student's-t UCL		3.0219172	95% H-UCL	3.0728994
10221	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3.4026766
10222	95% Adjusted-CLT UCL (Chen-1995)		2.9705384	97.5% Chebyshev (MVUE) UCL	3.687584
10223	95% Modified-t UCL (Johnson-1978)		3.0196222	99% Chebyshev (MVUE) UCL	4.2472295
10224					
10225	**Gamma Distribution Test**			**Data Distribution**	
10226	k star (bias corrected)		30.262386	**Data appear Normal at 5% Significance Level**	
10227	Theta Star		0.0906654		
10228	MLE of Mean		2.74375		
10229	MLE of Standard Deviation		0.4987615		
10230	nu star		484.19818		
10231	Approximate Chi Square Value (.05)		434.17386	**Nonparametric Statistics**	
10232	Adjusted Level of Significance		0.01946	95% CLT UCL	2.9852519
10233	Adjusted Chi Square Value		422.132	95% Jackknife UCL	3.0219172
10234				95% Standard Bootstrap UCL	2.9709108
10235	Anderson-Darling Test Statistic		0.4256295	95% Bootstrap-t UCL	3.0073212
10236	Anderson-Darling 5% Critical Value		0.7148351	95% Hall's Bootstrap UCL	2.9388767
10237	Kolmogorov-Smirnov Test Statistic		0.1944846	95% Percentile Bootstrap UCL	2.96875
10238	Kolmogorov-Smirnov 5% Critical Value		0.2934357	95% BCA Bootstrap UCL	2.96875
10239	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3.3837355
10240				97.5% Chebyshev(Mean, Sd) UCL	3.6606578
10241	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4.2046179
10242	95% Approximate Gamma UCL		3.0598774		
10243	95% Adjusted Gamma UCL		3.1471642		
10244					
10245	**Potential UCL to Use**			Use 95% Student's-t UCL	3.0219172
10246					
10247	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10248	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10249	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10250					
10251					
10252	**M|MG/KG|COBALT (gi_sd_s_2010)**				
10253					
10254	**General Statistics**				
10255	Number of Valid Observations		2	Number of Distinct Observations	2
10256					

	A	B	C	D	E
10257					
10258	**Warning: This data set only has 2 observations!**				
10259	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
10260	**The data set for variable M|MG/KG|COBALT (gi_sd_s_2010) was not processed!**				
10261					
10262	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
10263	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
10264					
10265					
10266					
10267	**M|MG/KG|COBALT (gi_sd_stillwater_2005)**				
10268					
10269	**General Statistics**				
10270	Number of Valid Observations		4	Number of Distinct Observations	4
10271					
10272					
10273	**Warning: This data set only has 4 observations!**				
10274	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
10275	**The data set for variable M|MG/KG|COBALT (gi_sd_stillwater_2005) was not processed!**				
10276					
10277	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
10278	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
10279					
10280					
10281					
10282	**M|MG/KG|COBALT (gi_sd_stillwater_2009)**				
10283					
10284	**General Statistics**				
10285	Number of Valid Observations		60	Number of Distinct Observations	32
10286					
10287	**Raw Statistics**			**Log-transformed Statistics**	
10288	Minimum		2.2	Minimum of Log Data	0.7884574
10289	Maximum		6.4	Maximum of Log Data	1.856298
10290	Mean		3.9083333	Mean of log Data	1.3342183
10291	Median		3.725	SD of log Data	0.2435892
10292	SD		0.9478864		
10293	Coefficient of Variation		0.2425296		
10294	Skewness		0.4719504		
10295					
10296	**Relevant UCL Statistics**				
10297	**Normal Distribution Test**			**Lognormal Distribution Test**	
10298	Lilliefors Test Statistic		0.1121625	Lilliefors Test Statistic	0.0845192
10299	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
10300	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
10301					
10302	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10303	95% Student's-t UCL		4.1128277	95% H-UCL	4.1301092
10304	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	4.4520976
10305	95% Adjusted-CLT UCL (Chen-1995)		4.1175835	97.5% Chebyshev (MVUE) UCL	4.6869338
10306	95% Modified-t UCL (Johnson-1978)		4.1140703	99% Chebyshev (MVUE) UCL	5.148224
10307					
10308	**Gamma Distribution Test**			**Data Distribution**	
10309	k star (bias corrected)		16.608005	**Data appear Normal at 5% Significance Level**	
10310	Theta Star		0.2353283		
10311	MLE of Mean		3.9083333		
10312	MLE of Standard Deviation		0.9590315		
10313	nu star		1992.9606		
10314	Approximate Chi Square Value (.05)		1890.2636	**Nonparametric Statistics**	
10315	Adjusted Level of Significance		0.046	95% CLT UCL	4.1096167
10316	Adjusted Chi Square Value		1887.8216	95% Jackknife UCL	4.1128277
10317				95% Standard Bootstrap UCL	4.1089238
10318	Anderson-Darling Test Statistic		0.3706252	95% Bootstrap-t UCL	4.1233648

	A	B	C	D	E
10319	Anderson-Darling 5% Critical Value		0.7494842	95% Hall's Bootstrap UCL	4.1128723
10320	Kolmogorov-Smirnov Test Statistic		0.0819598	95% Percentile Bootstrap UCL	4.1108333
10321	Kolmogorov-Smirnov 5% Critical Value		0.1144808	95% BCA Bootstrap UCL	4.1208333
10322	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	4.4417388
10323				97.5% Chebyshev(Mean, Sd) UCL	4.6725438
10324	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	5.1259155
10325	95% Approximate Gamma UCL		4.1206711		
10326	95% Adjusted Gamma UCL		4.1260013		
10327					
10328	**Potential UCL to Use**			Use 95% Student's-t UCL	4.1128277
10329					
10330	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10331	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10332	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10333					
10334					
10335	**M|MG/KG|COBALT (gi_sd_stillwater_2010)**				
10336					
10337	**General Statistics**				
10338	Number of Valid Observations		11	Number of Distinct Observations	8
10339					
10340	**Raw Statistics**			**Log-transformed Statistics**	
10341	Minimum		2.7	Minimum of Log Data	0.9932518
10342	Maximum		3.7	Maximum of Log Data	1.3083328
10343	Mean		3.2136364	Mean of log Data	1.1633938
10344	Median		3.2	SD of log Data	0.0945002
10345	SD		0.2984049		
10346	Coefficient of Variation		0.0928558		
10347	Skewness		-0.266005		
10348					
10349					
10350	**Relevant UCL Statistics**				
10351	**Normal Distribution Test**			**Lognormal Distribution Test**	
10352	Shapiro Wilk Test Statistic		0.9555537	Shapiro Wilk Test Statistic	0.9462799
10353	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
10354	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
10355					
10356	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10357	95% Student's-t UCL		3.3767079	95% H-UCL	N/A
10358	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3.613274
10359	95% Adjusted-CLT UCL (Chen-1995)		3.3539174	97.5% Chebyshev (MVUE) UCL	3.78613
10360	95% Modified-t UCL (Johnson-1978)		3.3755052	99% Chebyshev (MVUE) UCL	4.1256721
10361					
10362	**Gamma Distribution Test**			**Data Distribution**	
10363	k star (bias corrected)		90.88019	**Data appear Normal at 5% Significance Level**	
10364	Theta Star		0.0353612		
10365	MLE of Mean		3.2136364		
10366	MLE of Standard Deviation		0.3371026		
10367	nu star		1999.3642		
10368	Approximate Chi Square Value (.05)		1896.5004	**Nonparametric Statistics**	
10369	Adjusted Level of Significance		0.02783	95% CLT UCL	3.3616279
10370	Adjusted Chi Square Value		1880.137	95% Jackknife UCL	3.3767079
10371				95% Standard Bootstrap UCL	3.3569513
10372	Anderson-Darling Test Statistic		0.3528367	95% Bootstrap-t UCL	3.365085
10373	Anderson-Darling 5% Critical Value		0.72567	95% Hall's Bootstrap UCL	3.36716
10374	Kolmogorov-Smirnov Test Statistic		0.2202357	95% Percentile Bootstrap UCL	3.3545455
10375	Kolmogorov-Smirnov 5% Critical Value		0.25443	95% BCA Bootstrap UCL	3.3454545
10376	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3.6058172
10377				97.5% Chebyshev(Mean, Sd) UCL	3.7755141
10378	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4.1088509
10379	95% Approximate Gamma UCL		3.3879399		
10380	95% Adjusted Gamma UCL		3.4174261		
10381					
10382	**Potential UCL to Use**			Use 95% Student's-t UCL	3.3767079
10383					
10384	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
10385	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10386	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10387					
10388					
10389	**M|MG/KG|COPPER (gi_sd_ne_2005)**				
10390					
10391	**General Statistics**				
10392	Number of Valid Observations		36	Number of Distinct Observations	33
10393					
10394	**Raw Statistics**			**Log-transformed Statistics**	
10395	Minimum		11.3	Minimum of Log Data	2.4248027
10396	Maximum		77.8	Maximum of Log Data	4.3541414
10397	Mean		23.238889	Mean of log Data	3.0542297
10398	Median		20.7	SD of log Data	0.4034565
10399	SD		12.286305		
10400	Coefficient of Variation		0.5286959		
10401	Skewness		2.8343665		
10402					
10403	**Relevant UCL Statistics**				
10404	**Normal Distribution Test**			**Lognormal Distribution Test**	
10405	Shapiro Wilk Test Statistic		0.7298642	Shapiro Wilk Test Statistic	0.9314982
10406	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
10407	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
10408					
10409	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10410	95% Student's-t UCL		26.698656	95% H-UCL	26.0839
10411	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	29.88088
10412	95% Adjusted-CLT UCL (Chen-1995)		27.640691	97.5% Chebyshev (MVUE) UCL	32.881157
10413	95% Modified-t UCL (Johnson-1978)		26.859878	99% Chebyshev (MVUE) UCL	38.774619
10414					
10415	**Gamma Distribution Test**			**Data Distribution**	
10416	k star (bias corrected)		5.1702239	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
10417	Theta Star		4.4947548		
10418	MLE of Mean		23.238889		
10419	MLE of Standard Deviation		10.22023		
10420	nu star		372.25612		
10421	Approximate Chi Square Value (.05)		328.54051	**Nonparametric Statistics**	
10422	Adjusted Level of Significance		0.0428	95% CLT UCL	26.607085
10423	Adjusted Chi Square Value		326.68114	95% Jackknife UCL	26.698656
10424				95% Standard Bootstrap UCL	26.53932
10425	Anderson-Darling Test Statistic		1.1459819	95% Bootstrap-t UCL	28.533961
10426	Anderson-Darling 5% Critical Value		0.7498461	95% Hall's Bootstrap UCL	40.856671
10427	Kolmogorov-Smirnov Test Statistic		0.1466258	95% Percentile Bootstrap UCL	26.769444
10428	Kolmogorov-Smirnov 5% Critical Value		0.1471499	95% BCA Bootstrap UCL	27.536111
10429	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	32.164683
10430				97.5% Chebyshev(Mean, Sd) UCL	36.026881
10431	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	43.613422
10432	95% Approximate Gamma UCL		26.331057		
10433	95% Adjusted Gamma UCL		26.480925		
10434					
10435	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	26.331057
10436					
10437	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10438	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10439	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10440					
10441					
10442	**M|MG/KG|COPPER (gi_sd_ne_2009)**				
10443					
10444	**General Statistics**				
10445	Number of Valid Observations		20	Number of Distinct Observations	20
10446					
10447	**Raw Statistics**			**Log-transformed Statistics**	
10448	Minimum		7.2	Minimum of Log Data	1.974081

	A	B	C	D	E
10449	Maximum		28.2	Maximum of Log Data	3.339322
10450	Mean		14.86	Mean of log Data	2.6135345
10451	Median		12.35	SD of log Data	0.4211438
10452	SD		6.4402027		
10453	Coefficient of Variation		0.4333918		
10454	Skewness		0.8354144		
10455					
10456	**Relevant UCL Statistics**				
10457	**Normal Distribution Test**			**Lognormal Distribution Test**	
10458	Shapiro Wilk Test Statistic		0.9037977	Shapiro Wilk Test Statistic	0.9546381
10459	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
10460	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
10461					
10462	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10463	95% Student's-t UCL		17.350078	95% H-UCL	17.999279
10464	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	21.096098
10465	95% Adjusted-CLT UCL (Chen-1995)		17.516153	97.5% Chebyshev (MVUE) UCL	23.802343
10466	95% Modified-t UCL (Johnson-1978)		17.394913	99% Chebyshev (MVUE) UCL	29.118237
10467					
10468	**Gamma Distribution Test**			**Data Distribution**	
10469	k star (bias corrected)		5.1626921	**Data appear Gamma Distributed at 5% Significance Level**	
10470	Theta Star		2.8783432		
10471	MLE of Mean		14.86		
10472	MLE of Standard Deviation		6.5400444		
10473	nu star		206.50769		
10474	Approximate Chi Square Value (.05)		174.25471	**Nonparametric Statistics**	
10475	Adjusted Level of Significance		0.038	95% CLT UCL	17.228709
10476	Adjusted Chi Square Value		171.91607	95% Jackknife UCL	17.350078
10477				95% Standard Bootstrap UCL	17.140095
10478	Anderson-Darling Test Statistic		0.3756424	95% Bootstrap-t UCL	17.726734
10479	Anderson-Darling 5% Critical Value		0.7445286	95% Hall's Bootstrap UCL	17.614296
10480	Kolmogorov-Smirnov Test Statistic		0.1512046	95% Percentile Bootstrap UCL	17.235
10481	Kolmogorov-Smirnov 5% Critical Value		0.1943417	95% BCA Bootstrap UCL	17.46
10482	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	21.137133
10483				97.5% Chebyshev(Mean, Sd) UCL	23.853254
10484	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	29.188546
10485	95% Approximate Gamma UCL		17.610452		
10486	95% Adjusted Gamma UCL		17.850014		
10487					
10488	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	17.610452
10489					
10490	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10491	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10492	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10493					
10494					
10495	**M|MG/KG|COPPER (gi_sd_ne_2010)**				
10496					
10497	**General Statistics**				
10498	Number of Valid Observations		16	Number of Distinct Observations	16
10499					
10500	**Raw Statistics**			**Log-transformed Statistics**	
10501	Minimum		6.8	Minimum of Log Data	1.9169226
10502	Maximum		186	Maximum of Log Data	5.2257467
10503	Mean		31.11875	Mean of log Data	2.9259621
10504	Median		15.85	SD of log Data	0.8655507
10505	SD		46.970944		
10506	Coefficient of Variation		1.5094097		
10507	Skewness		2.9365594		
10508					
10509	**Relevant UCL Statistics**				
10510	**Normal Distribution Test**			**Lognormal Distribution Test**	
10511	Shapiro Wilk Test Statistic		0.5063201	Shapiro Wilk Test Statistic	0.7905888
10512	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
10513	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
10514					
10515	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	

	A	B	C	D	E
10516	95% Student's-t UCL		51.704358	95% H-UCL	47.472235
10517	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	53.130648
10518	95% Adjusted-CLT UCL (Chen-1995)		59.645293	97.5% Chebyshev (MVUE) UCL	64.732868
10519	95% Modified-t UCL (Johnson-1978)		53.141159	99% Chebyshev (MVUE) UCL	87.523183
10520					
10521	**Gamma Distribution Test**			**Data Distribution**	
10522	k star (bias corrected)		0.9467564	**Data do not follow a Discernable Distribution (0.05)**	
10523	Theta Star		32.868804		
10524	MLE of Mean		31.11875		
10525	MLE of Standard Deviation		31.981809		
10526	nu star		30.296204		
10527	Approximate Chi Square Value (.05)		18.72581	**Nonparametric Statistics**	
10528	Adjusted Level of Significance		0.03348	95% CLT UCL	50.433832
10529	Adjusted Chi Square Value		17.69455	95% Jackknife UCL	51.704358
10530				95% Standard Bootstrap UCL	49.422376
10531	Anderson-Darling Test Statistic		2.2857082	95% Bootstrap-t UCL	174.41881
10532	Anderson-Darling 5% Critical Value		0.7613377	95% Hall's Bootstrap UCL	141.92591
10533	Kolmogorov-Smirnov Test Statistic		0.3782543	95% Percentile Bootstrap UCL	52.525
10534	Kolmogorov-Smirnov 5% Critical Value		0.2206449	95% BCA Bootstrap UCL	64.45
10535	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	82.30415
10536				97.5% Chebyshev(Mean, Sd) UCL	104.45211
10537	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	147.9575
10538	95% Approximate Gamma UCL		50.346553		
10539	95% Adjusted Gamma UCL		53.280814		
10540					
10541	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	82.30415
10542					
10543	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10544	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10545	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10546					
10547					
10548	**M|MG/KG|COPPER (gi_sd_nw_2005)**				
10549					
10550	**General Statistics**				
10551	Number of Valid Observations		18	Number of Distinct Observations	18
10552					
10553	**Raw Statistics**			**Log-transformed Statistics**	
10554	Minimum		9	Minimum of Log Data	2.1972246
10555	Maximum		64.4	Maximum of Log Data	4.1651136
10556	Mean		21.127778	Mean of log Data	2.8750257
10557	Median		17.1	SD of log Data	0.5837635
10558	SD		14.502284		
10559	Coefficient of Variation		0.6864084		
10560	Skewness		1.8277479		
10561					
10562	**Relevant UCL Statistics**				
10563	**Normal Distribution Test**			**Lognormal Distribution Test**	
10564	Shapiro Wilk Test Statistic		0.7977025	Shapiro Wilk Test Statistic	0.9258459
10565	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
10566	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
10567					
10568	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10569	95% Student's-t UCL		27.074138	95% H-UCL	28.322198
10570	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	33.831636
10571	95% Adjusted-CLT UCL (Chen-1995)		28.323729	97.5% Chebyshev (MVUE) UCL	39.473489
10572	95% Modified-t UCL (Johnson-1978)		27.319569	99% Chebyshev (MVUE) UCL	50.555816
10573					
10574	**Gamma Distribution Test**			**Data Distribution**	
10575	k star (bias corrected)		2.5406268	**Data appear Gamma Distributed at 5% Significance Level**	
10576	Theta Star		8.3159707		
10577	MLE of Mean		21.127778		
10578	MLE of Standard Deviation		13.255111		
10579	nu star		91.462564		
10580	Approximate Chi Square Value (.05)		70.409575	**Nonparametric Statistics**	
10581	Adjusted Level of Significance		0.03574	95% CLT UCL	26.750251
10582	Adjusted Chi Square Value		68.637383	95% Jackknife UCL	27.074138
10583				95% Standard Bootstrap UCL	26.656207

	A	B	C	D	E
10584	Anderson-Darling Test Statistic		0.6138944	95% Bootstrap-t UCL	29.980214
10585	Anderson-Darling 5% Critical Value		0.7457562	95% Hall's Bootstrap UCL	33.72023
10586	Kolmogorov-Smirnov Test Statistic		0.1629798	95% Percentile Bootstrap UCL	27.15
10587	Kolmogorov-Smirnov 5% Critical Value		0.2050182	95% BCA Bootstrap UCL	28.422222
10588	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	36.027458
10589				97.5% Chebyshev(Mean, Sd) UCL	42.474562
10590	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	55.138649
10591	95% Approximate Gamma UCL		27.445141		
10592	95% Adjusted Gamma UCL		28.153765		
10593					
10594	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	27.445141
10595					
10596	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10597	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10598	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10599					
10600					
10601	**M|MG/KG|COPPER (gi_sd_nw_2009)**				
10602					
10603	**General Statistics**				
10604	Number of Valid Observations		7	Number of Distinct Observations	7
10605					
10606	**Raw Statistics**			**Log-transformed Statistics**	
10607	Minimum		6.9	Minimum of Log Data	1.9315214
10608	Maximum		42	Maximum of Log Data	3.7376696
10609	Mean		17.907143	Mean of log Data	2.6332172
10610	Median		9.9	SD of log Data	0.7487667
10611	SD		14.161992		
10612	Coefficient of Variation		0.7908572		
10613	Skewness		1.1026545		
10614					
10615					
10616	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
10617					
10618	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
10619	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
10620					
10621					
10622	**Warning: There are only 7 Values in this data**				
10623	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
10624	**the resulting calculations may not be reliable enough to draw conclusions**				
10625					
10626	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
10627					
10628	**Relevant UCL Statistics**				
10629	**Normal Distribution Test**			**Lognormal Distribution Test**	
10630	Shapiro Wilk Test Statistic		0.803629	Shapiro Wilk Test Statistic	0.8576456
10631	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
10632	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
10633					
10634	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10635	95% Student's-t UCL		28.308462	95% H-UCL	46.427813
10636	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	39.411743
10637	95% Adjusted-CLT UCL (Chen-1995)		29.09527	97.5% Chebyshev (MVUE) UCL	48.858761
10638	95% Modified-t UCL (Johnson-1978)		28.680266	99% Chebyshev (MVUE) UCL	67.4156
10639					
10640	**Gamma Distribution Test**			**Data Distribution**	
10641	k star (bias corrected)		1.3158056	**Data appear Normal at 5% Significance Level**	
10642	Theta Star		13.609262		

	A	B	C	D	E
10643	MLE of Mean		17.907143		
10644	MLE of Standard Deviation		15.61099		
10645	nu star		18.421278		
10646	Approximate Chi Square Value (.05)		9.6960089	**Nonparametric Statistics**	
10647	Adjusted Level of Significance		0.01584	95% CLT UCL	26.7116
10648	Adjusted Chi Square Value		7.859784	95% Jackknife UCL	28.308462
10649				95% Standard Bootstrap UCL	26.034668
10650	Anderson-Darling Test Statistic		0.5859956	95% Bootstrap-t UCL	47.221795
10651	Anderson-Darling 5% Critical Value		0.7145328	95% Hall's Bootstrap UCL	38.222709
10652	Kolmogorov-Smirnov Test Statistic		0.2799846	95% Percentile Bootstrap UCL	26.6
10653	Kolmogorov-Smirnov 5% Critical Value		0.314921	95% BCA Bootstrap UCL	28.542857
10654	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	41.239152
10655				97.5% Chebyshev(Mean, Sd) UCL	51.334931
10656	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	71.166133
10657	95% Approximate Gamma UCL		34.021468		
10658	95% Adjusted Gamma UCL		41.969659		
10659					
10660	**Potential UCL to Use**			Use 95% Student's-t UCL	28.308462
10661					
10662	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10663	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10664	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10665					
10666					
10667	**M|MG/KG|COPPER (gi_sd_nw_2010)**				
10668					
10669	**General Statistics**				
10670	Number of Valid Observations		4	Number of Distinct Observations	4
10671					
10672					
10673	**Warning: This data set only has 4 observations!**				
10674	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
10675	**The data set for variable M|MG/KG|COPPER (gi_sd_nw_2010) was not processed!**				
10676					
10677	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
10678	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
10679					
10680					
10681					
10682	**M|MG/KG|COPPER (gi_sd_ref_2009)**				
10683					
10684	**General Statistics**				
10685	Number of Valid Observations		6	Number of Distinct Observations	6
10686					
10687	**Raw Statistics**			**Log-transformed Statistics**	
10688	Minimum		4.4	Minimum of Log Data	1.4816045
10689	Maximum		11.3	Maximum of Log Data	2.4248027
10690	Mean		7.4583333	Mean of log Data	1.9710557
10691	Median		7.35	SD of log Data	0.3059423
10692	SD		2.2535343		
10693	Coefficient of Variation		0.3021498		
10694	Skewness		0.7113047		
10695					
10696					
10697	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
10698					
10699	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
10700	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
10701					
10702					

	A	B	C	D	E
10703	**Warning: There are only 6 Values in this data**				
10704	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
10705	**the resulting calculations may not be reliable enough to draw conclusions**				
10706					
10707	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
10708					
10709	**Relevant UCL Statistics**				
10710	**Normal Distribution Test**			**Lognormal Distribution Test**	
10711	Shapiro Wilk Test Statistic		0.934223	Shapiro Wilk Test Statistic	0.9507348
10712	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
10713	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
10714					
10715	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10716	95% Student's-t UCL		9.3121809	95% H-UCL	10.214773
10717	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	11.523908
10718	95% Adjusted-CLT UCL (Chen-1995)		9.2570636	97.5% Chebyshev (MVUE) UCL	13.281442
10719	95% Modified-t UCL (Johnson-1978)		9.3567072	99% Chebyshev (MVUE) UCL	16.733778
10720					
10721	**Gamma Distribution Test**			**Data Distribution**	
10722	k star (bias corrected)		6.7248223	**Data appear Normal at 5% Significance Level**	
10723	Theta Star		1.1090752		
10724	MLE of Mean		7.4583333		
10725	MLE of Standard Deviation		2.8760828		
10726	nu star		80.697867		
10727	Approximate Chi Square Value (.05)		60.998558	**Nonparametric Statistics**	
10728	Adjusted Level of Significance		0.01222	95% CLT UCL	8.9716012
10729	Adjusted Chi Square Value		54.852195	95% Jackknife UCL	9.3121809
10730				95% Standard Bootstrap UCL	8.8449166
10731	Anderson-Darling Test Statistic		0.3049183	95% Bootstrap-t UCL	9.5219369
10732	Anderson-Darling 5% Critical Value		0.6979298	95% Hall's Bootstrap UCL	11.45264
10733	Kolmogorov-Smirnov Test Statistic		0.2144176	95% Percentile Bootstrap UCL	8.85
10734	Kolmogorov-Smirnov 5% Critical Value		0.3322379	95% BCA Bootstrap UCL	8.95
10735	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	11.468527
10736				97.5% Chebyshev(Mean, Sd) UCL	13.203741
10737	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	16.612233
10738	95% Approximate Gamma UCL		9.8669807		
10739	95% Adjusted Gamma UCL		10.972607		
10740					
10741	**Potential UCL to Use**			Use 95% Student's-t UCL	9.3121809
10742					
10743	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10744	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10745	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10746					
10747					
10748	**M|MG/KG|COPPER (gi_sd_ref_2010)**				
10749					
10750	**General Statistics**				
10751	Number of Valid Observations		3	Number of Distinct Observations	3
10752					
10753					
10754	**Warning: This data set only has 3 observations!**				
10755	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
10756	**The data set for variable M|MG/KG|COPPER (gi_sd_ref_2010) was not processed!**				
10757					
10758	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
10759	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				

	A	B	C	D	E
10760					
10761					
10762					
10763	**M|MG/KG|COPPER (gi_sd_s_2005)**				
10764					
10765	**General Statistics**				
10766	Number of Valid Observations		8	Number of Distinct Observations	8
10767					
10768	**Raw Statistics**			**Log-transformed Statistics**	
10769	Minimum		9.3	Minimum of Log Data	2.2300144
10770	Maximum		20.7	Maximum of Log Data	3.0301337
10771	Mean		14.55	Mean of log Data	2.6491023
10772	Median		13.95	SD of log Data	0.257324
10773	SD		3.6757895		
10774	Coefficient of Variation		0.2526316		
10775	Skewness		0.3281403		
10776					
10777					
10778	**Warning: There are only 8 Values in this data**				
10779	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
10780	**the resulting calculations may not be reliable enough to draw conclusions**				
10781					
10782	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
10783					
10784	**Relevant UCL Statistics**				
10785	**Normal Distribution Test**			**Lognormal Distribution Test**	
10786	Shapiro Wilk Test Statistic		0.9792832	Shapiro Wilk Test Statistic	0.9825895
10787	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
10788	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
10789					
10790	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10791	95% Student's-t UCL		17.012171	95% H-UCL	17.767071
10792	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	20.345536
10793	95% Adjusted-CLT UCL (Chen-1995)		16.848734	97.5% Chebyshev (MVUE) UCL	22.850825
10794	95% Modified-t UCL (Johnson-1978)		17.0373	99% Chebyshev (MVUE) UCL	27.771981
10795					
10796	**Gamma Distribution Test**			**Data Distribution**	
10797	k star (bias corrected)		11.155763	**Data appear Normal at 5% Significance Level**	
10798	Theta Star		1.3042587		
10799	MLE of Mean		14.55		
10800	MLE of Standard Deviation		4.3562557		
10801	nu star		178.4922		
10802	Approximate Chi Square Value (.05)		148.59213	**Nonparametric Statistics**	
10803	Adjusted Level of Significance		0.01946	95% CLT UCL	16.687632
10804	Adjusted Chi Square Value		141.68289	95% Jackknife UCL	17.012171
10805				95% Standard Bootstrap UCL	16.53135
10806	Anderson-Darling Test Statistic		0.1636796	95% Bootstrap-t UCL	17.408325
10807	Anderson-Darling 5% Critical Value		0.7159499	95% Hall's Bootstrap UCL	17.952621
10808	Kolmogorov-Smirnov Test Statistic		0.1466479	95% Percentile Bootstrap UCL	16.7
10809	Kolmogorov-Smirnov 5% Critical Value		0.2939559	95% BCA Bootstrap UCL	16.75
10810	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	20.214772
10811				97.5% Chebyshev(Mean, Sd) UCL	22.665924
10812	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	27.480736
10813	95% Approximate Gamma UCL		17.477786		
10814	95% Adjusted Gamma UCL		18.3301		
10815					
10816	**Potential UCL to Use**			Use 95% Student's-t UCL	17.012171
10817					
10818	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10819	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10820	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10821					
10822					
10823	**M|MG/KG|COPPER (gi_sd_s_2010)**				

	A	B	C	D	E
10824					
10825	**General Statistics**				
10826	Number of Valid Observations		2	Number of Distinct Observations	2
10827					
10828					
10829	**Warning: This data set only has 2 observations!**				
10830	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
10831	**The data set for variable M|MG/KG|COPPER (gi_sd_s_2010) was not processed!**				
10832					
10833	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
10834	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
10835					
10836					
10837					
10838	**M|MG/KG|COPPER (gi_sd_stillwater_2005)**				
10839					
10840	**General Statistics**				
10841	Number of Valid Observations		4	Number of Distinct Observations	4
10842					
10843					
10844	**Warning: This data set only has 4 observations!**				
10845	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
10846	**The data set for variable M|MG/KG|COPPER (gi_sd_stillwater_2005) was not processed!**				
10847					
10848	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
10849	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
10850					
10851					
10852					
10853	**M|MG/KG|COPPER (gi_sd_stillwater_2009)**				
10854					
10855	**General Statistics**				
10856	Number of Valid Observations		60	Number of Distinct Observations	55
10857					
10858	**Raw Statistics**			**Log-transformed Statistics**	
10859	Minimum		7.3	Minimum of Log Data	1.9878743
10860	Maximum		497	Maximum of Log Data	6.20859
10861	Mean		33.305833	Mean of log Data	2.9093494
10862	Median		14.75	SD of log Data	0.8755837
10863	SD		68.600573		
10864	Coefficient of Variation		2.0597165		
10865	Skewness		5.6439975		
10866					
10867	**Relevant UCL Statistics**				
10868	**Normal Distribution Test**			**Lognormal Distribution Test**	
10869	Lilliefors Test Statistic		0.3523103	Lilliefors Test Statistic	0.1463052
10870	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
10871	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
10872					
10873	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10874	95% Student's-t UCL		48.105527	95% H-UCL	34.61268
10875	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	41.748802
10876	95% Adjusted-CLT UCL (Chen-1995)		54.768294	97.5% Chebyshev (MVUE) UCL	48.268195
10877	95% Modified-t UCL (Johnson-1978)		49.181031	99% Chebyshev (MVUE) UCL	61.074281
10878					
10879	**Gamma Distribution Test**			**Data Distribution**	
10880	k star (bias corrected)		0.9337613	**Data do not follow a Discernable Distribution (0.05)**	
10881	Theta Star		35.668466		
10882	MLE of Mean		33.305833		
10883	MLE of Standard Deviation		34.466912		
10884	nu star		112.05136		
10885	Approximate Chi Square Value (.05)		88.616092	**Nonparametric Statistics**	

	A	B	C	D	E
10886	Adjusted Level of Significance		0.046	95% CLT UCL	47.873144
10887	Adjusted Chi Square Value		88.104432	95% Jackknife UCL	48.105527
10888				95% Standard Bootstrap UCL	47.727589
10889	Anderson-Darling Test Statistic		5.8057139	95% Bootstrap-t UCL	70.20407
10890	Anderson-Darling 5% Critical Value		0.7806278	95% Hall's Bootstrap UCL	96.955549
10891	Kolmogorov-Smirnov Test Statistic		0.2154084	95% Percentile Bootstrap UCL	49.6475
10892	Kolmogorov-Smirnov 5% Critical Value		0.1181528	95% BCA Bootstrap UCL	57.411667
10893	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	71.909532
10894				97.5% Chebyshev(Mean, Sd) UCL	88.613384
10895	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	121.42487
10896	95% Approximate Gamma UCL		42.113838		
10897	95% Adjusted Gamma UCL		42.358411		
10898					
10899	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	71.909532
10900					
10901	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10902	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10903	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10904					
10905					
10906	**M|MG/KG|COPPER (gi_sd_stillwater_2010)**				
10907					
10908	**General Statistics**				
10909	Number of Valid Observations		11	Number of Distinct Observations	11
10910					
10911	**Raw Statistics**			**Log-transformed Statistics**	
10912	Minimum		9.6	Minimum of Log Data	2.2617631
10913	Maximum		28.7	Maximum of Log Data	3.3568971
10914	Mean		16.163636	Mean of log Data	2.7190276
10915	Median		14.8	SD of log Data	0.3666889
10916	SD		6.3336045		
10917	Coefficient of Variation		0.3918428		
10918	Skewness		0.9868508		
10919					
10920	**Relevant UCL Statistics**				
10921	**Normal Distribution Test**			**Lognormal Distribution Test**	
10922	Shapiro Wilk Test Statistic		0.8852632	Shapiro Wilk Test Statistic	0.9351129
10923	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
10924	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
10925					
10926	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10927	95% Student's-t UCL		19.624809	95% H-UCL	20.494819
10928	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	23.976004
10929	95% Adjusted-CLT UCL (Chen-1995)		19.911879	97.5% Chebyshev (MVUE) UCL	27.376854
10930	95% Modified-t UCL (Johnson-1978)		19.719511	99% Chebyshev (MVUE) UCL	34.057166
10931					
10932	**Gamma Distribution Test**			**Data Distribution**	
10933	k star (bias corrected)		5.8844757	**Data appear Normal at 5% Significance Level**	
10934	Theta Star		2.7468269		
10935	MLE of Mean		16.163636		
10936	MLE of Standard Deviation		6.6632358		
10937	nu star		129.45847		
10938	Approximate Chi Square Value (.05)		104.1761	**Nonparametric Statistics**	
10939	Adjusted Level of Significance		0.02783	95% CLT UCL	19.304737
10940	Adjusted Chi Square Value		100.4824	95% Jackknife UCL	19.624809
10941				95% Standard Bootstrap UCL	19.188725
10942	Anderson-Darling Test Statistic		0.3992929	95% Bootstrap-t UCL	20.833252
10943	Anderson-Darling 5% Critical Value		0.7301828	95% Hall's Bootstrap UCL	20.289832
10944	Kolmogorov-Smirnov Test Statistic		0.1795126	95% Percentile Bootstrap UCL	19.281818
10945	Kolmogorov-Smirnov 5% Critical Value		0.255627	95% BCA Bootstrap UCL	19.890909
10946	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	24.487623
10947				97.5% Chebyshev(Mean, Sd) UCL	28.089419
10948	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	35.16445
10949	95% Approximate Gamma UCL		20.086369		
10950	95% Adjusted Gamma UCL		20.824738		
10951					
10952	**Potential UCL to Use**			Use 95% Student's-t UCL	19.624809
10953					

	A	B	C	D	E
10954	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
10955	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
10956	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
10957					
10958					
10959	**M|MG/KG|CYANIDE (gi_sd_ne_2005)**				
10960					
10961	**General Statistics**				
10962	Number of Valid Data		36	Number of Detected Data	2
10963	Number of Distinct Detected Data		2	Number of Non-Detect Data	34
10964				Percent Non-Detects	94.44%
10965					
10966	**Raw Statistics**			**Log-transformed Statistics**	
10967	Minimum Detected		0.1	Minimum Detected	-2.302585
10968	Maximum Detected		0.14	Maximum Detected	-1.966113
10969	Mean of Detected		0.12	Mean of Detected	-2.134349
10970	SD of Detected		0.0282843	SD of Detected	0.2379218
10971	Minimum Non-Detect		0.11	Minimum Non-Detect	-2.207275
10972	Maximum Non-Detect		0.21	Maximum Non-Detect	-1.560648
10973					
10974	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
10975	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
10976	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
10977					
10978	**Warning: Data set has only 2 Distinct Detected Values.**				
10979	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
10980	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
10981					
10982	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
10983					
10984	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
10985	**Those methods will return a 'N/A' value on your output display!**				
10986					
10987	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
10988	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
10989	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
10990					
10991					
10992	**UCL Statistics**				
10993	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
10994	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
10995	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
10996	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
10997					
10998	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
10999	DL/2 Substitution Method			DL/2 Substitution Method	
11000	Mean		0.0647917	Mean	-2.757428
11001	SD		0.0163922	SD	0.187672
11002	95% DL/2 (t) UCL		0.0694076	95% H-Stat (DL/2) UCL	0.0682225
11003					
11004	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
11005	**MLE method failed to converge properly**			Mean in Log Scale	N/A
11006				SD in Log Scale	N/A
11007				Mean in Original Scale	N/A
11008				SD in Original Scale	N/A

	A	B	C	D	E
11009				95% t UCL	N/A
11010				95% Percentile Bootstrap UCL	N/A
11011				95% BCA Bootstrap UCL	N/A
11012					
11013	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
11014	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
11015	Theta Star		N/A		
11016	nu star		N/A		
11017					
11018	A-D Test Statistic		N/A	**Nonparametric Statistics**	
11019	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
11020	K-S Test Statistic		N/A	Mean	0.1011429
11021	5% K-S Critical Value		N/A	SD	0.0066639
11022	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.001593
11023				95% KM (t) UCL	0.1038343
11024	**Assuming Gamma Distribution**			95% KM (z) UCL	0.1037631
11025	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.1272568
11026	Minimum		N/A	95% KM (bootstrap t) UCL	0.101185
11027	Maximum		N/A	95% KM (BCA) UCL	N/A
11028	Mean		N/A	95% KM (Percentile Bootstrap) UCL	0.14
11029	Median		N/A	95% KM (Chebyshev) UCL	0.1080865
11030	SD		N/A	97.5% KM (Chebyshev) UCL	0.1110911
11031	k star		N/A	99% KM (Chebyshev) UCL	0.1169929
11032	Theta star		N/A		
11033	Nu star		N/A	**Potential UCLs to Use**	
11034	AppChi2		N/A	95% KM (t) UCL	0.1038343
11035	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	0.14
11036	95% Adjusted Gamma UCL		N/A		
11037	**Note: DL/2 is not a recommended method.**				
11038					
11039	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
11040	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
11041	**For additional insight, the user may want to consult a statistician.**				
11042					
11043					
11044	**M|MG/KG|CYANIDE (gi_sd_ne_2009)**				
11045					
11046	**General Statistics**				
11047	Number of Valid Data		0	Number of Detected Data	0
11048	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
11049	Number of Missing Values		20	Percent Non-Detects	NaN%
11050					
11051	**Warning: This data set only has 0 observations!**				
11052	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
11053	**The data set for variable M|MG/KG|CYANIDE (gi_sd_ne_2009) was not processed!**				
11054					
11055	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
11056	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
11057					
11058					
11059					
11060	**M|MG/KG|CYANIDE (gi_sd_ne_2010)**				
11061					
11062	**General Statistics**				
11063	Number of Valid Data		0	Number of Detected Data	0
11064	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
11065	Number of Missing Values		16	Percent Non-Detects	NaN%
11066					
11067	**Warning: This data set only has 0 observations!**				
11068	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
11069	**The data set for variable M|MG/KG|CYANIDE (gi_sd_ne_2010) was not processed!**				

	A	B	C	D	E
11070					
11071	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
11072	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
11073					
11074					
11075					
11076	M|MG/KG|CYANIDE (gi_sd_nw_2005)				
11077					
11078	General Statistics				
11079	Number of Valid Data		18	Number of Detected Data	1
11080	Number of Distinct Detected Data		1	Number of Non-Detect Data	17
11081				Percent Non-Detects	94.44%
11082					
11083	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
11084	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
11085					
11086	The data set for variable M|MG/KG|CYANIDE (gi_sd_nw_2005) was not processed!				
11087					
11088					
11089					
11090	M|MG/KG|CYANIDE (gi_sd_nw_2009)				
11091					
11092	General Statistics				
11093	Number of Valid Data		0	Number of Detected Data	0
11094	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
11095	Number of Missing Values		7	Percent Non-Detects	NaN%
11096					
11097	Warning: This data set only has 0 observations!				
11098	Data set is too small to compute reliable and meaningful statistics and estimates!				
11099	The data set for variable M|MG/KG|CYANIDE (gi_sd_nw_2009) was not processed!				
11100					
11101	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
11102	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
11103					
11104					
11105					
11106	M|MG/KG|CYANIDE (gi_sd_nw_2010)				
11107					
11108	General Statistics				
11109	Number of Valid Data		0	Number of Detected Data	0
11110	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
11111	Number of Missing Values		4	Percent Non-Detects	NaN%
11112					
11113	Warning: This data set only has 0 observations!				
11114	Data set is too small to compute reliable and meaningful statistics and estimates!				
11115	The data set for variable M|MG/KG|CYANIDE (gi_sd_nw_2010) was not processed!				
11116					
11117	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
11118	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
11119					
11120					
11121					
11122	M|MG/KG|CYANIDE (gi_sd_ref_2009)				
11123					
11124	General Statistics				

	A	B	C	D	E
11125	Number of Valid Data		0	Number of Detected Data	0
11126	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
11127	Number of Missing Values		6	Percent Non-Detects	NaN%
11128					
11129	**Warning: This data set only has 0 observations!**				
11130	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
11131	**The data set for variable M|MG/KG|CYANIDE (gi_sd_ref_2009) was not processed!**				
11132					
11133	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
11134	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
11135					
11136					
11137					
11138	**M|MG/KG|CYANIDE (gi_sd_ref_2010)**				
11139					
11140	**General Statistics**				
11141	Number of Valid Data		0	Number of Detected Data	0
11142	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
11143	Number of Missing Values		3	Percent Non-Detects	NaN%
11144					
11145	**Warning: This data set only has 0 observations!**				
11146	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
11147	**The data set for variable M|MG/KG|CYANIDE (gi_sd_ref_2010) was not processed!**				
11148					
11149	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
11150	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
11151					
11152					
11153					
11154	**M|MG/KG|CYANIDE (gi_sd_s_2005)**				
11155					
11156	**General Statistics**				
11157	Number of Valid Data		8	Number of Detected Data	2
11158	Number of Distinct Detected Data		2	Number of Non-Detect Data	6
11159				Percent Non-Detects	75.00%
11160					
11161	**Raw Statistics**			**Log-transformed Statistics**	
11162	Minimum Detected		0.3	Minimum Detected	-1.203973
11163	Maximum Detected		0.31	Maximum Detected	-1.171183
11164	Mean of Detected		0.305	Mean of Detected	-1.187578
11165	SD of Detected		0.0070711	SD of Detected	0.0231859
11166	Minimum Non-Detect		0.12	Minimum Non-Detect	-2.120264
11167	Maximum Non-Detect		0.12	Maximum Non-Detect	-2.120264
11168					
11169					
11170	**Warning: Data set has only 2 Distinct Detected Values.**				
11171	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
11172	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
11173					
11174	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
11175					
11176	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
11177	**Those methods will return a 'N/A' value on your output display!**				
11178					

	A	B	C	D	E
11179	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
11180	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
11181	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
11182					
11183					
11184	**UCL Statistics**				
11185	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
11186	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
11187	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
11188	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
11189					
11190	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
11191	DL/2 Substitution Method			DL/2 Substitution Method	
11192	Mean		0.12125	Mean	-2.406953
11193	SD		0.1134444	SD	0.7526654
11194	95% DL/2 (t) UCL		0.197239	95% H-Stat (DL/2) UCL	0.2688234
11195					
11196	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
11197	**MLE method failed to converge properly**			Mean in Log Scale	N/A
11198				SD in Log Scale	N/A
11199				Mean in Original Scale	N/A
11200				SD in Original Scale	N/A
11201				95% t UCL	N/A
11202				95% Percentile Bootstrap UCL	N/A
11203				95% BCA Bootstrap UCL	N/A
11204					
11205	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
11206	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
11207	Theta Star		N/A		
11208	nu star		N/A		
11209					
11210	A-D Test Statistic		N/A	**Nonparametric Statistics**	
11211	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
11212	K-S Test Statistic		N/A	Mean	0.30125
11213	5% K-S Critical Value		N/A	SD	0.0033072
11214	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0016536
11215				95% KM (t) UCL	0.3043829
11216	**Assuming Gamma Distribution**			95% KM (z) UCL	0.3039699
11217	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	N/A
11218	Minimum		N/A	95% KM (bootstrap t) UCL	N/A
11219	Maximum		N/A	95% KM (BCA) UCL	N/A
11220	Mean		N/A	95% KM (Percentile Bootstrap) UCL	N/A
11221	Median		N/A	95% KM (Chebyshev) UCL	0.3084579
11222	SD		N/A	97.5% KM (Chebyshev) UCL	0.3115767
11223	k star		N/A	99% KM (Chebyshev) UCL	0.3177031
11224	Theta star		N/A		
11225	Nu star		N/A	**Potential UCLs to Use**	
11226	AppChi2		N/A	95% KM (t) UCL	0.3043829
11227	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	N/A
11228	95% Adjusted Gamma UCL		N/A		
11229	**Note: DL/2 is not a recommended method.**				
11230					
11231	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
11232	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
11233	**For additional insight, the user may want to consult a statistician.**				
11234					
11235					
11236	**M|MG/KG|CYANIDE (gi_sd_s_2010)**				
11237					
11238	**General Statistics**				
11239	Number of Valid Data		0	Number of Detected Data	0
11240	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
11241	Number of Missing Values		2	Percent Non-Detects	NaN%
11242					

	A	B	C	D	E
11243	Warning: This data set only has 0 observations!				
11244	Data set is too small to compute reliable and meaningful statistics and estimates!				
11245	The data set for variable M|MG/KG|CYANIDE (gi_sd_s_2010) was not processed!				
11246					
11247	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
11248	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
11249					
11250					
11251					
11252	M|MG/KG|CYANIDE (gi_sd_stillwater_2005)				
11253					
11254	General Statistics				
11255	Number of Valid Data		4	Number of Detected Data	0
11256	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
11257				Percent Non-Detects	100.00%
11258					
11259	Warning: This data set only has 4 observations!				
11260	Data set is too small to compute reliable and meaningful statistics and estimates!				
11261	The data set for variable M|MG/KG|CYANIDE (gi_sd_stillwater_2005) was not processed!				
11262					
11263	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
11264	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
11265					
11266					
11267					
11268	M|MG/KG|CYANIDE (gi_sd_stillwater_2009)				
11269					
11270	General Statistics				
11271	Number of Valid Data		0	Number of Detected Data	0
11272	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
11273	Number of Missing Values		60	Percent Non-Detects	NaN%
11274					
11275	Warning: This data set only has 0 observations!				
11276	Data set is too small to compute reliable and meaningful statistics and estimates!				
11277	The data set for variable M|MG/KG|CYANIDE (gi_sd_stillwater_2009) was not processed!				
11278					
11279	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
11280	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
11281					
11282					
11283					
11284	M|MG/KG|CYANIDE (gi_sd_stillwater_2010)				
11285					
11286	General Statistics				
11287	Number of Valid Data		0	Number of Detected Data	0
11288	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
11289	Number of Missing Values		11	Percent Non-Detects	NaN%
11290					
11291	Warning: This data set only has 0 observations!				
11292	Data set is too small to compute reliable and meaningful statistics and estimates!				
11293	The data set for variable M|MG/KG|CYANIDE (gi_sd_stillwater_2010) was not processed!				
11294					
11295	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
11296	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
11297					
11298					
11299					
11300	**M|MG/KG|IRON (gi_sd_ne_2005)**				
11301					
11302	**General Statistics**				
11303	Number of Valid Observations		36	Number of Distinct Observations	32
11304					
11305	**Raw Statistics**			**Log-transformed Statistics**	
11306	Minimum		9470	Minimum of Log Data	9.1558842
11307	Maximum		71800	Maximum of Log Data	11.18164
11308	Mean		17988.056	Mean of log Data	9.6640093
11309	Median		13200	SD of log Data	0.4564828
11310	SD		12797.796		
11311	Coefficient of Variation		0.7114608		
11312	Skewness		3.1458784		
11313					
11314	**Relevant UCL Statistics**				
11315	**Normal Distribution Test**			**Lognormal Distribution Test**	
11316	Shapiro Wilk Test Statistic		0.5781076	Shapiro Wilk Test Statistic	0.7835337
11317	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
11318	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
11319					
11320	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
11321	95% Student's-t UCL		21591.856	95% H-UCL	20194.213
11322	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	23415.197
11323	95% Adjusted-CLT UCL (Chen-1995)		22691.437	97.5% Chebyshev (MVUE) UCL	26011.932
11324	95% Modified-t UCL (Johnson-1978)		21778.247	99% Chebyshev (MVUE) UCL	31112.717
11325					
11326	**Gamma Distribution Test**			**Data Distribution**	
11327	k star (bias corrected)		3.5985417	**Data do not follow a Discernable Distribution (0.05)**	
11328	Theta Star		4998.7071		
11329	MLE of Mean		17988.056		
11330	MLE of Standard Deviation		9482.4585		
11331	nu star		259.095		
11332	Approximate Chi Square Value (.05)		222.82292	**Nonparametric Statistics**	
11333	Adjusted Level of Significance		0.0428	95% CLT UCL	21496.473
11334	Adjusted Chi Square Value		221.29907	95% Jackknife UCL	21591.856
11335				95% Standard Bootstrap UCL	21474.615
11336	Anderson-Darling Test Statistic		3.5911599	95% Bootstrap-t UCL	25519.229
11337	Anderson-Darling 5% Critical Value		0.7527166	95% Hall's Bootstrap UCL	37267.36
11338	Kolmogorov-Smirnov Test Statistic		0.2775416	95% Percentile Bootstrap UCL	21763.889
11339	Kolmogorov-Smirnov 5% Critical Value		0.1475619	95% BCA Bootstrap UCL	22858.333
11340	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	27285.439
11341				97.5% Chebyshev(Mean, Sd) UCL	31308.424
11342	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	39210.8
11343	95% Approximate Gamma UCL		20916.229		
11344	95% Adjusted Gamma UCL		21060.257		
11345					
11346	**Potential UCL to Use**			Use 95% Student's-t UCL	21591.856
11347				or 95% Modified-t UCL	21778.247
11348					
11349	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
11350	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
11351	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
11352					
11353					
11354	**M|MG/KG|IRON (gi_sd_ne_2009)**				
11355					
11356	**General Statistics**				
11357	Number of Valid Observations		20	Number of Distinct Observations	18
11358					
11359	**Raw Statistics**			**Log-transformed Statistics**	
11360	Minimum		6220	Minimum of Log Data	8.7355252
11361	Maximum		42500	Maximum of Log Data	10.657259
11362	Mean		16438	Mean of log Data	9.6180915

	A	B	C	D	E
11363	Median		14600	SD of log Data	0.4319925
11364	SD		7700.742		
11365	Coefficient of Variation		0.468472		
11366	Skewness		2.0060186		
11367					
11368	**Relevant UCL Statistics**				
11369	**Normal Distribution Test**			**Lognormal Distribution Test**	
11370	Shapiro Wilk Test Statistic		0.8150807	Shapiro Wilk Test Statistic	0.9350096
11371	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
11372	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
11373					
11374	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
11375	95% Student's-t UCL		19415.46	95% H-UCL	20036.274
11376	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	23529.232
11377	95% Adjusted-CLT UCL (Chen-1995)		20095.648	97.5% Chebyshev (MVUE) UCL	26604.627
11378	95% Modified-t UCL (Johnson-1978)		19544.192	99% Chebyshev (MVUE) UCL	32645.647
11379					
11380	**Gamma Distribution Test**			**Data Distribution**	
11381	k star (bias corrected)		4.9320163	**Data appear Gamma Distributed at 5% Significance Level**	
11382	Theta Star		3332.9168		
11383	MLE of Mean		16438		
11384	MLE of Standard Deviation		7401.7894		
11385	nu star		197.28065		
11386	Approximate Chi Square Value (.05)		165.78388	**Nonparametric Statistics**	
11387	Adjusted Level of Significance		0.038	95% CLT UCL	19270.336
11388	Adjusted Chi Square Value		163.50467	95% Jackknife UCL	19415.46
11389				95% Standard Bootstrap UCL	19161.096
11390	Anderson-Darling Test Statistic		0.5469591	95% Bootstrap-t UCL	20719.933
11391	Anderson-Darling 5% Critical Value		0.7447126	95% Hall's Bootstrap UCL	34025.899
11392	Kolmogorov-Smirnov Test Statistic		0.1448228	95% Percentile Bootstrap UCL	19420
11393	Kolmogorov-Smirnov 5% Critical Value		0.1943754	95% BCA Bootstrap UCL	19715
11394	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	23943.755
11395				97.5% Chebyshev(Mean, Sd) UCL	27191.501
11396	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	33571.069
11397	95% Approximate Gamma UCL		19561.005		
11398	95% Adjusted Gamma UCL		19833.68		
11399					
11400	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	19561.005
11401					
11402	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
11403	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
11404	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
11405					
11406					
11407	**M|MG/KG|IRON (gi_sd_ne_2010)**				
11408					
11409	**General Statistics**				
11410	Number of Valid Observations		16	Number of Distinct Observations	15
11411					
11412	**Raw Statistics**			**Log-transformed Statistics**	
11413	Minimum		9830	Minimum of Log Data	9.1931942
11414	Maximum		37400	Maximum of Log Data	10.529426
11415	Mean		17020.625	Mean of log Data	9.6646989
11416	Median		14050	SD of log Data	0.3853167
11417	SD		7791.8423		
11418	Coefficient of Variation		0.4577883		
11419	Skewness		1.7166079		
11420					
11421	**Relevant UCL Statistics**				
11422	**Normal Distribution Test**			**Lognormal Distribution Test**	
11423	Shapiro Wilk Test Statistic		0.7963378	Shapiro Wilk Test Statistic	0.9084513
11424	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
11425	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
11426					
11427	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
11428	95% Student's-t UCL		20435.498	95% H-UCL	20579.409
11429	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	24108.442

	A	B	C	D	E
11430	95% Adjusted-CLT UCL (Chen-1995)		21117.982	97.5% Chebyshev (MVUE) UCL	27235.268
11431	95% Modified-t UCL (Johnson-1978)		20574.826	99% Chebyshev (MVUE) UCL	33377.314
11432					
11433	**Gamma Distribution Test**			**Data Distribution**	
11434	k star (bias corrected)		5.4166008	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
11435	Theta Star		3142.3074		
11436	MLE of Mean		17020.625		
11437	MLE of Standard Deviation		7313.2781		
11438	nu star		173.33123		
11439	Approximate Chi Square Value (.05)		143.88434	**Nonparametric Statistics**	
11440	Adjusted Level of Significance		0.03348	95% CLT UCL	20224.735
11441	Adjusted Chi Square Value		140.8318	95% Jackknife UCL	20435.498
11442				95% Standard Bootstrap UCL	20027.445
11443	Anderson-Darling Test Statistic		0.7462767	95% Bootstrap-t UCL	23476.96
11444	Anderson-Darling 5% Critical Value		0.7405843	95% Hall's Bootstrap UCL	28406.427
11445	Kolmogorov-Smirnov Test Statistic		0.1817475	95% Percentile Bootstrap UCL	20050
11446	Kolmogorov-Smirnov 5% Critical Value		0.2155765	95% BCA Bootstrap UCL	21241.25
11447	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	25511.588
11448				97.5% Chebyshev(Mean, Sd) UCL	29185.635
11449	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	36402.588
11450	95% Approximate Gamma UCL		20504.008		
11451	95% Adjusted Gamma UCL		20948.435		
11452					
11453	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	20504.008
11454					
11455	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
11456	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
11457	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
11458					
11459					
11460	**M|MG/KG|IRON (gi_sd_nw_2005)**				
11461					
11462	**General Statistics**				
11463	Number of Valid Observations		18	Number of Distinct Observations	17
11464					
11465	**Raw Statistics**			**Log-transformed Statistics**	
11466	Minimum		10600	Minimum of Log Data	9.2686093
11467	Maximum		72100	Maximum of Log Data	11.185809
11468	Mean		17866.667	Mean of log Data	9.6449389
11469	Median		13050	SD of log Data	0.4708519
11470	SD		14256.681		
11471	Coefficient of Variation		0.7979485		
11472	Skewness		3.6023465		
11473					
11474	**Relevant UCL Statistics**				
11475	**Normal Distribution Test**			**Lognormal Distribution Test**	
11476	Shapiro Wilk Test Statistic		0.5100435	Shapiro Wilk Test Statistic	0.7536725
11477	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
11478	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
11479					
11480	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
11481	95% Student's-t UCL		23712.323	95% H-UCL	21664.869
11482	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	25683.831
11483	95% Adjusted-CLT UCL (Chen-1995)		26442.6	97.5% Chebyshev (MVUE) UCL	29381.556
11484	95% Modified-t UCL (Johnson-1978)		24187.855	99% Chebyshev (MVUE) UCL	36645.021
11485					
11486	**Gamma Distribution Test**			**Data Distribution**	
11487	k star (bias corrected)		3.0275251	**Data do not follow a Discernable Distribution (0.05)**	
11488	Theta Star		5901.41		
11489	MLE of Mean		17866.667		
11490	MLE of Standard Deviation		10268.326		
11491	nu star		108.9909		
11492	Approximate Chi Square Value (.05)		85.894935	**Nonparametric Statistics**	
11493	Adjusted Level of Significance		0.03574	95% CLT UCL	23393.921
11494	Adjusted Chi Square Value		83.927828	95% Jackknife UCL	23712.323
11495				95% Standard Bootstrap UCL	23221.483
11496	Anderson-Darling Test Statistic		1.894845	95% Bootstrap-t UCL	35966.571

	A	B	C	D	E
11497	Anderson-Darling 5% Critical Value		0.7438865	95% Hall's Bootstrap UCL	44096.954
11498	Kolmogorov-Smirnov Test Statistic		0.2413867	95% Percentile Bootstrap UCL	23933.333
11499	Kolmogorov-Smirnov 5% Critical Value		0.2047728	95% BCA Bootstrap UCL	27727.778
11500	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	32514.014
11501				97.5% Chebyshev(Mean, Sd) UCL	38851.932
11502	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	51301.546
11503	95% Approximate Gamma UCL		22670.768		
11504	95% Adjusted Gamma UCL		23202.127		
11505					
11506	**Potential UCL to Use**			Use 95% Student's-t UCL	23712.323
11507				or 95% Modified-t UCL	24187.855
11508					
11509	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
11510	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
11511	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
11512					
11513					
11514	**M|MG/KG|IRON (gi_sd_nw_2009)**				
11515					
11516	**General Statistics**				
11517	Number of Valid Observations		7	Number of Distinct Observations	7
11518					
11519	**Raw Statistics**			**Log-transformed Statistics**	
11520	Minimum		10300	Minimum of Log Data	9.2398992
11521	Maximum		34100	Maximum of Log Data	10.437053
11522	Mean		19000	Mean of log Data	9.7688475
11523	Median		15500	SD of log Data	0.4371413
11524	SD		8575.741		
11525	Coefficient of Variation		0.4513548		
11526	Skewness		0.9166026		
11527					
11528					
11529	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
11530					
11531	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
11532	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
11533					
11534					
11535	**Warning: There are only 7 Values in this data**				
11536	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
11537	**the resulting calculations may not be reliable enough to draw conclusions**				
11538					
11539	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
11540					
11541	**Relevant UCL Statistics**				
11542	**Normal Distribution Test**			**Lognormal Distribution Test**	
11543	Shapiro Wilk Test Statistic		0.9130927	Shapiro Wilk Test Statistic	0.9537039
11544	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
11545	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
11546					
11547	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
11548	95% Student's-t UCL		25298.48	95% H-UCL	29183.47
11549	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	32664.674
11550	95% Adjusted-CLT UCL (Chen-1995)		25531.378	97.5% Chebyshev (MVUE) UCL	38596.035
11551	95% Modified-t UCL (Johnson-1978)		25485.635	99% Chebyshev (MVUE) UCL	50247.045
11552					
11553	**Gamma Distribution Test**			**Data Distribution**	
11554	k star (bias corrected)		3.6157539	**Data appear Normal at 5% Significance Level**	
11555	Theta Star		5254.7825		

	A	B	C	D	E
11556	MLE of Mean		19000		
11557	MLE of Standard Deviation		9992.0402		
11558	nu star		50.620554		
11559	Approximate Chi Square Value (.05)		35.282648	**Nonparametric Statistics**	
11560	Adjusted Level of Significance		0.01584	95% CLT UCL	24331.506
11561	Adjusted Chi Square Value		31.461803	95% Jackknife UCL	25298.48
11562				95% Standard Bootstrap UCL	23947.301
11563	Anderson-Darling Test Statistic		0.2645648	95% Bootstrap-t UCL	28647.619
11564	Anderson-Darling 5% Critical Value		0.7095396	95% Hall's Bootstrap UCL	26513.547
11565	Kolmogorov-Smirnov Test Statistic		0.2089542	95% Percentile Bootstrap UCL	23900
11566	Kolmogorov-Smirnov 5% Critical Value		0.3127592	95% BCA Bootstrap UCL	24928.571
11567	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	33128.61
11568				97.5% Chebyshev(Mean, Sd) UCL	39242.071
11569	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	51250.781
11570	95% Approximate Gamma UCL		27259.59		
11571	95% Adjusted Gamma UCL		30570.102		
11572					
11573	**Potential UCL to Use**			Use 95% Student's-t UCL	25298.48
11574					
11575	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
11576	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
11577	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
11578					
11579					
11580	**M|MG/KG|IRON (gi_sd_nw_2010)**				
11581					
11582	**General Statistics**				
11583	Number of Valid Observations		4	Number of Distinct Observations	4
11584					
11585					
11586	**Warning: This data set only has 4 observations!**				
11587	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
11588	**The data set for variable M|MG/KG|IRON (gi_sd_nw_2010) was not processed!**				
11589					
11590	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
11591	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
11592					
11593					
11594					
11595	**M|MG/KG|IRON (gi_sd_ref_2009)**				
11596					
11597	**General Statistics**				
11598	Number of Valid Observations		6	Number of Distinct Observations	6
11599					
11600	**Raw Statistics**			**Log-transformed Statistics**	
11601	Minimum		6250	Minimum of Log Data	8.7403367
11602	Maximum		12900	Maximum of Log Data	9.4649826
11603	Mean		10352.5	Mean of log Data	9.2117087
11604	Median		11300	SD of log Data	0.2932038
11605	SD		2716.4384		
11606	Coefficient of Variation		0.2623944		
11607	Skewness		-0.800945		
11608					
11609					
11610	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
11611					
11612	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
11613	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
11614					
11615					

	A	B	C	D	E
11616	**Warning: There are only 6 Values in this data**				
11617	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
11618	**the resulting calculations may not be reliable enough to draw conclusions**				
11619					
11620	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
11621					
11622	**Relevant UCL Statistics**				
11623	**Normal Distribution Test**			**Lognormal Distribution Test**	
11624	Shapiro Wilk Test Statistic		0.8805087	Shapiro Wilk Test Statistic	0.856828
11625	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
11626	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
11627					
11628	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
11629	95% Student's-t UCL		12587.151	95% H-UCL	13975.386
11630	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	15790.387
11631	95% Adjusted-CLT UCL (Chen-1995)		11789.148	97.5% Chebyshev (MVUE) UCL	18132.762
11632	95% Modified-t UCL (Johnson-1978)		12526.714	99% Chebyshev (MVUE) UCL	22733.904
11633					
11634	**Gamma Distribution Test**			**Data Distribution**	
11635	k star (bias corrected)		7.7067427	**Data appear Normal at 5% Significance Level**	
11636	Theta Star		1343.3042		
11637	MLE of Mean		10352.5		
11638	MLE of Standard Deviation		3729.1496		
11639	nu star		92.480913		
11640	Approximate Chi Square Value (.05)		71.304115	**Nonparametric Statistics**	
11641	Adjusted Level of Significance		0.01222	95% CLT UCL	12176.612
11642	Adjusted Chi Square Value		64.61766	95% Jackknife UCL	12587.151
11643				95% Standard Bootstrap UCL	12003.227
11644	Anderson-Darling Test Statistic		0.4825505	95% Bootstrap-t UCL	12139.493
11645	Anderson-Darling 5% Critical Value		0.6976863	95% Hall's Bootstrap UCL	11518.295
11646	Kolmogorov-Smirnov Test Statistic		0.250065	95% Percentile Bootstrap UCL	11933.333
11647	Kolmogorov-Smirnov 5% Critical Value		0.3320907	95% BCA Bootstrap UCL	11710.833
11648	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	15186.438
11649				97.5% Chebyshev(Mean, Sd) UCL	17278.086
11650	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	21386.725
11651	95% Approximate Gamma UCL		13427.116		
11652	95% Adjusted Gamma UCL		14816.517		
11653					
11654	**Potential UCL to Use**			Use 95% Student's-t UCL	12587.151
11655					
11656	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
11657	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
11658	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
11659					
11660					
11661	**M|MG/KG|IRON (gi_sd_ref_2010)**				
11662					
11663	**General Statistics**				
11664	Number of Valid Observations		3	Number of Distinct Observations	3
11665					
11666					
11667	**Warning: This data set only has 3 observations!**				
11668	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
11669	**The data set for variable M|MG/KG|IRON (gi_sd_ref_2010) was not processed!**				
11670					
11671	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
11672	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				

	A	B	C	D	E
11673					
11674					
11675					
11676	**M|MG/KG|IRON (gi_sd_s_2005)**				
11677					
11678	**General Statistics**				
11679	Number of Valid Observations		8	Number of Distinct Observations	7
11680					
11681	**Raw Statistics**			**Log-transformed Statistics**	
11682	Minimum		9520	Minimum of Log Data	9.1611501
11683	Maximum		18700	Maximum of Log Data	9.8362788
11684	Mean		13365	Mean of log Data	9.476443
11685	Median		12650	SD of log Data	0.2333092
11686	SD		3152.8808		
11687	Coefficient of Variation		0.2359058		
11688	Skewness		0.5141341		
11689					
11690					
11691	**Warning: There are only 8 Values in this data**				
11692	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
11693	**the resulting calculations may not be reliable enough to draw conclusions**				
11694					
11695	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
11696					
11697	**Relevant UCL Statistics**				
11698	**Normal Distribution Test**			**Lognormal Distribution Test**	
11699	Shapiro Wilk Test Statistic		0.9527139	Shapiro Wilk Test Statistic	0.9658438
11700	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
11701	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
11702					
11703	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
11704	95% Student's-t UCL		15476.909	95% H-UCL	15965.262
11705	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	18178.996
11706	95% Adjusted-CLT UCL (Chen-1995)		15415.046	97.5% Chebyshev (MVUE) UCL	20263.171
11707	95% Modified-t UCL (Johnson-1978)		15510.68	99% Chebyshev (MVUE) UCL	24357.129
11708					
11709	**Gamma Distribution Test**			**Data Distribution**	
11710	k star (bias corrected)		13.23377	**Data appear Normal at 5% Significance Level**	
11711	Theta Star		1009.9163		
11712	MLE of Mean		13365		
11713	MLE of Standard Deviation		3673.8986		
11714	nu star		211.74032		
11715	Approximate Chi Square Value (.05)		179.06603	**Nonparametric Statistics**	
11716	Adjusted Level of Significance		0.01946	95% CLT UCL	15198.538
11717	Adjusted Chi Square Value		171.44983	95% Jackknife UCL	15476.909
11718				95% Standard Bootstrap UCL	15051.782
11719	Anderson-Darling Test Statistic		0.2190003	95% Bootstrap-t UCL	15821.442
11720	Anderson-Darling 5% Critical Value		0.7161883	95% Hall's Bootstrap UCL	15308.122
11721	Kolmogorov-Smirnov Test Statistic		0.186576	95% Percentile Bootstrap UCL	15037.5
11722	Kolmogorov-Smirnov 5% Critical Value		0.2938444	95% BCA Bootstrap UCL	15187.5
11723	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	18223.916
11724				97.5% Chebyshev(Mean, Sd) UCL	20326.372
11725	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	24456.241
11726	95% Approximate Gamma UCL		15803.72		
11727	95% Adjusted Gamma UCL		16505.758		
11728					
11729	**Potential UCL to Use**			Use 95% Student's-t UCL	15476.909
11730					
11731	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
11732	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
11733	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
11734					
11735					
11736	**M|MG/KG|IRON (gi_sd_s_2010)**				

	A	B	C	D	E
11737					
11738	**General Statistics**				
11739	Number of Valid Observations		2	Number of Distinct Observations	2
11740					
11741					
11742	**Warning: This data set only has 2 observations!**				
11743	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
11744	**The data set for variable M|MG/KG|IRON (gi_sd_s_2010) was not processed!**				
11745					
11746	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
11747	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
11748					
11749					
11750					
11751	**M|MG/KG|IRON (gi_sd_stillwater_2005)**				
11752					
11753	**General Statistics**				
11754	Number of Valid Observations		4	Number of Distinct Observations	4
11755					
11756					
11757	**Warning: This data set only has 4 observations!**				
11758	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
11759	**The data set for variable M|MG/KG|IRON (gi_sd_stillwater_2005) was not processed!**				
11760					
11761	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
11762	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
11763					
11764					
11765					
11766	**M|MG/KG|IRON (gi_sd_stillwater_2009)**				
11767					
11768	**General Statistics**				
11769	Number of Valid Observations		60	Number of Distinct Observations	52
11770					
11771	**Raw Statistics**			**Log-transformed Statistics**	
11772	Minimum		6220	Minimum of Log Data	8.7355252
11773	Maximum		41600	Maximum of Log Data	10.635855
11774	Mean		17199.333	Mean of log Data	9.6731832
11775	Median		14950	SD of log Data	0.3941594
11776	SD		7393.8155		
11777	Coefficient of Variation		0.4298897		
11778	Skewness		1.3187287		
11779					
11780	**Relevant UCL Statistics**				
11781	**Normal Distribution Test**			**Lognormal Distribution Test**	
11782	Lilliefors Test Statistic		0.1940873	Lilliefors Test Statistic	0.1150621
11783	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
11784	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
11785					
11786	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
11787	95% Student's-t UCL		18794.454	95% H-UCL	18839.952
11788	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	21073.039
11789	95% Adjusted-CLT UCL (Chen-1995)		18943.049	97.5% Chebyshev (MVUE) UCL	22772.614
11790	95% Modified-t UCL (Johnson-1978)		18821.539	99% Chebyshev (MVUE) UCL	26111.1
11791					
11792	**Gamma Distribution Test**			**Data Distribution**	
11793	k star (bias corrected)		6.1442552	**Data do not follow a Discernable Distribution (0.05)**	
11794	Theta Star		2799.2544		
11795	MLE of Mean		17199.333		
11796	MLE of Standard Deviation		6938.6821		
11797	nu star		737.31062		
11798	Approximate Chi Square Value (.05)		675.30423	**Nonparametric Statistics**	

	A	B	C	D	E
11799	Adjusted Level of Significance		0.046	95% CLT UCL	18769.408
11800	Adjusted Chi Square Value		673.85366	95% Jackknife UCL	18794.454
11801				95% Standard Bootstrap UCL	18741.636
11802	Anderson-Darling Test Statistic		1.1667159	95% Bootstrap-t UCL	18944.837
11803	Anderson-Darling 5% Critical Value		0.752711	95% Hall's Bootstrap UCL	19055.77
11804	Kolmogorov-Smirnov Test Statistic		0.1426305	95% Percentile Bootstrap UCL	18792.333
11805	Kolmogorov-Smirnov 5% Critical Value		0.1149239	95% BCA Bootstrap UCL	18961.667
11806	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	21360.066
11807				97.5% Chebyshev(Mean, Sd) UCL	23160.418
11808	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	26696.861
11809	95% Approximate Gamma UCL		18778.575		
11810	95% Adjusted Gamma UCL		18818.999		
11811					
11812	**Potential UCL to Use**			Use 95% Student's-t UCL	18794.454
11813				or 95% Modified-t UCL	18821.539
11814					
11815	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
11816	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
11817	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
11818					
11819					
11820	**M|MG/KG|IRON (gi_sd_stillwater_2010)**				
11821					
11822	**General Statistics**				
11823	Number of Valid Observations		11	Number of Distinct Observations	11
11824					
11825	**Raw Statistics**			**Log-transformed Statistics**	
11826	Minimum		8860	Minimum of Log Data	9.089302
11827	Maximum		20100	Maximum of Log Data	9.9084751
11828	Mean		12747.273	Mean of log Data	9.4188641
11829	Median		12100	SD of log Data	0.2700037
11830	SD		3624.1084		
11831	Coefficient of Variation		0.2843046		
11832	Skewness		0.9178754		
11833					
11834	**Relevant UCL Statistics**				
11835	**Normal Distribution Test**			**Lognormal Distribution Test**	
11836	Shapiro Wilk Test Statistic		0.9138845	Shapiro Wilk Test Statistic	0.9476233
11837	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
11838	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
11839					
11840	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
11841	95% Student's-t UCL		14727.767	95% H-UCL	15052.555
11842	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	17280.751
11843	95% Adjusted-CLT UCL (Chen-1995)		14867.747	97.5% Chebyshev (MVUE) UCL	19248.797
11844	95% Modified-t UCL (Johnson-1978)		14778.168	99% Chebyshev (MVUE) UCL	23114.644
11845					
11846	**Gamma Distribution Test**			**Data Distribution**	
11847	k star (bias corrected)		10.810402	**Data appear Normal at 5% Significance Level**	
11848	Theta Star		1179.1674		
11849	MLE of Mean		12747.273		
11850	MLE of Standard Deviation		3877.005		
11851	nu star		237.82883		
11852	Approximate Chi Square Value (.05)		203.12775	**Nonparametric Statistics**	
11853	Adjusted Level of Significance		0.02783	95% CLT UCL	14544.62
11854	Adjusted Chi Square Value		197.89836	95% Jackknife UCL	14727.767
11855				95% Standard Bootstrap UCL	14497.856
11856	Anderson-Darling Test Statistic		0.2852316	95% Bootstrap-t UCL	15520.888
11857	Anderson-Darling 5% Critical Value		0.7290497	95% Hall's Bootstrap UCL	15493.311
11858	Kolmogorov-Smirnov Test Statistic		0.1333829	95% Percentile Bootstrap UCL	14450
11859	Kolmogorov-Smirnov 5% Critical Value		0.2552127	95% BCA Bootstrap UCL	14678.182
11860	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	17510.284
11861				97.5% Chebyshev(Mean, Sd) UCL	19571.243
11862	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	23619.598
11863	95% Approximate Gamma UCL		14924.938		
11864	95% Adjusted Gamma UCL		15319.323		
11865					
11866	**Potential UCL to Use**			Use 95% Student's-t UCL	14727.767

	A	B	C	D	E
11867					
11868	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
11869	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
11870	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
11871					
11872					
11873	**M|MG/KG|LEAD (gi_sd_ne_2005)**				
11874					
11875	**General Statistics**				
11876	Number of Valid Observations		36	Number of Distinct Observations	36
11877					
11878	**Raw Statistics**			**Log-transformed Statistics**	
11879	Minimum		9.3	Minimum of Log Data	2.2300144
11880	Maximum		21200	Maximum of Log Data	9.9617565
11881	Mean		658.24306	Mean of log Data	3.7419792
11882	Median		32.1	SD of log Data	1.4709333
11883	SD		3523.8349		
11884	Coefficient of Variation		5.3533948		
11885	Skewness		5.9872701		
11886					
11887	**Relevant UCL Statistics**				
11888	**Normal Distribution Test**			**Lognormal Distribution Test**	
11889	Shapiro Wilk Test Statistic		0.1875816	Shapiro Wilk Test Statistic	0.7790382
11890	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
11891	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
11892					
11893	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
11894	95% Student's-t UCL		1650.5388	95% H-UCL	260.32251
11895	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	278.12344
11896	95% Adjusted-CLT UCL (Chen-1995)		2250.4885	97.5% Chebyshev (MVUE) UCL	347.65701
11897	95% Modified-t UCL (Johnson-1978)		1748.2154	99% Chebyshev (MVUE) UCL	484.24223
11898					
11899	**Gamma Distribution Test**			**Data Distribution**	
11900	k star (bias corrected)		0.2543883	**Data do not follow a Discernable Distribution (0.05)**	
11901	Theta Star		2587.5528		
11902	MLE of Mean		658.24306		
11903	MLE of Standard Deviation		1305.0819		
11904	nu star		18.315955		
11905	Approximate Chi Square Value (.05)		9.6195926	**Nonparametric Statistics**	
11906	Adjusted Level of Significance		0.0428	95% CLT UCL	1624.2752
11907	Adjusted Chi Square Value		9.3328763	95% Jackknife UCL	1650.5388
11908				95% Standard Bootstrap UCL	1604.9136
11909	Anderson-Darling Test Statistic		8.3084986	95% Bootstrap-t UCL	37285.707
11910	Anderson-Darling 5% Critical Value		0.8752591	95% Hall's Bootstrap UCL	22510.502
11911	Kolmogorov-Smirnov Test Statistic		0.3868478	95% Percentile Bootstrap UCL	1823.3639
11912	Kolmogorov-Smirnov 5% Critical Value		0.1607424	95% BCA Bootstrap UCL	2468.5569
11913	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3218.2498
11914				97.5% Chebyshev(Mean, Sd) UCL	4325.9668
11915	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	6501.8622
11916	95% Approximate Gamma UCL		1253.3119		
11917	95% Adjusted Gamma UCL		1291.8151		
11918					
11919	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	3218.2498
11920					
11921	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
11922	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
11923	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
11924					
11925					
11926	**M|MG/KG|LEAD (gi_sd_ne_2009)**				
11927					
11928	**General Statistics**				
11929	Number of Valid Observations		20	Number of Distinct Observations	20

	A	B	C	D	E
11930					
11931	**Raw Statistics**			**Log-transformed Statistics**	
11932	Minimum		6.4	Minimum of Log Data	1.856298
11933	Maximum		138	Maximum of Log Data	4.9272537
11934	Mean		20.4875	Mean of log Data	2.6571615
11935	Median		11.1	SD of log Data	0.7123495
11936	SD		28.781691		
11937	Coefficient of Variation		1.4048416		
11938	Skewness		3.9489047		
11939					
11940	**Relevant UCL Statistics**				
11941	**Normal Distribution Test**			**Lognormal Distribution Test**	
11942	Shapiro Wilk Test Statistic		0.4534593	Shapiro Wilk Test Statistic	0.8282356
11943	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
11944	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
11945					
11946	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
11947	95% Student's-t UCL		31.615822	95% H-UCL	26.541324
11948	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	31.522548
11949	95% Adjusted-CLT UCL (Chen-1995)		37.145582	97.5% Chebyshev (MVUE) UCL	37.333686
11950	95% Modified-t UCL (Johnson-1978)		32.562956	99% Chebyshev (MVUE) UCL	48.748542
11951					
11952	**Gamma Distribution Test**			**Data Distribution**	
11953	k star (bias corrected)		1.3287178	**Data do not follow a Discernable Distribution (0.05)**	
11954	Theta Star		15.419		
11955	MLE of Mean		20.4875		
11956	MLE of Standard Deviation		17.773485		
11957	nu star		53.148712		
11958	Approximate Chi Square Value (.05)		37.400806	**Nonparametric Statistics**	
11959	Adjusted Level of Significance		0.038	95% CLT UCL	31.073419
11960	Adjusted Chi Square Value		36.357028	95% Jackknife UCL	31.615822
11961				95% Standard Bootstrap UCL	30.926869
11962	Anderson-Darling Test Statistic		1.9843066	95% Bootstrap-t UCL	58.243396
11963	Anderson-Darling 5% Critical Value		0.7575224	95% Hall's Bootstrap UCL	66.594225
11964	Kolmogorov-Smirnov Test Statistic		0.2434618	95% Percentile Bootstrap UCL	32.1375
11965	Kolmogorov-Smirnov 5% Critical Value		0.1973762	95% BCA Bootstrap UCL	39.005
11966	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	48.540423
11967				97.5% Chebyshev(Mean, Sd) UCL	60.678945
11968	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	84.522721
11969	95% Approximate Gamma UCL		29.113925		
11970	95% Adjusted Gamma UCL		29.94976		
11971					
11972	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	48.540423
11973					
11974	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
11975	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
11976	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
11977					
11978					
11979	**M|MG/KG|LEAD (gi_sd_ne_2010)**				
11980					
11981	**General Statistics**				
11982	Number of Valid Observations		16	Number of Distinct Observations	15
11983					
11984	**Raw Statistics**			**Log-transformed Statistics**	
11985	Minimum		7.3	Minimum of Log Data	1.9878743
11986	Maximum		199	Maximum of Log Data	5.2933048
11987	Mean		39.79375	Mean of log Data	3.1720858
11988	Median		19.5	SD of log Data	0.9418539
11989	SD		51.893821		
11990	Coefficient of Variation		1.3040696		
11991	Skewness		2.3726203		
11992					
11993	**Relevant UCL Statistics**				
11994	**Normal Distribution Test**			**Lognormal Distribution Test**	
11995	Shapiro Wilk Test Statistic		0.6263002	Shapiro Wilk Test Statistic	0.8767546
11996	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
11997	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	

	A	B	C	D	E
11998					
11999	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12000	95% Student's-t UCL		62.53687	95% H-UCL	70.228687
12001	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	75.90945
12002	95% Adjusted-CLT UCL (Chen-1995)		69.355693	97.5% Chebyshev (MVUE) UCL	93.259548
12003	95% Modified-t UCL (Johnson-1978)		63.819415	99% Chebyshev (MVUE) UCL	127.34046
12004					
12005	**Gamma Distribution Test**			**Data Distribution**	
12006	k star (bias corrected)		0.9471139	**Data do not follow a Discernable Distribution (0.05)**	
12007	Theta Star		42.015801		
12008	MLE of Mean		39.79375		
12009	MLE of Standard Deviation		40.889684		
12010	nu star		30.307645		
12011	Approximate Chi Square Value (.05)		18.734817	**Nonparametric Statistics**	
12012	Adjusted Level of Significance		0.03348	95% CLT UCL	61.133185
12013	Adjusted Chi Square Value		17.703283	95% Jackknife UCL	62.53687
12014				95% Standard Bootstrap UCL	61.333402
12015	Anderson-Darling Test Statistic		1.4931918	95% Bootstrap-t UCL	83.618988
12016	Anderson-Darling 5% Critical Value		0.7613301	95% Hall's Bootstrap UCL	67.353419
12017	Kolmogorov-Smirnov Test Statistic		0.3291779	95% Percentile Bootstrap UCL	62.03125
12018	Kolmogorov-Smirnov 5% Critical Value		0.2206429	95% BCA Bootstrap UCL	70.2875
12019	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	96.34373
12020				97.5% Chebyshev(Mean, Sd) UCL	120.81295
12021	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	168.878
12022	95% Approximate Gamma UCL		64.375055		
12023	95% Adjusted Gamma UCL		68.126056		
12024					
12025	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	96.34373
12026					
12027	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12028	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12029	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
12030					
12031					
12032	**M|MG/KG|LEAD (gi_sd_nw_2005)**				
12033					
12034	**General Statistics**				
12035	Number of Valid Observations		18	Number of Distinct Observations	17
12036					
12037	**Raw Statistics**			**Log-transformed Statistics**	
12038	Minimum		11.8	Minimum of Log Data	2.4680995
12039	Maximum		40.3	Maximum of Log Data	3.6963515
12040	Mean		18.427778	Mean of log Data	2.8527233
12041	Median		15.3	SD of log Data	0.3377211
12042	SD		7.5995205		
12043	Coefficient of Variation		0.4123948		
12044	Skewness		1.9570238		
12045					
12046	**Relevant UCL Statistics**				
12047	**Normal Distribution Test**			**Lognormal Distribution Test**	
12048	Shapiro Wilk Test Statistic		0.7558644	Shapiro Wilk Test Statistic	0.8643866
12049	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
12050	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
12051					
12052	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12053	95% Student's-t UCL		21.543803	95% H-UCL	21.409263
12054	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	24.742049
12055	95% Adjusted-CLT UCL (Chen-1995)		22.256936	97.5% Chebyshev (MVUE) UCL	27.533249
12056	95% Modified-t UCL (Johnson-1978)		21.681511	99% Chebyshev (MVUE) UCL	33.01602
12057					
12058	**Gamma Distribution Test**			**Data Distribution**	
12059	k star (bias corrected)		6.9884303	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
12060	Theta Star		2.636898		
12061	MLE of Mean		18.427778		
12062	MLE of Standard Deviation		6.9708084		
12063	nu star		251.58349		

	A	B	C	D	E
12064	Approximate Chi Square Value (.05)		215.85866	**Nonparametric Statistics**	
12065	Adjusted Level of Significance		0.03574	95% CLT UCL	21.374079
12066	Adjusted Chi Square Value		212.68465	95% Jackknife UCL	21.543803
12067				95% Standard Bootstrap UCL	21.306785
12068	Anderson-Darling Test Statistic		1.1364926	95% Bootstrap-t UCL	24.336799
12069	Anderson-Darling 5% Critical Value		0.7404403	95% Hall's Bootstrap UCL	34.437165
12070	Kolmogorov-Smirnov Test Statistic		0.1890483	95% Percentile Bootstrap UCL	21.638889
12071	Kolmogorov-Smirnov 5% Critical Value		0.2036623	95% BCA Bootstrap UCL	22.094444
12072	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	26.235543
12073				97.5% Chebyshev(Mean, Sd) UCL	29.613969
12074	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	36.250233
12075	95% Approximate Gamma UCL		21.477594		
12076	95% Adjusted Gamma UCL		21.798116		
12077					
12078	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	21.477594
12079					
12080	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12081	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12082	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
12083					
12084					
12085	**M|MG/KG|LEAD (gi_sd_nw_2009)**				
12086					
12087	**General Statistics**				
12088	Number of Valid Observations		7	Number of Distinct Observations	7
12089					
12090	**Raw Statistics**			**Log-transformed Statistics**	
12091	Minimum		8.6	Minimum of Log Data	2.1517622
12092	Maximum		51.4	Maximum of Log Data	3.9396382
12093	Mean		20.985714	Mean of log Data	2.8619144
12094	Median		21.3	SD of log Data	0.6349912
12095	SD		14.790473		
12096	Coefficient of Variation		0.7047877		
12097	Skewness		1.7130022		
12098					
12099					
12100	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
12101					
12102	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
12103	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
12104					
12105					
12106	**Warning: There are only 7 Values in this data**				
12107	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
12108	**the resulting calculations may not be reliable enough to draw conclusions**				
12109					
12110	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
12111					
12112	**Relevant UCL Statistics**				
12113	**Normal Distribution Test**			**Lognormal Distribution Test**	
12114	Shapiro Wilk Test Statistic		0.7965009	Shapiro Wilk Test Statistic	0.9091016
12115	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
12116	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
12117					
12118	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12119	95% Student's-t UCL		31.848623	95% H-UCL	43.672977
12120	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	42.535439
12121	95% Adjusted-CLT UCL (Chen-1995)		34.048325	97.5% Chebyshev (MVUE) UCL	51.974541
12122	95% Modified-t UCL (Johnson-1978)		32.451864	99% Chebyshev (MVUE) UCL	70.515827
12123					

	A	B	C	D	E
12124	**Gamma Distribution Test**			**Data Distribution**	
12125	k star (bias corrected)		1.7548318	**Data appear Gamma Distributed at 5% Significance Level**	
12126	Theta Star		11.958818		
12127	MLE of Mean		20.985714		
12128	MLE of Standard Deviation		15.841854		
12129	nu star		24.567645		
12130	Approximate Chi Square Value (.05)		14.281139	**Nonparametric Statistics**	
12131	Adjusted Level of Significance		0.01584	95% CLT UCL	30.180896
12132	Adjusted Chi Square Value		11.981066	95% Jackknife UCL	31.848623
12133				95% Standard Bootstrap UCL	29.393254
12134	Anderson-Darling Test Statistic		0.4421398	95% Bootstrap-t UCL	39.978847
12135	Anderson-Darling 5% Critical Value		0.7124584	95% Hall's Bootstrap UCL	66.874677
12136	Kolmogorov-Smirnov Test Statistic		0.215946	95% Percentile Bootstrap UCL	30.571429
12137	Kolmogorov-Smirnov 5% Critical Value		0.313853	95% BCA Bootstrap UCL	32.785714
12138	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	45.353151
12139				97.5% Chebyshev(Mean, Sd) UCL	55.89696
12140	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	76.608232
12141	95% Approximate Gamma UCL		36.101434		
12142	95% Adjusted Gamma UCL		43.03203		
12143					
12144	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	36.101434
12145					
12146	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12147	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12148	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
12149					
12150					
12151	**M|MG/KG|LEAD (gi_sd_nw_2010)**				
12152					
12153	**General Statistics**				
12154	Number of Valid Observations		4	Number of Distinct Observations	4
12155					
12156					
12157	**Warning: This data set only has 4 observations!**				
12158	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
12159	**The data set for variable M|MG/KG|LEAD (gi_sd_nw_2010) was not processed!**				
12160					
12161	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
12162	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
12163					
12164					
12165					
12166	**M|MG/KG|LEAD (gi_sd_ref_2009)**				
12167					
12168	**General Statistics**				
12169	Number of Valid Observations		6	Number of Distinct Observations	6
12170					
12171	**Raw Statistics**			**Log-transformed Statistics**	
12172	Minimum		5.4	Minimum of Log Data	1.686399
12173	Maximum		13.7	Maximum of Log Data	2.6173958
12174	Mean		9.0666667	Mean of log Data	2.1677994
12175	Median		8.8	SD of log Data	0.2996104
12176	SD		2.6941913		
12177	Coefficient of Variation		0.2971535		
12178	Skewness		0.7572861		
12179					
12180					
12181	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
12182					
12183	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				

	A	B	C	D	E
12184	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
12185					
12186					
12187	**Warning: There are only 6 Values in this data**				
12188	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
12189	**the resulting calculations may not be reliable enough to draw conclusions**				
12190					
12191	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
12192					
12193	**Relevant UCL Statistics**				
12194	**Normal Distribution Test**			**Lognormal Distribution Test**	
12195	Shapiro Wilk Test Statistic		0.9192784	Shapiro Wilk Test Statistic	0.9366649
12196	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
12197	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
12198					
12199	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12200	95% Student's-t UCL		11.283016	95% H-UCL	12.315445
12201	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	13.905315
12202	95% Adjusted-CLT UCL (Chen-1995)		11.239183	97.5% Chebyshev (MVUE) UCL	15.997433
12203	95% Modified-t UCL (Johnson-1978)		11.339691	99% Chebyshev (MVUE) UCL	20.106995
12204					
12205	**Gamma Distribution Test**			**Data Distribution**	
12206	k star (bias corrected)		6.9859017	**Data appear Normal at 5% Significance Level**	
12207	Theta Star		1.297852		
12208	MLE of Mean		9.0666667		
12209	MLE of Standard Deviation		3.4303341		
12210	nu star		83.83082		
12211	Approximate Chi Square Value (.05)		63.728636	**Nonparametric Statistics**	
12212	Adjusted Level of Significance		0.01222	95% CLT UCL	10.87584
12213	Adjusted Chi Square Value		57.435057	95% Jackknife UCL	11.283016
12214				95% Standard Bootstrap UCL	10.741443
12215	Anderson-Darling Test Statistic		0.3553203	95% Bootstrap-t UCL	11.822755
12216	Anderson-Darling 5% Critical Value		0.6978651	95% Hall's Bootstrap UCL	15.272212
12217	Kolmogorov-Smirnov Test Statistic		0.2140491	95% Percentile Bootstrap UCL	10.7
12218	Kolmogorov-Smirnov 5% Critical Value		0.3321988	95% BCA Bootstrap UCL	11.033333
12219	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	13.861015
12220				97.5% Chebyshev(Mean, Sd) UCL	15.935534
12221	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	20.010523
12222	95% Approximate Gamma UCL		11.926602		
12223	95% Adjusted Gamma UCL		13.233487		
12224					
12225	**Potential UCL to Use**			Use 95% Student's-t UCL	11.283016
12226					
12227	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12228	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12229	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
12230					
12231					
12232	**M|MG/KG|LEAD (gi_sd_ref_2010)**				
12233					
12234	**General Statistics**				
12235	Number of Valid Observations		3	Number of Distinct Observations	3
12236					
12237					
12238	**Warning: This data set only has 3 observations!**				
12239	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
12240	**The data set for variable M|MG/KG|LEAD (gi_sd_ref_2010) was not processed!**				
12241					

	A	B	C	D	E
12242	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
12243	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
12244					
12245					
12246					
12247	**M|MG/KG|LEAD (gi_sd_s_2005)**				
12248					
12249	**General Statistics**				
12250	Number of Valid Observations		8	Number of Distinct Observations	8
12251					
12252	**Raw Statistics**			**Log-transformed Statistics**	
12253	Minimum		9.5	Minimum of Log Data	2.2512918
12254	Maximum		27.2	Maximum of Log Data	3.303217
12255	Mean		17.0875	Mean of log Data	2.7730296
12256	Median		16.4	SD of log Data	0.3899919
12257	SD		6.4865658		
12258	Coefficient of Variation		0.3796088		
12259	Skewness		0.3357089		
12260					
12261					
12262	**Warning: There are only 8 Values in this data**				
12263	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
12264	**the resulting calculations may not be reliable enough to draw conclusions**				
12265					
12266	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
12267					
12268	**Relevant UCL Statistics**				
12269	**Normal Distribution Test**			**Lognormal Distribution Test**	
12270	Shapiro Wilk Test Statistic		0.9237698	Shapiro Wilk Test Statistic	0.9288634
12271	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
12272	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
12273					
12274	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12275	95% Student's-t UCL		21.432427	95% H-UCL	23.818416
12276	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	27.445192
12277	95% Adjusted-CLT UCL (Chen-1995)		21.15057	97.5% Chebyshev (MVUE) UCL	31.921507
12278	95% Modified-t UCL (Johnson-1978)		21.477793	99% Chebyshev (MVUE) UCL	40.71436
12279					
12280	**Gamma Distribution Test**			**Data Distribution**	
12281	k star (bias corrected)		4.9694761	**Data appear Normal at 5% Significance Level**	
12282	Theta Star		3.4384913		
12283	MLE of Mean		17.0875		
12284	MLE of Standard Deviation		7.6651953		
12285	nu star		79.511617		
12286	Approximate Chi Square Value (.05)		59.966898	**Nonparametric Statistics**	
12287	Adjusted Level of Significance		0.01946	95% CLT UCL	20.859721
12288	Adjusted Chi Square Value		55.692071	95% Jackknife UCL	21.432427
12289				95% Standard Bootstrap UCL	20.571491
12290	Anderson-Darling Test Statistic		0.3504987	95% Bootstrap-t UCL	22.160304
12291	Anderson-Darling 5% Critical Value		0.7167594	95% Hall's Bootstrap UCL	20.683711
12292	Kolmogorov-Smirnov Test Statistic		0.2156694	95% Percentile Bootstrap UCL	20.625
12293	Kolmogorov-Smirnov 5% Critical Value		0.294699	95% BCA Bootstrap UCL	20.625
12294	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	27.083969
12295				97.5% Chebyshev(Mean, Sd) UCL	31.409449
12296	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	39.906018
12297	95% Approximate Gamma UCL		22.656746		
12298	95% Adjusted Gamma UCL		24.395838		
12299					
12300	**Potential UCL to Use**			Use 95% Student's-t UCL	21.432427
12301					
12302	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12303	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				

	A	B	C	D	E
12304	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
12305					
12306					
12307	M|MG/KG|LEAD (gi_sd_s_2010)				
12308					
12309	General Statistics				
12310	Number of Valid Observations		2	Number of Distinct Observations	2
12311					
12312					
12313	Warning: This data set only has 2 observations!				
12314	Data set is too small to compute reliable and meaningful statistics and estimates!				
12315	The data set for variable M|MG/KG|LEAD (gi_sd_s_2010) was not processed!				
12316					
12317	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
12318	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
12319					
12320					
12321					
12322	M|MG/KG|LEAD (gi_sd_stillwater_2005)				
12323					
12324	General Statistics				
12325	Number of Valid Observations		4	Number of Distinct Observations	3
12326					
12327					
12328	Warning: This data set only has 4 observations!				
12329	Data set is too small to compute reliable and meaningful statistics and estimates!				
12330	The data set for variable M|MG/KG|LEAD (gi_sd_stillwater_2005) was not processed!				
12331					
12332	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
12333	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
12334					
12335					
12336					
12337	M|MG/KG|LEAD (gi_sd_stillwater_2009)				
12338					
12339	General Statistics				
12340	Number of Valid Observations		60	Number of Distinct Observations	56
12341					
12342	Raw Statistics			Log-transformed Statistics	
12343	Minimum		3.7	Minimum of Log Data	1.3083328
12344	Maximum		407	Maximum of Log Data	6.0088132
12345	Mean		31.2775	Mean of log Data	2.6110371
12346	Median		9.95	SD of log Data	1.044895
12347	SD		71.077711		
12348	Coefficient of Variation		2.272487		
12349	Skewness		4.3399475		
12350					
12351	Relevant UCL Statistics				
12352	Normal Distribution Test			Lognormal Distribution Test	
12353	Lilliefors Test Statistic		0.3683891	Lilliefors Test Statistic	0.1385642
12354	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
12355	Data not Normal at 5% Significance Level			Data not Lognormal at 5% Significance Level	
12356					
12357	Assuming Normal Distribution			Assuming Lognormal Distribution	
12358	95% Student's-t UCL		46.611605	95% H-UCL	32.678488
12359	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	39.501303
12360	95% Adjusted-CLT UCL (Chen-1995)		51.864304	97.5% Chebyshev (MVUE) UCL	46.564227
12361	95% Modified-t UCL (Johnson-1978)		47.468476	99% Chebyshev (MVUE) UCL	60.437973
12362					
12363	Gamma Distribution Test			Data Distribution	

	A	B	C	D	E
12364	k star (bias corrected)		0.698167	**Data do not follow a Discernable Distribution (0.05)**	
12365	Theta Star		44.799453		
12366	MLE of Mean		31.2775		
12367	MLE of Standard Deviation		37.432805		
12368	nu star		83.780041		
12369	Approximate Chi Square Value (.05)		63.684326	**Nonparametric Statistics**	
12370	Adjusted Level of Significance		0.046	95% CLT UCL	46.37083
12371	Adjusted Chi Square Value		63.253752	95% Jackknife UCL	46.611605
12372				95% Standard Bootstrap UCL	46.425506
12373	Anderson-Darling Test Statistic		5.9907195	95% Bootstrap-t UCL	63.859245
12374	Anderson-Darling 5% Critical Value		0.7946226	95% Hall's Bootstrap UCL	55.968371
12375	Kolmogorov-Smirnov Test Statistic		0.2219625	95% Percentile Bootstrap UCL	48.394167
12376	Kolmogorov-Smirnov 5% Critical Value		0.1194761	95% BCA Bootstrap UCL	52.961667
12377	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	71.275162
12378				97.5% Chebyshev(Mean, Sd) UCL	88.582183
12379	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	122.57847
12380	95% Approximate Gamma UCL		41.147177		
12381	95% Adjusted Gamma UCL		41.42727		
12382					
12383	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	71.275162
12384					
12385	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12386	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12387	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
12388					
12389					
12390	**M|MG/KG|LEAD (gi_sd_stillwater_2010)**				
12391					
12392	**General Statistics**				
12393	Number of Valid Observations		11	Number of Distinct Observations	10
12394					
12395	**Raw Statistics**			**Log-transformed Statistics**	
12396	Minimum		7.1	Minimum of Log Data	1.9600948
12397	Maximum		35.2	Maximum of Log Data	3.5610461
12398	Mean		15.354545	Mean of log Data	2.6380871
12399	Median		12.4	SD of log Data	0.4335466
12400	SD		7.7946602		
12401	Coefficient of Variation		0.5076451		
12402	Skewness		1.8554916		
12403					
12404	**Relevant UCL Statistics**				
12405	**Normal Distribution Test**			**Lognormal Distribution Test**	
12406	Shapiro Wilk Test Statistic		0.8041465	Shapiro Wilk Test Statistic	0.9347943
12407	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
12408	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
12409					
12410	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12411	95% Student's-t UCL		19.614153	95% H-UCL	20.471261
12412	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	24.04089
12413	95% Adjusted-CLT UCL (Chen-1995)		20.62514	97.5% Chebyshev (MVUE) UCL	27.855617
12414	95% Modified-t UCL (Johnson-1978)		19.833288	99% Chebyshev (MVUE) UCL	35.348909
12415					
12416	**Gamma Distribution Test**			**Data Distribution**	
12417	k star (bias corrected)		4.0743692	**Data appear Gamma Distributed at 5% Significance Level**	
12418	Theta Star		3.7685699		
12419	MLE of Mean		15.354545		
12420	MLE of Standard Deviation		7.6068836		
12421	nu star		89.636123		
12422	Approximate Chi Square Value (.05)		68.806937	**Nonparametric Statistics**	
12423	Adjusted Level of Significance		0.02783	95% CLT UCL	19.220245
12424	Adjusted Chi Square Value		65.838112	95% Jackknife UCL	19.614153
12425				95% Standard Bootstrap UCL	19.065262
12426	Anderson-Darling Test Statistic		0.5449567	95% Bootstrap-t UCL	22.470582
12427	Anderson-Darling 5% Critical Value		0.7311983	95% Hall's Bootstrap UCL	35.139621
12428	Kolmogorov-Smirnov Test Statistic		0.1921894	95% Percentile Bootstrap UCL	19.436364
12429	Kolmogorov-Smirnov 5% Critical Value		0.2559357	95% BCA Bootstrap UCL	20.527273
12430	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	25.598736

	A	B	C	D	E
12431				97.5% Chebyshev(Mean, Sd) UCL	30.031405
12432	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	38.738526
12433	95% Approximate Gamma UCL		20.002662		
12434	95% Adjusted Gamma UCL		20.904638		
12435					
12436	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	20.002662
12437					
12438	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12439	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12440	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
12441					
12442					
12443	**M|MG/KG|MAGNESIUM (gi_sd_ne_2005)**				
12444					
12445	**General Statistics**				
12446	Number of Valid Observations		36	Number of Distinct Observations	31
12447					
12448	**Raw Statistics**			**Log-transformed Statistics**	
12449	Minimum		2390	Minimum of Log Data	7.7790486
12450	Maximum		6340	Maximum of Log Data	8.754634
12451	Mean		3416.3889	Mean of log Data	8.120077
12452	Median		3360	SD of log Data	0.1774754
12453	SD		677.05308		
12454	Coefficient of Variation		0.198178		
12455	Skewness		2.2271036		
12456					
12457	**Relevant UCL Statistics**				
12458	**Normal Distribution Test**			**Lognormal Distribution Test**	
12459	Shapiro Wilk Test Statistic		0.832614	Shapiro Wilk Test Statistic	0.9333841
12460	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
12461	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
12462					
12463	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12464	95% Student's-t UCL		3607.0439	95% H-UCL	3595.916
12465	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3855.8948
12466	95% Adjusted-CLT UCL (Chen-1995)		3646.7527	97.5% Chebyshev (MVUE) UCL	4047.484
12467	95% Modified-t UCL (Johnson-1978)		3614.0248	99% Chebyshev (MVUE) UCL	4423.8239
12468					
12469	**Gamma Distribution Test**			**Data Distribution**	
12470	k star (bias corrected)		28.354173	**Data appear Gamma Distributed at 5% Significance Level**	
12471	Theta Star		120.48981		
12472	MLE of Mean		3416.3889		
12473	MLE of Standard Deviation		641.59181		
12474	nu star		2041.5004		
12475	Approximate Chi Square Value (.05)		1937.5462	**Nonparametric Statistics**	
12476	Adjusted Level of Significance		0.0428	95% CLT UCL	3601.9978
12477	Adjusted Chi Square Value		1932.9696	95% Jackknife UCL	3607.0439
12478				95% Standard Bootstrap UCL	3596.9819
12479	Anderson-Darling Test Statistic		0.6261787	95% Bootstrap-t UCL	3683.3955
12480	Anderson-Darling 5% Critical Value		0.7460811	95% Hall's Bootstrap UCL	3854.8532
12481	Kolmogorov-Smirnov Test Statistic		0.1051955	95% Percentile Bootstrap UCL	3612.7778
12482	Kolmogorov-Smirnov 5% Critical Value		0.1464743	95% BCA Bootstrap UCL	3650.2778
12483	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3908.2565
12484				97.5% Chebyshev(Mean, Sd) UCL	4121.0881
12485	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4539.1544
12486	95% Approximate Gamma UCL		3599.6867		
12487	95% Adjusted Gamma UCL		3608.2096		
12488					
12489	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	3599.6867
12490					
12491	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12492	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12493	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				

	A	B	C	D	E
12494					
12495					
12496	**M|MG/KG|MAGNESIUM (gi_sd_ne_2009)**				
12497					
12498	**General Statistics**				
12499	Number of Valid Observations		20	Number of Distinct Observations	20
12500					
12501	**Raw Statistics**			**Log-transformed Statistics**	
12502	Minimum		1920	Minimum of Log Data	7.5600805
12503	Maximum		4410	Maximum of Log Data	8.39163
12504	Mean		2791	Mean of log Data	7.907051
12505	Median		2580	SD of log Data	0.2343723
12506	SD		696.00287		
12507	Coefficient of Variation		0.249374		
12508	Skewness		0.9994545		
12509					
12510	**Relevant UCL Statistics**				
12511	**Normal Distribution Test**			**Lognormal Distribution Test**	
12512	Shapiro Wilk Test Statistic		0.8966714	Shapiro Wilk Test Statistic	0.9436671
12513	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
12514	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
12515					
12516	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12517	95% Student's-t UCL		3060.1066	95% H-UCL	3076.9024
12518	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3430.4364
12519	95% Adjusted-CLT UCL (Chen-1995)		3084.1543	97.5% Chebyshev (MVUE) UCL	3708.382
12520	95% Modified-t UCL (Johnson-1978)		3065.9035	99% Chebyshev (MVUE) UCL	4254.3522
12521					
12522	**Gamma Distribution Test**			**Data Distribution**	
12523	k star (bias corrected)		15.853904	**Data appear Gamma Distributed at 5% Significance Level**	
12524	Theta Star		176.04496		
12525	MLE of Mean		2791		
12526	MLE of Standard Deviation		700.95755		
12527	nu star		634.15617		
12528	Approximate Chi Square Value (.05)		576.73626	**Nonparametric Statistics**	
12529	Adjusted Level of Significance		0.038	95% CLT UCL	3046.9902
12530	Adjusted Chi Square Value		572.41777	95% Jackknife UCL	3060.1066
12531				95% Standard Bootstrap UCL	3041.7684
12532	Anderson-Darling Test Statistic		0.577143	95% Bootstrap-t UCL	3109.2898
12533	Anderson-Darling 5% Critical Value		0.740884	95% Hall's Bootstrap UCL	3102.6477
12534	Kolmogorov-Smirnov Test Statistic		0.1387958	95% Percentile Bootstrap UCL	3050
12535	Kolmogorov-Smirnov 5% Critical Value		0.1935313	95% BCA Bootstrap UCL	3065
12536	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3469.3797
12537				97.5% Chebyshev(Mean, Sd) UCL	3762.9151
12538	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4339.5086
12539	95% Approximate Gamma UCL		3068.8722		
12540	95% Adjusted Gamma UCL		3092.0247		
12541					
12542	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	3068.8722
12543					
12544	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12545	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12546	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
12547					
12548					
12549	**M|MG/KG|MAGNESIUM (gi_sd_ne_2010)**				
12550					
12551	**General Statistics**				
12552	Number of Valid Observations		16	Number of Distinct Observations	15
12553					
12554	**Raw Statistics**			**Log-transformed Statistics**	
12555	Minimum		2530	Minimum of Log Data	7.8359746
12556	Maximum		4220	Maximum of Log Data	8.3475904
12557	Mean		3083.75	Mean of log Data	8.0249373
12558	Median		3045	SD of log Data	0.1364305
12559	SD		439.71013		
12560	Coefficient of Variation		0.1425894		
12561	Skewness		1.0760118		
12562					

	A	B	C	D	E
12563	**Relevant UCL Statistics**				
12564	**Normal Distribution Test**			**Lognormal Distribution Test**	
12565	Shapiro Wilk Test Statistic		0.9243773	Shapiro Wilk Test Statistic	0.9547701
12566	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
12567	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
12568					
12569	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12570	95% Student's-t UCL		3276.4585	95% H-UCL	3282.3587
12571	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3542.5208
12572	95% Adjusted-CLT UCL (Chen-1995)		3296.1616	97.5% Chebyshev (MVUE) UCL	3741.3568
12573	95% Modified-t UCL (Johnson-1978)		3281.387	99% Chebyshev (MVUE) UCL	4131.9314
12574					
12575	**Gamma Distribution Test**			**Data Distribution**	
12576	k star (bias corrected)		45.494803	**Data appear Normal at 5% Significance Level**	
12577	Theta Star		67.782468		
12578	MLE of Mean		3083.75		
12579	MLE of Standard Deviation		457.19163		
12580	nu star		1455.8337		
12581	Approximate Chi Square Value (.05)		1368.2291	**Nonparametric Statistics**	
12582	Adjusted Level of Significance		0.03348	95% CLT UCL	3264.5647
12583	Adjusted Chi Square Value		1358.5666	95% Jackknife UCL	3276.4585
12584				95% Standard Bootstrap UCL	3264.7916
12585	Anderson-Darling Test Statistic		0.2748639	95% Bootstrap-t UCL	3322.9096
12586	Anderson-Darling 5% Critical Value		0.7354573	95% Hall's Bootstrap UCL	3356.189
12587	Kolmogorov-Smirnov Test Statistic		0.1160258	95% Percentile Bootstrap UCL	3263.75
12588	Kolmogorov-Smirnov 5% Critical Value		0.21444	95% BCA Bootstrap UCL	3273.75
12589	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3562.913
12590				97.5% Chebyshev(Mean, Sd) UCL	3770.2472
12591	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4177.5151
12592	95% Approximate Gamma UCL		3281.1955		
12593	95% Adjusted Gamma UCL		3304.5323		
12594					
12595	**Potential UCL to Use**			Use 95% Student's-t UCL	3276.4585
12596					
12597	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12598	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12599	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
12600					
12601					
12602	**M|MG/KG|MAGNESIUM (gi_sd_nw_2005)**				
12603					
12604	**General Statistics**				
12605	Number of Valid Observations		18	Number of Distinct Observations	16
12606					
12607	**Raw Statistics**			**Log-transformed Statistics**	
12608	Minimum		2770	Minimum of Log Data	7.9266026
12609	Maximum		4760	Maximum of Log Data	8.4680029
12610	Mean		3439.4444	Mean of log Data	8.1322863
12611	Median		3290	SD of log Data	0.1485002
12612	SD		539.4275		
12613	Coefficient of Variation		0.1568356		
12614	Skewness		1.127599		
12615					
12616	**Relevant UCL Statistics**				
12617	**Normal Distribution Test**			**Lognormal Distribution Test**	
12618	Shapiro Wilk Test Statistic		0.9005894	Shapiro Wilk Test Statistic	0.9345868
12619	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
12620	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
12621					
12622	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12623	95% Student's-t UCL		3660.6255	95% H-UCL	3665.1277
12624	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3964.4402
12625	95% Adjusted-CLT UCL (Chen-1995)		3684.6855	97.5% Chebyshev (MVUE) UCL	4192.1584
12626	95% Modified-t UCL (Johnson-1978)		3666.2575	99% Chebyshev (MVUE) UCL	4639.4668
12627					
12628	**Gamma Distribution Test**			**Data Distribution**	

	A	B	C	D	E
12629	k star (bias corrected)		38.830923	**Data appear Normal at 5% Significance Level**	
12630	Theta Star		88.574882		
12631	MLE of Mean		3439.4444		
12632	MLE of Standard Deviation		551.94962		
12633	nu star		1397.9132		
12634	Approximate Chi Square Value (.05)		1312.0924	**Nonparametric Statistics**	
12635	Adjusted Level of Significance		0.03574	95% CLT UCL	3648.5782
12636	Adjusted Chi Square Value		1304.1227	95% Jackknife UCL	3660.6255
12637				95% Standard Bootstrap UCL	3639.1135
12638	Anderson-Darling Test Statistic		0.5167487	95% Bootstrap-t UCL	3727.3818
12639	Anderson-Darling 5% Critical Value		0.7384102	95% Hall's Bootstrap UCL	3714.8336
12640	Kolmogorov-Smirnov Test Statistic		0.154848	95% Percentile Bootstrap UCL	3643.8889
12641	Kolmogorov-Smirnov 5% Critical Value		0.2030741	95% BCA Bootstrap UCL	3667.7778
12642	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3993.6535
12643				97.5% Chebyshev(Mean, Sd) UCL	4233.4602
12644	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4704.5141
12645	95% Approximate Gamma UCL		3664.4102		
12646	95% Adjusted Gamma UCL		3686.8042		
12647					
12648	**Potential UCL to Use**			Use 95% Student's-t UCL	3660.6255
12649					
12650	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12651	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12652	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
12653					
12654					
12655	**M|MG/KG|MAGNESIUM (gi_sd_nw_2009)**				
12656					
12657	**General Statistics**				
12658	Number of Valid Observations		7	Number of Distinct Observations	7
12659					
12660	**Raw Statistics**			**Log-transformed Statistics**	
12661	Minimum		2310	Minimum of Log Data	7.7450028
12662	Maximum		3810	Maximum of Log Data	8.2453845
12663	Mean		3071.4286	Mean of log Data	8.0187174
12664	Median		3150	SD of log Data	0.1635894
12665	SD		484.98895		
12666	Coefficient of Variation		0.1579034		
12667	Skewness		-0.254456		
12668					
12669					
12670	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
12671					
12672	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
12673	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
12674					
12675					
12676	**Warning: There are only 7 Values in this data**				
12677	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
12678	**the resulting calculations may not be reliable enough to draw conclusions**				
12679					
12680	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
12681					
12682	**Relevant UCL Statistics**				
12683	**Normal Distribution Test**			**Lognormal Distribution Test**	
12684	Shapiro Wilk Test Statistic		0.9377522	Shapiro Wilk Test Statistic	0.9234735
12685	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
12686	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
12687					

	A	B	C	D	E
12688	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12689	95% Student's-t UCL		3427.6302	95% H-UCL	3503.9699
12690	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3900.8609
12691	95% Adjusted-CLT UCL (Chen-1995)		3354.1067	97.5% Chebyshev (MVUE) UCL	4259.3952
12692	95% Modified-t UCL (Johnson-1978)		3424.6919	99% Chebyshev (MVUE) UCL	4963.6665
12693					
12694	**Gamma Distribution Test**			**Data Distribution**	
12695	k star (bias corrected)		25.744329	**Data appear Normal at 5% Significance Level**	
12696	Theta Star		119.30505		
12697	MLE of Mean		3071.4286		
12698	MLE of Standard Deviation		605.34036		
12699	nu star		360.42061		
12700	Approximate Chi Square Value (.05)		317.42469	**Nonparametric Statistics**	
12701	Adjusted Level of Significance		0.01584	95% CLT UCL	3372.9444
12702	Adjusted Chi Square Value		305.16919	95% Jackknife UCL	3427.6302
12703				95% Standard Bootstrap UCL	3346.9921
12704	Anderson-Darling Test Statistic		0.4034849	95% Bootstrap-t UCL	3378.9817
12705	Anderson-Darling 5% Critical Value		0.7075012	95% Hall's Bootstrap UCL	3366.4674
12706	Kolmogorov-Smirnov Test Statistic		0.2759184	95% Percentile Bootstrap UCL	3358.5714
12707	Kolmogorov-Smirnov 5% Critical Value		0.3114102	95% BCA Bootstrap UCL	3324.2857
12708	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3870.4522
12709				97.5% Chebyshev(Mean, Sd) UCL	4216.1904
12710	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4895.3261
12711	95% Approximate Gamma UCL		3487.4608		
12712	95% Adjusted Gamma UCL		3627.5161		
12713					
12714	**Potential UCL to Use**			Use 95% Student's-t UCL	3427.6302
12715					
12716	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12717	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12718	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
12719					
12720					
12721	**M|MG/KG|MAGNESIUM (gi_sd_nw_2010)**				
12722					
12723	**General Statistics**				
12724	Number of Valid Observations		4	Number of Distinct Observations	4
12725					
12726					
12727	**Warning: This data set only has 4 observations!**				
12728	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
12729	**The data set for variable M|MG/KG|MAGNESIUM (gi_sd_nw_2010) was not processed!**				
12730					
12731	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
12732	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
12733					
12734					
12735					
12736	**M|MG/KG|MAGNESIUM (gi_sd_ref_2009)**				
12737					
12738	**General Statistics**				
12739	Number of Valid Observations		6	Number of Distinct Observations	6
12740					
12741	**Raw Statistics**			**Log-transformed Statistics**	
12742	Minimum		1980	Minimum of Log Data	7.5908521
12743	Maximum		2820	Maximum of Log Data	7.9444922
12744	Mean		2521.6667	Mean of log Data	7.8235757
12745	Median		2680	SD of log Data	0.150397
12746	SD		359.57846		
12747	Coefficient of Variation		0.1425956		
12748	Skewness		-0.905204		
12749					

	A	B	C	D	E
12750					
12751	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
12752					
12753	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
12754	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
12755					
12756					
12757	**Warning: There are only 6 Values in this data**				
12758	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
12759	**the resulting calculations may not be reliable enough to draw conclusions**				
12760					
12761	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
12762					
12763	**Relevant UCL Statistics**				
12764	**Normal Distribution Test**			**Lognormal Distribution Test**	
12765	Shapiro Wilk Test Statistic		0.8265251	Shapiro Wilk Test Statistic	0.8180802
12766	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
12767	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
12768					
12769	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12770	95% Student's-t UCL		2817.4703	95% H-UCL	2891.5737
12771	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3197.5397
12772	95% Adjusted-CLT UCL (Chen-1995)		2705.1612	97.5% Chebyshev (MVUE) UCL	3489.6496
12773	95% Modified-t UCL (Johnson-1978)		2808.4289	99% Chebyshev (MVUE) UCL	4063.4429
12774					
12775	**Gamma Distribution Test**			**Data Distribution**	
12776	k star (bias corrected)		27.667768	**Data appear Normal at 5% Significance Level**	
12777	Theta Star		91.140949		
12778	MLE of Mean		2521.6667		
12779	MLE of Standard Deviation		479.40285		
12780	nu star		332.01322		
12781	Approximate Chi Square Value (.05)		290.79457	**Nonparametric Statistics**	
12782	Adjusted Level of Significance		0.01222	95% CLT UCL	2763.1267
12783	Adjusted Chi Square Value		276.75605	95% Jackknife UCL	2817.4703
12784				95% Standard Bootstrap UCL	2738.6001
12785	Anderson-Darling Test Statistic		0.6177599	95% Bootstrap-t UCL	2760.9148
12786	Anderson-Darling 5% Critical Value		0.6968115	95% Hall's Bootstrap UCL	2672.3798
12787	Kolmogorov-Smirnov Test Statistic		0.2742686	95% Percentile Bootstrap UCL	2740
12788	Kolmogorov-Smirnov 5% Critical Value		0.3317824	95% BCA Bootstrap UCL	2696.6667
12789	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3161.5412
12790				97.5% Chebyshev(Mean, Sd) UCL	3438.4155
12791	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	3982.2813
12792	95% Approximate Gamma UCL		2879.1001		
12793	95% Adjusted Gamma UCL		3025.1432		
12794					
12795	**Potential UCL to Use**			Use 95% Student's-t UCL	2817.4703
12796					
12797	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12798	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12799	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
12800					
12801					
12802	**M|MG/KG|MAGNESIUM (gi_sd_ref_2010)**				
12803					
12804	**General Statistics**				
12805	Number of Valid Observations		3	Number of Distinct Observations	3
12806					
12807					

	A	B	C	D	E
12808	**Warning: This data set only has 3 observations!**				
12809	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
12810	**The data set for variable M|MG/KG|MAGNESIUM (gi_sd_ref_2010) was not processed!**				
12811					
12812	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
12813	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
12814					
12815					
12816					
12817	**M|MG/KG|MAGNESIUM (gi_sd_s_2005)**				
12818					
12819	**General Statistics**				
12820	Number of Valid Observations		8	Number of Distinct Observations	8
12821					
12822	**Raw Statistics**			**Log-transformed Statistics**	
12823	Minimum		2570	Minimum of Log Data	7.8516612
12824	Maximum		4430	Maximum of Log Data	8.3961549
12825	Mean		3296.25	Mean of log Data	8.0826889
12826	Median		3060	SD of log Data	0.1985935
12827	SD		688.95236		
12828	Coefficient of Variation		0.209011		
12829	Skewness		0.952629		
12830					
12831					
12832	**Warning: There are only 8 Values in this data**				
12833	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
12834	**the resulting calculations may not be reliable enough to draw conclusions**				
12835					
12836	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
12837					
12838	**Relevant UCL Statistics**				
12839	**Normal Distribution Test**			**Lognormal Distribution Test**	
12840	Shapiro Wilk Test Statistic		0.8508606	Shapiro Wilk Test Statistic	0.8805617
12841	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
12842	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
12843					
12844	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12845	95% Student's-t UCL		3757.7342	95% H-UCL	3820.5226
12846	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	4304.2412
12847	95% Adjusted-CLT UCL (Chen-1995)		3784.5662	97.5% Chebyshev (MVUE) UCL	4741.2982
12848	95% Modified-t UCL (Johnson-1978)		3771.4074	99% Chebyshev (MVUE) UCL	5599.8119
12849					
12850	**Gamma Distribution Test**			**Data Distribution**	
12851	k star (bias corrected)		17.692097	**Data appear Normal at 5% Significance Level**	
12852	Theta Star		186.31201		
12853	MLE of Mean		3296.25		
12854	MLE of Standard Deviation		783.66508		
12855	nu star		283.07354		
12856	Approximate Chi Square Value (.05)		245.10572	**Nonparametric Statistics**	
12857	Adjusted Level of Significance		0.01946	95% CLT UCL	3696.9058
12858	Adjusted Chi Square Value		236.13987	95% Jackknife UCL	3757.7342
12859				95% Standard Bootstrap UCL	3662.3136
12860	Anderson-Darling Test Statistic		0.5661359	95% Bootstrap-t UCL	4151.353
12861	Anderson-Darling 5% Critical Value		0.715834	95% Hall's Bootstrap UCL	4565.0463
12862	Kolmogorov-Smirnov Test Statistic		0.2493819	95% Percentile Bootstrap UCL	3671.25
12863	Kolmogorov-Smirnov 5% Critical Value		0.2937374	95% BCA Bootstrap UCL	3723.75
12864	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	4357.9969
12865				97.5% Chebyshev(Mean, Sd) UCL	4817.4156
12866	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	5719.8548
12867	95% Approximate Gamma UCL		3806.852		
12868	95% Adjusted Gamma UCL		3951.3919		
12869					

	A	B	C	D	E
12870	**Potential UCL to Use**			Use 95% Student's-t UCL	3757.7342
12871					
12872	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12873	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12874	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
12875					
12876					
12877	**M|MG/KG|MAGNESIUM (gi_sd_s_2010)**				
12878					
12879	**General Statistics**				
12880	Number of Valid Observations		2	Number of Distinct Observations	2
12881					
12882					
12883	**Warning: This data set only has 2 observations!**				
12884	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
12885	**The data set for variable M|MG/KG|MAGNESIUM (gi_sd_s_2010) was not processed!**				
12886					
12887	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
12888	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
12889					
12890					
12891					
12892	**M|MG/KG|MAGNESIUM (gi_sd_stillwater_2005)**				
12893					
12894	**General Statistics**				
12895	Number of Valid Observations		4	Number of Distinct Observations	4
12896					
12897					
12898	**Warning: This data set only has 4 observations!**				
12899	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
12900	**The data set for variable M|MG/KG|MAGNESIUM (gi_sd_stillwater_2005) was not processed!**				
12901					
12902	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
12903	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
12904					
12905					
12906					
12907	**M|MG/KG|MAGNESIUM (gi_sd_stillwater_2009)**				
12908					
12909	**General Statistics**				
12910	Number of Valid Observations		60	Number of Distinct Observations	54
12911					
12912	**Raw Statistics**			**Log-transformed Statistics**	
12913	Minimum		1340	Minimum of Log Data	7.2004249
12914	Maximum		4980	Maximum of Log Data	8.5131852
12915	Mean		2661	Mean of log Data	7.8424224
12916	Median		2535	SD of log Data	0.2996189
12917	SD		810.75127		
12918	Coefficient of Variation		0.3046792		
12919	Skewness		0.860478		
12920					
12921	**Relevant UCL Statistics**				
12922	**Normal Distribution Test**			**Lognormal Distribution Test**	
12923	Lilliefors Test Statistic		0.0994218	Lilliefors Test Statistic	0.0461133
12924	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
12925	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	

	A	B	C	D	E
12926					
12927	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12928	95% Student's-t UCL		2835.9092	95% H-UCL	2844.0721
12929	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3118.4981
12930	95% Adjusted-CLT UCL (Chen-1995)		2845.5866	97.5% Chebyshev (MVUE) UCL	3316.3762
12931	95% Modified-t UCL (Johnson-1978)		2837.8471	99% Chebyshev (MVUE) UCL	3705.0695
12932					
12933	**Gamma Distribution Test**			**Data Distribution**	
12934	k star (bias corrected)		10.953976	**Data appear Normal at 5% Significance Level**	
12935	Theta Star		242.92549		
12936	MLE of Mean		2661		
12937	MLE of Standard Deviation		804.00542		
12938	nu star		1314.4771		
12939	Approximate Chi Square Value (.05)		1231.2923	**Nonparametric Statistics**	
12940	Adjusted Level of Significance		0.046	95% CLT UCL	2833.1628
12941	Adjusted Chi Square Value		1229.3257	95% Jackknife UCL	2835.9092
12942				95% Standard Bootstrap UCL	2829.2679
12943	Anderson-Darling Test Statistic		0.2211902	95% Bootstrap-t UCL	2849.0042
12944	Anderson-Darling 5% Critical Value		0.7508352	95% Hall's Bootstrap UCL	2851.8454
12945	Kolmogorov-Smirnov Test Statistic		0.0597681	95% Percentile Bootstrap UCL	2837.6667
12946	Kolmogorov-Smirnov 5% Critical Value		0.1146475	95% BCA Bootstrap UCL	2839.8333
12947	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3117.2352
12948				97.5% Chebyshev(Mean, Sd) UCL	3314.6486
12949	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	3702.4289
12950	95% Approximate Gamma UCL		2840.7745		
12951	95% Adjusted Gamma UCL		2845.3189		
12952					
12953	**Potential UCL to Use**			Use 95% Student's-t UCL	2835.9092
12954					
12955	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
12956	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
12957	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
12958					
12959					
12960	**M|MG/KG|MAGNESIUM (gi_sd_stillwater_2010)**				
12961					
12962	**General Statistics**				
12963	Number of Valid Observations		11	Number of Distinct Observations	11
12964					
12965	**Raw Statistics**			**Log-transformed Statistics**	
12966	Minimum		2000	Minimum of Log Data	7.6009025
12967	Maximum		3990	Maximum of Log Data	8.2915465
12968	Mean		2711.8182	Mean of log Data	7.8864552
12969	Median		2700	SD of log Data	0.2012911
12970	SD		571.3986		
12971	Coefficient of Variation		0.2107068		
12972	Skewness		1.0015242		
12973					
12974	**Relevant UCL Statistics**				
12975	**Normal Distribution Test**			**Lognormal Distribution Test**	
12976	Shapiro Wilk Test Statistic		0.9318042	Shapiro Wilk Test Statistic	0.9686631
12977	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
12978	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
12979					
12980	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
12981	95% Student's-t UCL		3024.0747	95% H-UCL	3056.9624
12982	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3430.105
12983	95% Adjusted-CLT UCL (Chen-1995)		3050.7877	97.5% Chebyshev (MVUE) UCL	3741.5303
12984	95% Modified-t UCL (Johnson-1978)		3032.7455	99% Chebyshev (MVUE) UCL	4353.265
12985					
12986	**Gamma Distribution Test**			**Data Distribution**	
12987	k star (bias corrected)		19.401359	**Data appear Normal at 5% Significance Level**	
12988	Theta Star		139.77465		
12989	MLE of Mean		2711.8182		
12990	MLE of Standard Deviation		615.66503		
12991	nu star		426.82991		
12992	Approximate Chi Square Value (.05)		379.93506	**Nonparametric Statistics**	

	A	B	C	D	E
12993	Adjusted Level of Significance		0.02783	95% CLT UCL	2995.1988
12994	Adjusted Chi Square Value		372.7153	95% Jackknife UCL	3024.0747
12995				95% Standard Bootstrap UCL	2990.059
12996	Anderson-Darling Test Statistic		0.2158683	95% Bootstrap-t UCL	3088.9495
12997	Anderson-Darling 5% Critical Value		0.7286341	95% Hall's Bootstrap UCL	3178.0216
12998	Kolmogorov-Smirnov Test Statistic		0.1275163	95% Percentile Bootstrap UCL	2999.0909
12999	Kolmogorov-Smirnov 5% Critical Value		0.2549465	95% BCA Bootstrap UCL	3030
13000	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3462.7831
13001				97.5% Chebyshev(Mean, Sd) UCL	3787.7262
13002	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4426.014
13003	95% Approximate Gamma UCL		3046.5341		
13004	95% Adjusted Gamma UCL		3105.5476		
13005					
13006	**Potential UCL to Use**			Use 95% Student's-t UCL	3024.0747
13007					
13008	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13009	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
13010	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
13011					
13012					
13013	**M|MG/KG|MANGANESE (gi_sd_ne_2005)**				
13014					
13015	**General Statistics**				
13016	Number of Valid Observations		36	Number of Distinct Observations	32
13017					
13018	**Raw Statistics**			**Log-transformed Statistics**	
13019	Minimum		86	Minimum of Log Data	4.4543473
13020	Maximum		418	Maximum of Log Data	6.0354814
13021	Mean		149.75833	Mean of log Data	4.9432394
13022	Median		127	SD of log Data	0.3364865
13023	SD		67.487385		
13024	Coefficient of Variation		0.4506419		
13025	Skewness		2.706298		
13026					
13027	**Relevant UCL Statistics**				
13028	**Normal Distribution Test**			**Lognormal Distribution Test**	
13029	Shapiro Wilk Test Statistic		0.6829676	Shapiro Wilk Test Statistic	0.8565375
13030	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
13031	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
13032					
13033	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13034	95% Student's-t UCL		168.76247	95% H-UCL	164.41706
13035	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	185.14781
13036	95% Adjusted-CLT UCL (Chen-1995)		173.68044	97.5% Chebyshev (MVUE) UCL	201.15861
13037	95% Modified-t UCL (Johnson-1978)		169.60803	99% Chebyshev (MVUE) UCL	232.60873
13038					
13039	**Gamma Distribution Test**			**Data Distribution**	
13040	k star (bias corrected)		7.1351448	**Data do not follow a Discernable Distribution (0.05)**	
13041	Theta Star		20.988829		
13042	MLE of Mean		149.75833		
13043	MLE of Standard Deviation		56.064713		
13044	nu star		513.73043		
13045	Approximate Chi Square Value (.05)		462.16751	**Nonparametric Statistics**	
13046	Adjusted Level of Significance		0.0428	95% CLT UCL	168.25948
13047	Adjusted Chi Square Value		459.9543	95% Jackknife UCL	168.76247
13048				95% Standard Bootstrap UCL	168.29107
13049	Anderson-Darling Test Statistic		2.3340015	95% Bootstrap-t UCL	181.74456
13050	Anderson-Darling 5% Critical Value		0.7490513	95% Hall's Bootstrap UCL	207.78461
13051	Kolmogorov-Smirnov Test Statistic		0.19259	95% Percentile Bootstrap UCL	169.6
13052	Kolmogorov-Smirnov 5% Critical Value		0.1469699	95% BCA Bootstrap UCL	173.75833
13053	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	198.78678
13054				97.5% Chebyshev(Mean, Sd) UCL	220.00143
13055	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	261.6735
13056	95% Approximate Gamma UCL		166.46651		
13057	95% Adjusted Gamma UCL		167.26751		
13058					
13059	**Potential UCL to Use**			Use 95% Student's-t UCL	168.76247
13060				or 95% Modified-t UCL	169.60803

	A	B	C	D	E
13061					
13062	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13063	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
13064	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
13065					
13066					
13067	**M|MG/KG|MANGANESE (gi_sd_ne_2009)**				
13068					
13069	**General Statistics**				
13070	Number of Valid Observations		20	Number of Distinct Observations	17
13071					
13072	**Raw Statistics**			**Log-transformed Statistics**	
13073	Minimum		84.6	Minimum of Log Data	4.4379343
13074	Maximum		261	Maximum of Log Data	5.5645204
13075	Mean		130.935	Mean of log Data	4.8374929
13076	Median		123	SD of log Data	0.2697656
13077	SD		40.279083		
13078	Coefficient of Variation		0.3076266		
13079	Skewness		1.9112875		
13080					
13081	**Relevant UCL Statistics**				
13082	**Normal Distribution Test**			**Lognormal Distribution Test**	
13083	Shapiro Wilk Test Statistic		0.8286706	Shapiro Wilk Test Statistic	0.9346037
13084	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
13085	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
13086					
13087	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13088	95% Student's-t UCL		146.50874	95% H-UCL	146.51736
13089	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	165.30378
13090	95% Adjusted-CLT UCL (Chen-1995)		149.86264	97.5% Chebyshev (MVUE) UCL	180.32779
13091	95% Modified-t UCL (Johnson-1978)		147.15028	99% Chebyshev (MVUE) UCL	209.83955
13092					
13093	**Gamma Distribution Test**			**Data Distribution**	
13094	k star (bias corrected)		11.595465	**Data appear Gamma Distributed at 5% Significance Level**	
13095	Theta Star		11.291915		
13096	MLE of Mean		130.935		
13097	MLE of Standard Deviation		38.451357		
13098	nu star		463.81859		
13099	Approximate Chi Square Value (.05)		414.88358	**Nonparametric Statistics**	
13100	Adjusted Level of Significance		0.038	95% CLT UCL	145.74966
13101	Adjusted Chi Square Value		411.23282	95% Jackknife UCL	146.50874
13102				95% Standard Bootstrap UCL	145.8564
13103	Anderson-Darling Test Statistic		0.5606373	95% Bootstrap-t UCL	153.41967
13104	Anderson-Darling 5% Critical Value		0.7414401	95% Hall's Bootstrap UCL	224.79479
13105	Kolmogorov-Smirnov Test Statistic		0.156986	95% Percentile Bootstrap UCL	146.68
13106	Kolmogorov-Smirnov 5% Critical Value		0.1937167	95% BCA Bootstrap UCL	150.275
13107	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	170.19419
13108				97.5% Chebyshev(Mean, Sd) UCL	187.18168
13109	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	220.5503
13110	95% Approximate Gamma UCL		146.37862		
13111	95% Adjusted Gamma UCL		147.67811		
13112					
13113	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	146.37862
13114					
13115	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13116	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
13117	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
13118					
13119					
13120	**M|MG/KG|MANGANESE (gi_sd_ne_2010)**				
13121					
13122	**General Statistics**				
13123	Number of Valid Observations		16	Number of Distinct Observations	14

	A	B	C	D	E
13124					
13125	**Raw Statistics**			**Log-transformed Statistics**	
13126	Minimum		107	Minimum of Log Data	4.6728288
13127	Maximum		230	Maximum of Log Data	5.4380793
13128	Mean		153.5	Mean of log Data	5.0056443
13129	Median		142	SD of log Data	0.2414175
13130	SD		38.647121		
13131	Coefficient of Variation		0.2517728		
13132	Skewness		0.7496646		
13133					
13134	**Relevant UCL Statistics**				
13135	**Normal Distribution Test**			**Lognormal Distribution Test**	
13136	Shapiro Wilk Test Statistic		0.9067399	Shapiro Wilk Test Statistic	0.9376831
13137	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
13138	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
13139					
13140	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13141	95% Student's-t UCL		170.43759	95% H-UCL	172.20978
13142	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	194.04895
13143	95% Adjusted-CLT UCL (Chen-1995)		171.32705	97.5% Chebyshev (MVUE) UCL	211.64631
13144	95% Modified-t UCL (Johnson-1978)		170.73938	99% Chebyshev (MVUE) UCL	246.2129
13145					
13146	**Gamma Distribution Test**			**Data Distribution**	
13147	k star (bias corrected)		14.655642	**Data appear Normal at 5% Significance Level**	
13148	Theta Star		10.473782		
13149	MLE of Mean		153.5		
13150	MLE of Standard Deviation		40.096452		
13151	nu star		468.98056		
13152	Approximate Chi Square Value (.05)		419.76741	**Nonparametric Statistics**	
13153	Adjusted Level of Significance		0.03348	95% CLT UCL	169.39221
13154	Adjusted Chi Square Value		414.46966	95% Jackknife UCL	170.43759
13155				95% Standard Bootstrap UCL	168.84326
13156	Anderson-Darling Test Statistic		0.4759593	95% Bootstrap-t UCL	172.77006
13157	Anderson-Darling 5% Critical Value		0.7369994	95% Hall's Bootstrap UCL	169.67144
13158	Kolmogorov-Smirnov Test Statistic		0.177377	95% Percentile Bootstrap UCL	169
13159	Kolmogorov-Smirnov 5% Critical Value		0.2147267	95% BCA Bootstrap UCL	170.3125
13160	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	195.61472
13161				97.5% Chebyshev(Mean, Sd) UCL	213.8378
13162	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	249.6335
13163	95% Approximate Gamma UCL		171.4962		
13164	95% Adjusted Gamma UCL		173.68826		
13165					
13166	**Potential UCL to Use**			Use 95% Student's-t UCL	170.43759
13167					
13168	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13169	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
13170	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
13171					
13172					
13173	**M|MG/KG|MANGANESE (gi_sd_nw_2005)**				
13174					
13175	**General Statistics**				
13176	Number of Valid Observations		18	Number of Distinct Observations	16
13177					
13178	**Raw Statistics**			**Log-transformed Statistics**	
13179	Minimum		114	Minimum of Log Data	4.7361984
13180	Maximum		306	Maximum of Log Data	5.7235851
13181	Mean		162.94444	Mean of log Data	5.0570336
13182	Median		149.5	SD of log Data	0.2660034
13183	SD		49.661764		
13184	Coefficient of Variation		0.3047773		
13185	Skewness		1.7013619		
13186					
13187	**Relevant UCL Statistics**				
13188	**Normal Distribution Test**			**Lognormal Distribution Test**	
13189	Shapiro Wilk Test Statistic		0.8269828	Shapiro Wilk Test Statistic	0.9088777
13190	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
13191	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	

	A	B	C	D	E
13192					
13193	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13194	95% Student's-t UCL		183.30722	95% H-UCL	183.17188
13195	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	207.30781
13196	95% Adjusted-CLT UCL (Chen-1995)		187.21374	97.5% Chebyshev (MVUE) UCL	226.71653
13197	95% Modified-t UCL (Johnson-1978)		184.08956	99% Chebyshev (MVUE) UCL	264.84122
13198					
13199	**Gamma Distribution Test**			**Data Distribution**	
13200	k star (bias corrected)		11.628737	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
13201	Theta Star		14.012222		
13202	MLE of Mean		162.94444		
13203	MLE of Standard Deviation		47.782985		
13204	nu star		418.63454		
13205	Approximate Chi Square Value (.05)		372.20356	**Nonparametric Statistics**	
13206	Adjusted Level of Significance		0.03574	95% CLT UCL	182.1981
13207	Adjusted Chi Square Value		368.00518	95% Jackknife UCL	183.30722
13208				95% Standard Bootstrap UCL	181.6091
13209	Anderson-Darling Test Statistic		0.7404205	95% Bootstrap-t UCL	193.8325
13210	Anderson-Darling 5% Critical Value		0.7392951	95% Hall's Bootstrap UCL	200.7907
13211	Kolmogorov-Smirnov Test Statistic		0.1764748	95% Percentile Bootstrap UCL	183.27778
13212	Kolmogorov-Smirnov 5% Critical Value		0.2033757	95% BCA Bootstrap UCL	185.27778
13213	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	213.96706
13214				97.5% Chebyshev(Mean, Sd) UCL	236.04458
13215	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	279.41161
13216	95% Approximate Gamma UCL		183.27114		
13217	95% Adjusted Gamma UCL		185.36199		
13218					
13219	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	183.27114
13220					
13221	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13222	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
13223	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
13224					
13225					
13226	**M|MG/KG|MANGANESE (gi_sd_nw_2009)**				
13227					
13228	**General Statistics**				
13229	Number of Valid Observations		7	Number of Distinct Observations	7
13230					
13231	**Raw Statistics**			**Log-transformed Statistics**	
13232	Minimum		98.8	Minimum of Log Data	4.5930976
13233	Maximum		185	Maximum of Log Data	5.2203558
13234	Mean		134.97143	Mean of log Data	4.8765274
13235	Median		123	SD of log Data	0.2561546
13236	SD		35.309192		
13237	Coefficient of Variation		0.2616049		
13238	Skewness		0.5522402		
13239					
13240					
13241	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
13242					
13243	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
13244	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
13245					
13246					
13247	**Warning: There are only 7 Values in this data**				
13248	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
13249	**the resulting calculations may not be reliable enough to draw conclusions**				
13250					

	A	B	C	D	E
13251	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
13252					
13253	**Relevant UCL Statistics**				
13254	**Normal Distribution Test**			**Lognormal Distribution Test**	
13255	Shapiro Wilk Test Statistic		0.8849988	Shapiro Wilk Test Statistic	0.9026635
13256	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
13257	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
13258					
13259	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13260	95% Student's-t UCL		160.90437	95% H-UCL	168.88819
13261	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	191.92569
13262	95% Adjusted-CLT UCL (Chen-1995)		159.89947	97.5% Chebyshev (MVUE) UCL	216.5998
13263	95% Modified-t UCL (Johnson-1978)		161.36864	99% Chebyshev (MVUE) UCL	265.06731
13264					
13265	**Gamma Distribution Test**			**Data Distribution**	
13266	k star (bias corrected)		10.202072	**Data appear Normal at 5% Significance Level**	
13267	Theta Star		13.229806		
13268	MLE of Mean		134.97143		
13269	MLE of Standard Deviation		42.256902		
13270	nu star		142.82901		
13271	Approximate Chi Square Value (.05)		116.2112	**Nonparametric Statistics**	
13272	Adjusted Level of Significance		0.01584	95% CLT UCL	156.92302
13273	Adjusted Chi Square Value		108.95879	95% Jackknife UCL	160.90437
13274				95% Standard Bootstrap UCL	155.3953
13275	Anderson-Darling Test Statistic		0.3895995	95% Bootstrap-t UCL	175.19292
13276	Anderson-Darling 5% Critical Value		0.7070963	95% Hall's Bootstrap UCL	160.1527
13277	Kolmogorov-Smirnov Test Statistic		0.1911283	95% Percentile Bootstrap UCL	155.68571
13278	Kolmogorov-Smirnov 5% Critical Value		0.3115687	95% BCA Bootstrap UCL	156.85714
13279	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	193.14364
13280				97.5% Chebyshev(Mean, Sd) UCL	218.3148
13281	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	267.75867
13282	95% Approximate Gamma UCL		165.8862		
13283	95% Adjusted Gamma UCL		176.92777		
13284					
13285	**Potential UCL to Use**			Use 95% Student's-t UCL	160.90437
13286					
13287	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13288	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
13289	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
13290					
13291					
13292	**M|MG/KG|MANGANESE (gi_sd_nw_2010)**				
13293					
13294	**General Statistics**				
13295	Number of Valid Observations		4	Number of Distinct Observations	4
13296					
13297					
13298	**Warning: This data set only has 4 observations!**				
13299	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
13300	**The data set for variable M|MG/KG|MANGANESE (gi_sd_nw_2010) was not processed!**				
13301					
13302	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
13303	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
13304					
13305					
13306					
13307	**M|MG/KG|MANGANESE (gi_sd_ref_2009)**				
13308					
13309	**General Statistics**				

	A	B	C	D	E
13310	Number of Valid Observations		6	Number of Distinct Observations	6
13311					
13312	**Raw Statistics**			**Log-transformed Statistics**	
13313	Minimum		66.6	Minimum of Log Data	4.1987046
13314	Maximum		107.25	Maximum of Log Data	4.6751626
13315	Mean		94.575	Mean of log Data	4.5378489
13316	Median		99.6	SD of log Data	0.1731989
13317	SD		14.543306		
13318	Coefficient of Variation		0.1537754		
13319	Skewness		-1.867187		
13320					
13321					
13322	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
13323					
13324	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
13325	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
13326					
13327					
13328	**Warning: There are only 6 Values in this data**				
13329	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
13330	**the resulting calculations may not be reliable enough to draw conclusions**				
13331					
13332	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
13333					
13334	**Relevant UCL Statistics**				
13335	**Normal Distribution Test**			**Lognormal Distribution Test**	
13336	Shapiro Wilk Test Statistic		0.7996789	Shapiro Wilk Test Statistic	0.7554127
13337	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
13338	**Data appear Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
13339					
13340	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13341	95% Student's-t UCL		106.53891	95% H-UCL	111.07902
13342	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	123.83875
13343	95% Adjusted-CLT UCL (Chen-1995)		99.505026	97.5% Chebyshev (MVUE) UCL	136.46302
13344	95% Modified-t UCL (Johnson-1978)		105.7846	99% Chebyshev (MVUE) UCL	161.26094
13345					
13346	**Gamma Distribution Test**			**Data Distribution**	
13347	k star (bias corrected)		21.849967	**Data appear Normal at 5% Significance Level**	
13348	Theta Star		4.3283818		
13349	MLE of Mean		94.575		
13350	MLE of Standard Deviation		20.232566		
13351	nu star		262.19961		
13352	Approximate Chi Square Value (.05)		225.70366	**Nonparametric Statistics**	
13353	Adjusted Level of Significance		0.01222	95% CLT UCL	104.34096
13354	Adjusted Chi Square Value		213.39991	95% Jackknife UCL	106.53891
13355				95% Standard Bootstrap UCL	103.59251
13356	Anderson-Darling Test Statistic		0.7446869	95% Bootstrap-t UCL	102.90909
13357	Anderson-Darling 5% Critical Value		0.6969257	95% Hall's Bootstrap UCL	100.53501
13358	Kolmogorov-Smirnov Test Statistic		0.2926556	95% Percentile Bootstrap UCL	102.24167
13359	Kolmogorov-Smirnov 5% Critical Value		0.3317926	95% BCA Bootstrap UCL	100.80833
13360	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	120.455
13361				97.5% Chebyshev(Mean, Sd) UCL	131.6533
13362	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	153.65019
13363	95% Approximate Gamma UCL		109.86764		
13364	95% Adjusted Gamma UCL		116.20215		
13365					
13366	**Potential UCL to Use**			Use 95% Student's-t UCL	106.53891
13367					
13368	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13369	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				

	A	B	C	D	E
13370	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
13371					
13372					
13373	M|MG/KG|MANGANESE (gi_sd_ref_2010)				
13374					
13375	General Statistics				
13376	Number of Valid Observations		3	Number of Distinct Observations	3
13377					
13378					
13379	Warning: This data set only has 3 observations!				
13380	Data set is too small to compute reliable and meaningful statistics and estimates!				
13381	The data set for variable M|MG/KG|MANGANESE (gi_sd_ref_2010) was not processed!				
13382					
13383	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
13384	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
13385					
13386					
13387					
13388	M|MG/KG|MANGANESE (gi_sd_s_2005)				
13389					
13390	General Statistics				
13391	Number of Valid Observations		8	Number of Distinct Observations	8
13392					
13393	Raw Statistics			Log-transformed Statistics	
13394	Minimum		101	Minimum of Log Data	4.6151205
13395	Maximum		177	Maximum of Log Data	5.1761497
13396	Mean		130	Mean of log Data	4.8494302
13397	Median		122	SD of log Data	0.2012583
13398	SD		27.039653		
13399	Coefficient of Variation		0.2079973		
13400	Skewness		0.7387873		
13401					
13402					
13403	Warning: There are only 8 Values in this data				
13404	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
13405	the resulting calculations may not be reliable enough to draw conclusions				
13406					
13407	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
13408					
13409	Relevant UCL Statistics				
13410	Normal Distribution Test			Lognormal Distribution Test	
13411	Shapiro Wilk Test Statistic		0.9188112	Shapiro Wilk Test Statistic	0.9362465
13412	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
13413	Data appear Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
13414					
13415	Assuming Normal Distribution			Assuming Lognormal Distribution	
13416	95% Student's-t UCL		148.1121	95% H-UCL	151.04591
13417	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	170.32651
13418	95% Adjusted-CLT UCL (Chen-1995)		148.39289	97.5% Chebyshev (MVUE) UCL	187.79933
13419	95% Modified-t UCL (Johnson-1978)		148.52828	99% Chebyshev (MVUE) UCL	222.12132
13420					
13421	Gamma Distribution Test			Data Distribution	
13422	k star (bias corrected)		17.448024	Data appear Normal at 5% Significance Level	
13423	Theta Star		7.4507006		
13424	MLE of Mean		130		
13425	MLE of Standard Deviation		31.122196		
13426	nu star		279.16838		
13427	Approximate Chi Square Value (.05)		241.47167	Nonparametric Statistics	
13428	Adjusted Level of Significance		0.01946	95% CLT UCL	145.72474
13429	Adjusted Chi Square Value		232.57497	95% Jackknife UCL	148.1121
13430				95% Standard Bootstrap UCL	144.43463

	A	B	C	D	E
13431	Anderson-Darling Test Statistic		0.3176706	95% Bootstrap-t UCL	152.27327
13432	Anderson-Darling 5% Critical Value		0.7158534	95% Hall's Bootstrap UCL	148.83955
13433	Kolmogorov-Smirnov Test Statistic		0.2302207	95% Percentile Bootstrap UCL	145.75
13434	Kolmogorov-Smirnov 5% Critical Value		0.2937432	95% BCA Bootstrap UCL	146.375
13435	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	171.6709
13436				97.5% Chebyshev(Mean, Sd) UCL	189.70194
13437	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	225.12041
13438	95% Approximate Gamma UCL		150.2946		
13439	95% Adjusted Gamma UCL		156.04383		
13440					
13441	**Potential UCL to Use**			Use 95% Student's-t UCL	148.1121
13442					
13443	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13444	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
13445	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
13446					
13447					
13448	**M|MG/KG|MANGANESE (gi_sd_s_2010)**				
13449					
13450	**General Statistics**				
13451	Number of Valid Observations		2	Number of Distinct Observations	2
13452					
13453					
13454	**Warning: This data set only has 2 observations!**				
13455	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
13456	**The data set for variable M|MG/KG|MANGANESE (gi_sd_s_2010) was not processed!**				
13457					
13458	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
13459	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
13460					
13461					
13462					
13463	**M|MG/KG|MANGANESE (gi_sd_stillwater_2005)**				
13464					
13465	**General Statistics**				
13466	Number of Valid Observations		4	Number of Distinct Observations	4
13467					
13468					
13469	**Warning: This data set only has 4 observations!**				
13470	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
13471	**The data set for variable M|MG/KG|MANGANESE (gi_sd_stillwater_2005) was not processed!**				
13472					
13473	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
13474	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
13475					
13476					
13477					
13478	**M|MG/KG|MANGANESE (gi_sd_stillwater_2009)**				
13479					
13480	**General Statistics**				
13481	Number of Valid Observations		60	Number of Distinct Observations	56
13482					
13483	**Raw Statistics**			**Log-transformed Statistics**	
13484	Minimum		51.3	Minimum of Log Data	3.9376908

	A	B	C	D	E
13485	Maximum		365	Maximum of Log Data	5.8998974
13486	Mean		127.73	Mean of log Data	4.764522
13487	Median		111.5	SD of log Data	0.4027609
13488	SD		59.35769		
13489	Coefficient of Variation		0.4647122		
13490	Skewness		1.8782112		
13491					
13492	**Relevant UCL Statistics**				
13493	**Normal Distribution Test**			**Lognormal Distribution Test**	
13494	Lilliefors Test Statistic		0.1586702	Lilliefors Test Statistic	0.0717939
13495	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
13496	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
13497					
13498	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13499	95% Student's-t UCL		140.53566	95% H-UCL	139.96067
13500	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	156.76809
13501	95% Adjusted-CLT UCL (Chen-1995)		142.32	97.5% Chebyshev (MVUE) UCL	169.64947
13502	95% Modified-t UCL (Johnson-1978)		140.84534	99% Chebyshev (MVUE) UCL	194.95243
13503					
13504	**Gamma Distribution Test**			**Data Distribution**	
13505	k star (bias corrected)		5.7270435	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
13506	Theta Star		22.302956		
13507	MLE of Mean		127.73		
13508	MLE of Standard Deviation		53.373744		
13509	nu star		687.24522		
13510	Approximate Chi Square Value (.05)		627.42174	**Nonparametric Statistics**	
13511	Adjusted Level of Significance		0.046	95% CLT UCL	140.33459
13512	Adjusted Chi Square Value		626.02435	95% Jackknife UCL	140.53566
13513				95% Standard Bootstrap UCL	140.01592
13514	Anderson-Darling Test Statistic		0.8140158	95% Bootstrap-t UCL	144.14364
13515	Anderson-Darling 5% Critical Value		0.7529008	95% Hall's Bootstrap UCL	143.22398
13516	Kolmogorov-Smirnov Test Statistic		0.0984055	95% Percentile Bootstrap UCL	140.77
13517	Kolmogorov-Smirnov 5% Critical Value		0.1149529	95% BCA Bootstrap UCL	142.66667
13518	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	161.13244
13519				97.5% Chebyshev(Mean, Sd) UCL	175.5857
13520	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	203.97633
13521	95% Approximate Gamma UCL		139.90882		
13522	95% Adjusted Gamma UCL		140.22112		
13523					
13524	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	139.90882
13525					
13526	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13527	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
13528	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
13529					
13530					
13531	**M|MG/KG|MANGANESE (gi_sd_stillwater_2010)**				
13532					
13533	**General Statistics**				
13534	Number of Valid Observations		11	Number of Distinct Observations	11
13535					
13536	**Raw Statistics**			**Log-transformed Statistics**	
13537	Minimum		75	Minimum of Log Data	4.3174881
13538	Maximum		203	Maximum of Log Data	5.313206
13539	Mean		112.96364	Mean of log Data	4.6847992
13540	Median		106	SD of log Data	0.2950315
13541	SD		37.194039		
13542	Coefficient of Variation		0.3292567		
13543	Skewness		1.5459162		
13544					
13545	**Relevant UCL Statistics**				
13546	**Normal Distribution Test**			**Lognormal Distribution Test**	
13547	Shapiro Wilk Test Statistic		0.8527992	Shapiro Wilk Test Statistic	0.9301315
13548	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
13549	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
13550					

	A	B	C	D	E
13551	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13552	95% Student's-t UCL		133.28935	95% H-UCL	135.6
13553	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	156.66706
13554	95% Adjusted-CLT UCL (Chen-1995)		136.99503	97.5% Chebyshev (MVUE) UCL	175.71574
13555	95% Modified-t UCL (Johnson-1978)		134.16054	99% Chebyshev (MVUE) UCL	213.1332
13556					
13557	**Gamma Distribution Test**			**Data Distribution**	
13558	k star (bias corrected)		8.7834463	**Data appear Normal at 5% Significance Level**	
13559	Theta Star		12.86097		
13560	MLE of Mean		112.96364		
13561	MLE of Standard Deviation		38.115901		
13562	nu star		193.23582		
13563	Approximate Chi Square Value (.05)		162.07612	**Nonparametric Statistics**	
13564	Adjusted Level of Significance		0.02783	95% CLT UCL	131.40972
13565	Adjusted Chi Square Value		157.42441	95% Jackknife UCL	133.28935
13566				95% Standard Bootstrap UCL	130.92062
13567	Anderson-Darling Test Statistic		0.4364825	95% Bootstrap-t UCL	144.59098
13568	Anderson-Darling 5% Critical Value		0.7292364	95% Hall's Bootstrap UCL	222.75721
13569	Kolmogorov-Smirnov Test Statistic		0.2377441	95% Percentile Bootstrap UCL	131.20909
13570	Kolmogorov-Smirnov 5% Critical Value		0.2553102	95% BCA Bootstrap UCL	138
13571	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	161.84618
13572				97.5% Chebyshev(Mean, Sd) UCL	182.9977
13573	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	224.54575
13574	95% Approximate Gamma UCL		134.68129		
13575	95% Adjusted Gamma UCL		138.66096		
13576					
13577	**Potential UCL to Use**			Use 95% Student's-t UCL	133.28935
13578					
13579	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13580	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
13581	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
13582					
13583					
13584	**M|MG/KG|MERCURY (gi_sd_ne_2005)**				
13585					
13586	**General Statistics**				
13587	Number of Valid Data		36	Number of Detected Data	30
13588	Number of Distinct Detected Data		25	Number of Non-Detect Data	6
13589				Percent Non-Detects	16.67%
13590					
13591	**Raw Statistics**			**Log-transformed Statistics**	
13592	Minimum Detected		0.0099	Minimum Detected	-4.615221
13593	Maximum Detected		0.74	Maximum Detected	-0.301105
13594	Mean of Detected		0.0636633	Mean of Detected	-3.182734
13595	SD of Detected		0.1285465	SD of Detected	0.6761397
13596	Minimum Non-Detect		0.007	Minimum Non-Detect	-4.961845
13597	Maximum Non-Detect		0.05	Maximum Non-Detect	-2.995732
13598					
13599	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	29
13600	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	7
13601	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	80.56%
13602					
13603	**UCL Statistics**				
13604	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
13605	Shapiro Wilk Test Statistic		0.2792637	Shapiro Wilk Test Statistic	0.758451
13606	5% Shapiro Wilk Critical Value		0.927	5% Shapiro Wilk Critical Value	0.927
13607	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
13608					
13609	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13610	DL/2 Substitution Method			DL/2 Substitution Method	
13611	Mean		0.0547944	Mean	-3.462805
13612	SD		0.1187717	SD	0.942213
13613	95% DL/2 (t) UCL		0.08824	95% H-Stat (DL/2) UCL	0.070674
13614					
13615	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
13616	**MLE yields a negative mean**			Mean in Log Scale	-3.355671

	A	B	C	D	E
13617				SD in Log Scale	0.7440513
13618				Mean in Original Scale	0.0556753
13619				SD in Original Scale	0.118435
13620				95% t UCL	0.089026
13621				95% Percentile Bootstrap UCL	0.0936196
13622				95% BCA Bootstrap UCL	0.1308248
13623					
13624	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
13625	k star (bias corrected)		1.19959	**Data do not follow a Discernable Distribution (0.05)**	
13626	Theta Star		0.0530709		
13627	nu star		71.9754		
13628					
13629	A-D Test Statistic		4.465603	**Nonparametric Statistics**	
13630	5% A-D Critical Value		0.7678062	Kaplan-Meier (KM) Method	
13631	K-S Test Statistic		0.7678062	Mean	0.0555403
13632	5% K-S Critical Value		0.1636066	SD	0.1168649
13633	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0198153
13634				95% KM (t) UCL	0.0890196
13635	**Assuming Gamma Distribution**			95% KM (z) UCL	0.0881335
13636	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.0875829
13637	Minimum		1E-12	95% KM (bootstrap t) UCL	0.2316232
13638	Maximum		0.74	95% KM (BCA) UCL	0.1003394
13639	Mean		0.0552133	95% KM (Percentile Bootstrap) UCL	0.093812
13640	Median		0.036	95% KM (Chebyshev) UCL	0.141913
13641	SD		0.1189523	97.5% KM (Chebyshev) UCL	0.1792866
13642	k star		0.235959	99% KM (Chebyshev) UCL	0.2526997
13643	Theta star		0.2339952		
13644	Nu star		16.989052	**Potential UCLs to Use**	
13645	AppChi2		8.6644032	95% KM (Chebyshev) UCL	0.141913
13646	95% Gamma Approximate UCL		0.1082615		
13647	95% Adjusted Gamma UCL		0.1117487		
13648	**Note: DL/2 is not a recommended method.**				
13649					
13650	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13651	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
13652	**For additional insight, the user may want to consult a statistician.**				
13653					
13654					
13655	**M|MG/KG|MERCURY (gi_sd_ne_2009)**				
13656					
13657	**General Statistics**				
13658	Number of Valid Data		20	Number of Detected Data	19
13659	Number of Distinct Detected Data		17	Number of Non-Detect Data	1
13660				Percent Non-Detects	5.00%
13661					
13662	**Raw Statistics**			**Log-transformed Statistics**	
13663	Minimum Detected		0.0047	Minimum Detected	-5.360193
13664	Maximum Detected		0.068	Maximum Detected	-2.688248
13665	Mean of Detected		0.0245947	Mean of Detected	-3.91721
13666	SD of Detected		0.0165381	SD of Detected	0.6931886
13667	Minimum Non-Detect		0.004	Minimum Non-Detect	-5.521461
13668	Maximum Non-Detect		0.004	Maximum Non-Detect	-5.521461
13669					
13670					
13671	**UCL Statistics**				
13672	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
13673	Shapiro Wilk Test Statistic		0.8732756	Shapiro Wilk Test Statistic	0.9743297
13674	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
13675	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
13676					
13677	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13678	DL/2 Substitution Method			DL/2 Substitution Method	
13679	Mean		0.023465	Mean	-4.03208
13680	SD		0.0168713	SD	0.8480108
13681	95% DL/2 (t) UCL		0.0299882	95% H-Stat (DL/2) UCL	0.0407081
13682					
13683	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
13684	Mean		0.0231391	Mean in Log Scale	-4.00233

	A	B	C	D	E
13685	SD		0.0170027	SD in Log Scale	0.7746794
13686	95% MLE (t) UCL		0.0297131	Mean in Original Scale	0.0235463
13687	95% MLE (Tiku) UCL		0.0295238	SD in Original Scale	0.016766
13688				95% t UCL	0.0300288
13689				95% Percentile Bootstrap UCL	0.02969
13690				95% BCA Bootstrap UCL	0.03073
13691					
13692	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
13693	k star (bias corrected)		2.1510975	**Data appear Gamma Distributed at 5% Significance Level**	
13694	Theta Star		0.0114336		
13695	nu star		81.741707		
13696					
13697	A-D Test Statistic		0.235092	**Nonparametric Statistics**	
13698	5% A-D Critical Value		0.749933	Kaplan-Meier (KM) Method	
13699	K-S Test Statistic		0.749933	Mean	0.0236
13700	5% K-S Critical Value		0.2004044	SD	0.0162775
13701	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.0037395
13702				95% KM (t) UCL	0.0300661
13703	**Assuming Gamma Distribution**			95% KM (z) UCL	0.0297509
13704	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.0299858
13705	Minimum		1E-12	95% KM (bootstrap t) UCL	0.0318593
13706	Maximum		0.068	95% KM (BCA) UCL	0.030005
13707	Mean		0.023365	95% KM (Percentile Bootstrap) UCL	0.0302
13708	Median		0.0205	95% KM (Chebyshev) UCL	0.0399001
13709	SD		0.0170105	97.5% KM (Chebyshev) UCL	0.0469532
13710	k star		0.4374932	99% KM (Chebyshev) UCL	0.0608076
13711	Theta star		0.0534065		
13712	Nu star		17.499727	**Potential UCLs to Use**	
13713	AppChi2		9.0303228	95% KM (BCA) UCL	0.030005
13714	95% Gamma Approximate UCL		0.0452787		
13715	95% Adjusted Gamma UCL		0.0478149		
13716	**Note: DL/2 is not a recommended method.**				
13717					
13718	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13719	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
13720	**For additional insight, the user may want to consult a statistician.**				
13721					
13722					
13723	**M|MG/KG|MERCURY (gi_sd_ne_2010)**				
13724					
13725	**General Statistics**				
13726	Number of Valid Data		16	Number of Detected Data	15
13727	Number of Distinct Detected Data		12	Number of Non-Detect Data	1
13728				Percent Non-Detects	6.25%
13729					
13730	**Raw Statistics**			**Log-transformed Statistics**	
13731	Minimum Detected		0.006	Minimum Detected	-5.115996
13732	Maximum Detected		0.239	Maximum Detected	-1.431292
13733	Mean of Detected		0.0542	Mean of Detected	-3.504451
13734	SD of Detected		0.0753005	SD of Detected	1.0185781
13735	Minimum Non-Detect		0.039	Minimum Non-Detect	-3.244194
13736	Maximum Non-Detect		0.039	Maximum Non-Detect	-3.244194
13737					
13738					
13739	**UCL Statistics**				
13740	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
13741	Shapiro Wilk Test Statistic		0.5851129	Shapiro Wilk Test Statistic	0.8793459
13742	5% Shapiro Wilk Critical Value		0.881	5% Shapiro Wilk Critical Value	0.881
13743	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
13744					
13745	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13746	DL/2 Substitution Method			DL/2 Substitution Method	
13747	Mean		0.0520313	Mean	-3.531507
13748	SD		0.0732626	SD	0.9899731
13749	95% DL/2 (t) UCL		0.0841395	95% H-Stat (DL/2) UCL	0.0949646
13750					
13751	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
13752	Mean		0.1909199	Mean in Log Scale	-3.522207

	A	B	C	D	E
13753	SD		0.0694166	SD in Log Scale	0.9865995
13754	95% MLE (t) UCL		0.2213426	Mean in Original Scale	0.0522268
13755	95% MLE (Tiku) UCL		0.2607265	SD in Original Scale	0.0731742
13756				95% t UCL	0.0842963
13757				95% Percentile Bootstrap UCL	0.0821643
13758				95% BCA Bootstrap UCL	0.0929768
13759					
13760	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
13761	k star (bias corrected)		0.8296626	**Data do not follow a Discernable Distribution (0.05)**	
13762	Theta Star		0.0653278		
13763	nu star		24.889877		
13764					
13765	A-D Test Statistic		1.561438	**Nonparametric Statistics**	
13766	5% A-D Critical Value		0.7639228	Kaplan-Meier (KM) Method	
13767	K-S Test Statistic		0.7639228	Mean	0.0521563
13768	5% K-S Critical Value		0.22809	SD	0.0709088
13769	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0183573
13770				95% KM (t) UCL	0.0843375
13771	**Assuming Gamma Distribution**			95% KM (z) UCL	0.0823513
13772	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.0842685
13773	Minimum		0.006	95% KM (bootstrap t) UCL	0.1592084
13774	Maximum		0.239	95% KM (BCA) UCL	0.0865625
13775	Mean		0.0531687	95% KM (Percentile Bootstrap) UCL	0.0823125
13776	Median		0.0275	95% KM (Chebyshev) UCL	0.1321739
13777	SD		0.0728641	97.5% KM (Chebyshev) UCL	0.1667976
13778	k star		0.8818609	99% KM (Chebyshev) UCL	0.2348092
13779	Theta star		0.0602915		
13780	Nu star		28.219548	**Potential UCLs to Use**	
13781	AppChi2		17.099053	97.5% KM (Chebyshev) UCL	0.1667976
13782	95% Gamma Approximate UCL		0.0877473		
13783	95% Adjusted Gamma UCL		0.0930874		
13784	**Note: DL/2 is not a recommended method.**				
13785					
13786	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13787	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
13788	**For additional insight, the user may want to consult a statistician.**				
13789					
13790					
13791	**M|MG/KG|MERCURY (gi_sd_nw_2005)**				
13792					
13793	**General Statistics**				
13794	Number of Valid Data		18	Number of Detected Data	6
13795	Number of Distinct Detected Data		6	Number of Non-Detect Data	12
13796				Percent Non-Detects	66.67%
13797					
13798	**Raw Statistics**			**Log-transformed Statistics**	
13799	Minimum Detected		0.04	Minimum Detected	-3.218876
13800	Maximum Detected		0.13	Maximum Detected	-2.040221
13801	Mean of Detected		0.0741667	Mean of Detected	-2.695747
13802	SD of Detected		0.0366411	SD of Detected	0.4656329
13803	Minimum Non-Detect		0.0068	Minimum Non-Detect	-4.990833
13804	Maximum Non-Detect		0.022	Maximum Non-Detect	-3.816713
13805					
13806	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	12
13807	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	6
13808	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	66.67%
13809					
13810	**Warning: There are only 6 Detected Values in this data**				
13811	**Note: It should be noted that even though bootstrap may be performed on this data set**				
13812	**the resulting calculations may not be reliable enough to draw conclusions**				
13813					
13814	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
13815					
13816					
13817	**UCL Statistics**				

	A	B	C	D	E
13818	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
13819	Shapiro Wilk Test Statistic		0.8370402	Shapiro Wilk Test Statistic	0.8911653
13820	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788
13821	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
13822					
13823	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13824	DL/2 Substitution Method			DL/2 Substitution Method	
13825	Mean		0.0295917	Mean	-4.221858
13826	SD		0.0380934	SD	1.1815735
13827	95% DL/2 (t) UCL		0.0452111	95% H-Stat (DL/2) UCL	0.0679324
13828					
13829	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
13830	Mean		0.0783782	Mean in Log Scale	-3.783052
13831	SD		0.0334486	SD in Log Scale	0.8473401
13832	95% MLE (t) UCL		0.0920931	Mean in Original Scale	0.0337053
13833	95% MLE (Tiku) UCL		0.1016587	SD in Original Scale	0.0355892
13834				95% t UCL	0.0482979
13835				95% Percentile Bootstrap UCL	0.0486065
13836				95% BCA Bootstrap UCL	0.0509128
13837					
13838	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
13839	k star (bias corrected)		2.8426428	**Data appear Normal at 5% Significance Level**	
13840	Theta Star		0.0260907		
13841	nu star		34.111714		
13842					
13843	A-D Test Statistic		0.5068362	**Nonparametric Statistics**	
13844	5% A-D Critical Value		0.6980759	Kaplan-Meier (KM) Method	
13845	K-S Test Statistic		0.6980759	Mean	0.0513889
13846	5% K-S Critical Value		0.3327613	SD	0.0251465
13847	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.0064928
13848				95% KM (t) UCL	0.0626838
13849	**Assuming Gamma Distribution**			95% KM (z) UCL	0.0620686
13850	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.0615211
13851	Minimum		0.04	95% KM (bootstrap t) UCL	0.0797214
13852	Maximum		0.13	95% KM (BCA) UCL	0.0733333
13853	Mean		0.0741667	95% KM (Percentile Bootstrap) UCL	0.0686667
13854	Median		0.0741667	95% KM (Chebyshev) UCL	0.0796904
13855	SD		0.0198714	97.5% KM (Chebyshev) UCL	0.0919365
13856	k star		13.429069	99% KM (Chebyshev) UCL	0.1159915
13857	Theta star		0.0055228		
13858	Nu star		483.4465	**Potential UCLs to Use**	
13859	AppChi2		433.46194	95% KM (t) UCL	0.0626838
13860	95% Gamma Approximate UCL		0.0827192	95% KM (Percentile Bootstrap) UCL	0.0686667
13861	95% Adjusted Gamma UCL		0.0835944		
13862	**Note: DL/2 is not a recommended method.**				
13863					
13864	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13865	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
13866	**For additional insight, the user may want to consult a statistician.**				
13867					
13868					
13869	**M|MG/KG|MERCURY (gi_sd_nw_2009)**				
13870					
13871	**General Statistics**				
13872	Number of Valid Observations		7	Number of Distinct Observations	7
13873					
13874	**Raw Statistics**			**Log-transformed Statistics**	
13875	Minimum		0.024	Minimum of Log Data	-3.729701
13876	Maximum		0.084	Maximum of Log Data	-2.476938
13877	Mean		0.0385	Mean of log Data	-3.349085
13878	Median		0.031	SD of log Data	0.4272074
13879	SD		0.0209742		
13880	Coefficient of Variation		0.5447842		
13881	Skewness		2.2200803		
13882					
13883					

	A	B	C	D	E
13884	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
13885					
13886	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
13887	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
13888					
13889					
13890	**Warning: There are only 7 Values in this data**				
13891	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
13892	**the resulting calculations may not be reliable enough to draw conclusions**				
13893					
13894	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
13895					
13896	**Relevant UCL Statistics**				
13897	**Normal Distribution Test**			**Lognormal Distribution Test**	
13898	Shapiro Wilk Test Statistic		0.7018496	Shapiro Wilk Test Statistic	0.8229616
13899	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
13900	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
13901					
13902	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13903	95% Student's-t UCL		0.0539046	95% H-UCL	0.0576621
13904	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.0647559
13905	95% Adjusted-CLT UCL (Chen-1995)		0.0586474	97.5% Chebyshev (MVUE) UCL	0.076357
13906	95% Modified-t UCL (Johnson-1978)		0.0550132	99% Chebyshev (MVUE) UCL	0.099145
13907					
13908	**Gamma Distribution Test**			**Data Distribution**	
13909	k star (bias corrected)		3.2934286	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
13910	Theta Star		0.0116899		
13911	MLE of Mean		0.0385		
13912	MLE of Standard Deviation		0.0212147		
13913	nu star		46.108001		
13914	Approximate Chi Square Value (.05)		31.528454	**Nonparametric Statistics**	
13915	Adjusted Level of Significance		0.01584	95% CLT UCL	0.0515396
13916	Adjusted Chi Square Value		27.937079	95% Jackknife UCL	0.0539046
13917				95% Standard Bootstrap UCL	0.0502029
13918	Anderson-Darling Test Statistic		0.750868	95% Bootstrap-t UCL	0.1040146
13919	Anderson-Darling 5% Critical Value		0.7096953	95% Hall's Bootstrap UCL	0.1207744
13920	Kolmogorov-Smirnov Test Statistic		0.3116246	95% Percentile Bootstrap UCL	0.0531429
13921	Kolmogorov-Smirnov 5% Critical Value		0.3128811	95% BCA Bootstrap UCL	0.0561429
13922	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.0730552
13923				97.5% Chebyshev(Mean, Sd) UCL	0.0880072
13924	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.1173776
13925	95% Approximate Gamma UCL		0.0563034		
13926	95% Adjusted Gamma UCL		0.0635413		
13927					
13928	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	0.0563034
13929					
13930	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
13931	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
13932	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
13933					
13934					
13935	**M|MG/KG|MERCURY (gi_sd_nw_2010)**				
13936					
13937	**General Statistics**				
13938	Number of Valid Observations		4	Number of Distinct Observations	4
13939					
13940					

	A	B	C	D	E
13941	**Warning: This data set only has 4 observations!**				
13942	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
13943	**The data set for variable M|MG/KG|MERCURY (gi_sd_nw_2010) was not processed!**				
13944					
13945	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
13946	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
13947					
13948					
13949					
13950	**M|MG/KG|MERCURY (gi_sd_ref_2009)**				
13951					
13952	**General Statistics**				
13953	Number of Valid Observations		6	Number of Distinct Observations	5
13954					
13955	**Raw Statistics**			**Log-transformed Statistics**	
13956	Minimum		0.013	Minimum of Log Data	-4.342806
13957	Maximum		0.058	Maximum of Log Data	-2.847312
13958	Mean		0.0288333	Mean of log Data	-3.651538
13959	Median		0.0245	SD of log Data	0.492416
13960	SD		0.0155102		
13961	Coefficient of Variation		0.5379264		
13962	Skewness		1.6248039		
13963					
13964					
13965	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
13966					
13967	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
13968	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
13969					
13970					
13971	**Warning: There are only 6 Values in this data**				
13972	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
13973	**the resulting calculations may not be reliable enough to draw conclusions**				
13974					
13975	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
13976					
13977	**Relevant UCL Statistics**				
13978	**Normal Distribution Test**			**Lognormal Distribution Test**	
13979	Shapiro Wilk Test Statistic		0.8461381	Shapiro Wilk Test Statistic	0.9547967
13980	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
13981	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
13982					
13983	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
13984	95% Student's-t UCL		0.0415927	95% H-UCL	0.0521641
13985	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.0537593
13986	95% Adjusted-CLT UCL (Chen-1995)		0.0437365	97.5% Chebyshev (MVUE) UCL	0.0646157
13987	95% Modified-t UCL (Johnson-1978)		0.0422927	99% Chebyshev (MVUE) UCL	0.0859409
13988					
13989	**Gamma Distribution Test**			**Data Distribution**	
13990	k star (bias corrected)		2.5652158	**Data appear Normal at 5% Significance Level**	
13991	Theta Star		0.0112401		
13992	MLE of Mean		0.0288333		
13993	MLE of Standard Deviation		0.0180025		
13994	nu star		30.782589		
13995	Approximate Chi Square Value (.05)		19.109103	**Nonparametric Statistics**	
13996	Adjusted Level of Significance		0.01222	95% CLT UCL	0.0392486
13997	Adjusted Chi Square Value		15.880119	95% Jackknife UCL	0.0415927
13998				95% Standard Bootstrap UCL	0.0384235
13999	Anderson-Darling Test Statistic		0.3454447	95% Bootstrap-t UCL	0.0513472

	A	B	C	D	E
14000	Anderson-Darling 5% Critical Value		0.6982272	95% Hall's Bootstrap UCL	0.0931754
14001	Kolmogorov-Smirnov Test Statistic		0.2105852	95% Percentile Bootstrap UCL	0.0393333
14002	Kolmogorov-Smirnov 5% Critical Value		0.3328588	95% BCA Bootstrap UCL	0.0415
14003	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.056434
14004				97.5% Chebyshev(Mean, Sd) UCL	0.0683768
14005	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.0918361
14006	95% Approximate Gamma UCL		0.0464472		
14007	95% Adjusted Gamma UCL		0.0558916		
14008					
14009	**Potential UCL to Use**			Use 95% Student's-t UCL	0.0415927
14010					
14011	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14012	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
14013	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
14014					
14015					
14016	**M|MG/KG|MERCURY (gi_sd_ref_2010)**				
14017					
14018	**General Statistics**				
14019	Number of Valid Observations		3	Number of Distinct Observations	3
14020					
14021					
14022	**Warning: This data set only has 3 observations!**				
14023	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
14024	**The data set for variable M|MG/KG|MERCURY (gi_sd_ref_2010) was not processed!**				
14025					
14026	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
14027	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
14028					
14029					
14030					
14031	**M|MG/KG|MERCURY (gi_sd_s_2005)**				
14032					
14033	**General Statistics**				
14034	Number of Valid Data		8	Number of Detected Data	0
14035	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
14036				Percent Non-Detects	100.00%
14037					
14038	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
14039	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
14040	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
14041					
14042	**The data set for variable M|MG/KG|MERCURY (gi_sd_s_2005) was not processed!**				
14043					
14044					
14045					
14046	**M|MG/KG|MERCURY (gi_sd_s_2010)**				
14047					
14048	**General Statistics**				
14049	Number of Valid Observations		2	Number of Distinct Observations	2
14050					
14051					
14052	**Warning: This data set only has 2 observations!**				
14053	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
14054	**The data set for variable M|MG/KG|MERCURY (gi_sd_s_2010) was not processed!**				

	A	B	C	D	E
14055					
14056	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
14057	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
14058					
14059					
14060					
14061	**M|MG/KG|MERCURY (gi_sd_stillwater_2005)**				
14062					
14063	**General Statistics**				
14064	Number of Valid Observations		4	Number of Distinct Observations	4
14065					
14066					
14067	**Warning: This data set only has 4 observations!**				
14068	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
14069	**The data set for variable M|MG/KG|MERCURY (gi_sd_stillwater_2005) was not processed!**				
14070					
14071	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
14072	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
14073					
14074					
14075					
14076	**M|MG/KG|MERCURY (gi_sd_stillwater_2009)**				
14077					
14078	**General Statistics**				
14079	Number of Valid Data		60	Number of Detected Data	57
14080	Number of Distinct Detected Data		47	Number of Non-Detect Data	3
14081				Percent Non-Detects	5.00%
14082					
14083	**Raw Statistics**			**Log-transformed Statistics**	
14084	Minimum Detected		0.004	Minimum Detected	-5.521461
14085	Maximum Detected		0.94	Maximum Detected	-0.061875
14086	Mean of Detected		0.0974132	Mean of Detected	-3.223112
14087	SD of Detected		0.1654574	SD of Detected	1.3111652
14088	Minimum Non-Detect		0.004	Minimum Non-Detect	-5.521461
14089	Maximum Non-Detect		0.0042	Maximum Non-Detect	-5.472671
14090					
14091	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	4
14092	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	56
14093	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	6.67%
14094					
14095	**UCL Statistics**				
14096	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
14097	Lilliefors Test Statistic		0.2883286	Lilliefors Test Statistic	0.0830661
14098	5% Lilliefors Critical Value		0.1173536	5% Lilliefors Critical Value	0.1173536
14099	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
14100					
14101	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14102	DL/2 Substitution Method			DL/2 Substitution Method	
14103	Mean		0.0926442	Mean	-3.371874
14104	SD		0.1625534	SD	1.4350483
14105	95% DL/2 (t) UCL		0.127713	95% H-Stat (DL/2) UCL	0.1721171
14106					
14107	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
14108	Mean		0.0854833	Mean in Log Scale	-3.37827
14109	SD		0.1688424	SD in Log Scale	1.4489584
14110	95% MLE (t) UCL		0.1219089	Mean in Original Scale	0.0926341
14111	95% MLE (Tiku) UCL		0.1190025	SD in Original Scale	0.1625591
14112				95% t UCL	0.1277042
14113				95% Percentile Bootstrap UCL	0.1290935
14114				95% BCA Bootstrap UCL	0.1383735
14115					
14116	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	

	A	B	C	D	E
14117	k star (bias corrected)		0.6546731	**Data appear Lognormal at 5% Significance Level**	
14118	Theta Star		0.1487966		
14119	nu star		74.632731		
14120					
14121	A-D Test Statistic		2.1359988	**Nonparametric Statistics**	
14122	5% A-D Critical Value		0.7990125	Kaplan-Meier (KM) Method	
14123	K-S Test Statistic		0.7990125	Mean	0.0927425
14124	5% K-S Critical Value		0.1231831	SD	0.1611384
14125	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0209878
14126				95% KM (t) UCL	0.127815
14127	**Assuming Gamma Distribution**			95% KM (z) UCL	0.1272643
14128	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.1277292
14129	Minimum		1E-12	95% KM (bootstrap t) UCL	0.146248
14130	Maximum		0.94	95% KM (BCA) UCL	0.1339675
14131	Mean		0.0925425	95% KM (Percentile Bootstrap) UCL	0.1304733
14132	Median		0.036	95% KM (Chebyshev) UCL	0.1842262
14133	SD		0.1626116	97.5% KM (Chebyshev) UCL	0.2238112
14134	k star		0.3238158	99% KM (Chebyshev) UCL	0.3015684
14135	Theta star		0.2857875		
14136	Nu star		38.857892	**Potential UCLs to Use**	
14137	AppChi2		25.580002	95% KM (Chebyshev) UCL	0.1842262
14138	95% Gamma Approximate UCL		0.1405788		
14139	95% Adjusted Gamma UCL		0.1420533		
14140	**Note: DL/2 is not a recommended method.**				
14141					
14142	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14143	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
14144	**For additional insight, the user may want to consult a statistician.**				
14145					
14146					
14147	**M|MG/KG|MERCURY (gi_sd_stillwater_2010)**				
14148					
14149	**General Statistics**				
14150	Number of Valid Observations		11	Number of Distinct Observations	11
14151					
14152	**Raw Statistics**			**Log-transformed Statistics**	
14153	Minimum		0.0195	Minimum of Log Data	-3.937341
14154	Maximum		0.107	Maximum of Log Data	-2.234926
14155	Mean		0.0502727	Mean of log Data	-3.149465
14156	Median		0.045	SD of log Data	0.6001485
14157	SD		0.0292347		
14158	Coefficient of Variation		0.5815222		
14159	Skewness		0.7377807		
14160					
14161	**Relevant UCL Statistics**				
14162	**Normal Distribution Test**			**Lognormal Distribution Test**	
14163	Shapiro Wilk Test Statistic		0.910788	Shapiro Wilk Test Statistic	0.9382152
14164	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
14165	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
14166					
14167	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14168	95% Student's-t UCL		0.0662488	95% H-UCL	0.079645
14169	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.0912821
14170	95% Adjusted-CLT UCL (Chen-1995)		0.0668666	97.5% Chebyshev (MVUE) UCL	0.1089751
14171	95% Modified-t UCL (Johnson-1978)		0.0665756	99% Chebyshev (MVUE) UCL	0.1437296
14172					
14173	**Gamma Distribution Test**			**Data Distribution**	
14174	k star (bias corrected)		2.459564	**Data appear Normal at 5% Significance Level**	
14175	Theta Star		0.0204397		
14176	MLE of Mean		0.0502727		
14177	MLE of Standard Deviation		0.0320556		
14178	nu star		54.110408		
14179	Approximate Chi Square Value (.05)		38.209128	**Nonparametric Statistics**	
14180	Adjusted Level of Significance		0.02783	95% CLT UCL	0.0647714
14181	Adjusted Chi Square Value		36.040492	95% Jackknife UCL	0.0662488
14182				95% Standard Bootstrap UCL	0.0640691
14183	Anderson-Darling Test Statistic		0.2954821	95% Bootstrap-t UCL	0.0704348
14184	Anderson-Darling 5% Critical Value		0.7332483	95% Hall's Bootstrap UCL	0.0671283
14185	Kolmogorov-Smirnov Test Statistic		0.1369512	95% Percentile Bootstrap UCL	0.0645455

	A	B	C	D	E
14186	Kolmogorov-Smirnov 5% Critical Value		0.2568377	95% BCA Bootstrap UCL	0.0654545
14187	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.0886947
14188				97.5% Chebyshev(Mean, Sd) UCL	0.1053199
14189	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	0.1379769
14190	95% Approximate Gamma UCL		0.0711944		
14191	95% Adjusted Gamma UCL		0.0754784		
14192					
14193	**Potential UCL to Use**			Use 95% Student's-t UCL	0.0662488
14194					
14195	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14196	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
14197	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
14198					
14199					
14200	**M|MG/KG|NICKEL (gi_sd_ne_2005)**				
14201					
14202	**General Statistics**				
14203	Number of Valid Observations		36	Number of Distinct Observations	26
14204					
14205	**Raw Statistics**			**Log-transformed Statistics**	
14206	Minimum		5.9	Minimum of Log Data	1.7749524
14207	Maximum		19	Maximum of Log Data	2.944439
14208	Mean		8.8722222	Mean of log Data	2.154287
14209	Median		8.65	SD of log Data	0.2311433
14210	SD		2.4306215		
14211	Coefficient of Variation		0.2739586		
14212	Skewness		2.4531469		
14213					
14214	**Relevant UCL Statistics**				
14215	**Normal Distribution Test**			**Lognormal Distribution Test**	
14216	Shapiro Wilk Test Statistic		0.7817094	Shapiro Wilk Test Statistic	0.9113082
14217	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
14218	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
14219					
14220	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14221	95% Student's-t UCL		9.5566741	95% H-UCL	9.481125
14222	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	10.349732
14223	95% Adjusted-CLT UCL (Chen-1995)		9.7155361	97.5% Chebyshev (MVUE) UCL	10.999345
14224	95% Modified-t UCL (Johnson-1978)		9.584279	99% Chebyshev (MVUE) UCL	12.275384
14225					
14226	**Gamma Distribution Test**			**Data Distribution**	
14227	k star (bias corrected)		16.174048	**Data do not follow a Discernable Distribution (0.05)**	
14228	Theta Star		0.5485468		
14229	MLE of Mean		8.8722222		
14230	MLE of Standard Deviation		2.2060891		
14231	nu star		1164.5314		
14232	Approximate Chi Square Value (.05)		1086.3034	**Nonparametric Statistics**	
14233	Adjusted Level of Significance		0.0428	95% CLT UCL	9.5385583
14234	Adjusted Chi Square Value		1082.8874	95% Jackknife UCL	9.5566741
14235				95% Standard Bootstrap UCL	9.5401145
14236	Anderson-Darling Test Statistic		1.0980282	95% Bootstrap-t UCL	9.9364217
14237	Anderson-Darling 5% Critical Value		0.7470784	95% Hall's Bootstrap UCL	12.950298
14238	Kolmogorov-Smirnov Test Statistic		0.1681139	95% Percentile Bootstrap UCL	9.5597222
14239	Kolmogorov-Smirnov 5% Critical Value		0.1465929	95% BCA Bootstrap UCL	9.6763889
14240	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	10.638028
14241				97.5% Chebyshev(Mean, Sd) UCL	11.402093
14242	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	12.902952
14243	95% Approximate Gamma UCL		9.5111383		
14244	95% Adjusted Gamma UCL		9.5411411		
14245					
14246	**Potential UCL to Use**			Use 95% Student's-t UCL	9.5566741
14247				or 95% Modified-t UCL	9.584279
14248					
14249	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
14250	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
14251	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
14252					
14253					
14254	M|MG/KG|NICKEL (gi_sd_ne_2009)				
14255					
14256	General Statistics				
14257	Number of Valid Observations		20	Number of Distinct Observations	19
14258					
14259	Raw Statistics			Log-transformed Statistics	
14260	Minimum		3.8	Minimum of Log Data	1.3350011
14261	Maximum		15.4	Maximum of Log Data	2.7343675
14262	Mean		7.9925	Mean of log Data	2.0045031
14263	Median		7.2	SD of log Data	0.395888
14264	SD		3.1764874		
14265	Coefficient of Variation		0.3974335		
14266	Skewness		0.7053233		
14267					
14268	Relevant UCL Statistics				
14269	Normal Distribution Test			Lognormal Distribution Test	
14270	Shapiro Wilk Test Statistic		0.9373014	Shapiro Wilk Test Statistic	0.9678989
14271	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
14272	Data appear Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
14273					
14274	Assuming Normal Distribution			Assuming Lognormal Distribution	
14275	95% Student's-t UCL		9.2206757	95% H-UCL	9.5615477
14276	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	11.151502
14277	95% Adjusted-CLT UCL (Chen-1995)		9.2805112	97.5% Chebyshev (MVUE) UCL	12.51777
14278	95% Modified-t UCL (Johnson-1978)		9.2393461	99% Chebyshev (MVUE) UCL	15.20154
14279					
14280	Gamma Distribution Test			Data Distribution	
14281	k star (bias corrected)		5.9145939	Data appear Normal at 5% Significance Level	
14282	Theta Star		1.3513185		
14283	MLE of Mean		7.9925		
14284	MLE of Standard Deviation		3.2863982		
14285	nu star		236.58376		
14286	Approximate Chi Square Value (.05)		201.97679	Nonparametric Statistics	
14287	Adjusted Level of Significance		0.038	95% CLT UCL	9.1608135
14288	Adjusted Chi Square Value		199.45308	95% Jackknife UCL	9.2206757
14289				95% Standard Bootstrap UCL	9.1581194
14290	Anderson-Darling Test Statistic		0.3337638	95% Bootstrap-t UCL	9.2679247
14291	Anderson-Darling 5% Critical Value		0.7439288	95% Hall's Bootstrap UCL	9.3646588
14292	Kolmogorov-Smirnov Test Statistic		0.1679608	95% Percentile Bootstrap UCL	9.18
14293	Kolmogorov-Smirnov 5% Critical Value		0.194232	95% BCA Bootstrap UCL	9.3325
14294	Data appear Gamma Distributed at 5% Significance Level			95% Chebyshev(Mean, Sd) UCL	11.088557
14295				97.5% Chebyshev(Mean, Sd) UCL	12.428223
14296	Assuming Gamma Distribution			99% Chebyshev(Mean, Sd) UCL	15.059738
14297	95% Approximate Gamma UCL		9.3619454		
14298	95% Adjusted Gamma UCL		9.4804033		
14299					
14300	Potential UCL to Use			Use 95% Student's-t UCL	9.2206757
14301					
14302	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
14303	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
14304	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
14305					
14306					
14307	M|MG/KG|NICKEL (gi_sd_ne_2010)				
14308					
14309	General Statistics				
14310	Number of Valid Observations		16	Number of Distinct Observations	15
14311					
14312	Raw Statistics			Log-transformed Statistics	
14313	Minimum		6	Minimum of Log Data	1.7917595
14314	Maximum		33.4	Maximum of Log Data	3.5085559

	A	B	C	D	E
14315	Mean		11.2625	Mean of log Data	2.2570359
14316	Median		8.2	SD of log Data	0.5173452
14317	SD		8.6566256		
14318	Coefficient of Variation		0.7686238		
14319	Skewness		2.3642007		
14320					
14321	**Relevant UCL Statistics**				
14322	**Normal Distribution Test**			**Lognormal Distribution Test**	
14323	Shapiro Wilk Test Statistic		0.5584964	Shapiro Wilk Test Statistic	0.7196878
14324	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
14325	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
14326					
14327	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14328	95% Student's-t UCL		15.056375	95% H-UCL	14.398274
14329	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	17.128112
14330	95% Adjusted-CLT UCL (Chen-1995)		16.188984	97.5% Chebyshev (MVUE) UCL	19.856753
14331	95% Modified-t UCL (Johnson-1978)		15.269563	99% Chebyshev (MVUE) UCL	25.21664
14332					
14333	**Gamma Distribution Test**			**Data Distribution**	
14334	k star (bias corrected)		2.6396937	**Data do not follow a Discernable Distribution (0.05)**	
14335	Theta Star		4.2665935		
14336	MLE of Mean		11.2625		
14337	MLE of Standard Deviation		6.9319918		
14338	nu star		84.470198		
14339	Approximate Chi Square Value (.05)		64.286729	**Nonparametric Statistics**	
14340	Adjusted Level of Significance		0.03348	95% CLT UCL	14.822221
14341	Adjusted Chi Square Value		62.284294	95% Jackknife UCL	15.056375
14342				95% Standard Bootstrap UCL	14.75134
14343	Anderson-Darling Test Statistic		2.3279351	95% Bootstrap-t UCL	30.553312
14344	Anderson-Darling 5% Critical Value		0.7438339	95% Hall's Bootstrap UCL	36.211793
14345	Kolmogorov-Smirnov Test Statistic		0.2921627	95% Percentile Bootstrap UCL	14.74375
14346	Kolmogorov-Smirnov 5% Critical Value		0.2165553	95% BCA Bootstrap UCL	16.2625
14347	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	20.695839
14348				97.5% Chebyshev(Mean, Sd) UCL	24.777652
14349	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	32.795584
14350	95% Approximate Gamma UCL		14.798476		
14351	95% Adjusted Gamma UCL		15.274246		
14352					
14353	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	20.695839
14354					
14355	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14356	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
14357	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
14358					
14359					
14360	**M|MG/KG|NICKEL (gi_sd_nw_2005)**				
14361					
14362	**General Statistics**				
14363	Number of Valid Observations		18	Number of Distinct Observations	16
14364					
14365	**Raw Statistics**			**Log-transformed Statistics**	
14366	Minimum		6.4	Minimum of Log Data	1.856298
14367	Maximum		47.4	Maximum of Log Data	3.8586222
14368	Mean		11.788889	Mean of log Data	2.3025112
14369	Median		8.5	SD of log Data	0.5030361
14370	SD		9.7763153		
14371	Coefficient of Variation		0.8292822		
14372	Skewness		3.2610114		
14373					
14374	**Relevant UCL Statistics**				
14375	**Normal Distribution Test**			**Lognormal Distribution Test**	
14376	Shapiro Wilk Test Statistic		0.5357355	Shapiro Wilk Test Statistic	0.7509249
14377	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
14378	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
14379					
14380	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14381	95% Student's-t UCL		15.797464	95% H-UCL	14.526324

	A	B	C	D	E
14382	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	17.281831
14383	95% Adjusted-CLT UCL (Chen-1995)		17.471622	97.5% Chebyshev (MVUE) UCL	19.887443
14384	95% Modified-t UCL (Johnson-1978)		16.092655	99% Chebyshev (MVUE) UCL	25.005664
14385					
14386	**Gamma Distribution Test**			**Data Distribution**	
14387	k star (bias corrected)		2.6985377	**Data do not follow a Discernable Distribution (0.05)**	
14388	Theta Star		4.3686212		
14389	MLE of Mean		11.788889		
14390	MLE of Standard Deviation		7.176433		
14391	nu star		97.147356		
14392	Approximate Chi Square Value (.05)		75.41179	**Nonparametric Statistics**	
14393	Adjusted Level of Significance		0.03574	95% CLT UCL	15.579124
14394	Adjusted Chi Square Value		73.574491	95% Jackknife UCL	15.797464
14395				95% Standard Bootstrap UCL	15.382813
14396	Anderson-Darling Test Statistic		2.1378858	95% Bootstrap-t UCL	27.103173
14397	Anderson-Darling 5% Critical Value		0.7451498	95% Hall's Bootstrap UCL	31.613774
14398	Kolmogorov-Smirnov Test Statistic		0.2605328	95% Percentile Bootstrap UCL	15.766667
14399	Kolmogorov-Smirnov 5% Critical Value		0.2049386	95% BCA Bootstrap UCL	17.711111
14400	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	21.833098
14401				97.5% Chebyshev(Mean, Sd) UCL	26.179235
14402	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	34.71638
14403	95% Approximate Gamma UCL		15.186742		
14404	95% Adjusted Gamma UCL		15.565984		
14405					
14406	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	21.833098
14407					
14408	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14409	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
14410	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
14411					
14412					
14413	**M|MG/KG|NICKEL (gi_sd_nw_2009)**				
14414					
14415	**General Statistics**				
14416	Number of Valid Observations		7	Number of Distinct Observations	7
14417					
14418	**Raw Statistics**			**Log-transformed Statistics**	
14419	Minimum		5.35	Minimum of Log Data	1.6770966
14420	Maximum		16.9	Maximum of Log Data	2.8273136
14421	Mean		9.6357143	Mean of log Data	2.1911127
14422	Median		8.4	SD of log Data	0.4134562
14423	SD		4.1004791		
14424	Coefficient of Variation		0.4255501		
14425	Skewness		0.8957316		
14426					
14427					
14428	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
14429					
14430	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
14431	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
14432					
14433					
14434	**Warning: There are only 7 Values in this data**				
14435	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
14436	**the resulting calculations may not be reliable enough to draw conclusions**				
14437					
14438	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
14439					
14440	**Relevant UCL Statistics**				
14441	**Normal Distribution Test**			**Lognormal Distribution Test**	
14442	Shapiro Wilk Test Statistic		0.9240325	Shapiro Wilk Test Statistic	0.9642245

	A	B	C	D	E
14443	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
14444	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
14445					
14446	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14447	95% Student's-t UCL		12.647324	95% H-UCL	14.364893
14448	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	16.195114
14449	95% Adjusted-CLT UCL (Chen-1995)		12.745621	97.5% Chebyshev (MVUE) UCL	19.040701
14450	95% Modified-t UCL (Johnson-1978)		12.734775	99% Chebyshev (MVUE) UCL	24.630304
14451					
14452	**Gamma Distribution Test**			**Data Distribution**	
14453	k star (bias corrected)		4.0301535	**Data appear Normal at 5% Significance Level**	
14454	Theta Star		2.390905		
14455	MLE of Mean		9.6357143		
14456	MLE of Standard Deviation		4.7997998		
14457	nu star		56.422149		
14458	Approximate Chi Square Value (.05)		40.157716	**Nonparametric Statistics**	
14459	Adjusted Level of Significance		0.01584	95% CLT UCL	12.184967
14460	Adjusted Chi Square Value		36.056167	95% Jackknife UCL	12.647324
14461				95% Standard Bootstrap UCL	11.97666
14462	Anderson-Darling Test Statistic		0.2299038	95% Bootstrap-t UCL	13.837048
14463	Anderson-Darling 5% Critical Value		0.7093394	95% Hall's Bootstrap UCL	12.782333
14464	Kolmogorov-Smirnov Test Statistic		0.1597652	95% Percentile Bootstrap UCL	12.185714
14465	Kolmogorov-Smirnov 5% Critical Value		0.3126026	95% BCA Bootstrap UCL	12.507143
14466	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	16.39129
14467				97.5% Chebyshev(Mean, Sd) UCL	19.314433
14468	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	25.056382
14469	95% Approximate Gamma UCL		13.538313		
14470	95% Adjusted Gamma UCL		15.078356		
14471					
14472	**Potential UCL to Use**			Use 95% Student's-t UCL	12.647324
14473					
14474	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14475	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
14476	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
14477					
14478					
14479	**M|MG/KG|NICKEL (gi_sd_nw_2010)**				
14480					
14481	**General Statistics**				
14482	Number of Valid Observations		4	Number of Distinct Observations	4
14483					
14484					
14485	**Warning: This data set only has 4 observations!**				
14486	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
14487	**The data set for variable M|MG/KG|NICKEL (gi_sd_nw_2010) was not processed!**				
14488					
14489	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
14490	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
14491					
14492					
14493					
14494	**M|MG/KG|NICKEL (gi_sd_ref_2009)**				
14495					
14496	**General Statistics**				
14497	Number of Valid Observations		6	Number of Distinct Observations	6
14498					
14499	**Raw Statistics**			**Log-transformed Statistics**	
14500	Minimum		5.3	Minimum of Log Data	1.6677068
14501	Maximum		8.2	Maximum of Log Data	2.1041342
14502	Mean		6.7	Mean of log Data	1.8906944
14503	Median		6.8	SD of log Data	0.1662879
14504	SD		1.0990905		

	A	B	C	D	E
14505	Coefficient of Variation		0.1640434		
14506	Skewness		0.0162687		
14507					
14508					
14509	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
14510					
14511	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
14512	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
14513					
14514					
14515	**Warning: There are only 6 Values in this data**				
14516	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
14517	**the resulting calculations may not be reliable enough to draw conclusions**				
14518					
14519	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
14520					
14521	**Relevant UCL Statistics**				
14522	**Normal Distribution Test**			**Lognormal Distribution Test**	
14523	Shapiro Wilk Test Statistic		0.9632106	Shapiro Wilk Test Statistic	0.9594429
14524	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
14525	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
14526					
14527	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14528	95% Student's-t UCL		7.6041559	95% H-UCL	7.8064531
14529	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	8.6833485
14530	95% Adjusted-CLT UCL (Chen-1995)		7.4412331	97.5% Chebyshev (MVUE) UCL	9.5412856
14531	95% Modified-t UCL (Johnson-1978)		7.6046526	99% Chebyshev (MVUE) UCL	11.226537
14532					
14533	**Gamma Distribution Test**			**Data Distribution**	
14534	k star (bias corrected)		22.098654	**Data appear Normal at 5% Significance Level**	
14535	Theta Star		0.3031859		
14536	MLE of Mean		6.7		
14537	MLE of Standard Deviation		1.4252528		
14538	nu star		265.18384		
14539	Approximate Chi Square Value (.05)		228.47396	**Nonparametric Statistics**	
14540	Adjusted Level of Significance		0.01222	95% CLT UCL	7.4380488
14541	Adjusted Chi Square Value		216.09165	95% Jackknife UCL	7.6041559
14542				95% Standard Bootstrap UCL	7.3865913
14543	Anderson-Darling Test Statistic		0.2346566	95% Bootstrap-t UCL	7.635525
14544	Anderson-Darling 5% Critical Value		0.6969222	95% Hall's Bootstrap UCL	7.3333519
14545	Kolmogorov-Smirnov Test Statistic		0.2030061	95% Percentile Bootstrap UCL	7.3333333
14546	Kolmogorov-Smirnov 5% Critical Value		0.3317939	95% BCA Bootstrap UCL	7.3333333
14547	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	8.6558459
14548				97.5% Chebyshev(Mean, Sd) UCL	9.502142
14549	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	11.164527
14550	95% Approximate Gamma UCL		7.7765174		
14551	95% Adjusted Gamma UCL		8.2221213		
14552					
14553	**Potential UCL to Use**			Use 95% Student's-t UCL	7.6041559
14554					
14555	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14556	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
14557	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
14558					
14559					
14560	**M|MG/KG|NICKEL (gi_sd_ref_2010)**				
14561					
14562	**General Statistics**				
14563	Number of Valid Observations		3	Number of Distinct Observations	3

	A	B	C	D	E
14564					
14565					
14566	**Warning: This data set only has 3 observations!**				
14567	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
14568	**The data set for variable M|MG/KG|NICKEL (gi_sd_ref_2010) was not processed!**				
14569					
14570	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
14571	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
14572					
14573					
14574					
14575	**M|MG/KG|NICKEL (gi_sd_s_2005)**				
14576					
14577	**General Statistics**				
14578	Number of Valid Observations		8	Number of Distinct Observations	8
14579					
14580	**Raw Statistics**			**Log-transformed Statistics**	
14581	Minimum		6.2	Minimum of Log Data	1.8245493
14582	Maximum		10.9	Maximum of Log Data	2.3887628
14583	Mean		8.6875	Mean of log Data	2.1457517
14584	Median		9.05	SD of log Data	0.1953438
14585	SD		1.6146096		
14586	Coefficient of Variation		0.1858543		
14587	Skewness		-0.382047		
14588					
14589					
14590	**Warning: There are only 8 Values in this data**				
14591	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
14592	**the resulting calculations may not be reliable enough to draw conclusions**				
14593					
14594	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
14595					
14596	**Relevant UCL Statistics**				
14597	**Normal Distribution Test**			**Lognormal Distribution Test**	
14598	Shapiro Wilk Test Statistic		0.9445184	Shapiro Wilk Test Statistic	0.926613
14599	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
14600	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
14601					
14602	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14603	95% Student's-t UCL		9.7690215	95% H-UCL	10.053606
14604	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	11.313539
14605	95% Adjusted-CLT UCL (Chen-1995)		9.5440757	97.5% Chebyshev (MVUE) UCL	12.447834
14606	95% Modified-t UCL (Johnson-1978)		9.7561703	99% Chebyshev (MVUE) UCL	14.675936
14607					
14608	**Gamma Distribution Test**			**Data Distribution**	
14609	k star (bias corrected)		19.556582	**Data appear Normal at 5% Significance Level**	
14610	Theta Star		0.4442238		
14611	MLE of Mean		8.6875		
14612	MLE of Standard Deviation		1.9644833		
14613	nu star		312.90531		
14614	Approximate Chi Square Value (.05)		272.92531	**Nonparametric Statistics**	
14615	Adjusted Level of Significance		0.01946	95% CLT UCL	9.6264659
14616	Adjusted Chi Square Value		263.44625	95% Jackknife UCL	9.7690215
14617				95% Standard Bootstrap UCL	9.5663805
14618	Anderson-Darling Test Statistic		0.3464706	95% Bootstrap-t UCL	9.6162572
14619	Anderson-Darling 5% Critical Value		0.7156859	95% Hall's Bootstrap UCL	9.502616
14620	Kolmogorov-Smirnov Test Statistic		0.234408	95% Percentile Bootstrap UCL	9.5375
14621	Kolmogorov-Smirnov 5% Critical Value		0.2936926	95% BCA Bootstrap UCL	9.475
14622	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	11.175781
14623				97.5% Chebyshev(Mean, Sd) UCL	12.252462
14624	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	14.367393
14625	95% Approximate Gamma UCL		9.9601056		
14626	95% Adjusted Gamma UCL		10.31848		

	A	B	C	D	E
14627					
14628	**Potential UCL to Use**			Use 95% Student's-t UCL	9.7690215
14629					
14630	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14631	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
14632	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
14633					
14634					
14635	**M|MG/KG|NICKEL (gi_sd_s_2010)**				
14636					
14637	**General Statistics**				
14638	Number of Valid Observations		2	Number of Distinct Observations	2
14639					
14640					
14641	**Warning: This data set only has 2 observations!**				
14642	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
14643	**The data set for variable M|MG/KG|NICKEL (gi_sd_s_2010) was not processed!**				
14644					
14645	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
14646	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
14647					
14648					
14649					
14650	**M|MG/KG|NICKEL (gi_sd_stillwater_2005)**				
14651					
14652	**General Statistics**				
14653	Number of Valid Observations		4	Number of Distinct Observations	4
14654					
14655					
14656	**Warning: This data set only has 4 observations!**				
14657	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
14658	**The data set for variable M|MG/KG|NICKEL (gi_sd_stillwater_2005) was not processed!**				
14659					
14660	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
14661	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
14662					
14663					
14664					
14665	**M|MG/KG|NICKEL (gi_sd_stillwater_2009)**				
14666					
14667	**General Statistics**				
14668	Number of Valid Observations		60	Number of Distinct Observations	48
14669					
14670	**Raw Statistics**			**Log-transformed Statistics**	
14671	Minimum		4.6	Minimum of Log Data	1.5260563
14672	Maximum		30.1	Maximum of Log Data	3.4045252
14673	Mean		9.3666667	Mean of log Data	2.1718803
14674	Median		8.4	SD of log Data	0.3423021
14675	SD		4.051006		
14676	Coefficient of Variation		0.4324917		
14677	Skewness		2.8060944		
14678					
14679	**Relevant UCL Statistics**				
14680	**Normal Distribution Test**			**Lognormal Distribution Test**	
14681	Lilliefors Test Statistic		0.2005437	Lilliefors Test Statistic	0.1181491
14682	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
14683	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
14684					

	A	B	C	D	E
14685	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14686	95% Student's-t UCL		10.240619	95% H-UCL	10.045659
14687	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	11.129645
14688	95% Adjusted-CLT UCL (Chen-1995)		10.429336	97.5% Chebyshev (MVUE) UCL	11.923665
14689	95% Modified-t UCL (Johnson-1978)		10.272196	99% Chebyshev (MVUE) UCL	13.483364
14690					
14691	**Gamma Distribution Test**			**Data Distribution**	
14692	k star (bias corrected)		7.4425827	**Data do not follow a Discernable Distribution (0.05)**	
14693	Theta Star		1.2585237		
14694	MLE of Mean		9.3666667		
14695	MLE of Standard Deviation		3.4333907		
14696	nu star		893.10992		
14697	Approximate Chi Square Value (.05)		824.74779	**Nonparametric Statistics**	
14698	Adjusted Level of Significance		0.046	95% CLT UCL	10.226897
14699	Adjusted Chi Square Value		823.14239	95% Jackknife UCL	10.240619
14700				95% Standard Bootstrap UCL	10.218034
14701	Anderson-Darling Test Statistic		1.3923748	95% Bootstrap-t UCL	10.613875
14702	Anderson-Darling 5% Critical Value		0.7521206	95% Hall's Bootstrap UCL	10.897282
14703	Kolmogorov-Smirnov Test Statistic		0.1472208	95% Percentile Bootstrap UCL	10.314167
14704	Kolmogorov-Smirnov 5% Critical Value		0.1148337	95% BCA Bootstrap UCL	10.4575
14705	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	11.646295
14706				97.5% Chebyshev(Mean, Sd) UCL	12.632692
14707	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	14.570278
14708	95% Approximate Gamma UCL		10.143056		
14709	95% Adjusted Gamma UCL		10.162838		
14710					
14711	**Potential UCL to Use**			Use 95% Student's-t UCL	10.240619
14712				or 95% Modified-t UCL	10.272196
14713					
14714	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14715	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
14716	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
14717					
14718					
14719	**M|MG/KG|NICKEL (gi_sd_stillwater_2010)**				
14720					
14721	**General Statistics**				
14722	Number of Valid Observations		11	Number of Distinct Observations	8
14723					
14724	**Raw Statistics**			**Log-transformed Statistics**	
14725	Minimum		5.85	Minimum of Log Data	1.7664417
14726	Maximum		10	Maximum of Log Data	2.3025851
14727	Mean		7.45	Mean of log Data	1.9963164
14728	Median		7	SD of log Data	0.1598048
14729	SD		1.2379418		
14730	Coefficient of Variation		0.1661667		
14731	Skewness		0.8873154		
14732					
14733					
14734	**Relevant UCL Statistics**				
14735	**Normal Distribution Test**			**Lognormal Distribution Test**	
14736	Shapiro Wilk Test Statistic		0.9234096	Shapiro Wilk Test Statistic	0.9477517
14737	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
14738	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
14739					
14740	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14741	95% Student's-t UCL		8.1265075	95% H-UCL	8.1784258
14742	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	9.0157075
14743	95% Adjusted-CLT UCL (Chen-1995)		8.1706478	97.5% Chebyshev (MVUE) UCL	9.6941602
14744	95% Modified-t UCL (Johnson-1978)		8.1431506	99% Chebyshev (MVUE) UCL	11.026849
14745					
14746	**Gamma Distribution Test**			**Data Distribution**	
14747	k star (bias corrected)		30.744988	**Data appear Normal at 5% Significance Level**	
14748	Theta Star		0.2423159		
14749	MLE of Mean		7.45		
14750	MLE of Standard Deviation		1.3435973		
14751	nu star		676.38974		

	A	B	C	D	E
14752	Approximate Chi Square Value (.05)		617.04995	**Nonparametric Statistics**	
14753	Adjusted Level of Significance		0.02783	95% CLT UCL	8.0639474
14754	Adjusted Chi Square Value		607.79772	95% Jackknife UCL	8.1265075
14755				95% Standard Bootstrap UCL	8.0436059
14756	Anderson-Darling Test Statistic		0.371495	95% Bootstrap-t UCL	8.3121931
14757	Anderson-Darling 5% Critical Value		0.7284781	95% Hall's Bootstrap UCL	8.3447729
14758	Kolmogorov-Smirnov Test Statistic		0.1887059	95% Percentile Bootstrap UCL	8.0454545
14759	Kolmogorov-Smirnov 5% Critical Value		0.2547489	95% BCA Bootstrap UCL	8.1272727
14760	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	9.0769743
14761				97.5% Chebyshev(Mean, Sd) UCL	9.7809674
14762	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	11.163826
14763	95% Approximate Gamma UCL		8.1664434		
14764	95% Adjusted Gamma UCL		8.2907576		
14765					
14766	**Potential UCL to Use**			Use 95% Student's-t UCL	8.1265075
14767					
14768	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14769	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
14770	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
14771					
14772					
14773	**M|MG/KG|POTASSIUM (gi_sd_ne_2005)**				
14774					
14775	**General Statistics**				
14776	Number of Valid Observations		36	Number of Distinct Observations	36
14777					
14778	**Raw Statistics**			**Log-transformed Statistics**	
14779	Minimum		654	Minimum of Log Data	6.4831074
14780	Maximum		1430	Maximum of Log Data	7.2654297
14781	Mean		913.19444	Mean of log Data	6.8024282
14782	Median		883.5	SD of log Data	0.1701657
14783	SD		164.05849		
14784	Coefficient of Variation		0.1796534		
14785	Skewness		1.1413772		
14786					
14787	**Relevant UCL Statistics**				
14788	**Normal Distribution Test**			**Lognormal Distribution Test**	
14789	Shapiro Wilk Test Statistic		0.9211262	Shapiro Wilk Test Statistic	0.9643152
14790	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
14791	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
14792					
14793	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14794	95% Student's-t UCL		959.39256	95% H-UCL	959.50456
14795	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1026.2639
14796	95% Adjusted-CLT UCL (Chen-1995)		963.72765	97.5% Chebyshev (MVUE) UCL	1075.3668
14797	95% Modified-t UCL (Johnson-1978)		960.25947	99% Chebyshev (MVUE) UCL	1171.8202
14798					
14799	**Gamma Distribution Test**			**Data Distribution**	
14800	k star (bias corrected)		31.734829	**Data appear Gamma Distributed at 5% Significance Level**	
14801	Theta Star		28.775779		
14802	MLE of Mean		913.19444		
14803	MLE of Standard Deviation		162.10454		
14804	nu star		2284.9077		
14805	Approximate Chi Square Value (.05)		2174.8635	**Nonparametric Statistics**	
14806	Adjusted Level of Significance		0.0428	95% CLT UCL	958.16981
14807	Adjusted Chi Square Value		2170.0121	95% Jackknife UCL	959.39256
14808				95% Standard Bootstrap UCL	956.41977
14809	Anderson-Darling Test Statistic		0.6026572	95% Bootstrap-t UCL	967.16445
14810	Anderson-Darling 5% Critical Value		0.7458645	95% Hall's Bootstrap UCL	967.02063
14811	Kolmogorov-Smirnov Test Statistic		0.1414668	95% Percentile Bootstrap UCL	958.63889
14812	Kolmogorov-Smirnov 5% Critical Value		0.1464542	95% BCA Bootstrap UCL	963.55556
14813	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1032.3802
14814				97.5% Chebyshev(Mean, Sd) UCL	1083.9519
14815	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1185.2547
14816	95% Approximate Gamma UCL		959.40045		
14817	95% Adjusted Gamma UCL		961.54533		
14818					
14819	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	959.40045

	A	B	C	D	E
14820					
14821	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14822	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
14823	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
14824					
14825					
14826	**M|MG/KG|POTASSIUM (gi_sd_ne_2009)**				
14827					
14828	**General Statistics**				
14829	Number of Valid Observations		20	Number of Distinct Observations	20
14830					
14831	**Raw Statistics**			**Log-transformed Statistics**	
14832	Minimum		522	Minimum of Log Data	6.2576676
14833	Maximum		1800	Maximum of Log Data	7.4955419
14834	Mean		913.8	Mean of log Data	6.7771786
14835	Median		825	SD of log Data	0.2837215
14836	SD		287.55715		
14837	Coefficient of Variation		0.3146828		
14838	Skewness		1.6168027		
14839					
14840	**Relevant UCL Statistics**				
14841	**Normal Distribution Test**			**Lognormal Distribution Test**	
14842	Shapiro Wilk Test Statistic		0.8737346	Shapiro Wilk Test Statistic	0.9667924
14843	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
14844	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
14845					
14846	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14847	95% Student's-t UCL		1024.9828	95% H-UCL	1029.8513
14848	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1166.9943
14849	95% Adjusted-CLT UCL (Chen-1995)		1044.4025	97.5% Chebyshev (MVUE) UCL	1277.4467
14850	95% Modified-t UCL (Johnson-1978)		1028.8571	99% Chebyshev (MVUE) UCL	1494.4089
14851					
14852	**Gamma Distribution Test**			**Data Distribution**	
14853	k star (bias corrected)		10.684231	**Data appear Gamma Distributed at 5% Significance Level**	
14854	Theta Star		85.527916		
14855	MLE of Mean		913.8		
14856	MLE of Standard Deviation		279.56289		
14857	nu star		427.36923		
14858	Approximate Chi Square Value (.05)		380.44402	**Nonparametric Statistics**	
14859	Adjusted Level of Significance		0.038	95% CLT UCL	1019.5637
14860	Adjusted Chi Square Value		376.9514	95% Jackknife UCL	1024.9828
14861				95% Standard Bootstrap UCL	1017.2453
14862	Anderson-Darling Test Statistic		0.3872529	95% Bootstrap-t UCL	1064.0515
14863	Anderson-Darling 5% Critical Value		0.7415591	95% Hall's Bootstrap UCL	1135.1011
14864	Kolmogorov-Smirnov Test Statistic		0.1432512	95% Percentile Bootstrap UCL	1024.3
14865	Kolmogorov-Smirnov 5% Critical Value		0.1937564	95% BCA Bootstrap UCL	1037.3
14866	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1194.076
14867				97.5% Chebyshev(Mean, Sd) UCL	1315.3517
14868	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1553.5743
14869	95% Approximate Gamma UCL		1026.5111		
14870	95% Adjusted Gamma UCL		1036.0222		
14871					
14872	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	1026.5111
14873					
14874	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14875	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
14876	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
14877					
14878					
14879	**M|MG/KG|POTASSIUM (gi_sd_ne_2010)**				
14880					
14881	**General Statistics**				
14882	Number of Valid Observations		16	Number of Distinct Observations	16

	A	B	C	D	E
14883					
14884	**Raw Statistics**			**Log-transformed Statistics**	
14885	Minimum		709	Minimum of Log Data	6.5638555
14886	Maximum		1390	Maximum of Log Data	7.237059
14887	Mean		907.375	Mean of log Data	6.7930282
14888	Median		866	SD of log Data	0.1881674
14889	SD		185.99279		
14890	Coefficient of Variation		0.204979		
14891	Skewness		1.3999921		
14892					
14893	**Relevant UCL Statistics**				
14894	**Normal Distribution Test**			**Lognormal Distribution Test**	
14895	Shapiro Wilk Test Statistic		0.8622384	Shapiro Wilk Test Statistic	0.911021
14896	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
14897	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
14898					
14899	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14900	95% Student's-t UCL		988.88868	95% H-UCL	990.11475
14901	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1093.2941
14902	95% Adjusted-CLT UCL (Chen-1995)		1001.247	97.5% Chebyshev (MVUE) UCL	1174.113
14903	95% Modified-t UCL (Johnson-1978)		991.60106	99% Chebyshev (MVUE) UCL	1332.866
14904					
14905	**Gamma Distribution Test**			**Data Distribution**	
14906	k star (bias corrected)		23.354048	**Data appear Gamma Distributed at 5% Significance Level**	
14907	Theta Star		38.853008		
14908	MLE of Mean		907.375		
14909	MLE of Standard Deviation		187.76115		
14910	nu star		747.32952		
14911	Approximate Chi Square Value (.05)		684.8953	**Nonparametric Statistics**	
14912	Adjusted Level of Significance		0.03348	95% CLT UCL	983.85773
14913	Adjusted Chi Square Value		678.09471	95% Jackknife UCL	988.88868
14914				95% Standard Bootstrap UCL	982.02714
14915	Anderson-Darling Test Statistic		0.6575965	95% Bootstrap-t UCL	1023.5311
14916	Anderson-Darling 5% Critical Value		0.7361755	95% Hall's Bootstrap UCL	1011.8126
14917	Kolmogorov-Smirnov Test Statistic		0.1942779	95% Percentile Bootstrap UCL	981.125
14918	Kolmogorov-Smirnov 5% Critical Value		0.2145678	95% BCA Bootstrap UCL	995.9375
14919	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1110.0559
14920				97.5% Chebyshev(Mean, Sd) UCL	1197.7561
14921	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1370.0262
14922	95% Approximate Gamma UCL		990.09021		
14923	95% Adjusted Gamma UCL		1000.0198		
14924					
14925	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	990.09021
14926					
14927	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14928	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
14929	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
14930					
14931					
14932	**M|MG/KG|POTASSIUM (gi_sd_nw_2005)**				
14933					
14934	**General Statistics**				
14935	Number of Valid Observations		18	Number of Distinct Observations	18
14936					
14937	**Raw Statistics**			**Log-transformed Statistics**	
14938	Minimum		742	Minimum of Log Data	6.6093492
14939	Maximum		2400	Maximum of Log Data	7.783224
14940	Mean		1038.6111	Mean of log Data	6.9037278
14941	Median		922.5	SD of log Data	0.2724621
14942	SD		376.3925		
14943	Coefficient of Variation		0.3623998		
14944	Skewness		3.0631849		
14945					
14946	**Relevant UCL Statistics**				
14947	**Normal Distribution Test**			**Lognormal Distribution Test**	
14948	Shapiro Wilk Test Statistic		0.6403821	Shapiro Wilk Test Statistic	0.8004629
14949	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
14950	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	

	A	B	C	D	E
14951					
14952	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
14953	95% Student's-t UCL		1192.943	95% H-UCL	1166.7938
14954	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1323.2987
14955	95% Adjusted-CLT UCL (Chen-1995)		1252.9788	97.5% Chebyshev (MVUE) UCL	1449.5826
14956	95% Modified-t UCL (Johnson-1978)		1203.6186	99% Chebyshev (MVUE) UCL	1697.643
14957					
14958	**Gamma Distribution Test**			**Data Distribution**	
14959	k star (bias corrected)		10.115449	**Data do not follow a Discernable Distribution (0.05)**	
14960	Theta Star		102.67573		
14961	MLE of Mean		1038.6111		
14962	MLE of Standard Deviation		326.55804		
14963	nu star		364.15616		
14964	Approximate Chi Square Value (.05)		320.93183	**Nonparametric Statistics**	
14965	Adjusted Level of Significance		0.03574	95% CLT UCL	1184.5369
14966	Adjusted Chi Square Value		317.04033	95% Jackknife UCL	1192.943
14967				95% Standard Bootstrap UCL	1176.9193
14968	Anderson-Darling Test Statistic		1.3878551	95% Bootstrap-t UCL	1372.2001
14969	Anderson-Darling 5% Critical Value		0.739237	95% Hall's Bootstrap UCL	1767.138
14970	Kolmogorov-Smirnov Test Statistic		0.248343	95% Percentile Bootstrap UCL	1187.4444
14971	Kolmogorov-Smirnov 5% Critical Value		0.2034102	95% BCA Bootstrap UCL	1257.2222
14972	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1425.3176
14973				97.5% Chebyshev(Mean, Sd) UCL	1592.6459
14974	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1921.3298
14975	95% Approximate Gamma UCL		1178.4953		
14976	95% Adjusted Gamma UCL		1192.9607		
14977					
14978	**Potential UCL to Use**			Use 95% Student's-t UCL	1192.943
14979				or 95% Modified-t UCL	1203.6186
14980					
14981	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
14982	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
14983	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
14984					
14985					
14986	**M|MG/KG|POTASSIUM (gi_sd_nw_2009)**				
14987					
14988	**General Statistics**				
14989	Number of Valid Observations		7	Number of Distinct Observations	7
14990					
14991	**Raw Statistics**			**Log-transformed Statistics**	
14992	Minimum		974	Minimum of Log Data	6.8814113
14993	Maximum		1860	Maximum of Log Data	7.5283318
14994	Mean		1343.4286	Mean of log Data	7.1684315
14995	Median		1080	SD of log Data	0.2809799
14996	SD		388.02356		
14997	Coefficient of Variation		0.2888308		
14998	Skewness		0.5611218		
14999					
15000					
15001	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
15002					
15003	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
15004	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
15005					
15006					
15007	**Warning: There are only 7 Values in this data**				
15008	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
15009	**the resulting calculations may not be reliable enough to draw conclusions**				
15010					

	A	B	C	D	E
15011	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
15012					
15013	**Relevant UCL Statistics**				
15014	**Normal Distribution Test**			**Lognormal Distribution Test**	
15015	Shapiro Wilk Test Statistic		0.8052063	Shapiro Wilk Test Statistic	0.8163769
15016	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
15017	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
15018					
15019	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
15020	95% Student's-t UCL		1628.4137	95% H-UCL	1730.3674
15021	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1964.8393
15022	95% Adjusted-CLT UCL (Chen-1995)		1617.8965	97.5% Chebyshev (MVUE) UCL	2234.221
15023	95% Modified-t UCL (Johnson-1978)		1633.5977	99% Chebyshev (MVUE) UCL	2763.3692
15024					
15025	**Gamma Distribution Test**			**Data Distribution**	
15026	k star (bias corrected)		8.4592544	**Data appear Normal at 5% Significance Level**	
15027	Theta Star		158.8117		
15028	MLE of Mean		1343.4286		
15029	MLE of Standard Deviation		461.90061		
15030	nu star		118.42956		
15031	Approximate Chi Square Value (.05)		94.301817	**Nonparametric Statistics**	
15032	Adjusted Level of Significance		0.01584	95% CLT UCL	1584.6614
15033	Adjusted Chi Square Value		87.808705	95% Jackknife UCL	1628.4137
15034				95% Standard Bootstrap UCL	1564.2465
15035	Anderson-Darling Test Statistic		0.7337055	95% Bootstrap-t UCL	1787.1961
15036	Anderson-Darling 5% Critical Value		0.7076453	95% Hall's Bootstrap UCL	1503.1651
15037	Kolmogorov-Smirnov Test Statistic		0.3347315	95% Percentile Bootstrap UCL	1580
15038	Kolmogorov-Smirnov 5% Critical Value		0.3117121	95% BCA Bootstrap UCL	1581.4286
15039	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1982.7009
15040				97.5% Chebyshev(Mean, Sd) UCL	2259.3145
15041	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	2802.6684
15042	95% Approximate Gamma UCL		1687.1537		
15043	95% Adjusted Gamma UCL		1811.9121		
15044					
15045	**Potential UCL to Use**			Use 95% Student's-t UCL	1628.4137
15046					
15047	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
15048	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
15049	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
15050					
15051					
15052	**M|MG/KG|POTASSIUM (gi_sd_nw_2010)**				
15053					
15054	**General Statistics**				
15055	Number of Valid Observations		4	Number of Distinct Observations	4
15056					
15057					
15058	**Warning: This data set only has 4 observations!**				
15059	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
15060	**The data set for variable M|MG/KG|POTASSIUM (gi_sd_nw_2010) was not processed!**				
15061					
15062	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
15063	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
15064					
15065					
15066					
15067	**M|MG/KG|POTASSIUM (gi_sd_ref_2009)**				
15068					
15069	**General Statistics**				

	A	B	C	D	E
15070	Number of Valid Observations		6	Number of Distinct Observations	6
15071					
15072	**Raw Statistics**			**Log-transformed Statistics**	
15073	Minimum		566	Minimum of Log Data	6.3385941
15074	Maximum		1150	Maximum of Log Data	7.0475172
15075	Mean		855.91667	Mean of log Data	6.7209214
15076	Median		839.75	SD of log Data	0.2765857
15077	SD		229.87919		
15078	Coefficient of Variation		0.2685766		
15079	Skewness		0.0603662		
15080					
15081					
15082	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
15083					
15084	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
15085	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
15086					
15087					
15088	**Warning: There are only 6 Values in this data**				
15089	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
15090	**the resulting calculations may not be reliable enough to draw conclusions**				
15091					
15092	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
15093					
15094	**Relevant UCL Statistics**				
15095	**Normal Distribution Test**			**Lognormal Distribution Test**	
15096	Shapiro Wilk Test Statistic		0.9359075	Shapiro Wilk Test Statistic	0.9365655
15097	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
15098	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
15099					
15100	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
15101	95% Student's-t UCL		1045.0245	95% H-UCL	1129.6147
15102	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1277.7438
15103	95% Adjusted-CLT UCL (Chen-1995)		1012.7538	97.5% Chebyshev (MVUE) UCL	1460.0912
15104	95% Modified-t UCL (Johnson-1978)		1045.41	99% Chebyshev (MVUE) UCL	1818.2772
15105					
15106	**Gamma Distribution Test**			**Data Distribution**	
15107	k star (bias corrected)		8.1931524	**Data appear Normal at 5% Significance Level**	
15108	Theta Star		104.46732		
15109	MLE of Mean		855.91667		
15110	MLE of Standard Deviation		299.02395		
15111	nu star		98.317828		
15112	Approximate Chi Square Value (.05)		76.444236	**Nonparametric Statistics**	
15113	Adjusted Level of Significance		0.01222	95% CLT UCL	1010.2825
15114	Adjusted Chi Square Value		69.502896	95% Jackknife UCL	1045.0245
15115				95% Standard Bootstrap UCL	997.4564
15116	Anderson-Darling Test Statistic		0.3094215	95% Bootstrap-t UCL	1091.755
15117	Anderson-Darling 5% Critical Value		0.6975657	95% Hall's Bootstrap UCL	983.79457
15118	Kolmogorov-Smirnov Test Statistic		0.2202829	95% Percentile Bootstrap UCL	997.91667
15119	Kolmogorov-Smirnov 5% Critical Value		0.3320177	95% BCA Bootstrap UCL	997.91667
15120	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1264.9897
15121				97.5% Chebyshev(Mean, Sd) UCL	1441.9959
15122	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1789.6903
15123	95% Approximate Gamma UCL		1100.8269		
15124	95% Adjusted Gamma UCL		1210.7678		
15125					
15126	**Potential UCL to Use**			Use 95% Student's-t UCL	1045.0245
15127					
15128	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
15129	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				

	A	B	C	D	E
15130	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
15131					
15132					
15133	M|MG/KG|POTASSIUM (gi_sd_ref_2010)				
15134					
15135	General Statistics				
15136	Number of Valid Observations		3	Number of Distinct Observations	3
15137					
15138					
15139	Warning: This data set only has 3 observations!				
15140	Data set is too small to compute reliable and meaningful statistics and estimates!				
15141	The data set for variable M|MG/KG|POTASSIUM (gi_sd_ref_2010) was not processed!				
15142					
15143	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
15144	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
15145					
15146					
15147					
15148	M|MG/KG|POTASSIUM (gi_sd_s_2005)				
15149					
15150	General Statistics				
15151	Number of Valid Observations		8	Number of Distinct Observations	8
15152					
15153	Raw Statistics			Log-transformed Statistics	
15154	Minimum		644	Minimum of Log Data	6.4676987
15155	Maximum		1220	Maximum of Log Data	7.1066061
15156	Mean		840.875	Mean of log Data	6.7072468
15157	Median		764	SD of log Data	0.2450259
15158	SD		217.04077		
15159	Coefficient of Variation		0.258113		
15160	Skewness		0.896421		
15161					
15162					
15163	Warning: There are only 8 Values in this data				
15164	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
15165	the resulting calculations may not be reliable enough to draw conclusions				
15166					
15167	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
15168					
15169	Relevant UCL Statistics				
15170	Normal Distribution Test			Lognormal Distribution Test	
15171	Shapiro Wilk Test Statistic		0.8615857	Shapiro Wilk Test Statistic	0.8796542
15172	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
15173	Data appear Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
15174					
15175	Assuming Normal Distribution			Assuming Lognormal Distribution	
15176	95% Student's-t UCL		986.25644	95% H-UCL	1014.107
15177	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	1158.1174
15178	95% Adjusted-CLT UCL (Chen-1995)		993.07993	97.5% Chebyshev (MVUE) UCL	1295.7543
15179	95% Modified-t UCL (Johnson-1978)		990.30977	99% Chebyshev (MVUE) UCL	1566.1152
15180					
15181	Gamma Distribution Test			Data Distribution	
15182	k star (bias corrected)		11.677132	Data appear Normal at 5% Significance Level	
15183	Theta Star		72.010402		
15184	MLE of Mean		840.875		
15185	MLE of Standard Deviation		246.07265		
15186	nu star		186.83412		
15187	Approximate Chi Square Value (.05)		156.21522	Nonparametric Statistics	
15188	Adjusted Level of Significance		0.01946	95% CLT UCL	967.09367
15189	Adjusted Chi Square Value		149.12283	95% Jackknife UCL	986.25644
15190				95% Standard Bootstrap UCL	956.26735

	A	B	C	D	E
15191	Anderson-Darling Test Statistic		0.5087155	95% Bootstrap-t UCL	1074.6633
15192	Anderson-Darling 5% Critical Value		0.7160559	95% Hall's Bootstrap UCL	995.62768
15193	Kolmogorov-Smirnov Test Statistic		0.245414	95% Percentile Bootstrap UCL	966
15194	Kolmogorov-Smirnov 5% Critical Value		0.2939209	95% BCA Bootstrap UCL	980.75
15195	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1175.3573
15196				97.5% Chebyshev(Mean, Sd) UCL	1320.088
15197	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1604.3836
15198	95% Approximate Gamma UCL		1005.6904		
15199	95% Adjusted Gamma UCL		1053.5217		
15200					
15201	**Potential UCL to Use**			Use 95% Student's-t UCL	986.25644
15202					
15203	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
15204	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
15205	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
15206					
15207					
15208	**M|MG/KG|POTASSIUM (gi_sd_s_2010)**				
15209					
15210	**General Statistics**				
15211	Number of Valid Observations		2	Number of Distinct Observations	2
15212					
15213					
15214	**Warning: This data set only has 2 observations!**				
15215	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
15216	**The data set for variable M|MG/KG|POTASSIUM (gi_sd_s_2010) was not processed!**				
15217					
15218	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
15219	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
15220					
15221					
15222					
15223	**M|MG/KG|POTASSIUM (gi_sd_stillwater_2005)**				
15224					
15225	**General Statistics**				
15226	Number of Valid Observations		4	Number of Distinct Observations	4
15227					
15228					
15229	**Warning: This data set only has 4 observations!**				
15230	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
15231	**The data set for variable M|MG/KG|POTASSIUM (gi_sd_stillwater_2005) was not processed!**				
15232					
15233	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
15234	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
15235					
15236					
15237					
15238	**M|MG/KG|POTASSIUM (gi_sd_stillwater_2009)**				
15239					
15240	**General Statistics**				
15241	Number of Valid Observations		60	Number of Distinct Observations	53
15242					
15243	**Raw Statistics**			**Log-transformed Statistics**	
15244	Minimum		448	Minimum of Log Data	6.1047932
15245	Maximum		2250	Maximum of Log Data	7.7186855
15246	Mean		1040.8833	Mean of log Data	6.8564684

	A	B	C	D	E
15247	Median		889	SD of log Data	0.4286433
15248	SD		461.15702		
15249	Coefficient of Variation		0.4430439		
15250	Skewness		0.860913		
15251					
15252	**Relevant UCL Statistics**				
15253	**Normal Distribution Test**			**Lognormal Distribution Test**	
15254	Lilliefors Test Statistic		0.1550886	Lilliefors Test Statistic	0.0775108
15255	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
15256	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
15257					
15258	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
15259	95% Student's-t UCL		1140.372	95% H-UCL	1154.637
15260	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1300.159
15261	95% Adjusted-CLT UCL (Chen-1995)		1145.8802	97.5% Chebyshev (MVUE) UCL	1412.867
15262	95% Modified-t UCL (Johnson-1978)		1141.4749	99% Chebyshev (MVUE) UCL	1634.26
15263					
15264	**Gamma Distribution Test**			**Data Distribution**	
15265	k star (bias corrected)		5.3638399	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
15266	Theta Star		194.05563		
15267	MLE of Mean		1040.8833		
15268	MLE of Standard Deviation		449.43217		
15269	nu star		643.66079		
15270	Approximate Chi Square Value (.05)		585.80336	**Nonparametric Statistics**	
15271	Adjusted Level of Significance		0.046	95% CLT UCL	1138.8099
15272	Adjusted Chi Square Value		584.45386	95% Jackknife UCL	1140.372
15273				95% Standard Bootstrap UCL	1139.9485
15274	Anderson-Darling Test Statistic		0.8543886	95% Bootstrap-t UCL	1147.5234
15275	Anderson-Darling 5% Critical Value		0.7530659	95% Hall's Bootstrap UCL	1147.6676
15276	Kolmogorov-Smirnov Test Statistic		0.1058019	95% Percentile Bootstrap UCL	1134.9833
15277	Kolmogorov-Smirnov 5% Critical Value		0.1149781	95% BCA Bootstrap UCL	1150.4167
15278	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1300.3909
15279				97.5% Chebyshev(Mean, Sd) UCL	1412.68
15280	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1633.2503
15281	95% Approximate Gamma UCL		1143.6872		
15282	95% Adjusted Gamma UCL		1146.3279		
15283					
15284	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	1143.6872
15285					
15286	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
15287	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
15288	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
15289					
15290					
15291	**M|MG/KG|POTASSIUM (gi_sd_stillwater_2010)**				
15292					
15293	**General Statistics**				
15294	Number of Valid Observations		11	Number of Distinct Observations	11
15295					
15296	**Raw Statistics**			**Log-transformed Statistics**	
15297	Minimum		770	Minimum of Log Data	6.6463905
15298	Maximum		1290	Maximum of Log Data	7.1623975
15299	Mean		1023.3636	Mean of log Data	6.9122782
15300	Median		1100	SD of log Data	0.2032203
15301	SD		204.37821		
15302	Coefficient of Variation		0.1997122		
15303	Skewness		-0.002328		
15304					
15305	**Relevant UCL Statistics**				
15306	**Normal Distribution Test**			**Lognormal Distribution Test**	
15307	Shapiro Wilk Test Statistic		0.8614984	Shapiro Wilk Test Statistic	0.856599
15308	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
15309	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
15310					
15311	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
15312	95% Student's-t UCL		1135.0518	95% H-UCL	1155.8907

	A	B	C	D	E
15313	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1297.957
15314	95% Adjusted-CLT UCL (Chen-1995)		1124.6772	97.5% Chebyshev (MVUE) UCL	1416.6981
15315	95% Modified-t UCL (Johnson-1978)		1135.0445	99% Chebyshev (MVUE) UCL	1649.942
15316					
15317	**Gamma Distribution Test**			**Data Distribution**	
15318	k star (bias corrected)		19.76095	**Data appear Normal at 5% Significance Level**	
15319	Theta Star		51.787167		
15320	MLE of Mean		1023.3636		
15321	MLE of Standard Deviation		230.211		
15322	nu star		434.74091		
15323	Approximate Chi Square Value (.05)		387.4025	**Nonparametric Statistics**	
15324	Adjusted Level of Significance		0.02783	95% CLT UCL	1124.7234
15325	Adjusted Chi Square Value		380.11031	95% Jackknife UCL	1135.0518
15326				95% Standard Bootstrap UCL	1119.0996
15327	Anderson-Darling Test Statistic		0.7544838	95% Bootstrap-t UCL	1133.0947
15328	Anderson-Darling 5% Critical Value		0.7286291	95% Hall's Bootstrap UCL	1112.2388
15329	Kolmogorov-Smirnov Test Statistic		0.2336425	95% Percentile Bootstrap UCL	1118.7273
15330	Kolmogorov-Smirnov 5% Critical Value		0.2549402	95% BCA Bootstrap UCL	1116.7273
15331	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1291.9692
15332				97.5% Chebyshev(Mean, Sd) UCL	1408.1951
15333	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1636.4983
15334	95% Approximate Gamma UCL		1148.4129		
15335	95% Adjusted Gamma UCL		1170.4445		
15336					
15337	**Potential UCL to Use**			Use 95% Student's-t UCL	1135.0518
15338					
15339	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
15340	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
15341	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
15342					
15343					
15344	**M|MG/KG|SELENIUM (gi_sd_ne_2005)**				
15345					
15346	**General Statistics**				
15347	Number of Valid Data		36	Number of Detected Data	16
15348	Number of Distinct Detected Data		15	Number of Non-Detect Data	20
15349				Percent Non-Detects	55.56%
15350					
15351	**Raw Statistics**			**Log-transformed Statistics**	
15352	Minimum Detected		4.4	Minimum Detected	1.4816045
15353	Maximum Detected		7.9	Maximum Detected	2.0668628
15354	Mean of Detected		6.065625	Mean of Detected	1.7910675
15355	SD of Detected		0.9512656	SD of Detected	0.1575489
15356	Minimum Non-Detect		0.064	Minimum Non-Detect	-2.748872
15357	Maximum Non-Detect		0.068	Maximum Non-Detect	-2.688248
15358					
15359	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	20
15360	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	16
15361	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	55.56%
15362					
15363	**UCL Statistics**				
15364	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
15365	Shapiro Wilk Test Statistic		0.9818159	Shapiro Wilk Test Statistic	0.9869421
15366	5% Shapiro Wilk Critical Value		0.887	5% Shapiro Wilk Critical Value	0.887
15367	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
15368					
15369	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
15370	DL/2 Substitution Method			DL/2 Substitution Method	
15371	Mean		2.7142292	Mean	-1.097288
15372	SD		3.1032287	SD	2.6221269
15373	95% DL/2 (t) UCL		3.5880841	95% H-Stat (DL/2) UCL	81.540963
15374					
15375	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
15376	Mean		0.0263457	Mean in Log Scale	1.540791
15377	SD		6.0884877	SD in Log Scale	0.2664681
15378	95% MLE (t) UCL		1.7408359	Mean in Original Scale	4.834845
15379	95% MLE (Tiku) UCL		2.2667404	SD in Original Scale	1.3257285

	A	B	C	D	E
15380				95% t UCL	5.208164
15381				95% Percentile Bootstrap UCL	5.1992545
15382				95% BCA Bootstrap UCL	5.2065276
15383					
15384	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
15385	k star (bias corrected)		35.288731	**Data appear Normal at 5% Significance Level**	
15386	Theta Star		0.1718856		
15387	nu star		1129.2394		
15388					
15389	A-D Test Statistic		0.1304254	**Nonparametric Statistics**	
15390	5% A-D Critical Value		0.7356271	Kaplan-Meier (KM) Method	
15391	K-S Test Statistic		0.7356271	Mean	5.1402778
15392	5% K-S Critical Value		0.2144797	SD	1.0305621
15393	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.1773933
15394				95% KM (t) UCL	5.4399967
15395	**Assuming Gamma Distribution**			95% KM (z) UCL	5.4320638
15396	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	5.4459665
15397	Minimum		4.4	95% KM (bootstrap t) UCL	5.4421068
15398	Maximum		7.9	95% KM (BCA) UCL	5.9
15399	Mean		6.0751804	95% KM (Percentile Bootstrap) UCL	5.7041667
15400	Median		6.1029885	95% KM (Chebyshev) UCL	5.9135174
15401	SD		0.6275214	97.5% KM (Chebyshev) UCL	6.2480988
15402	k star		87.95216	99% KM (Chebyshev) UCL	6.9053191
15403	Theta star		0.0690737		
15404	Nu star		6332.5556	**Potential UCLs to Use**	
15405	AppChi2		6148.5887	95% KM (t) UCL	5.4399967
15406	95% Gamma Approximate UCL		6.2569509	95% KM (Percentile Bootstrap) UCL	5.7041667
15407	95% Adjusted Gamma UCL		6.2652932		
15408	**Note: DL/2 is not a recommended method.**				
15409					
15410	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
15411	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
15412	**For additional insight, the user may want to consult a statistician.**				
15413					
15414					
15415	**M|MG/KG|SELENIUM (gi_sd_ne_2009)**				
15416					
15417	**General Statistics**				
15418	Number of Valid Data		20	Number of Detected Data	8
15419	Number of Distinct Detected Data		8	Number of Non-Detect Data	12
15420				Percent Non-Detects	60.00%
15421					
15422	**Raw Statistics**			**Log-transformed Statistics**	
15423	Minimum Detected		0.29	Minimum Detected	-1.237874
15424	Maximum Detected		1.2	Maximum Detected	0.1823216
15425	Mean of Detected		0.74625	Mean of Detected	-0.36363
15426	SD of Detected		0.2710792	SD of Detected	0.4298348
15427	Minimum Non-Detect		0.33	Minimum Non-Detect	-1.108663
15428	Maximum Non-Detect		0.39	Maximum Non-Detect	-0.941609
15429					
15430	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	13
15431	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	7
15432	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	65.00%
15433					
15434	**Warning: There are only 8 Detected Values in this data**				
15435	**Note: It should be noted that even though bootstrap may be performed on this data set**				
15436	**the resulting calculations may not be reliable enough to draw conclusions**				
15437					
15438	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
15439					
15440					
15441	**UCL Statistics**				
15442	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
15443	Shapiro Wilk Test Statistic		0.9670304	Shapiro Wilk Test Statistic	0.9033928

	A	B	C	D	E
15444	5% Shapiro Wilk Critical Value		0.818	5% Shapiro Wilk Critical Value	0.818
15445	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
15446					
15447	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
15448	DL/2 Substitution Method			DL/2 Substitution Method	
15449	Mean		0.40775	Mean	-1.168171
15450	SD		0.327922	SD	0.7237987
15451	95% DL/2 (t) UCL		0.5345397	95% H-Stat (DL/2) UCL	0.5884819
15452					
15453	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
15454	Mean		0.8214709	Mean in Log Scale	-0.870312
15455	SD		0.1987409	SD in Log Scale	0.5231932
15456	95% MLE (t) UCL		0.8983132	Mean in Original Scale	0.4813244
15457	95% MLE (Tiku) UCL		0.9504862	SD in Original Scale	0.2802774
15458				95% t UCL	0.5896925
15459				95% Percentile Bootstrap UCL	0.5887457
15460				95% BCA Bootstrap UCL	0.598484
15461					
15462	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
15463	k star (bias corrected)		4.5903992	**Data appear Normal at 5% Significance Level**	
15464	Theta Star		0.1625676		
15465	nu star		73.446387		
15466					
15467	A-D Test Statistic		0.3584944	**Nonparametric Statistics**	
15468	5% A-D Critical Value		0.7172567	Kaplan-Meier (KM) Method	
15469	K-S Test Statistic		0.7172567	Mean	0.4725
15470	5% K-S Critical Value		0.2948154	SD	0.2750977
15471	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.0657609
15472				95% KM (t) UCL	0.5862094
15473	**Assuming Gamma Distribution**			95% KM (z) UCL	0.5806671
15474	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.6115832
15475	Minimum		0.29	95% KM (bootstrap t) UCL	0.5828435
15476	Maximum		1.2	95% KM (BCA) UCL	0.826
15477	Mean		0.7463193	95% KM (Percentile Bootstrap) UCL	0.767
15478	Median		0.7461348	95% KM (Chebyshev) UCL	0.7591453
15479	SD		0.1645472	97.5% KM (Chebyshev) UCL	0.8831769
15480	k star		15.150899	99% KM (Chebyshev) UCL	1.126813
15481	Theta star		0.0492591		
15482	Nu star		606.03596	**Potential UCLs to Use**	
15483	AppChi2		549.93004	95% KM (t) UCL	0.5862094
15484	95% Gamma Approximate UCL		0.8224616	95% KM (Percentile Bootstrap) UCL	0.767
15485	95% Adjusted Gamma UCL		0.8288142		
15486	**Note: DL/2 is not a recommended method.**				
15487					
15488	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
15489	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
15490	**For additional insight, the user may want to consult a statistician.**				
15491					
15492					
15493	**M|MG/KG|SELENIUM (gi_sd_ne_2010)**				
15494					
15495	**General Statistics**				
15496	Number of Valid Data		16	Number of Detected Data	0
15497	Number of Distinct Detected Data		0	Number of Non-Detect Data	16
15498				Percent Non-Detects	100.00%
15499					
15500	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
15501	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
15502	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
15503					
15504	**The data set for variable M|MG/KG|SELENIUM (gi_sd_ne_2010) was not processed!**				
15505					

	A	B	C	D	E
15506					
15507					
15508	**M|MG/KG|SELENIUM (gi_sd_nw_2005)**				
15509					
15510	**General Statistics**				
15511	Number of Valid Data		18	Number of Detected Data	0
15512	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
15513				Percent Non-Detects	100.00%
15514					
15515	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
15516	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
15517	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
15518					
15519	**The data set for variable M|MG/KG|SELENIUM (gi_sd_nw_2005) was not processed!**				
15520					
15521					
15522					
15523	**M|MG/KG|SELENIUM (gi_sd_nw_2009)**				
15524					
15525	**General Statistics**				
15526	Number of Valid Data		7	Number of Detected Data	3
15527	Number of Distinct Detected Data		3	Number of Non-Detect Data	4
15528				Percent Non-Detects	57.14%
15529					
15530	**Raw Statistics**			**Log-transformed Statistics**	
15531	Minimum Detected		0.47	Minimum Detected	-0.755023
15532	Maximum Detected		0.97	Maximum Detected	-0.030459
15533	Mean of Detected		0.6733333	Mean of Detected	-0.443403
15534	SD of Detected		0.262742	SD of Detected	0.3727572
15535	Minimum Non-Detect		0.35	Minimum Non-Detect	-1.049822
15536	Maximum Non-Detect		0.44	Maximum Non-Detect	-0.820981
15537					
15538	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	4
15539	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	3
15540	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	57.14%
15541					
15542	**Warning: There are only 3 Distinct Detected Values in this data set**				
15543	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
15544	**Those methods will return a 'N/A' value on your output display!**				
15545					
15546	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
15547	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
15548	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
15549					
15550					
15551	**UCL Statistics**				
15552	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
15553	Shapiro Wilk Test Statistic		0.9053424	Shapiro Wilk Test Statistic	0.9445659
15554	5% Shapiro Wilk Critical Value		0.767	5% Shapiro Wilk Critical Value	0.767
15555	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
15556					
15557	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
15558	DL/2 Substitution Method			DL/2 Substitution Method	
15559	Mean		0.3964286	Mean	-1.145272
15560	SD		0.3005372	SD	0.6949549
15561	95% DL/2 (t) UCL		0.6171591	95% H-Stat (DL/2) UCL	0.9200313
15562					
15563	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
15564	Mean		0.3679031	Mean in Log Scale	-1.203937
15565	SD		0.3424752	SD in Log Scale	0.7595366

	A	B	C	D	E
15566	95% MLE (t) UCL		0.6194351	Mean in Original Scale	0.3872529
15567	95% MLE (Tiku) UCL		0.708569	SD in Original Scale	0.3087502
15568				95% t UCL	0.6140154
15569				95% Percentile Bootstrap UCL	0.5720698
15570				95% BCA Bootstrap UCL	0.6147132
15571					
15572	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
15573	k star (bias corrected)		N/A	**Data appear Normal at 5% Significance Level**	
15574	Theta Star		N/A		
15575	nu star		N/A		
15576					
15577	A-D Test Statistic		N/A	**Nonparametric Statistics**	
15578	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
15579	K-S Test Statistic		N/A	Mean	0.5571429
15580	5% K-S Critical Value		N/A	SD	0.1727686
15581	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0799763
15582				95% KM (t) UCL	0.7125512
15583	**Assuming Gamma Distribution**			95% KM (z) UCL	0.6886922
15584	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.6957749
15585	Minimum		N/A	95% KM (bootstrap t) UCL	0.769334
15586	Maximum		N/A	95% KM (BCA) UCL	0.97
15587	Mean		N/A	95% KM (Percentile Bootstrap) UCL	0.97
15588	Median		N/A	95% KM (Chebyshev) UCL	0.9057515
15589	SD		N/A	97.5% KM (Chebyshev) UCL	1.0565947
15590	k star		N/A	99% KM (Chebyshev) UCL	1.3528971
15591	Theta star		N/A		
15592	Nu star		N/A	**Potential UCLs to Use**	
15593	AppChi2		N/A	95% KM (t) UCL	0.7125512
15594	95% Gamma Approximate UCL		N/A	95% KM (Percentile Bootstrap) UCL	0.97
15595	95% Adjusted Gamma UCL		N/A		
15596	**Note: DL/2 is not a recommended method.**				
15597					
15598	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
15599	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
15600	**For additional insight, the user may want to consult a statistician.**				
15601					
15602					
15603	**M|MG/KG|SELENIUM (gi_sd_nw_2010)**				
15604					
15605	**General Statistics**				
15606	Number of Valid Data		4	Number of Detected Data	0
15607	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
15608				Percent Non-Detects	100.00%
15609					
15610	**Warning: This data set only has 4 observations!**				
15611	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
15612	**The data set for variable M|MG/KG|SELENIUM (gi_sd_nw_2010) was not processed!**				
15613					
15614	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
15615	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
15616					
15617					
15618					
15619	**M|MG/KG|SELENIUM (gi_sd_ref_2009)**				
15620					
15621	**General Statistics**				
15622	Number of Valid Observations		6	Number of Distinct Observations	5
15623					
15624	**Raw Statistics**			**Log-transformed Statistics**	
15625	Minimum		0.54	Minimum of Log Data	-0.616186
15626	Maximum		0.73	Maximum of Log Data	-0.314711
15627	Mean		0.6533333	Mean of log Data	-0.433789
15628	Median		0.685	SD of log Data	0.1411621
15629	SD		0.0891441		

	A	B	C	D	E
15630	Coefficient of Variation		0.136445		
15631	Skewness		-0.576606		
15632					
15633					
15634	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
15635					
15636	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
15637	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
15638					
15639					
15640	**Warning: There are only 6 Values in this data**				
15641	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
15642	**the resulting calculations may not be reliable enough to draw conclusions**				
15643					
15644	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
15645					
15646	**Relevant UCL Statistics**				
15647	**Normal Distribution Test**			**Lognormal Distribution Test**	
15648	Shapiro Wilk Test Statistic		0.804798	Shapiro Wilk Test Statistic	0.7997125
15649	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
15650	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
15651					
15652	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
15653	95% Student's-t UCL		0.7266668	95% H-UCL	0.742185
15654	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	0.8175898
15655	95% Adjusted-CLT UCL (Chen-1995)		0.7040406	97.5% Chebyshev (MVUE) UCL	0.888615
15656	95% Modified-t UCL (Johnson-1978)		0.725239	99% Chebyshev (MVUE) UCL	1.0281302
15657					
15658	**Gamma Distribution Test**			**Data Distribution**	
15659	k star (bias corrected)		30.979413	**Data appear Normal at 5% Significance Level**	
15660	Theta Star		0.0210893		
15661	MLE of Mean		0.6533333		
15662	MLE of Standard Deviation		0.1173811		
15663	nu star		371.75295		
15664	Approximate Chi Square Value (.05)		328.0677	**Nonparametric Statistics**	
15665	Adjusted Level of Significance		0.01222	95% CLT UCL	0.7131944
15666	Adjusted Chi Square Value		313.12286	95% Jackknife UCL	0.7266668
15667				95% Standard Bootstrap UCL	0.7082491
15668	Anderson-Darling Test Statistic		0.6520711	95% Bootstrap-t UCL	0.7208989
15669	Anderson-Darling 5% Critical Value		0.6967227	95% Hall's Bootstrap UCL	0.692042
15670	Kolmogorov-Smirnov Test Statistic		0.2933494	95% Percentile Bootstrap UCL	0.7016667
15671	Kolmogorov-Smirnov 5% Critical Value		0.3317466	95% BCA Bootstrap UCL	0.6983333
15672	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	0.8119664
15673				97.5% Chebyshev(Mean, Sd) UCL	0.880607
15674	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1.0154383
15675	95% Approximate Gamma UCL		0.7403307		
15676	95% Adjusted Gamma UCL		0.7756655		
15677					
15678	**Potential UCL to Use**			Use 95% Student's-t UCL	0.7266668
15679					
15680	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
15681	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
15682	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
15683					
15684					
15685	**M|MG/KG|SELENIUM (gi_sd_ref_2010)**				
15686					
15687	**General Statistics**				
15688	Number of Valid Data		3	Number of Detected Data	1

	A	B	C	D	E
15689	Number of Distinct Detected Data		1	Number of Non-Detect Data	2
15690				Percent Non-Detects	66.67%
15691					
15692	**Warning: This data set only has 3 observations!**				
15693	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
15694	**The data set for variable M|MG/KG|SELENIUM (gi_sd_ref_2010) was not processed!**				
15695					
15696	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
15697	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
15698					
15699					
15700					
15701	**M|MG/KG|SELENIUM (gi_sd_s_2005)**				
15702					
15703	**General Statistics**				
15704	Number of Valid Data		8	Number of Detected Data	0
15705	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
15706				Percent Non-Detects	100.00%
15707					
15708	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
15709	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
15710	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
15711					
15712	**The data set for variable M|MG/KG|SELENIUM (gi_sd_s_2005) was not processed!**				
15713					
15714					
15715					
15716	**M|MG/KG|SELENIUM (gi_sd_s_2010)**				
15717					
15718	**General Statistics**				
15719	Number of Valid Data		2	Number of Detected Data	0
15720	Number of Distinct Detected Data		0	Number of Non-Detect Data	2
15721				Percent Non-Detects	100.00%
15722					
15723	**Warning: This data set only has 2 observations!**				
15724	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
15725	**The data set for variable M|MG/KG|SELENIUM (gi_sd_s_2010) was not processed!**				
15726					
15727	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
15728	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
15729					
15730					
15731					
15732	**M|MG/KG|SELENIUM (gi_sd_stillwater_2005)**				
15733					
15734	**General Statistics**				
15735	Number of Valid Data		4	Number of Detected Data	0
15736	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
15737				Percent Non-Detects	100.00%
15738					
15739	**Warning: This data set only has 4 observations!**				
15740	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
15741	**The data set for variable M|MG/KG|SELENIUM (gi_sd_stillwater_2005) was not processed!**				
15742					

	A	B	C	D	E
15743	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
15744	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
15745					
15746					
15747					
15748	**M|MG/KG|SELENIUM (gi_sd_stillwater_2009)**				
15749					
15750	**General Statistics**				
15751	Number of Valid Data		60	Number of Detected Data	44
15752	Number of Distinct Detected Data		28	Number of Non-Detect Data	16
15753				Percent Non-Detects	26.67%
15754					
15755	**Raw Statistics**			**Log-transformed Statistics**	
15756	Minimum Detected		0.33	Minimum Detected	-1.108663
15757	Maximum Detected		1.5	Maximum Detected	0.4054651
15758	Mean of Detected		0.94	Mean of Detected	-0.105461
15759	SD of Detected		0.2593126	SD of Detected	0.3148654
15760	Minimum Non-Detect		0.32	Minimum Non-Detect	-1.139434
15761	Maximum Non-Detect		0.49	Maximum Non-Detect	-0.71335
15762					
15763	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	19
15764	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	41
15765	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	31.67%
15766					
15767	**UCL Statistics**				
15768	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
15769	Shapiro Wilk Test Statistic		0.9801965	Shapiro Wilk Test Statistic	0.9273302
15770	5% Shapiro Wilk Critical Value		0.944	5% Shapiro Wilk Critical Value	0.944
15771	**Data appear Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
15772					
15773	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
15774	DL/2 Substitution Method			DL/2 Substitution Method	
15775	Mean		0.7424583	Mean	-0.509219
15776	SD		0.3978362	SD	0.72905
15777	95% DL/2 (t) UCL		0.8282864	95% H-Stat (DL/2) UCL	0.9539526
15778					
15779	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
15780	Mean		0.7469934	Mean in Log Scale	-0.276263
15781	SD		0.4018464	SD in Log Scale	0.395313
15782	95% MLE (t) UCL		0.8336866	Mean in Original Scale	0.8163689
15783	95% MLE (Tiku) UCL		0.8416894	SD in Original Scale	0.3037912
15784				95% t UCL	0.881908
15785				95% Percentile Bootstrap UCL	0.8783865
15786				95% BCA Bootstrap UCL	0.884388
15787					
15788	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
15789	k star (bias corrected)		10.857667	**Data appear Normal at 5% Significance Level**	
15790	Theta Star		0.0865748		
15791	nu star		955.4747		
15792					
15793	A-D Test Statistic		0.616741	**Nonparametric Statistics**	
15794	5% A-D Critical Value		0.7482558	Kaplan-Meier (KM) Method	
15795	K-S Test Statistic		0.7482558	Mean	0.7782153
15796	5% K-S Critical Value		0.1332012	SD	0.3467779
15797	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.0453072
15798				95% KM (t) UCL	0.8539278
15799	**Assuming Gamma Distribution**			95% KM (z) UCL	0.852739
15800	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.845548
15801	Minimum		0.33	95% KM (bootstrap t) UCL	0.8510874
15802	Maximum		1.5	95% KM (BCA) UCL	0.8905
15803	Mean		0.8705183	95% KM (Percentile Bootstrap) UCL	0.8760833
15804	Median		0.835	95% KM (Chebyshev) UCL	0.9757048
15805	SD		0.2555661	97.5% KM (Chebyshev) UCL	1.0611587
15806	k star		10.741548	99% KM (Chebyshev) UCL	1.2290162
15807	Theta star		0.0810422		
15808	Nu star		1288.9858	**Potential UCLs to Use**	
15809	AppChi2		1206.6228	95% KM (t) UCL	0.8539278
15810	95% Gamma Approximate UCL		0.9299391	95% KM (Percentile Bootstrap) UCL	0.8760833

	A	B	C	D	E
15811	95% Adjusted Gamma UCL		0.9314417		
15812	Note: DL/2 is not a recommended method.				
15813					
15814	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
15815	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).				
15816	For additional insight, the user may want to consult a statistician.				
15817					
15818					
15819	M|MG/KG|SELENIUM (gi_sd_stillwater_2010)				
15820					
15821	General Statistics				
15822	Number of Valid Data		11	Number of Detected Data	1
15823	Number of Distinct Detected Data		1	Number of Non-Detect Data	10
15824				Percent Non-Detects	90.91%
15825					
15826	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
15827	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
15828					
15829	The data set for variable M|MG/KG|SELENIUM (gi_sd_stillwater_2010) was not processed!				
15830					
15831					
15832					
15833	M|MG/KG|SILVER (gi_sd_ne_2005)				
15834					
15835	General Statistics				
15836	Number of Valid Data		36	Number of Detected Data	0
15837	Number of Distinct Detected Data		0	Number of Non-Detect Data	36
15838				Percent Non-Detects	100.00%
15839					
15840	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
15841	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
15842	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
15843					
15844	The data set for variable M|MG/KG|SILVER (gi_sd_ne_2005) was not processed!				
15845					
15846					
15847					
15848	M|MG/KG|SILVER (gi_sd_ne_2009)				
15849					
15850	General Statistics				
15851	Number of Valid Data		20	Number of Detected Data	0
15852	Number of Distinct Detected Data		0	Number of Non-Detect Data	20
15853				Percent Non-Detects	100.00%
15854					
15855	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
15856	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
15857	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
15858					
15859	The data set for variable M|MG/KG|SILVER (gi_sd_ne_2009) was not processed!				
15860					
15861					
15862					
15863	M|MG/KG|SILVER (gi_sd_ne_2010)				
15864					

	A	B	C	D	E
15865	**General Statistics**				
15866	Number of Valid Data		16	Number of Detected Data	1
15867	Number of Distinct Detected Data		1	Number of Non-Detect Data	15
15868				Percent Non-Detects	93.75%
15869					
15870	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**				
15871	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**				
15872					
15873	**The data set for variable M|MG/KG|SILVER (gi_sd_ne_2010) was not processed!**				
15874					
15875					
15876					
15877	**M|MG/KG|SILVER (gi_sd_nw_2005)**				
15878					
15879	**General Statistics**				
15880	Number of Valid Data		18	Number of Detected Data	0
15881	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
15882				Percent Non-Detects	100.00%
15883					
15884	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
15885	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
15886	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
15887					
15888	**The data set for variable M|MG/KG|SILVER (gi_sd_nw_2005) was not processed!**				
15889					
15890					
15891					
15892	**M|MG/KG|SILVER (gi_sd_nw_2009)**				
15893					
15894	**General Statistics**				
15895	Number of Valid Data		7	Number of Detected Data	2
15896	Number of Distinct Detected Data		2	Number of Non-Detect Data	5
15897				Percent Non-Detects	71.43%
15898					
15899	**Raw Statistics**			**Log-transformed Statistics**	
15900	Minimum Detected		0.045	Minimum Detected	-3.101093
15901	Maximum Detected		0.14	Maximum Detected	-1.966113
15902	Mean of Detected		0.0925	Mean of Detected	-2.533603
15903	SD of Detected		0.0671751	SD of Detected	0.802552
15904	Minimum Non-Detect		0.033	Minimum Non-Detect	-3.411248
15905	Maximum Non-Detect		0.037	Maximum Non-Detect	-3.296837
15906					
15907	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	5
15908	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	2
15909	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	71.43%
15910					
15911	**Warning: Data set has only 2 Distinct Detected Values.**				
15912	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
15913	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
15914					
15915	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
15916					
15917	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
15918	**Those methods will return a 'N/A' value on your output display!**				
15919					

	A	B	C	D	E
15920	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
15921	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
15922	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
15923					
15924					
15925	**UCL Statistics**				
15926	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
15927	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
15928	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
15929	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
15930					
15931	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
15932	DL/2 Substitution Method			DL/2 Substitution Method	
15933	Mean		0.0391071	Mean	-3.604016
15934	SD		0.0456385	SD	0.8021323
15935	95% DL/2 (t) UCL		0.0726265	95% H-Stat (DL/2) UCL	0.1056799
15936					
15937	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
15938	**MLE method failed to converge properly**			Mean in Log Scale	N/A
15939				SD in Log Scale	N/A
15940				Mean in Original Scale	N/A
15941				SD in Original Scale	N/A
15942				95% t UCL	N/A
15943				95% Percentile Bootstrap UCL	N/A
15944				95% BCA Bootstrap UCL	N/A
15945					
15946	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
15947	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
15948	Theta Star		N/A		
15949	nu star		N/A		
15950					
15951	A-D Test Statistic		N/A	**Nonparametric Statistics**	
15952	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
15953	K-S Test Statistic		N/A	Mean	0.0585714
15954	5% K-S Critical Value		N/A	SD	0.0332431
15955	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0177692
15956				95% KM (t) UCL	0.0931001
15957	**Assuming Gamma Distribution**			95% KM (z) UCL	0.0877991
15958	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.1294273
15959	Minimum		N/A	95% KM (bootstrap t) UCL	N/A
15960	Maximum		N/A	95% KM (BCA) UCL	N/A
15961	Mean		N/A	95% KM (Percentile Bootstrap) UCL	0.14
15962	Median		N/A	95% KM (Chebyshev) UCL	0.1360254
15963	SD		N/A	97.5% KM (Chebyshev) UCL	0.1695399
15964	k star		N/A	99% KM (Chebyshev) UCL	0.2353724
15965	Theta star		N/A		
15966	Nu star		N/A	**Potential UCLs to Use**	
15967	AppChi2		N/A	95% KM (t) UCL	0.0931001
15968	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	0.14
15969	95% Adjusted Gamma UCL		N/A		
15970	**Note: DL/2 is not a recommended method.**				
15971					
15972	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
15973	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
15974	**For additional insight, the user may want to consult a statistician.**				
15975					
15976					
15977	**M|MG/KG|SILVER (gi_sd_nw_2010)**				
15978					
15979	**General Statistics**				
15980	Number of Valid Data		4	Number of Detected Data	2
15981	Number of Distinct Detected Data		2	Number of Non-Detect Data	2
15982				Percent Non-Detects	50.00%
15983					

	A	B	C	D	E
15984	Warning: This data set only has 4 observations!				
15985	Data set is too small to compute reliable and meaningful statistics and estimates!				
15986	The data set for variable M|MG/KG|SILVER (gi_sd_nw_2010) was not processed!				
15987					
15988	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
15989	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
15990					
15991					
15992					
15993	M|MG/KG|SILVER (gi_sd_ref_2009)				
15994					
15995	General Statistics				
15996	Number of Valid Data		6	Number of Detected Data	0
15997	Number of Distinct Detected Data		0	Number of Non-Detect Data	6
15998				Percent Non-Detects	100.00%
15999					
16000	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
16001	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
16002	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
16003					
16004	The data set for variable M|MG/KG|SILVER (gi_sd_ref_2009) was not processed!				
16005					
16006					
16007					
16008	M|MG/KG|SILVER (gi_sd_ref_2010)				
16009					
16010	General Statistics				
16011	Number of Valid Observations		3	Number of Distinct Observations	3
16012					
16013					
16014	Warning: This data set only has 3 observations!				
16015	Data set is too small to compute reliable and meaningful statistics and estimates!				
16016	The data set for variable M|MG/KG|SILVER (gi_sd_ref_2010) was not processed!				
16017					
16018	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
16019	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
16020					
16021					
16022					
16023	M|MG/KG|SILVER (gi_sd_s_2005)				
16024					
16025	General Statistics				
16026	Number of Valid Data		8	Number of Detected Data	0
16027	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
16028				Percent Non-Detects	100.00%
16029					
16030	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
16031	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
16032	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
16033					
16034	The data set for variable M|MG/KG|SILVER (gi_sd_s_2005) was not processed!				

	A	B	C	D	E
16035					
16036					
16037					
16038	**M|MG/KG|SILVER (gi_sd_s_2010)**				
16039					
16040	**General Statistics**				
16041	Number of Valid Data		2	Number of Detected Data	1
16042	Number of Distinct Detected Data		1	Number of Non-Detect Data	1
16043				Percent Non-Detects	50.00%
16044					
16045	**Warning: This data set only has 2 observations!**				
16046	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
16047	**The data set for variable M|MG/KG|SILVER (gi_sd_s_2010) was not processed!**				
16048					
16049	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
16050	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
16051					
16052					
16053					
16054	**M|MG/KG|SILVER (gi_sd_stillwater_2005)**				
16055					
16056	**General Statistics**				
16057	Number of Valid Data		4	Number of Detected Data	0
16058	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
16059				Percent Non-Detects	100.00%
16060					
16061	**Warning: This data set only has 4 observations!**				
16062	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
16063	**The data set for variable M|MG/KG|SILVER (gi_sd_stillwater_2005) was not processed!**				
16064					
16065	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
16066	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
16067					
16068					
16069					
16070	**M|MG/KG|SILVER (gi_sd_stillwater_2009)**				
16071					
16072	**General Statistics**				
16073	Number of Valid Data		60	Number of Detected Data	17
16074	Number of Distinct Detected Data		17	Number of Non-Detect Data	43
16075				Percent Non-Detects	71.67%
16076					
16077	**Raw Statistics**			**Log-transformed Statistics**	
16078	Minimum Detected		0.055	Minimum Detected	-2.900422
16079	Maximum Detected		0.608	Maximum Detected	-0.49758
16080	Mean of Detected		0.2481765	Mean of Detected	-1.672553
16081	SD of Detected		0.1756286	SD of Detected	0.8134902
16082	Minimum Non-Detect		0.031	Minimum Non-Detect	-3.473768
16083	Maximum Non-Detect		0.04	Maximum Non-Detect	-3.218876
16084					
16085	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	43
16086	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	17
16087	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	71.67%
16088					
16089	**UCL Statistics**				
16090	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
16091	Shapiro Wilk Test Statistic		0.9077478	Shapiro Wilk Test Statistic	0.9263735
16092	5% Shapiro Wilk Critical Value		0.892	5% Shapiro Wilk Critical Value	0.892
16093	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
16094					
16095	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	

	A	B	C	D	E
16096	DL/2 Substitution Method			DL/2 Substitution Method	
16097	Mean		0.0826958	Mean	-3.384049
16098	SD		0.1391957	SD	1.1662757
16099	95% DL/2 (t) UCL		0.1127255	95% H-Stat (DL/2) UCL	0.100201
16100					
16101	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
16102	**MLE yields a negative mean**			Mean in Log Scale	-3.63364
16103				SD in Log Scale	1.5099018
16104				Mean in Original Scale	0.082441
16105				SD in Original Scale	0.1397372
16106				95% t UCL	0.1125875
16107				95% Percentile Bootstrap UCL	0.1118805
16108				95% BCA Bootstrap UCL	0.1210729
16109					
16110	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
16111	k star (bias corrected)		1.6390346	**Data appear Normal at 5% Significance Level**	
16112	Theta Star		0.1514163		
16113	nu star		55.727175		
16114					
16115	A-D Test Statistic		0.3884543	**Nonparametric Statistics**	
16116	5% A-D Critical Value		0.7501447	Kaplan-Meier (KM) Method	
16117	K-S Test Statistic		0.7501447	Mean	0.1097333
16118	5% K-S Critical Value		0.2118146	SD	0.1257096
16119	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.0167285
16120				95% KM (t) UCL	0.1376882
16121	**Assuming Gamma Distribution**			95% KM (z) UCL	0.1372493
16122	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.1353686
16123	Minimum		0.055	95% KM (bootstrap t) UCL	0.146742
16124	Maximum		0.608	95% KM (BCA) UCL	0.14785
16125	Mean		0.2491095	95% KM (Percentile Bootstrap) UCL	0.1418333
16126	Median		0.252518	95% KM (Chebyshev) UCL	0.1826512
16127	SD		0.0955484	97.5% KM (Chebyshev) UCL	0.2142028
16128	k star		5.7310774	99% KM (Chebyshev) UCL	0.2761799
16129	Theta star		0.0434664		
16130	Nu star		687.72929	**Potential UCLs to Use**	
16131	AppChi2		627.88432	95% KM (t) UCL	0.1376882
16132	95% Gamma Approximate UCL		0.2728527	95% KM (Percentile Bootstrap) UCL	0.1418333
16133	95% Adjusted Gamma UCL		0.2734615		
16134	**Note: DL/2 is not a recommended method.**				
16135					
16136	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
16137	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
16138	**For additional insight, the user may want to consult a statistician.**				
16139					
16140					
16141	**M|MG/KG|SILVER (gi_sd_stillwater_2010)**				
16142					
16143	**General Statistics**				
16144	Number of Valid Data		11	Number of Detected Data	5
16145	Number of Distinct Detected Data		5	Number of Non-Detect Data	6
16146				Percent Non-Detects	54.55%
16147					
16148	**Raw Statistics**			**Log-transformed Statistics**	
16149	Minimum Detected		0.0435	Minimum Detected	-3.134994
16150	Maximum Detected		0.223	Maximum Detected	-1.500584
16151	Mean of Detected		0.1321	Mean of Detected	-2.151165
16152	SD of Detected		0.0653437	SD of Detected	0.6105034
16153	Minimum Non-Detect		0.23	Minimum Non-Detect	-1.469676
16154	Maximum Non-Detect		0.271	Maximum Non-Detect	-1.305636
16155					
16156	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	11
16157	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
16158	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
16159					
16160	**Warning: There are only 5 Detected Values in this data**				
16161	**Note: It should be noted that even though bootstrap may be performed on this data set**				
16162	**the resulting calculations may not be reliable enough to draw conclusions**				

	A	B	C	D	E
16163					
16164	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
16165					
16166					
16167	**UCL Statistics**				
16168	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
16169	Shapiro Wilk Test Statistic		0.969913	Shapiro Wilk Test Statistic	0.9054138
16170	5% Shapiro Wilk Critical Value		0.762	5% Shapiro Wilk Critical Value	0.762
16171	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
16172					
16173	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
16174	DL/2 Substitution Method			DL/2 Substitution Method	
16175	Mean		0.1269545	Mean	-2.123771
16176	SD		0.0422075	SD	0.3910512
16177	95% DL/2 (t) UCL		0.15002	95% H-Stat (DL/2) UCL	0.1662017
16178					
16179	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
16180	**MLE method failed to converge properly**			Mean in Log Scale	-2.151165
16181				SD in Log Scale	0.4132902
16182				Mean in Original Scale	0.1246675
16183				SD in Original Scale	0.0454845
16184				95% t UCL	0.1495238
16185				95% Percentile Bootstrap UCL	0.1465315
16186				95% BCA Bootstrap UCL	0.1497039
16187					
16188	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
16189	k star (bias corrected)		1.7722226	**Data appear Normal at 5% Significance Level**	
16190	Theta Star		0.0745392		
16191	nu star		17.722226		
16192					
16193	A-D Test Statistic		0.3153255	**Nonparametric Statistics**	
16194	5% A-D Critical Value		0.6811885	Kaplan-Meier (KM) Method	
16195	K-S Test Statistic		0.6811885	Mean	0.1321
16196	5% K-S Critical Value		0.3584364	SD	0.0584452
16197	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.0292226
16198				95% KM (t) UCL	0.1850648
16199	**Assuming Gamma Distribution**			95% KM (z) UCL	0.1801669
16200	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.1885607
16201	Minimum		0.0435	95% KM (bootstrap t) UCL	0.1893032
16202	Maximum		0.223	95% KM (BCA) UCL	0.17975
16203	Mean		0.1343021	95% KM (Percentile Bootstrap) UCL	0.17975
16204	Median		0.1368463	95% KM (Chebyshev) UCL	0.2594783
16205	SD		0.0448437	97.5% KM (Chebyshev) UCL	0.314595
16206	k star		5.7199864	99% KM (Chebyshev) UCL	0.4228611
16207	Theta star		0.0234794		
16208	Nu star		125.8397	**Potential UCLs to Use**	
16209	AppChi2		100.93054	95% KM (t) UCL	0.1850648
16210	95% Gamma Approximate UCL		0.1674472	95% KM (Percentile Bootstrap) UCL	0.17975
16211	95% Adjusted Gamma UCL		0.1736994		
16212	**Note: DL/2 is not a recommended method.**				
16213					
16214	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
16215	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
16216	**For additional insight, the user may want to consult a statistician.**				
16217					
16218					
16219	**M|MG/KG|SODIUM (gi_sd_ne_2005)**				
16220					
16221	**General Statistics**				
16222	Number of Valid Observations		36	Number of Distinct Observations	34
16223					
16224	**Raw Statistics**			**Log-transformed Statistics**	
16225	Minimum		2200	Minimum of Log Data	7.6962126
16226	Maximum		5820	Maximum of Log Data	8.6690555
16227	Mean		3596.1111	Mean of log Data	8.1634458
16228	Median		3405	SD of log Data	0.2188871

	A	B	C	D	E
16229	SD		840.2288		
16230	Coefficient of Variation		0.2336493		
16231	Skewness		1.1512398		
16232					
16233	**Relevant UCL Statistics**				
16234	**Normal Distribution Test**			**Lognormal Distribution Test**	
16235	Shapiro Wilk Test Statistic		0.9023916	Shapiro Wilk Test Statistic	0.9615522
16236	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
16237	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
16238					
16239	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
16240	95% Student's-t UCL		3832.7157	95% H-UCL	3834.7952
16241	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	4169.5978
16242	95% Adjusted-CLT UCL (Chen-1995)		3855.1639	97.5% Chebyshev (MVUE) UCL	4419.1253
16243	95% Modified-t UCL (Johnson-1978)		3837.1939	99% Chebyshev (MVUE) UCL	4909.2738
16244					
16245	**Gamma Distribution Test**			**Data Distribution**	
16246	k star (bias corrected)		19.138807	**Data appear Gamma Distributed at 5% Significance Level**	
16247	Theta Star		187.89631		
16248	MLE of Mean		3596.1111		
16249	MLE of Standard Deviation		822.0073		
16250	nu star		1377.9941		
16251	Approximate Chi Square Value (.05)		1292.7952	**Nonparametric Statistics**	
16252	Adjusted Level of Significance		0.0428	95% CLT UCL	3826.4533
16253	Adjusted Chi Square Value		1289.0648	95% Jackknife UCL	3832.7157
16254				95% Standard Bootstrap UCL	3821.3985
16255	Anderson-Darling Test Statistic		0.6969717	95% Bootstrap-t UCL	3864.4081
16256	Anderson-Darling 5% Critical Value		0.7466716	95% Hall's Bootstrap UCL	3868.2635
16257	Kolmogorov-Smirnov Test Statistic		0.1355813	95% Percentile Bootstrap UCL	3839.1667
16258	Kolmogorov-Smirnov 5% Critical Value		0.1465293	95% BCA Bootstrap UCL	3834.1667
16259	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	4206.5232
16260				97.5% Chebyshev(Mean, Sd) UCL	4470.649
16261	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4989.473
16262	95% Approximate Gamma UCL		3833.1049		
16263	95% Adjusted Gamma UCL		3844.1976		
16264					
16265	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	3833.1049
16266					
16267	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
16268	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
16269	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
16270					
16271					
16272	**M|MG/KG|SODIUM (gi_sd_ne_2009)**				
16273					
16274	**General Statistics**				
16275	Number of Valid Observations		20	Number of Distinct Observations	20
16276					
16277	**Raw Statistics**			**Log-transformed Statistics**	
16278	Minimum		1650	Minimum of Log Data	7.4085306
16279	Maximum		10900	Maximum of Log Data	9.2965181
16280	Mean		3610.5	Mean of log Data	8.0902566
16281	Median		3435	SD of log Data	0.4381881
16282	SD		1981.2741		
16283	Coefficient of Variation		0.5487534		
16284	Skewness		2.7338782		
16285					
16286	**Relevant UCL Statistics**				
16287	**Normal Distribution Test**			**Lognormal Distribution Test**	
16288	Shapiro Wilk Test Statistic		0.7175177	Shapiro Wilk Test Statistic	0.9282826
16289	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
16290	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
16291					
16292	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
16293	95% Student's-t UCL		4376.5514	95% H-UCL	4374.2519
16294	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5142.2794
16295	95% Adjusted-CLT UCL (Chen-1995)		4628.5973	97.5% Chebyshev (MVUE) UCL	5821.4501

	A	B	C	D	E
16296	95% Modified-t UCL (Johnson-1978)		4421.6894	99% Chebyshev (MVUE) UCL	7155.5493
16297					
16298	**Gamma Distribution Test**			**Data Distribution**	
16299	k star (bias corrected)		4.3636093	**Data appear Gamma Distributed at 5% Significance Level**	
16300	Theta Star		827.41138		
16301	MLE of Mean		3610.5		
16302	MLE of Standard Deviation		1728.4006		
16303	nu star		174.54437		
16304	Approximate Chi Square Value (.05)		144.99036	**Nonparametric Statistics**	
16305	Adjusted Level of Significance		0.038	95% CLT UCL	4339.2135
16306	Adjusted Chi Square Value		142.86383	95% Jackknife UCL	4376.5514
16307				95% Standard Bootstrap UCL	4324.2629
16308	Anderson-Darling Test Statistic		0.6253542	95% Bootstrap-t UCL	4892.1402
16309	Anderson-Darling 5% Critical Value		0.745166	95% Hall's Bootstrap UCL	7727.5477
16310	Kolmogorov-Smirnov Test Statistic		0.1419714	95% Percentile Bootstrap UCL	4368.5
16311	Kolmogorov-Smirnov 5% Critical Value		0.1944583	95% BCA Bootstrap UCL	4744
16312	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	5541.6071
16313				97.5% Chebyshev(Mean, Sd) UCL	6377.1987
16314	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	8018.5566
16315	95% Approximate Gamma UCL		4346.4438		
16316	95% Adjusted Gamma UCL		4411.1406		
16317					
16318	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	4346.4438
16319					
16320	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
16321	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
16322	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
16323					
16324					
16325	**M|MG/KG|SODIUM (gi_sd_ne_2010)**				
16326					
16327	**General Statistics**				
16328	Number of Valid Observations		16	Number of Distinct Observations	16
16329					
16330	**Raw Statistics**			**Log-transformed Statistics**	
16331	Minimum		810	Minimum of Log Data	6.6970342
16332	Maximum		9070	Maximum of Log Data	9.1127275
16333	Mean		4305	Mean of log Data	8.2460238
16334	Median		3630	SD of log Data	0.5501813
16335	SD		2086.3717		
16336	Coefficient of Variation		0.4846392		
16337	Skewness		1.0418771		
16338					
16339	**Relevant UCL Statistics**				
16340	**Normal Distribution Test**			**Lognormal Distribution Test**	
16341	Shapiro Wilk Test Statistic		0.891094	Shapiro Wilk Test Statistic	0.8803658
16342	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
16343	**Data appear Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
16344					
16345	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
16346	95% Student's-t UCL		5219.3786	95% H-UCL	5980.034
16347	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	7118.4723
16348	95% Adjusted-CLT UCL (Chen-1995)		5308.1112	97.5% Chebyshev (MVUE) UCL	8299.7143
16349	95% Modified-t UCL (Johnson-1978)		5242.0218	99% Chebyshev (MVUE) UCL	10620.036
16350					
16351	**Gamma Distribution Test**			**Data Distribution**	
16352	k star (bias corrected)		3.5147165	**Data appear Normal at 5% Significance Level**	
16353	Theta Star		1224.8499		
16354	MLE of Mean		4305		
16355	MLE of Standard Deviation		2296.2967		
16356	nu star		112.47093		
16357	Approximate Chi Square Value (.05)		88.989513	**Nonparametric Statistics**	
16358	Adjusted Level of Significance		0.03348	95% CLT UCL	5162.944
16359	Adjusted Chi Square Value		86.613542	95% Jackknife UCL	5219.3786
16360				95% Standard Bootstrap UCL	5136.3368
16361	Anderson-Darling Test Statistic		0.5687756	95% Bootstrap-t UCL	5627.6124
16362	Anderson-Darling 5% Critical Value		0.741749	95% Hall's Bootstrap UCL	6215.4565
16363	Kolmogorov-Smirnov Test Statistic		0.1914414	95% Percentile Bootstrap UCL	5186.25

	A	B	C	D	E
16364	Kolmogorov-Smirnov 5% Critical Value		0.2160339	95% BCA Bootstrap UCL	5254.375
16365	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	6578.5708
16366				97.5% Chebyshev(Mean, Sd) UCL	7562.3467
16367	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	9494.784
16368	95% Approximate Gamma UCL		5440.9484		
16369	95% Adjusted Gamma UCL		5590.2037		
16370					
16371	**Potential UCL to Use**			Use 95% Student's-t UCL	5219.3786
16372					
16373	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
16374	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
16375	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
16376					
16377					
16378	**M|MG/KG|SODIUM (gi_sd_nw_2005)**				
16379					
16380	**General Statistics**				
16381	Number of Valid Observations		18	Number of Distinct Observations	18
16382					
16383	**Raw Statistics**			**Log-transformed Statistics**	
16384	Minimum		2380	Minimum of Log Data	7.7748558
16385	Maximum		9580	Maximum of Log Data	9.1674329
16386	Mean		3956.6667	Mean of log Data	8.2354537
16387	Median		3665	SD of log Data	0.2912439
16388	SD		1538.7237		
16389	Coefficient of Variation		0.3888939		
16390	Skewness		3.1204406		
16391					
16392	**Relevant UCL Statistics**				
16393	**Normal Distribution Test**			**Lognormal Distribution Test**	
16394	Shapiro Wilk Test Statistic		0.6428079	Shapiro Wilk Test Statistic	0.8301145
16395	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
16396	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
16397					
16398	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
16399	95% Student's-t UCL		4587.5884	95% H-UCL	4484.1917
16400	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5115.455
16401	95% Adjusted-CLT UCL (Chen-1995)		4838.2492	97.5% Chebyshev (MVUE) UCL	5630.0505
16402	95% Modified-t UCL (Johnson-1978)		4632.0467	99% Chebyshev (MVUE) UCL	6640.8736
16403					
16404	**Gamma Distribution Test**			**Data Distribution**	
16405	k star (bias corrected)		8.9081834	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
16406	Theta Star		444.16089		
16407	MLE of Mean		3956.6667		
16408	MLE of Standard Deviation		1325.6684		
16409	nu star		320.6946		
16410	Approximate Chi Square Value (.05)		280.20522	**Nonparametric Statistics**	
16411	Adjusted Level of Significance		0.03574	95% CLT UCL	4553.2233
16412	Adjusted Chi Square Value		276.57541	95% Jackknife UCL	4587.5884
16413				95% Standard Bootstrap UCL	4539.4824
16414	Anderson-Darling Test Statistic		1.2671406	95% Bootstrap-t UCL	5303.8569
16415	Anderson-Darling 5% Critical Value		0.7391907	95% Hall's Bootstrap UCL	7095.7892
16416	Kolmogorov-Smirnov Test Statistic		0.1895913	95% Percentile Bootstrap UCL	4599.4444
16417	Kolmogorov-Smirnov 5% Critical Value		0.2034377	95% BCA Bootstrap UCL	4987.2222
16418	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	5537.555
16419				97.5% Chebyshev(Mean, Sd) UCL	6221.6066
16420	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	7565.2936
16421	95% Approximate Gamma UCL		4528.4012		
16422	95% Adjusted Gamma UCL		4587.8324		
16423					
16424	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	4528.4012
16425					
16426	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
16427	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
16428	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
16429					
16430					
16431	M|MG/KG|SODIUM (gi_sd_nw_2009)				
16432					
16433	General Statistics				
16434	Number of Valid Observations		7	Number of Distinct Observations	7
16435					
16436	Raw Statistics			Log-transformed Statistics	
16437	Minimum		2840	Minimum of Log Data	7.9515593
16438	Maximum		8830	Maximum of Log Data	9.0859103
16439	Mean		4680	Mean of log Data	8.3943256
16440	Median		4290	SD of log Data	0.3445903
16441	SD		1920.191		
16442	Coefficient of Variation		0.4102972		
16443	Skewness		2.1124248		
16444					
16445					
16446	Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!				
16447					
16448	It is suggested to collect at least 8 to 10 observations using these statistical methods!				
16449	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
16450					
16451					
16452	Warning: There are only 7 Values in this data				
16453	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
16454	the resulting calculations may not be reliable enough to draw conclusions				
16455					
16456	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
16457					
16458	Relevant UCL Statistics				
16459	Normal Distribution Test			Lognormal Distribution Test	
16460	Shapiro Wilk Test Statistic		0.7388093	Shapiro Wilk Test Statistic	0.8562509
16461	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
16462	Data not Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
16463					
16464	Assuming Normal Distribution			Assuming Lognormal Distribution	
16465	95% Student's-t UCL		6090.2902	95% H-UCL	6452.4388
16466	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	7299.1373
16467	95% Adjusted-CLT UCL (Chen-1995)		6492.9428	97.5% Chebyshev (MVUE) UCL	8444.8711
16468	95% Modified-t UCL (Johnson-1978)		6186.8678	99% Chebyshev (MVUE) UCL	10695.443
16469					
16470	Gamma Distribution Test			Data Distribution	
16471	k star (bias corrected)		5.2252094	Data Follow Appr. Gamma Distribution at 5% Significance Level	
16472	Theta Star		895.65789		
16473	MLE of Mean		4680		
16474	MLE of Standard Deviation		2047.359		
16475	nu star		73.152931		
16476	Approximate Chi Square Value (.05)		54.457393	Nonparametric Statistics	
16477	Adjusted Level of Significance		0.01584	95% CLT UCL	5873.7755
16478	Adjusted Chi Square Value		49.61789	95% Jackknife UCL	6090.2902
16479				95% Standard Bootstrap UCL	5786.4041
16480	Anderson-Darling Test Statistic		0.7054552	95% Bootstrap-t UCL	7752.0748
16481	Anderson-Darling 5% Critical Value		0.7087622	95% Hall's Bootstrap UCL	11676.434
16482	Kolmogorov-Smirnov Test Statistic		0.3408842	95% Percentile Bootstrap UCL	5838.5714
16483	Kolmogorov-Smirnov 5% Critical Value		0.3121509	95% BCA Bootstrap UCL	6258.5714
16484	Data follow Appr. Gamma Distribution at 5% Significance Level			95% Chebyshev(Mean, Sd) UCL	7843.5318
16485				97.5% Chebyshev(Mean, Sd) UCL	9212.3945
16486	Assuming Gamma Distribution			99% Chebyshev(Mean, Sd) UCL	11901.26

	A	B	C	D	E
16487	95% Approximate Gamma UCL		6286.6711		
16488	95% Adjusted Gamma UCL		6899.8443		
16489					
16490	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	6286.6711
16491					
16492	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
16493	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
16494	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
16495					
16496					
16497	**M|MG/KG|SODIUM (gi_sd_nw_2010)**				
16498					
16499	**General Statistics**				
16500	Number of Valid Observations		4	Number of Distinct Observations	4
16501					
16502					
16503	**Warning: This data set only has 4 observations!**				
16504	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
16505	**The data set for variable M|MG/KG|SODIUM (gi_sd_nw_2010) was not processed!**				
16506					
16507	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
16508	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
16509					
16510					
16511					
16512	**M|MG/KG|SODIUM (gi_sd_ref_2009)**				
16513					
16514	**General Statistics**				
16515	Number of Valid Observations		6	Number of Distinct Observations	6
16516					
16517	**Raw Statistics**			**Log-transformed Statistics**	
16518	Minimum		3080	Minimum of Log Data	8.0326849
16519	Maximum		5440	Maximum of Log Data	8.6015343
16520	Mean		4121.6667	Mean of log Data	8.3038846
16521	Median		4095	SD of log Data	0.2197695
16522	SD		906.47486		
16523	Coefficient of Variation		0.2199292		
16524	Skewness		0.3391156		
16525					
16526					
16527	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
16528					
16529	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
16530	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
16531					
16532					
16533	**Warning: There are only 6 Values in this data**				
16534	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
16535	**the resulting calculations may not be reliable enough to draw conclusions**				
16536					
16537	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
16538					
16539	**Relevant UCL Statistics**				
16540	**Normal Distribution Test**			**Lognormal Distribution Test**	
16541	Shapiro Wilk Test Statistic		0.9370657	Shapiro Wilk Test Statistic	0.942686
16542	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788

	A	B	C	D	E
16543	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
16544					
16545	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
16546	95% Student's-t UCL		4867.3692	95% H-UCL	5085.7618
16547	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5733.1397
16548	95% Adjusted-CLT UCL (Chen-1995)		4785.1159	97.5% Chebyshev (MVUE) UCL	6430.5347
16549	95% Modified-t UCL (Johnson-1978)		4875.9081	99% Chebyshev (MVUE) UCL	7800.4323
16550					
16551	**Gamma Distribution Test**			**Data Distribution**	
16552	k star (bias corrected)		12.614216	**Data appear Normal at 5% Significance Level**	
16553	Theta Star		326.74776		
16554	MLE of Mean		4121.6667		
16555	MLE of Standard Deviation		1160.4936		
16556	nu star		151.37059		
16557	Approximate Chi Square Value (.05)		123.93231	**Nonparametric Statistics**	
16558	Adjusted Level of Significance		0.01222	95% CLT UCL	4730.3724
16559	Adjusted Chi Square Value		114.9526	95% Jackknife UCL	4867.3692
16560				95% Standard Bootstrap UCL	4679.875
16561	Anderson-Darling Test Statistic		0.2992595	95% Bootstrap-t UCL	5027.7656
16562	Anderson-Darling 5% Critical Value		0.697055	95% Hall's Bootstrap UCL	4619.0348
16563	Kolmogorov-Smirnov Test Statistic		0.2152733	95% Percentile Bootstrap UCL	4666.6667
16564	Kolmogorov-Smirnov 5% Critical Value		0.3317433	95% BCA Bootstrap UCL	4656.6667
16565	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	5734.7505
16566				97.5% Chebyshev(Mean, Sd) UCL	6432.7332
16567	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	7803.7849
16568	95% Approximate Gamma UCL		5034.1926		
16569	95% Adjusted Gamma UCL		5427.4465		
16570					
16571	**Potential UCL to Use**			Use 95% Student's-t UCL	4867.3692
16572					
16573	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
16574	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
16575	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
16576					
16577					
16578	**M|MG/KG|SODIUM (gi_sd_ref_2010)**				
16579					
16580	**General Statistics**				
16581	Number of Valid Observations		3	Number of Distinct Observations	3
16582					
16583					
16584	**Warning: This data set only has 3 observations!**				
16585	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
16586	**The data set for variable M|MG/KG|SODIUM (gi_sd_ref_2010) was not processed!**				
16587					
16588	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
16589	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
16590					
16591					
16592					
16593	**M|MG/KG|SODIUM (gi_sd_s_2005)**				
16594					
16595	**General Statistics**				
16596	Number of Valid Observations		8	Number of Distinct Observations	8
16597					
16598	**Raw Statistics**			**Log-transformed Statistics**	
16599	Minimum		2250	Minimum of Log Data	7.7186855
16600	Maximum		3670	Maximum of Log Data	8.2079469
16601	Mean		2956.25	Mean of log Data	7.9763959
16602	Median		3005	SD of log Data	0.1882997
16603	SD		544.1622		
16604	Coefficient of Variation		0.1840718		

	A	B	C	D	E
16605	Skewness		-0.085813		
16606					
16607					
16608	**Warning: There are only 8 Values in this data**				
16609	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
16610	**the resulting calculations may not be reliable enough to draw conclusions**				
16611					
16612	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
16613					
16614	**Relevant UCL Statistics**				
16615	**Normal Distribution Test**			**Lognormal Distribution Test**	
16616	Shapiro Wilk Test Statistic		0.9187361	Shapiro Wilk Test Statistic	0.9120037
16617	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
16618	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
16619					
16620	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
16621	95% Student's-t UCL		3320.7487	95% H-UCL	3400.0614
16622	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3816.3422
16623	95% Adjusted-CLT UCL (Chen-1995)		3266.4671	97.5% Chebyshev (MVUE) UCL	4188.2429
16624	95% Modified-t UCL (Johnson-1978)		3319.7759	99% Chebyshev (MVUE) UCL	4918.7698
16625					
16626	**Gamma Distribution Test**			**Data Distribution**	
16627	k star (bias corrected)		20.637242	**Data appear Normal at 5% Significance Level**	
16628	Theta Star		143.24831		
16629	MLE of Mean		2956.25		
16630	MLE of Standard Deviation		650.75173		
16631	nu star		330.19587		
16632	Approximate Chi Square Value (.05)		289.09346	**Nonparametric Statistics**	
16633	Adjusted Level of Significance		0.01946	95% CLT UCL	3272.704
16634	Adjusted Chi Square Value		279.3281	95% Jackknife UCL	3320.7487
16635				95% Standard Bootstrap UCL	3257.3099
16636	Anderson-Darling Test Statistic		0.3775522	95% Bootstrap-t UCL	3319.3298
16637	Anderson-Darling 5% Critical Value		0.7156	95% Hall's Bootstrap UCL	3228.7201
16638	Kolmogorov-Smirnov Test Statistic		0.2017932	95% Percentile Bootstrap UCL	3250
16639	Kolmogorov-Smirnov 5% Critical Value		0.2936667	95% BCA Bootstrap UCL	3236.25
16640	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3794.8603
16641				97.5% Chebyshev(Mean, Sd) UCL	4157.7276
16642	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4870.5102
16643	95% Approximate Gamma UCL		3376.5604		
16644	95% Adjusted Gamma UCL		3494.6056		
16645					
16646	**Potential UCL to Use**			Use 95% Student's-t UCL	3320.7487
16647					
16648	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
16649	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
16650	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
16651					
16652					
16653	**M|MG/KG|SODIUM (gi_sd_s_2010)**				
16654					
16655	**General Statistics**				
16656	Number of Valid Observations		2	Number of Distinct Observations	2
16657					
16658					
16659	**Warning: This data set only has 2 observations!**				
16660	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
16661	**The data set for variable M|MG/KG|SODIUM (gi_sd_s_2010) was not processed!**				
16662					
16663	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
16664	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
16665					
16666					
16667					
16668	**M|MG/KG|SODIUM (gi_sd_stillwater_2005)**				
16669					
16670	**General Statistics**				
16671	Number of Valid Observations		4	Number of Distinct Observations	4
16672					
16673					
16674	**Warning: This data set only has 4 observations!**				
16675	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
16676	**The data set for variable M|MG/KG|SODIUM (gi_sd_stillwater_2005) was not processed!**				
16677					
16678	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
16679	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
16680					
16681					
16682					
16683	**M|MG/KG|SODIUM (gi_sd_stillwater_2009)**				
16684					
16685	**General Statistics**				
16686	Number of Valid Observations		60	Number of Distinct Observations	57
16687					
16688	**Raw Statistics**			**Log-transformed Statistics**	
16689	Minimum		1130	Minimum of Log Data	7.0299729
16690	Maximum		13500	Maximum of Log Data	9.510445
16691	Mean		4347	Mean of log Data	8.1488325
16692	Median		2700	SD of log Data	0.6483362
16693	SD		3276.5874		
16694	Coefficient of Variation		0.7537583		
16695	Skewness		1.3029172		
16696					
16697	**Relevant UCL Statistics**				
16698	**Normal Distribution Test**			**Lognormal Distribution Test**	
16699	Lilliefors Test Statistic		0.2586747	Lilliefors Test Statistic	0.1883105
16700	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
16701	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
16702					
16703	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
16704	95% Student's-t UCL		5053.8817	95% H-UCL	5053.201
16705	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5932.8476
16706	95% Adjusted-CLT UCL (Chen-1995)		5118.8093	97.5% Chebyshev (MVUE) UCL	6660.7759
16707	95% Modified-t UCL (Johnson-1978)		5065.7404	99% Chebyshev (MVUE) UCL	8090.6499
16708					
16709	**Gamma Distribution Test**			**Data Distribution**	
16710	k star (bias corrected)		2.2361997	**Data do not follow a Discernable Distribution (0.05)**	
16711	Theta Star		1943.923		
16712	MLE of Mean		4347		
16713	MLE of Standard Deviation		2906.9285		
16714	nu star		268.34397		
16715	Approximate Chi Square Value (.05)		231.40885	**Nonparametric Statistics**	
16716	Adjusted Level of Significance		0.046	95% CLT UCL	5042.7823
16717	Adjusted Chi Square Value		230.56885	95% Jackknife UCL	5053.8817
16718				95% Standard Bootstrap UCL	5034.2096
16719	Anderson-Darling Test Statistic		3.926753	95% Bootstrap-t UCL	5172.0974
16720	Anderson-Darling 5% Critical Value		0.7612203	95% Hall's Bootstrap UCL	5102.3314
16721	Kolmogorov-Smirnov Test Statistic		0.2184011	95% Percentile Bootstrap UCL	5083.5
16722	Kolmogorov-Smirnov 5% Critical Value		0.1159386	95% BCA Bootstrap UCL	5121.6667
16723	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	6190.8387
16724				97.5% Chebyshev(Mean, Sd) UCL	6988.6692
16725	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	8555.8527
16726	95% Approximate Gamma UCL		5040.8236		
16727	95% Adjusted Gamma UCL		5059.1883		
16728					
16729	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	6190.8387

	A	B	C	D	E
16730					
16731	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
16732	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
16733	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
16734					
16735					
16736	**M|MG/KG|SODIUM (gi_sd_stillwater_2010)**				
16737					
16738	**General Statistics**				
16739	Number of Valid Observations		11	Number of Distinct Observations	11
16740					
16741	**Raw Statistics**			**Log-transformed Statistics**	
16742	Minimum		3440	Minimum of Log Data	8.1432268
16743	Maximum		7690	Maximum of Log Data	8.9476761
16744	Mean		4890	Mean of log Data	8.4608846
16745	Median		4530	SD of log Data	0.2685403
16746	SD		1394.9624		
16747	Coefficient of Variation		0.2852684		
16748	Skewness		0.9693461		
16749					
16750	**Relevant UCL Statistics**				
16751	**Normal Distribution Test**			**Lognormal Distribution Test**	
16752	Shapiro Wilk Test Statistic		0.8919683	Shapiro Wilk Test Statistic	0.9286473
16753	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
16754	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
16755					
16756	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
16757	95% Student's-t UCL		5652.3157	95% H-UCL	5767.1097
16758	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	6618.1238
16759	95% Adjusted-CLT UCL (Chen-1995)		5713.1702	97.5% Chebyshev (MVUE) UCL	7368.7872
16760	95% Modified-t UCL (Johnson-1978)		5672.8036	99% Chebyshev (MVUE) UCL	8843.3202
16761					
16762	**Gamma Distribution Test**			**Data Distribution**	
16763	k star (bias corrected)		10.855846	**Data appear Normal at 5% Significance Level**	
16764	Theta Star		450.44855		
16765	MLE of Mean		4890		
16766	MLE of Standard Deviation		1484.1474		
16767	nu star		238.82861		
16768	Approximate Chi Square Value (.05)		204.05213	**Nonparametric Statistics**	
16769	Adjusted Level of Significance		0.02783	95% CLT UCL	5581.8205
16770	Adjusted Chi Square Value		198.81044	95% Jackknife UCL	5652.3157
16771				95% Standard Bootstrap UCL	5557.1934
16772	Anderson-Darling Test Statistic		0.4031407	95% Bootstrap-t UCL	5863.5982
16773	Anderson-Darling 5% Critical Value		0.7290455	95% Hall's Bootstrap UCL	5831.2236
16774	Kolmogorov-Smirnov Test Statistic		0.162175	95% Percentile Bootstrap UCL	5650.9091
16775	Kolmogorov-Smirnov 5% Critical Value		0.2552105	95% BCA Bootstrap UCL	5702.7273
16776	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	6723.3397
16777				97.5% Chebyshev(Mean, Sd) UCL	7516.6273
16778	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	9074.8871
16779	95% Approximate Gamma UCL		5723.3997		
16780	95% Adjusted Gamma UCL		5874.2986		
16781					
16782	**Potential UCL to Use**			Use 95% Student's-t UCL	5652.3157
16783					
16784	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
16785	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
16786	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
16787					
16788					
16789	**M|MG/KG|THALLIUM (gi_sd_ne_2005)**				
16790					
16791	**General Statistics**				
16792	Number of Valid Data		36	Number of Detected Data	17

	A	B	C	D	E
16793	Number of Distinct Detected Data		12	Number of Non-Detect Data	19
16794				Percent Non-Detects	52.78%
16795					
16796	**Raw Statistics**			**Log-transformed Statistics**	
16797	Minimum Detected		0.13	Minimum Detected	-2.040221
16798	Maximum Detected		1.7	Maximum Detected	0.5306283
16799	Mean of Detected		0.9447059	Mean of Detected	-0.266746
16800	SD of Detected		0.43167	SD of Detected	0.8200242
16801	Minimum Non-Detect		0.076	Minimum Non-Detect	-2.577022
16802	Maximum Non-Detect		1.1	Maximum Non-Detect	0.0953102
16803					
16804	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	27
16805	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	9
16806	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	75.00%
16807					
16808	**UCL Statistics**				
16809	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
16810	Shapiro Wilk Test Statistic		0.8553444	Shapiro Wilk Test Statistic	0.6717525
16811	5% Shapiro Wilk Critical Value		0.892	5% Shapiro Wilk Critical Value	0.892
16812	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
16813					
16814	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
16815	DL/2 Substitution Method			DL/2 Substitution Method	
16816	Mean		0.587625	Mean	-1.025266
16817	SD		0.4706638	SD	1.1731223
16818	95% DL/2 (t) UCL		0.7201618	95% H-Stat (DL/2) UCL	1.1920922
16819					
16820	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
16821	Mean		0.9021876	Mean in Log Scale	-1.039899
16822	SD		0.2743426	SD in Log Scale	0.946148
16823	95% MLE (t) UCL		0.9794412	Mean in Original Scale	0.5428111
16824	95% MLE (Tiku) UCL		1.0600167	SD in Original Scale	0.4849317
16825				95% t UCL	0.6793656
16826				95% Percentile Bootstrap UCL	0.6791181
16827				95% BCA Bootstrap UCL	0.6744506
16828					
16829	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
16830	k star (bias corrected)		2.1283014	**Data do not follow a Discernable Distribution (0.05)**	
16831	Theta Star		0.4438779		
16832	nu star		72.362247		
16833					
16834	A-D Test Statistic		2.2234157	**Nonparametric Statistics**	
16835	5% A-D Critical Value		0.7472669	Kaplan-Meier (KM) Method	
16836	K-S Test Statistic		0.7472669	Mean	0.5355425
16837	5% K-S Critical Value		0.2111172	SD	0.4964248
16838	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0876262
16839				95% KM (t) UCL	0.6835934
16840	**Assuming Gamma Distribution**			95% KM (z) UCL	0.6796748
16841	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.6787425
16842	Minimum		0.13	95% KM (bootstrap t) UCL	0.6960012
16843	Maximum		1.7	95% KM (BCA) UCL	0.7895139
16844	Mean		0.933998	95% KM (Percentile Bootstrap) UCL	0.7588542
16845	Median		0.9629604	95% KM (Chebyshev) UCL	0.9174963
16846	SD		0.3214332	97.5% KM (Chebyshev) UCL	1.082768
16847	k star		4.3172588	99% KM (Chebyshev) UCL	1.4074123
16848	Theta star		0.2163405		
16849	Nu star		310.84263	**Potential UCLs to Use**	
16850	AppChi2		270.99858	95% KM (t) UCL	0.6835934
16851	95% Gamma Approximate UCL		1.0713208	95% KM (% Bootstrap) UCL	0.7588542
16852	95% Adjusted Gamma UCL		1.078023		
16853	**Note: DL/2 is not a recommended method.**				
16854					
16855	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
16856	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
16857	**For additional insight, the user may want to consult a statistician.**				
16858					
16859					

	A	B	C	D	E
16860	**M|MG/KG|THALLIUM (gi_sd_ne_2009)**				
16861					
16862	**General Statistics**				
16863	Number of Valid Data		20	Number of Detected Data	6
16864	Number of Distinct Detected Data		5	Number of Non-Detect Data	14
16865				Percent Non-Detects	70.00%
16866					
16867	**Raw Statistics**			**Log-transformed Statistics**	
16868	Minimum Detected		0.145	Minimum Detected	-1.931022
16869	Maximum Detected		0.89	Maximum Detected	-0.116534
16870	Mean of Detected		0.3608333	Mean of Detected	-1.209666
16871	SD of Detected		0.2757611	SD of Detected	0.6374198
16872	Minimum Non-Detect		0.094	Minimum Non-Detect	-2.36446
16873	Maximum Non-Detect		0.12	Maximum Non-Detect	-2.120264
16874					
16875	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	14
16876	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	6
16877	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	70.00%
16878					
16879	**Warning: There are only 6 Detected Values in this data**				
16880	**Note: It should be noted that even though bootstrap may be performed on this data set**				
16881	**the resulting calculations may not be reliable enough to draw conclusions**				
16882					
16883	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
16884					
16885					
16886	**UCL Statistics**				
16887	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
16888	Shapiro Wilk Test Statistic		0.7558977	Shapiro Wilk Test Statistic	0.8920603
16889	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788
16890	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
16891					
16892	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
16893	DL/2 Substitution Method			DL/2 Substitution Method	
16894	Mean		0.146325	Mean	-2.403217
16895	SD		0.2019496	SD	0.8685301
16896	95% DL/2 (t) UCL		0.224408	95% H-Stat (DL/2) UCL	0.2148094
16897					
16898	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
16899	**MLE yields a negative mean**			Mean in Log Scale	-2.877848
16900				SD in Log Scale	1.2995543
16901				Mean in Original Scale	0.1318354
16902				SD in Original Scale	0.2096967
16903				95% t UCL	0.2129138
16904				95% Percentile Bootstrap UCL	0.2159523
16905				95% BCA Bootstrap UCL	0.256217
16906					
16907	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
16908	k star (bias corrected)		1.5023608	**Data appear Gamma Distributed at 5% Significance Level**	
16909	Theta Star		0.2401775		
16910	nu star		18.02833		
16911					
16912	A-D Test Statistic		0.5692986	**Nonparametric Statistics**	
16913	5% A-D Critical Value		0.7019564	Kaplan-Meier (KM) Method	
16914	K-S Test Statistic		0.7019564	Mean	0.20975
16915	5% K-S Critical Value		0.3348284	SD	0.169687
16916	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.0415647
16917				95% KM (t) UCL	0.2816208
16918	**Assuming Gamma Distribution**			95% KM (z) UCL	0.2781178
16919	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.2780333
16920	Minimum		0.1304845	95% KM (bootstrap t) UCL	0.4031632
16921	Maximum		0.89	95% KM (BCA) UCL	0.35
16922	Mean		0.3368105	95% KM (Percentile Bootstrap) UCL	0.326
16923	Median		0.318122	95% KM (Chebyshev) UCL	0.3909262
16924	SD		0.1808074	97.5% KM (Chebyshev) UCL	0.4693212
16925	k star		3.6928319	99% KM (Chebyshev) UCL	0.6233132
16926	Theta star		0.0912066		

	A	B	C	D	E
16927	Nu star		147.71328	**Potential UCLs to Use**	
16928	AppChi2		120.62339	95% KM (t) UCL	0.2816208
16929	95% Gamma Approximate UCL		0.4124522		
16930	95% Adjusted Gamma UCL		0.4191693		
16931	**Note: DL/2 is not a recommended method.**				
16932					
16933	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
16934	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
16935	**For additional insight, the user may want to consult a statistician.**				
16936					
16937					
16938	**M|MG/KG|THALLIUM (gi_sd_ne_2010)**				
16939					
16940	**General Statistics**				
16941	Number of Valid Data		16	Number of Detected Data	4
16942	Number of Distinct Detected Data		4	Number of Non-Detect Data	12
16943				Percent Non-Detects	75.00%
16944					
16945	**Raw Statistics**			**Log-transformed Statistics**	
16946	Minimum Detected		0.123	Minimum Detected	-2.095571
16947	Maximum Detected		4.9	Maximum Detected	1.5892352
16948	Mean of Detected		2.73075	Mean of Detected	0.405474
16949	SD of Detected		2.0171884	SD of Detected	1.6926616
16950	Minimum Non-Detect		0.42	Minimum Non-Detect	-0.867501
16951	Maximum Non-Detect		1.18	Maximum Non-Detect	0.1655144
16952					
16953	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	13
16954	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	3
16955	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	81.25%
16956					
16957	**Warning: There are only 4 Distinct Detected Values in this data**				
16958	**Note: It should be noted that even though bootstrap may be performed on this data set**				
16959	**the resulting calculations may not be reliable enough to draw conclusions**				
16960					
16961	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
16962					
16963					
16964	**UCL Statistics**				
16965	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
16966	Shapiro Wilk Test Statistic		0.9848038	Shapiro Wilk Test Statistic	0.7837379
16967	5% Shapiro Wilk Critical Value		0.748	5% Shapiro Wilk Critical Value	0.748
16968	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
16969					
16970	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
16971	DL/2 Substitution Method			DL/2 Substitution Method	
16972	Mean		0.8974375	Mean	-0.889442
16973	SD		1.4219236	SD	1.1239076
16974	95% DL/2 (t) UCL		1.5206134	95% H-Stat (DL/2) UCL	1.7923298
16975					
16976	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
16977	**MLE yields a negative mean**			Mean in Log Scale	-1.402699
16978				SD in Log Scale	1.343344
16979				Mean in Original Scale	0.788071
16980				SD in Original Scale	1.4687375
16981				95% t UCL	1.4317637
16982				95% Percentile Bootstrap UCL	1.444042
16983				95% BCA Bootstrap UCL	1.6396282
16984					
16985	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
16986	k star (bias corrected)		0.4084846	**Data appear Normal at 5% Significance Level**	
16987	Theta Star		6.6850738		
16988	nu star		3.2678772		
16989					

	A	B	C	D	E
16990	A-D Test Statistic		0.4875368	**Nonparametric Statistics**	
16991	5% A-D Critical Value		0.6670931	Kaplan-Meier (KM) Method	
16992	K-S Test Statistic		0.6670931	Mean	0.7749375
16993	5% K-S Critical Value		0.4027825	SD	1.4275903
16994	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.4121098
16995				95% KM (t) UCL	1.4973868
16996	**Assuming Gamma Distribution**			95% KM (z) UCL	1.4527979
16997	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	2.203494
16998	Minimum		1E-12	95% KM (bootstrap t) UCL	1.2212697
16999	Maximum		4.9	95% KM (BCA) UCL	N/A
17000	Mean		0.6826875	95% KM (Percentile Bootstrap) UCL	3.675
17001	Median		1E-12	95% KM (Chebyshev) UCL	2.5712826
17002	SD		1.5182914	97.5% KM (Chebyshev) UCL	3.3485626
17003	k star		0.0772057	99% KM (Chebyshev) UCL	4.8753786
17004	Theta star		8.8424492		
17005	Nu star		2.4705825	**Potential UCLs to Use**	
17006	AppChi2		0.2345667	95% KM (t) UCL	1.4973868
17007	95% Gamma Approximate UCL		7.190432	95% KM (Percentile Bootstrap) UCL	3.675
17008	95% Adjusted Gamma UCL		N/A		
17009	**Note: DL/2 is not a recommended method.**				
17010					
17011	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
17012	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
17013	**For additional insight, the user may want to consult a statistician.**				
17014					
17015					
17016	**M|MG/KG|THALLIUM (gi_sd_nw_2005)**				
17017					
17018	**General Statistics**				
17019	Number of Valid Data		18	Number of Detected Data	1
17020	Number of Distinct Detected Data		1	Number of Non-Detect Data	17
17021				Percent Non-Detects	94.44%
17022					
17023	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**				
17024	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**				
17025					
17026	**The data set for variable M|MG/KG|THALLIUM (gi_sd_nw_2005) was not processed!**				
17027					
17028					
17029					
17030	**M|MG/KG|THALLIUM (gi_sd_nw_2009)**				
17031					
17032	**General Statistics**				
17033	Number of Valid Data		7	Number of Detected Data	5
17034	Number of Distinct Detected Data		5	Number of Non-Detect Data	2
17035				Percent Non-Detects	28.57%
17036					
17037	**Raw Statistics**			**Log-transformed Statistics**	
17038	Minimum Detected		0.12	Minimum Detected	-2.120264
17039	Maximum Detected		0.46	Maximum Detected	-0.776529
17040	Mean of Detected		0.226	Mean of Detected	-1.615786
17041	SD of Detected		0.1392121	SD of Detected	0.5441495
17042	Minimum Non-Detect		0.11	Minimum Non-Detect	-2.207275
17043	Maximum Non-Detect		0.14	Maximum Non-Detect	-1.966113
17044					
17045	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	4
17046	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	3
17047	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	57.14%
17048					
17049	**Warning: There are only 5 Detected Values in this data**				
17050	**Note: It should be noted that even though bootstrap may be performed on this data set**				
17051	**the resulting calculations may not be reliable enough to draw conclusions**				
17052					

	A	B	C	D	E
17053	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
17054					
17055					
17056	**UCL Statistics**				
17057	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
17058	Shapiro Wilk Test Statistic		0.8224946	Shapiro Wilk Test Statistic	0.9149453
17059	5% Shapiro Wilk Critical Value		0.762	5% Shapiro Wilk Critical Value	0.762
17060	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
17061					
17062	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
17063	DL/2 Substitution Method			DL/2 Substitution Method	
17064	Mean		0.1792857	Mean	-1.948373
17065	SD		0.1389373	SD	0.7244797
17066	95% DL/2 (t) UCL		0.2813286	95% H-Stat (DL/2) UCL	0.4451241
17067					
17068	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
17069	Mean		0.1018863	Mean in Log Scale	-1.89826
17070	SD		0.2093898	SD in Log Scale	0.6754119
17071	95% MLE (t) UCL		0.2556733	Mean in Original Scale	0.1833865
17072	95% MLE (Tiku) UCL		0.3093925	SD in Original Scale	0.1355087
17073				95% t UCL	0.2829113
17074				95% Percentile Bootstrap UCL	0.2719579
17075				95% BCA Bootstrap UCL	0.2914286
17076					
17077	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
17078	k star (bias corrected)		1.7526284	**Data appear Normal at 5% Significance Level**	
17079	Theta Star		0.1289492		
17080	nu star		17.526284		
17081					
17082	A-D Test Statistic		0.3757807	**Nonparametric Statistics**	
17083	5% A-D Critical Value		0.6812144	Kaplan-Meier (KM) Method	
17084	K-S Test Statistic		0.6812144	Mean	0.1961905
17085	5% K-S Critical Value		0.3584432	SD	0.1153246
17086	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.0487413
17087				95% KM (t) UCL	0.2909036
17088	**Assuming Gamma Distribution**			95% KM (z) UCL	0.2763628
17089	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.2867984
17090	Minimum		0.0713952	95% KM (bootstrap t) UCL	0.4567288
17091	Maximum		0.46	95% KM (BCA) UCL	0.2914286
17092	Mean		0.1993083	95% KM (Percentile Bootstrap) UCL	0.2785714
17093	Median		0.18	95% KM (Chebyshev) UCL	0.4086489
17094	SD		0.127459	97.5% KM (Chebyshev) UCL	0.5005799
17095	k star		2.0558157	99% KM (Chebyshev) UCL	0.6811604
17096	Theta star		0.0969485		
17097	Nu star		28.78142	**Potential UCLs to Use**	
17098	AppChi2		17.537587	95% KM (t) UCL	0.2909036
17099	95% Gamma Approximate UCL		0.3270905	95% KM (Percentile Bootstrap) UCL	0.2785714
17100	95% Adjusted Gamma UCL		0.3836755		
17101	**Note: DL/2 is not a recommended method.**				
17102					
17103	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
17104	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
17105	**For additional insight, the user may want to consult a statistician.**				
17106					
17107					
17108	**M|MG/KG|THALLIUM (gi_sd_nw_2010)**				
17109					
17110	**General Statistics**				
17111	Number of Valid Data		4	Number of Detected Data	1
17112	Number of Distinct Detected Data		1	Number of Non-Detect Data	3
17113				Percent Non-Detects	75.00%
17114					
17115	**Warning: This data set only has 4 observations!**				
17116	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
17117	The data set for variable M|MG/KG|THALLIUM (gi_sd_nw_2010) was not processed!				
17118					
17119	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
17120	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
17121					
17122					
17123					
17124	M|MG/KG|THALLIUM (gi_sd_ref_2009)				
17125					
17126	General Statistics				
17127	Number of Valid Data		6	Number of Detected Data	0
17128	Number of Distinct Detected Data		0	Number of Non-Detect Data	6
17129				Percent Non-Detects	100.00%
17130					
17131	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
17132	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
17133	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
17134					
17135	The data set for variable M|MG/KG|THALLIUM (gi_sd_ref_2009) was not processed!				
17136					
17137					
17138					
17139	M|MG/KG|THALLIUM (gi_sd_ref_2010)				
17140					
17141	General Statistics				
17142	Number of Valid Data		3	Number of Detected Data	0
17143	Number of Distinct Detected Data		0	Number of Non-Detect Data	3
17144				Percent Non-Detects	100.00%
17145					
17146	Warning: This data set only has 3 observations!				
17147	Data set is too small to compute reliable and meaningful statistics and estimates!				
17148	The data set for variable M|MG/KG|THALLIUM (gi_sd_ref_2010) was not processed!				
17149					
17150	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
17151	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
17152					
17153					
17154					
17155	M|MG/KG|THALLIUM (gi_sd_s_2005)				
17156					
17157	General Statistics				
17158	Number of Valid Data		8	Number of Detected Data	1
17159	Number of Distinct Detected Data		1	Number of Non-Detect Data	7
17160				Percent Non-Detects	87.50%
17161					
17162	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
17163	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
17164					
17165	The data set for variable M|MG/KG|THALLIUM (gi_sd_s_2005) was not processed!				
17166					
17167					
17168					
17169	M|MG/KG|THALLIUM (gi_sd_s_2010)				
17170					

	A	B	C	D	E
17171	**General Statistics**				
17172	Number of Valid Data		2	Number of Detected Data	0
17173	Number of Distinct Detected Data		0	Number of Non-Detect Data	2
17174				Percent Non-Detects	100.00%
17175					
17176	**Warning: This data set only has 2 observations!**				
17177	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
17178	**The data set for variable M|MG/KG|THALLIUM (gi_sd_s_2010) was not processed!**				
17179					
17180	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
17181	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
17182					
17183					
17184					
17185	**M|MG/KG|THALLIUM (gi_sd_stillwater_2005)**				
17186					
17187	**General Statistics**				
17188	Number of Valid Data		4	Number of Detected Data	0
17189	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
17190				Percent Non-Detects	100.00%
17191					
17192	**Warning: This data set only has 4 observations!**				
17193	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
17194	**The data set for variable M|MG/KG|THALLIUM (gi_sd_stillwater_2005) was not processed!**				
17195					
17196	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
17197	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
17198					
17199					
17200					
17201	**M|MG/KG|THALLIUM (gi_sd_stillwater_2009)**				
17202					
17203	**General Statistics**				
17204	Number of Valid Data		60	Number of Detected Data	48
17205	Number of Distinct Detected Data		32	Number of Non-Detect Data	12
17206				Percent Non-Detects	20.00%
17207					
17208	**Raw Statistics**			**Log-transformed Statistics**	
17209	Minimum Detected		0.072	Minimum Detected	-2.631089
17210	Maximum Detected		0.92	Maximum Detected	-0.083382
17211	Mean of Detected		0.3011875	Mean of Detected	-1.456319
17212	SD of Detected		0.2444264	SD of Detected	0.6866175
17213	Minimum Non-Detect		0.093	Minimum Non-Detect	-2.375156
17214	Maximum Non-Detect		0.13	Maximum Non-Detect	-2.040221
17215					
17216	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	20
17217	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	40
17218	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	33.33%
17219					
17220	**UCL Statistics**				
17221	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
17222	Shapiro Wilk Test Statistic		0.746176	Shapiro Wilk Test Statistic	0.8994112
17223	5% Shapiro Wilk Critical Value		0.947	5% Shapiro Wilk Critical Value	0.947
17224	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
17225					
17226	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
17227	DL/2 Substitution Method			DL/2 Substitution Method	
17228	Mean		0.2516167	Mean	-1.752418
17229	SD		0.2399901	SD	0.8570038
17230	95% DL/2 (t) UCL		0.3033914	95% H-Stat (DL/2) UCL	0.3194905
17231					

	A	B	C	D	E
17232	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
17233	Mean		0.1971995	Mean in Log Scale	-1.731787
17234	SD		0.3018648	SD in Log Scale	0.8315003
17235	95% MLE (t) UCL		0.262323	Mean in Original Scale	0.2529199
17236	95% MLE (Tiku) UCL		0.266792	SD in Original Scale	0.2389485
17237				95% t UCL	0.3044699
17238				95% Percentile Bootstrap UCL	0.3045237
17239				95% BCA Bootstrap UCL	0.3186167
17240					
17241	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
17242	k star (bias corrected)		1.9848306	**Data do not follow a Discernable Distribution (0.05)**	
17243	Theta Star		0.1517447		
17244	nu star		190.54374		
17245					
17246	A-D Test Statistic		2.6236731	**Nonparametric Statistics**	
17247	5% A-D Critical Value		0.7613822	Kaplan-Meier (KM) Method	
17248	K-S Test Statistic		0.7613822	Mean	0.256245
17249	5% K-S Critical Value		0.1294371	SD	0.2343245
17250	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0305794
17251				95% KM (t) UCL	0.307346
17252	**Assuming Gamma Distribution**			95% KM (z) UCL	0.3065436
17253	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	0.3038777
17254	Minimum		1E-12	95% KM (bootstrap t) UCL	0.3128294
17255	Maximum		0.92	95% KM (BCA) UCL	0.3113198
17256	Mean		0.2507232	95% KM (Percentile Bootstrap) UCL	0.3118042
17257	Median		0.15	95% KM (Chebyshev) UCL	0.3895374
17258	SD		0.2416724	97.5% KM (Chebyshev) UCL	0.4472131
17259	k star		0.5009054	99% KM (Chebyshev) UCL	0.5605059
17260	Theta star		0.50054		
17261	Nu star		60.10865	**Potential UCLs to Use**	
17262	AppChi2		43.280273	95% KM (BCA) UCL	0.3113198
17263	95% Gamma Approximate UCL		0.3482102		
17264	95% Adjusted Gamma UCL		0.3510602		
17265	**Note: DL/2 is not a recommended method.**				
17266					
17267	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
17268	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
17269	**For additional insight, the user may want to consult a statistician.**				
17270					
17271					
17272	**M|MG/KG|THALLIUM (gi_sd_stillwater_2010)**				
17273					
17274	**General Statistics**				
17275	Number of Valid Data		11	Number of Detected Data	5
17276	Number of Distinct Detected Data		5	Number of Non-Detect Data	6
17277				Percent Non-Detects	54.55%
17278					
17279	**Raw Statistics**			**Log-transformed Statistics**	
17280	Minimum Detected		0.136	Minimum Detected	-1.9951
17281	Maximum Detected		4.5	Maximum Detected	1.5040774
17282	Mean of Detected		1.7506	Mean of Detected	-0.045572
17283	SD of Detected		1.7726663	SD of Detected	1.3993406
17284	Minimum Non-Detect		0.435	Minimum Non-Detect	-0.832409
17285	Maximum Non-Detect		0.48	Maximum Non-Detect	-0.733969
17286					
17287	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	8
17288	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	3
17289	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	72.73%
17290					
17291	**Warning: There are only 5 Detected Values in this data**				
17292	**Note: It should be noted that even though bootstrap may be performed on this data set**				
17293	**the resulting calculations may not be reliable enough to draw conclusions**				
17294					
17295	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
17296					

	A	B	C	D	E
17297					
17298	**UCL Statistics**				
17299	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
17300	Shapiro Wilk Test Statistic		0.9082683	Shapiro Wilk Test Statistic	0.964013
17301	5% Shapiro Wilk Critical Value		0.762	5% Shapiro Wilk Critical Value	0.762
17302	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
17303					
17304	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
17305	DL/2 Substitution Method			DL/2 Substitution Method	
17306	Mean		0.9203182	Mean	-0.826361
17307	SD		1.3743676	SD	1.1587117
17308	95% DL/2 (t) UCL		1.6713793	95% H-Stat (DL/2) UCL	2.8814562
17309					
17310	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
17311	Mean		2.8938831	Mean in Log Scale	-0.802919
17312	SD		1.3274872	SD in Log Scale	1.1441322
17313	95% MLE (t) UCL		3.6193251	Mean in Original Scale	0.9257329
17314	95% MLE (Tiku) UCL		4.2619629	SD in Original Scale	1.3713656
17315				95% t UCL	1.6751535
17316				95% Percentile Bootstrap UCL	1.6203068
17317				95% BCA Bootstrap UCL	1.8808522
17318					
17319	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
17320	k star (bias corrected)		0.5165723	**Data appear Normal at 5% Significance Level**	
17321	Theta Star		3.388877		
17322	nu star		5.165723		
17323					
17324	A-D Test Statistic		0.1877229	**Nonparametric Statistics**	
17325	5% A-D Critical Value		0.6924982	Kaplan-Meier (KM) Method	
17326	K-S Test Statistic		0.6924982	Mean	0.9465455
17327	5% K-S Critical Value		0.3647888	SD	1.3008427
17328	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.4440594
17329				95% KM (t) UCL	1.7513859
17330	**Assuming Gamma Distribution**			95% KM (z) UCL	1.6769582
17331	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	1.7268942
17332	Minimum		0.136	95% KM (bootstrap t) UCL	2.2378124
17333	Maximum		4.5	95% KM (BCA) UCL	2.4
17334	Mean		1.7536487	95% KM (Percentile Bootstrap) UCL	2.0516364
17335	Median		1.7561893	95% KM (Chebyshev) UCL	2.8821557
17336	SD		1.1211364	97.5% KM (Chebyshev) UCL	3.7196958
17337	k star		1.4910969	99% KM (Chebyshev) UCL	5.3648811
17338	Theta star		1.1760797		
17339	Nu star		32.804132	**Potential UCLs to Use**	
17340	AppChi2		20.710758	95% KM (t) UCL	1.7513859
17341	95% Gamma Approximate UCL		2.7776349	95% KM (Percentile Bootstrap) UCL	2.0516364
17342	95% Adjusted Gamma UCL		3.0028485		
17343	**Note: DL/2 is not a recommended method.**				
17344					
17345	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
17346	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
17347	**For additional insight, the user may want to consult a statistician.**				
17348					
17349					
17350	**M|MG/KG|VANADIUM (gi_sd_ne_2005)**				
17351					
17352	**General Statistics**				
17353	Number of Valid Observations		36	Number of Distinct Observations	30
17354					
17355	**Raw Statistics**			**Log-transformed Statistics**	
17356	Minimum		13	Minimum of Log Data	2.5649494
17357	Maximum		24.1	Maximum of Log Data	3.1822118
17358	Mean		17.322222	Mean of log Data	2.840733
17359	Median		16.8	SD of log Data	0.1508569
17360	SD		2.6913736		
17361	Coefficient of Variation		0.1553712		
17362	Skewness		0.7216146		
17363					
17364	**Relevant UCL Statistics**				

	A	B	C	D	E
17365	**Normal Distribution Test**			**Lognormal Distribution Test**	
17366	Shapiro Wilk Test Statistic		0.9496404	Shapiro Wilk Test Statistic	0.9724125
17367	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
17368	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
17369					
17370	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
17371	95% Student's-t UCL		18.080101	95% H-UCL	18.098107
17372	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	19.225319
17373	95% Adjusted-CLT UCL (Chen-1995)		18.117686	97.5% Chebyshev (MVUE) UCL	20.050272
17374	95% Modified-t UCL (Johnson-1978)		18.089092	99% Chebyshev (MVUE) UCL	21.670733
17375					
17376	**Gamma Distribution Test**			**Data Distribution**	
17377	k star (bias corrected)		40.885259	**Data appear Normal at 5% Significance Level**	
17378	Theta Star		0.4236789		
17379	MLE of Mean		17.322222		
17380	MLE of Standard Deviation		2.70907		
17381	nu star		2943.7386		
17382	Approximate Chi Square Value (.05)		2818.6764	**Nonparametric Statistics**	
17383	Adjusted Level of Significance		0.0428	95% CLT UCL	18.060042
17384	Adjusted Chi Square Value		2813.1474	95% Jackknife UCL	18.080101
17385				95% Standard Bootstrap UCL	18.046819
17386	Anderson-Darling Test Statistic		0.3660745	95% Bootstrap-t UCL	18.173546
17387	Anderson-Darling 5% Critical Value		0.7452782	95% Hall's Bootstrap UCL	18.135501
17388	Kolmogorov-Smirnov Test Statistic		0.0989961	95% Percentile Bootstrap UCL	18.063889
17389	Kolmogorov-Smirnov 5% Critical Value		0.1463996	95% BCA Bootstrap UCL	18.116667
17390	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	19.27746
17391				97.5% Chebyshev(Mean, Sd) UCL	20.123493
17392	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	21.78536
17393	95% Approximate Gamma UCL		18.090794		
17394	95% Adjusted Gamma UCL		18.12635		
17395					
17396	**Potential UCL to Use**			Use 95% Student's-t UCL	18.080101
17397					
17398	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
17399	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
17400	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
17401					
17402					
17403	**M|MG/KG|VANADIUM (gi_sd_ne_2009)**				
17404					
17405	**General Statistics**				
17406	Number of Valid Observations		20	Number of Distinct Observations	18
17407					
17408	**Raw Statistics**			**Log-transformed Statistics**	
17409	Minimum		7.8	Minimum of Log Data	2.0541237
17410	Maximum		23.3	Maximum of Log Data	3.1484534
17411	Mean		13.41	Mean of log Data	2.5624651
17412	Median		12.45	SD of log Data	0.2575335
17413	SD		3.8448736		
17414	Coefficient of Variation		0.2867169		
17415	Skewness		1.5258863		
17416					
17417	**Relevant UCL Statistics**				
17418	**Normal Distribution Test**			**Lognormal Distribution Test**	
17419	Shapiro Wilk Test Statistic		0.8186038	Shapiro Wilk Test Statistic	0.9034136
17420	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
17421	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
17422					
17423	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
17424	95% Student's-t UCL		14.896604	95% H-UCL	14.92853
17425	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	16.775795
17426	95% Adjusted-CLT UCL (Chen-1995)		15.137586	97.5% Chebyshev (MVUE) UCL	18.244229
17427	95% Modified-t UCL (Johnson-1978)		14.945495	99% Chebyshev (MVUE) UCL	21.128682
17428					
17429	**Gamma Distribution Test**			**Data Distribution**	
17430	k star (bias corrected)		12.846483	**Data do not follow a Discernable Distribution (0.05)**	

	A	B	C	D	E
17431	Theta Star		1.0438655		
17432	MLE of Mean		13.41		
17433	MLE of Standard Deviation		3.7414217		
17434	nu star		513.85932		
17435	Approximate Chi Square Value (.05)		462.28978	**Nonparametric Statistics**	
17436	Adjusted Level of Significance		0.038	95% CLT UCL	14.824146
17437	Adjusted Chi Square Value		458.43171	95% Jackknife UCL	14.896604
17438				95% Standard Bootstrap UCL	14.772825
17439	Anderson-Darling Test Statistic		1.1129123	95% Bootstrap-t UCL	16.085315
17440	Anderson-Darling 5% Critical Value		0.7412768	95% Hall's Bootstrap UCL	15.889003
17441	Kolmogorov-Smirnov Test Statistic		0.2497258	95% Percentile Bootstrap UCL	14.81
17442	Kolmogorov-Smirnov 5% Critical Value		0.1936623	95% BCA Bootstrap UCL	15
17443	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	17.157519
17444				97.5% Chebyshev(Mean, Sd) UCL	18.779074
17445	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	21.964304
17446	95% Approximate Gamma UCL		14.905918		
17447	95% Adjusted Gamma UCL		15.031363		
17448					
17449	**Potential UCL to Use**			Use 95% Student's-t UCL	14.896604
17450				or 95% Modified-t UCL	14.945495
17451					
17452	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
17453	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
17454	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
17455					
17456					
17457	**M|MG/KG|VANADIUM (gi_sd_ne_2010)**				
17458					
17459	**General Statistics**				
17460	Number of Valid Observations		16	Number of Distinct Observations	15
17461					
17462	**Raw Statistics**			**Log-transformed Statistics**	
17463	Minimum		11.2	Minimum of Log Data	2.4159138
17464	Maximum		23.8	Maximum of Log Data	3.1696856
17465	Mean		15.36875	Mean of log Data	2.7098244
17466	Median		14.65	SD of log Data	0.2121888
17467	SD		3.6093801		
17468	Coefficient of Variation		0.2348519		
17469	Skewness		1.4854249		
17470					
17471	**Relevant UCL Statistics**				
17472	**Normal Distribution Test**			**Lognormal Distribution Test**	
17473	Shapiro Wilk Test Statistic		0.8272445	Shapiro Wilk Test Statistic	0.8945476
17474	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
17475	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
17476					
17477	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
17478	95% Student's-t UCL		16.950606	95% H-UCL	16.968963
17479	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	18.917008
17480	95% Adjusted-CLT UCL (Chen-1995)		17.211026	97.5% Chebyshev (MVUE) UCL	20.461864
17481	95% Modified-t UCL (Johnson-1978)		17.006455	99% Chebyshev (MVUE) UCL	23.496434
17482					
17483	**Gamma Distribution Test**			**Data Distribution**	
17484	k star (bias corrected)		18.222138	**Data appear Lognormal at 5% Significance Level**	
17485	Theta Star		0.8434109		
17486	MLE of Mean		15.36875		
17487	MLE of Standard Deviation		3.6003015		
17488	nu star		583.10843		
17489	Approximate Chi Square Value (.05)		528.09661	**Nonparametric Statistics**	
17490	Adjusted Level of Significance		0.03348	95% CLT UCL	16.852976
17491	Adjusted Chi Square Value		522.13978	95% Jackknife UCL	16.950606
17492				95% Standard Bootstrap UCL	16.781545
17493	Anderson-Darling Test Statistic		0.8072744	95% Bootstrap-t UCL	17.791085
17494	Anderson-Darling 5% Critical Value		0.7364113	95% Hall's Bootstrap UCL	19.412727
17495	Kolmogorov-Smirnov Test Statistic		0.23031	95% Percentile Bootstrap UCL	16.89375
17496	Kolmogorov-Smirnov 5% Critical Value		0.2146057	95% BCA Bootstrap UCL	17.01875
17497	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	19.301981
17498				97.5% Chebyshev(Mean, Sd) UCL	21.003893

	A	B	C	D	E
17499	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	24.34697
17500	95% Approximate Gamma UCL		16.969713		
17501	95% Adjusted Gamma UCL		17.163311		
17502					
17503	**Potential UCL to Use**			Use 95% Student's-t UCL	16.950606
17504				or 95% Modified-t UCL	17.006455
17505				or 95% H-UCL	16.968963
17506					
17507	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
17508	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
17509	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
17510	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
17511					
17512	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
17513	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
17514	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
17515					
17516					
17517	**M|MG/KG|VANADIUM (gi_sd_nw_2005)**				
17518					
17519	**General Statistics**				
17520	Number of Valid Observations		18	Number of Distinct Observations	18
17521					
17522	**Raw Statistics**			**Log-transformed Statistics**	
17523	Minimum		10.8	Minimum of Log Data	2.3795461
17524	Maximum		28.4	Maximum of Log Data	3.3463891
17525	Mean		16.488889	Mean of log Data	2.7764969
17526	Median		16.45	SD of log Data	0.2310699
17527	SD		4.0991949		
17528	Coefficient of Variation		0.2486035		
17529	Skewness		1.4409188		
17530					
17531	**Relevant UCL Statistics**				
17532	**Normal Distribution Test**			**Lognormal Distribution Test**	
17533	Shapiro Wilk Test Statistic		0.8697893	Shapiro Wilk Test Statistic	0.9388825
17534	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
17535	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
17536					
17537	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
17538	95% Student's-t UCL		18.169679	95% H-UCL	18.254635
17539	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	20.413381
17540	95% Adjusted-CLT UCL (Chen-1995)		18.428757	97.5% Chebyshev (MVUE) UCL	22.118712
17541	95% Modified-t UCL (Johnson-1978)		18.224369	99% Chebyshev (MVUE) UCL	25.468504
17542					
17543	**Gamma Distribution Test**			**Data Distribution**	
17544	k star (bias corrected)		16.084173	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
17545	Theta Star		1.0251624		
17546	MLE of Mean		16.488889		
17547	MLE of Standard Deviation		4.1114217		
17548	nu star		579.03023		
17549	Approximate Chi Square Value (.05)		524.21526	**Nonparametric Statistics**	
17550	Adjusted Level of Significance		0.03574	95% CLT UCL	18.078129
17551	Adjusted Chi Square Value		519.21437	95% Jackknife UCL	18.169679
17552				95% Standard Bootstrap UCL	18.079394
17553	Anderson-Darling Test Statistic		0.5608141	95% Bootstrap-t UCL	18.740389
17554	Anderson-Darling 5% Critical Value		0.7394662	95% Hall's Bootstrap UCL	20.556337
17555	Kolmogorov-Smirnov Test Statistic		0.2185449	95% Percentile Bootstrap UCL	18.088889
17556	Kolmogorov-Smirnov 5% Critical Value		0.2032741	95% BCA Bootstrap UCL	18.444444
17557	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	20.700411
17558				97.5% Chebyshev(Mean, Sd) UCL	22.52274
17559	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	26.102353
17560	95% Approximate Gamma UCL		18.213062		

	A	B	C	D	E
17561	95% Adjusted Gamma UCL		18.388484		
17562					
17563	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	18.213062
17564					
17565	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
17566	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
17567	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
17568					
17569					
17570	**M|MG/KG|VANADIUM (gi_sd_nw_2009)**				
17571					
17572	**General Statistics**				
17573	Number of Valid Observations		7	Number of Distinct Observations	7
17574					
17575	**Raw Statistics**			**Log-transformed Statistics**	
17576	Minimum		11.3	Minimum of Log Data	2.4248027
17577	Maximum		21.8	Maximum of Log Data	3.08191
17578	Mean		16.571429	Mean of log Data	2.7879955
17579	Median		16.7	SD of log Data	0.2173911
17580	SD		3.4673305		
17581	Coefficient of Variation		0.2092355		
17582	Skewness		-0.051479		
17583					
17584					
17585	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
17586					
17587	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
17588	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
17589					
17590					
17591	**Warning: There are only 7 Values in this data**				
17592	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
17593	**the resulting calculations may not be reliable enough to draw conclusions**				
17594					
17595	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
17596					
17597	**Relevant UCL Statistics**				
17598	**Normal Distribution Test**			**Lognormal Distribution Test**	
17599	Shapiro Wilk Test Statistic		0.9980793	Shapiro Wilk Test Statistic	0.9844974
17600	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
17601	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
17602					
17603	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
17604	95% Student's-t UCL		19.11802	95% H-UCL	19.907768
17605	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	22.525318
17606	95% Adjusted-CLT UCL (Chen-1995)		18.699808	97.5% Chebyshev (MVUE) UCL	25.097853
17607	95% Modified-t UCL (Johnson-1978)		19.11377	99% Chebyshev (MVUE) UCL	30.151101
17608					
17609	**Gamma Distribution Test**			**Data Distribution**	
17610	k star (bias corrected)		14.704471	**Data appear Normal at 5% Significance Level**	
17611	Theta Star		1.1269653		
17612	MLE of Mean		16.571429		
17613	MLE of Standard Deviation		4.3215072		
17614	nu star		205.8626		
17615	Approximate Chi Square Value (.05)		173.66194	**Nonparametric Statistics**	
17616	Adjusted Level of Significance		0.01584	95% CLT UCL	18.727055
17617	Adjusted Chi Square Value		164.70539	95% Jackknife UCL	19.11802
17618				95% Standard Bootstrap UCL	18.588172
17619	Anderson-Darling Test Statistic		0.1426817	95% Bootstrap-t UCL	19.009737
17620	Anderson-Darling 5% Critical Value		0.7068637	95% Hall's Bootstrap UCL	18.87238

	A	B	C	D	E
17621	Kolmogorov-Smirnov Test Statistic		0.1163214	95% Percentile Bootstrap UCL	18.571429
17622	Kolmogorov-Smirnov 5% Critical Value		0.3114489	95% BCA Bootstrap UCL	18.585714
17623	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	22.283887
17624				97.5% Chebyshev(Mean, Sd) UCL	24.755672
17625	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	29.611015
17626	95% Approximate Gamma UCL		19.644128		
17627	95% Adjusted Gamma UCL		20.71236		
17628					
17629	**Potential UCL to Use**			Use 95% Student's-t UCL	19.11802
17630					
17631	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
17632	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
17633	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
17634					
17635					
17636	**M|MG/KG|VANADIUM (gi_sd_nw_2010)**				
17637					
17638	**General Statistics**				
17639	Number of Valid Observations		4	Number of Distinct Observations	4
17640					
17641					
17642	**Warning: This data set only has 4 observations!**				
17643	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
17644	**The data set for variable M|MG/KG|VANADIUM (gi_sd_nw_2010) was not processed!**				
17645					
17646	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
17647	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
17648					
17649					
17650					
17651	**M|MG/KG|VANADIUM (gi_sd_ref_2009)**				
17652					
17653	**General Statistics**				
17654	Number of Valid Observations		6	Number of Distinct Observations	6
17655					
17656	**Raw Statistics**			**Log-transformed Statistics**	
17657	Minimum		7.2	Minimum of Log Data	1.974081
17658	Maximum		13.3	Maximum of Log Data	2.587764
17659	Mean		10.491667	Mean of log Data	2.330557
17660	Median		11.05	SD of log Data	0.2240938
17661	SD		2.2055423		
17662	Coefficient of Variation		0.2102185		
17663	Skewness		-0.487709		
17664					
17665					
17666	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
17667					
17668	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
17669	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
17670					
17671					
17672	**Warning: There are only 6 Values in this data**				
17673	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
17674	**the resulting calculations may not be reliable enough to draw conclusions**				
17675					

	A	B	C	D	E
17676	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
17677					
17678	**Relevant UCL Statistics**				
17679	**Normal Distribution Test**			**Lognormal Distribution Test**	
17680	Shapiro Wilk Test Statistic		0.9561849	Shapiro Wilk Test Statistic	0.9305245
17681	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
17682	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
17683					
17684	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
17685	95% Student's-t UCL		12.306034	95% H-UCL	13.0206
17686	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	14.687563
17687	95% Adjusted-CLT UCL (Chen-1995)		11.781147	97.5% Chebyshev (MVUE) UCL	16.499327
17688	95% Modified-t UCL (Johnson-1978)		12.276155	99% Chebyshev (MVUE) UCL	20.058184
17689					
17690	**Gamma Distribution Test**			**Data Distribution**	
17691	k star (bias corrected)		12.678728	**Data appear Normal at 5% Significance Level**	
17692	Theta Star		0.8275015		
17693	MLE of Mean		10.491667		
17694	MLE of Standard Deviation		2.9465014		
17695	nu star		152.14473		
17696	Approximate Chi Square Value (.05)		124.63325	**Nonparametric Statistics**	
17697	Adjusted Level of Significance		0.01222	95% CLT UCL	11.972707
17698	Adjusted Chi Square Value		115.62671	95% Jackknife UCL	12.306034
17699				95% Standard Bootstrap UCL	11.836733
17700	Anderson-Darling Test Statistic		0.3135094	95% Bootstrap-t UCL	12.091906
17701	Anderson-Darling 5% Critical Value		0.6970541	95% Hall's Bootstrap UCL	11.71896
17702	Kolmogorov-Smirnov Test Statistic		0.2507336	95% Percentile Bootstrap UCL	11.858333
17703	Kolmogorov-Smirnov 5% Critical Value		0.3317437	95% BCA Bootstrap UCL	11.683333
17704	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	14.416458
17705				97.5% Chebyshev(Mean, Sd) UCL	16.114718
17706	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	19.450622
17707	95% Approximate Gamma UCL		12.807592		
17708	95% Adjusted Gamma UCL		13.805217		
17709					
17710	**Potential UCL to Use**			Use 95% Student's-t UCL	12.306034
17711					
17712	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
17713	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
17714	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
17715					
17716					
17717	**M|MG/KG|VANADIUM (gi_sd_ref_2010)**				
17718					
17719	**General Statistics**				
17720	Number of Valid Observations		3	Number of Distinct Observations	3
17721					
17722					
17723	**Warning: This data set only has 3 observations!**				
17724	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
17725	**The data set for variable M|MG/KG|VANADIUM (gi_sd_ref_2010) was not processed!**				
17726					
17727	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
17728	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
17729					
17730					
17731					
17732	**M|MG/KG|VANADIUM (gi_sd_s_2005)**				
17733					
17734	**General Statistics**				
17735	Number of Valid Observations		8	Number of Distinct Observations	8

	A	B	C	D	E
17736					
17737	**Raw Statistics**			**Log-transformed Statistics**	
17738	Minimum		13.8	Minimum of Log Data	2.6246686
17739	Maximum		24.1	Maximum of Log Data	3.1822118
17740	Mean		17.525	Mean of log Data	2.8434836
17741	Median		16.8	SD of log Data	0.2113948
17742	SD		3.877315		
17743	Coefficient of Variation		0.2212448		
17744	Skewness		0.8797188		
17745					
17746					
17747	**Warning: There are only 8 Values in this data**				
17748	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
17749	**the resulting calculations may not be reliable enough to draw conclusions**				
17750					
17751	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
17752					
17753	**Relevant UCL Statistics**				
17754	**Normal Distribution Test**			**Lognormal Distribution Test**	
17755	Shapiro Wilk Test Statistic		0.8728557	Shapiro Wilk Test Statistic	0.895607
17756	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
17757	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
17758					
17759	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
17760	95% Student's-t UCL		20.12216	95% H-UCL	20.533033
17761	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	23.231516
17762	95% Adjusted-CLT UCL (Chen-1995)		20.235408	97.5% Chebyshev (MVUE) UCL	25.705552
17763	95% Modified-t UCL (Johnson-1978)		20.193221	99% Chebyshev (MVUE) UCL	30.565318
17764					
17765	**Gamma Distribution Test**			**Data Distribution**	
17766	k star (bias corrected)		15.699479	**Data appear Normal at 5% Significance Level**	
17767	Theta Star		1.1162791		
17768	MLE of Mean		17.525		
17769	MLE of Standard Deviation		4.4229844		
17770	nu star		251.19167		
17771	Approximate Chi Square Value (.05)		215.4956	**Nonparametric Statistics**	
17772	Adjusted Level of Significance		0.01946	95% CLT UCL	19.779828
17773	Adjusted Chi Square Value		207.10907	95% Jackknife UCL	20.12216
17774				95% Standard Bootstrap UCL	19.64216
17775	Anderson-Darling Test Statistic		0.4363851	95% Bootstrap-t UCL	22.026721
17776	Anderson-Darling 5% Critical Value		0.7159924	95% Hall's Bootstrap UCL	23.28628
17777	Kolmogorov-Smirnov Test Statistic		0.1863328	95% Percentile Bootstrap UCL	19.775
17778	Kolmogorov-Smirnov 5% Critical Value		0.2937852	95% BCA Bootstrap UCL	19.95
17779	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	23.500344
17780				97.5% Chebyshev(Mean, Sd) UCL	26.08588
17781	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	31.164664
17782	95% Approximate Gamma UCL		20.427953		
17783	95% Adjusted Gamma UCL		21.255148		
17784					
17785	**Potential UCL to Use**			Use 95% Student's-t UCL	20.12216
17786					
17787	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
17788	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
17789	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
17790					
17791					
17792	**M|MG/KG|VANADIUM (gi_sd_s_2010)**				
17793					
17794	**General Statistics**				
17795	Number of Valid Observations		2	Number of Distinct Observations	2
17796					
17797					
17798	**Warning: This data set only has 2 observations!**				

	A	B	C	D	E
17799	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
17800	**The data set for variable M|MG/KG|VANADIUM (gi_sd_s_2010) was not processed!**				
17801					
17802	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
17803	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
17804					
17805					
17806					
17807	**M|MG/KG|VANADIUM (gi_sd_stillwater_2005)**				
17808					
17809	**General Statistics**				
17810	Number of Valid Observations		4	Number of Distinct Observations	4
17811					
17812					
17813	**Warning: This data set only has 4 observations!**				
17814	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
17815	**The data set for variable M|MG/KG|VANADIUM (gi_sd_stillwater_2005) was not processed!**				
17816					
17817	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
17818	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
17819					
17820					
17821					
17822	**M|MG/KG|VANADIUM (gi_sd_stillwater_2009)**				
17823					
17824	**General Statistics**				
17825	Number of Valid Observations		60	Number of Distinct Observations	51
17826					
17827	**Raw Statistics**			**Log-transformed Statistics**	
17828	Minimum		7	Minimum of Log Data	1.9459101
17829	Maximum		27.2	Maximum of Log Data	3.303217
17830	Mean		14.435833	Mean of log Data	2.6095768
17831	Median		13.4	SD of log Data	0.3477631
17832	SD		5.167656		
17833	Coefficient of Variation		0.3579742		
17834	Skewness		0.76741		
17835					
17836	**Relevant UCL Statistics**				
17837	**Normal Distribution Test**			**Lognormal Distribution Test**	
17838	Lilliefors Test Statistic		0.1275476	Lilliefors Test Statistic	0.0660334
17839	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
17840	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
17841					
17842	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
17843	95% Student's-t UCL		15.550689	95% H-UCL	15.615546
17844	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	17.320885
17845	95% Adjusted-CLT UCL (Chen-1995)		15.603807	97.5% Chebyshev (MVUE) UCL	18.573824
17846	95% Modified-t UCL (Johnson-1978)		15.561705	99% Chebyshev (MVUE) UCL	21.034981
17847					
17848	**Gamma Distribution Test**			**Data Distribution**	
17849	k star (bias corrected)		8.0648502	**Data appear Gamma Distributed at 5% Significance Level**	
17850	Theta Star		1.7899692		
17851	MLE of Mean		14.435833		
17852	MLE of Standard Deviation		5.0832762		
17853	nu star		967.78203		
17854	Approximate Chi Square Value (.05)		896.57136	**Nonparametric Statistics**	
17855	Adjusted Level of Significance		0.046	95% CLT UCL	15.533183
17856	Adjusted Chi Square Value		894.89656	95% Jackknife UCL	15.550689
17857				95% Standard Bootstrap UCL	15.512581
17858	Anderson-Darling Test Statistic		0.6314891	95% Bootstrap-t UCL	15.628015
17859	Anderson-Darling 5% Critical Value		0.7518377	95% Hall's Bootstrap UCL	15.669933
17860	Kolmogorov-Smirnov Test Statistic		0.0825318	95% Percentile Bootstrap UCL	15.541667
17861	Kolmogorov-Smirnov 5% Critical Value		0.1147905	95% BCA Bootstrap UCL	15.559167

	A	B	C	D	E
17862	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	17.343836
17863				97.5% Chebyshev(Mean, Sd) UCL	18.602131
17864	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	21.073808
17865	95% Approximate Gamma UCL		15.582407		
17866	95% Adjusted Gamma UCL		15.61157		
17867					
17868	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	15.582407
17869					
17870	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
17871	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
17872	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
17873					
17874					
17875	**M|MG/KG|VANADIUM (gi_sd_stillwater_2010)**				
17876					
17877	**General Statistics**				
17878	Number of Valid Observations		11	Number of Distinct Observations	10
17879					
17880	**Raw Statistics**			**Log-transformed Statistics**	
17881	Minimum		10.8	Minimum of Log Data	2.3795461
17882	Maximum		17.3	Maximum of Log Data	2.8507065
17883	Mean		13.690909	Mean of log Data	2.6014301
17884	Median		12.7	SD of log Data	0.1827922
17885	SD		2.5296065		
17886	Coefficient of Variation		0.1847654		
17887	Skewness		0.3538606		
17888					
17889	**Relevant UCL Statistics**				
17890	**Normal Distribution Test**			**Lognormal Distribution Test**	
17891	Shapiro Wilk Test Statistic		0.8776666	Shapiro Wilk Test Statistic	0.8881473
17892	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
17893	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
17894					
17895	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
17896	95% Student's-t UCL		15.073282	95% H-UCL	15.254278
17897	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	16.987932
17898	95% Adjusted-CLT UCL (Chen-1995)		15.032398	97.5% Chebyshev (MVUE) UCL	18.415347
17899	95% Modified-t UCL (Johnson-1978)		15.086845	99% Chebyshev (MVUE) UCL	21.219227
17900					
17901	**Gamma Distribution Test**			**Data Distribution**	
17902	k star (bias corrected)		23.945302	**Data appear Normal at 5% Significance Level**	
17903	Theta Star		0.5717576		
17904	MLE of Mean		13.690909		
17905	MLE of Standard Deviation		2.7978352		
17906	nu star		526.79664		
17907	Approximate Chi Square Value (.05)		474.56714	**Nonparametric Statistics**	
17908	Adjusted Level of Significance		0.02783	95% CLT UCL	14.945447
17909	Adjusted Chi Square Value		466.47623	95% Jackknife UCL	15.073282
17910				95% Standard Bootstrap UCL	14.893618
17911	Anderson-Darling Test Statistic		0.5562349	95% Bootstrap-t UCL	15.253794
17912	Anderson-Darling 5% Critical Value		0.7285716	95% Hall's Bootstrap UCL	14.797069
17913	Kolmogorov-Smirnov Test Statistic		0.1885187	95% Percentile Bootstrap UCL	14.918182
17914	Kolmogorov-Smirnov 5% Critical Value		0.2548673	95% BCA Bootstrap UCL	14.936364
17915	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	17.015463
17916				97.5% Chebyshev(Mean, Sd) UCL	18.454001
17917	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	21.279729
17918	95% Approximate Gamma UCL		15.197691		
17919	95% Adjusted Gamma UCL		15.461292		
17920					
17921	**Potential UCL to Use**			Use 95% Student's-t UCL	15.073282
17922					
17923	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
17924	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				

	A	B	C	D	E
17925	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
17926					
17927					
17928	M|MG/KG|ZINC (gi_sd_ne_2005)				
17929					
17930	General Statistics				
17931	Number of Valid Observations		36	Number of Distinct Observations	35
17932					
17933	Raw Statistics			Log-transformed Statistics	
17934	Minimum		30.9	Minimum of Log Data	3.4307562
17935	Maximum		145	Maximum of Log Data	4.9767337
17936	Mean		54.088889	Mean of log Data	3.9044548
17937	Median		44.7	SD of log Data	0.3852664
17938	SD		27.559875		
17939	Coefficient of Variation		0.5095293		
17940	Skewness		2.2332484		
17941					
17942	Relevant UCL Statistics				
17943	Normal Distribution Test			Lognormal Distribution Test	
17944	Shapiro Wilk Test Statistic		0.6843555	Shapiro Wilk Test Statistic	0.8323349
17945	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
17946	Data not Normal at 5% Significance Level			Data not Lognormal at 5% Significance Level	
17947					
17948	Assuming Normal Distribution			Assuming Lognormal Distribution	
17949	95% Student's-t UCL		61.849623	95% H-UCL	60.217683
17950	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	68.67659
17951	95% Adjusted-CLT UCL (Chen-1995)		63.471021	97.5% Chebyshev (MVUE) UCL	75.317779
17952	95% Modified-t UCL (Johnson-1978)		62.134568	99% Chebyshev (MVUE) UCL	88.363109
17953					
17954	Gamma Distribution Test			Data Distribution	
17955	k star (bias corrected)		5.4854383	Data do not follow a Discernable Distribution (0.05)	
17956	Theta Star		9.8604498		
17957	MLE of Mean		54.088889		
17958	MLE of Standard Deviation		23.094172		
17959	nu star		394.95156		
17960	Approximate Chi Square Value (.05)		349.88723	Nonparametric Statistics	
17961	Adjusted Level of Significance		0.0428	95% CLT UCL	61.644216
17962	Adjusted Chi Square Value		347.96705	95% Jackknife UCL	61.849623
17963				95% Standard Bootstrap UCL	61.464838
17964	Anderson-Darling Test Statistic		2.857883	95% Bootstrap-t UCL	65.386043
17965	Anderson-Darling 5% Critical Value		0.7497186	95% Hall's Bootstrap UCL	63.015377
17966	Kolmogorov-Smirnov Test Statistic		0.2446358	95% Percentile Bootstrap UCL	61.719444
17967	Kolmogorov-Smirnov 5% Critical Value		0.147121	95% BCA Bootstrap UCL	63.047222
17968	Data not Gamma Distributed at 5% Significance Level			95% Chebyshev(Mean, Sd) UCL	74.110674
17969				97.5% Chebyshev(Mean, Sd) UCL	82.774117
17970	Assuming Gamma Distribution			99% Chebyshev(Mean, Sd) UCL	99.791772
17971	95% Approximate Gamma UCL		61.055361		
17972	95% Adjusted Gamma UCL		61.392281		
17973					
17974	Potential UCL to Use			Use 95% Student's-t UCL	61.849623
17975				or 95% Modified-t UCL	62.134568
17976					
17977	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
17978	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
17979	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
17980					
17981					
17982	M|MG/KG|ZINC (gi_sd_ne_2009)				
17983					
17984	General Statistics				
17985	Number of Valid Observations		20	Number of Distinct Observations	20
17986					
17987	Raw Statistics			Log-transformed Statistics	
17988	Minimum		19.3	Minimum of Log Data	2.9601051
17989	Maximum		164	Maximum of Log Data	5.0998664
17990	Mean		41.125	Mean of log Data	3.5513998
17991	Median		30.25	SD of log Data	0.5138285

	A	B	C	D	E
17992	SD		32.94865		
17993	Coefficient of Variation		0.801183		
17994	Skewness		3.1093586		
17995					
17996	**Relevant UCL Statistics**				
17997	**Normal Distribution Test**			**Lognormal Distribution Test**	
17998	Shapiro Wilk Test Statistic		0.5828275	Shapiro Wilk Test Statistic	0.816988
17999	Shapiro Wilk Critical Value		0.905	Shapiro Wilk Critical Value	0.905
18000	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
18001					
18002	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18003	95% Student's-t UCL		53.864459	95% H-UCL	50.551998
18004	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	60.031805
18005	95% Adjusted-CLT UCL (Chen-1995)		58.71695	97.5% Chebyshev (MVUE) UCL	68.919859
18006	95% Modified-t UCL (Johnson-1978)		54.718202	99% Chebyshev (MVUE) UCL	86.378721
18007					
18008	**Gamma Distribution Test**			**Data Distribution**	
18009	k star (bias corrected)		2.739127	**Data do not follow a Discernable Distribution (0.05)**	
18010	Theta Star		15.013908		
18011	MLE of Mean		41.125		
18012	MLE of Standard Deviation		24.84848		
18013	nu star		109.56508		
18014	Approximate Chi Square Value (.05)		86.405094	**Nonparametric Statistics**	
18015	Adjusted Level of Significance		0.038	95% CLT UCL	53.243528
18016	Adjusted Chi Square Value		84.78069	95% Jackknife UCL	53.864459
18017				95% Standard Bootstrap UCL	52.828788
18018	Anderson-Darling Test Statistic		1.9215546	95% Bootstrap-t UCL	68.853294
18019	Anderson-Darling 5% Critical Value		0.7471634	95% Hall's Bootstrap UCL	92.024873
18020	Kolmogorov-Smirnov Test Statistic		0.24777	95% Percentile Bootstrap UCL	54.165
18021	Kolmogorov-Smirnov 5% Critical Value		0.1949585	95% BCA Bootstrap UCL	59.67
18022	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	73.239372
18023				97.5% Chebyshev(Mean, Sd) UCL	87.135286
18024	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	114.43112
18025	95% Approximate Gamma UCL		52.148127		
18026	95% Adjusted Gamma UCL		53.147289		
18027					
18028	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	73.239372
18029					
18030	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18031	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18032	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18033					
18034					
18035	**M|MG/KG|ZINC (gi_sd_ne_2010)**				
18036					
18037	**General Statistics**				
18038	Number of Valid Observations		16	Number of Distinct Observations	15
18039					
18040	**Raw Statistics**			**Log-transformed Statistics**	
18041	Minimum		27.6	Minimum of Log Data	3.3178158
18042	Maximum		47.2	Maximum of Log Data	3.8543939
18043	Mean		38.375	Mean of log Data	3.6371877
18044	Median		38.2	SD of log Data	0.1492131
18045	SD		5.5657884		
18046	Coefficient of Variation		0.1450368		
18047	Skewness		-0.127728		
18048					
18049	**Relevant UCL Statistics**				
18050	**Normal Distribution Test**			**Lognormal Distribution Test**	
18051	Shapiro Wilk Test Statistic		0.9793365	Shapiro Wilk Test Statistic	0.9708147
18052	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
18053	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
18054					
18055	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18056	95% Student's-t UCL		40.814277	95% H-UCL	41.119615
18057	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	44.643269
18058	95% Adjusted-CLT UCL (Chen-1995)		40.616251	97.5% Chebyshev (MVUE) UCL	47.35204

	A	B	C	D	E
18059	95% Modified-t UCL (Johnson-1978)		40.806872	99% Chebyshev (MVUE) UCL	52.672896
18060					
18061	**Gamma Distribution Test**			**Data Distribution**	
18062	k star (bias corrected)		39.932817	**Data appear Normal at 5% Significance Level**	
18063	Theta Star		0.960989		
18064	MLE of Mean		38.375		
18065	MLE of Standard Deviation		6.0727222		
18066	nu star		1277.8502		
18067	Approximate Chi Square Value (.05)		1195.8488	**Nonparametric Statistics**	
18068	Adjusted Level of Significance		0.03348	95% CLT UCL	40.663727
18069	Adjusted Chi Square Value		1186.8234	95% Jackknife UCL	40.814277
18070				95% Standard Bootstrap UCL	40.632631
18071	Anderson-Darling Test Statistic		0.1528355	95% Bootstrap-t UCL	40.845303
18072	Anderson-Darling 5% Critical Value		0.7354137	95% Hall's Bootstrap UCL	40.714872
18073	Kolmogorov-Smirnov Test Statistic		0.0824157	95% Percentile Bootstrap UCL	40.525
18074	Kolmogorov-Smirnov 5% Critical Value		0.2144454	95% BCA Bootstrap UCL	40.50625
18075	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	44.440177
18076				97.5% Chebyshev(Mean, Sd) UCL	47.064584
18077	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	52.219724
18078	95% Approximate Gamma UCL		41.006438		
18079	95% Adjusted Gamma UCL		41.318277		
18080					
18081	**Potential UCL to Use**			Use 95% Student's-t UCL	40.814277
18082					
18083	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18084	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18085	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18086					
18087					
18088	**M|MG/KG|ZINC (gi_sd_nw_2005)**				
18089					
18090	**General Statistics**				
18091	Number of Valid Observations		18	Number of Distinct Observations	18
18092					
18093	**Raw Statistics**			**Log-transformed Statistics**	
18094	Minimum		32	Minimum of Log Data	3.4657359
18095	Maximum		72.3	Maximum of Log Data	4.2808241
18096	Mean		42.427778	Mean of log Data	3.7198317
18097	Median		38.25	SD of log Data	0.2342628
18098	SD		11.190953		
18099	Coefficient of Variation		0.2637648		
18100	Skewness		1.5465569		
18101					
18102	**Relevant UCL Statistics**				
18103	**Normal Distribution Test**			**Lognormal Distribution Test**	
18104	Shapiro Wilk Test Statistic		0.8159192	Shapiro Wilk Test Statistic	0.8721173
18105	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
18106	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
18107					
18108	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18109	95% Student's-t UCL		47.016396	95% H-UCL	46.9936
18110	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	52.611295
18111	95% Adjusted-CLT UCL (Chen-1995)		47.793865	97.5% Chebyshev (MVUE) UCL	57.056071
18112	95% Modified-t UCL (Johnson-1978)		47.17665	99% Chebyshev (MVUE) UCL	65.786974
18113					
18114	**Gamma Distribution Test**			**Data Distribution**	
18115	k star (bias corrected)		15.070683	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
18116	Theta Star		2.8152525		
18117	MLE of Mean		42.427778		
18118	MLE of Standard Deviation		10.929085		
18119	nu star		542.54459		
18120	Approximate Chi Square Value (.05)		489.52259	**Nonparametric Statistics**	
18121	Adjusted Level of Significance		0.03574	95% CLT UCL	46.766462
18122	Adjusted Chi Square Value		484.69334	95% Jackknife UCL	47.016396
18123				95% Standard Bootstrap UCL	46.593546
18124	Anderson-Darling Test Statistic		0.9895442	95% Bootstrap-t UCL	48.492142
18125	Anderson-Darling 5% Critical Value		0.7394273	95% Hall's Bootstrap UCL	50.016701

	A	B	C	D	E
18126	Kolmogorov-Smirnov Test Statistic		0.1904291	95% Percentile Bootstrap UCL	47.061111
18127	Kolmogorov-Smirnov 5% Critical Value		0.2032972	95% BCA Bootstrap UCL	47.916667
18128	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	53.925389
18129				97.5% Chebyshev(Mean, Sd) UCL	58.900414
18130	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	68.672888
18131	95% Approximate Gamma UCL		47.023287		
18132	95% Adjusted Gamma UCL		47.491804		
18133					
18134	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	47.023287
18135					
18136	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18137	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18138	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18139					
18140					
18141	**M|MG/KG|ZINC (gi_sd_nw_2009)**				
18142					
18143	**General Statistics**				
18144	Number of Valid Observations		7	Number of Distinct Observations	7
18145					
18146	**Raw Statistics**			**Log-transformed Statistics**	
18147	Minimum		24.8	Minimum of Log Data	3.2108437
18148	Maximum		67.5	Maximum of Log Data	4.2121276
18149	Mean		40.5	Mean of log Data	3.6477776
18150	Median		33.5	SD of log Data	0.3477509
18151	SD		14.853731		
18152	Coefficient of Variation		0.3667588		
18153	Skewness		1.0283751		
18154					
18155					
18156	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
18157					
18158	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
18159	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18160					
18161					
18162	**Warning: There are only 7 Values in this data**				
18163	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
18164	**the resulting calculations may not be reliable enough to draw conclusions**				
18165					
18166	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
18167					
18168	**Relevant UCL Statistics**				
18169	**Normal Distribution Test**			**Lognormal Distribution Test**	
18170	Shapiro Wilk Test Statistic		0.8977105	Shapiro Wilk Test Statistic	0.9447312
18171	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
18172	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
18173					
18174	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18175	95% Student's-t UCL		51.409369	95% H-UCL	56.261388
18176	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	63.639026
18177	95% Adjusted-CLT UCL (Chen-1995)		52.066192	97.5% Chebyshev (MVUE) UCL	73.686806
18178	95% Modified-t UCL (Johnson-1978)		51.773065	99% Chebyshev (MVUE) UCL	93.423725
18179					
18180	**Gamma Distribution Test**			**Data Distribution**	
18181	k star (bias corrected)		5.5267604	**Data appear Normal at 5% Significance Level**	
18182	Theta Star		7.3279818		
18183	MLE of Mean		40.5		
18184	MLE of Standard Deviation		17.227399		

	A	B	C	D	E
18185	nu star		77.374646		
18186	Approximate Chi Square Value (.05)		58.11137	**Nonparametric Statistics**	
18187	Adjusted Level of Significance		0.01584	95% CLT UCL	49.734509
18188	Adjusted Chi Square Value		53.099298	95% Jackknife UCL	51.409369
18189				95% Standard Bootstrap UCL	48.996173
18190	Anderson-Darling Test Statistic		0.341355	95% Bootstrap-t UCL	56.55436
18191	Anderson-Darling 5% Critical Value		0.7086166	95% Hall's Bootstrap UCL	51.314076
18192	Kolmogorov-Smirnov Test Statistic		0.2476261	95% Percentile Bootstrap UCL	49.314286
18193	Kolmogorov-Smirnov 5% Critical Value		0.3120369	95% BCA Bootstrap UCL	50.614286
18194	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	64.971655
18195				97.5% Chebyshev(Mean, Sd) UCL	75.56056
18196	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	96.360413
18197	95% Approximate Gamma UCL		53.925302		
18198	95% Adjusted Gamma UCL		59.015341		
18199					
18200	**Potential UCL to Use**			Use 95% Student's-t UCL	51.409369
18201					
18202	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18203	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18204	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18205					
18206					
18207	**M|MG/KG|ZINC (gi_sd_nw_2010)**				
18208					
18209	**General Statistics**				
18210	Number of Valid Observations		4	Number of Distinct Observations	4
18211					
18212					
18213	**Warning: This data set only has 4 observations!**				
18214	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18215	**The data set for variable M|MG/KG|ZINC (gi_sd_nw_2010) was not processed!**				
18216					
18217	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18218	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18219					
18220					
18221					
18222	**M|MG/KG|ZINC (gi_sd_ref_2009)**				
18223					
18224	**General Statistics**				
18225	Number of Valid Observations		6	Number of Distinct Observations	6
18226					
18227	**Raw Statistics**			**Log-transformed Statistics**	
18228	Minimum		21.1	Minimum of Log Data	3.049273
18229	Maximum		46	Maximum of Log Data	3.8286414
18230	Mean		32.366667	Mean of log Data	3.4495899
18231	Median		30.6	SD of log Data	0.2582295
18232	SD		8.3233807		
18233	Coefficient of Variation		0.257159		
18234	Skewness		0.5929547		
18235					
18236					
18237	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
18238					
18239	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
18240	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18241					
18242					
18243	**Warning: There are only 6 Values in this data**				

	A	B	C	D	E
18244	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
18245	**the resulting calculations may not be reliable enough to draw conclusions**				
18246					
18247	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
18248					
18249	**Relevant UCL Statistics**				
18250	**Normal Distribution Test**			**Lognormal Distribution Test**	
18251	Shapiro Wilk Test Statistic		0.9435885	Shapiro Wilk Test Statistic	0.9547593
18252	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
18253	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
18254					
18255	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18256	95% Student's-t UCL		39.213813	95% H-UCL	41.762687
18257	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	47.244766
18258	95% Adjusted-CLT UCL (Chen-1995)		38.834811	97.5% Chebyshev (MVUE) UCL	53.68063
18259	95% Modified-t UCL (Johnson-1978)		39.350907	99% Chebyshev (MVUE) UCL	66.322637
18260					
18261	**Gamma Distribution Test**			**Data Distribution**	
18262	k star (bias corrected)		9.2716493	**Data appear Normal at 5% Significance Level**	
18263	Theta Star		3.4909287		
18264	MLE of Mean		32.366667		
18265	MLE of Standard Deviation		10.629663		
18266	nu star		111.25979		
18267	Approximate Chi Square Value (.05)		87.911834	**Nonparametric Statistics**	
18268	Adjusted Level of Significance		0.01222	95% CLT UCL	37.955889
18269	Adjusted Chi Square Value		80.430874	95% Jackknife UCL	39.213813
18270				95% Standard Bootstrap UCL	37.449353
18271	Anderson-Darling Test Statistic		0.3002721	95% Bootstrap-t UCL	41.306426
18272	Anderson-Darling 5% Critical Value		0.6972982	95% Hall's Bootstrap UCL	56.774691
18273	Kolmogorov-Smirnov Test Statistic		0.2247042	95% Percentile Bootstrap UCL	37.7
18274	Kolmogorov-Smirnov 5% Critical Value		0.3318559	95% BCA Bootstrap UCL	37.733333
18275	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	47.178231
18276				97.5% Chebyshev(Mean, Sd) UCL	53.587207
18277	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	66.176399
18278	95% Approximate Gamma UCL		40.962729		
18279	95% Adjusted Gamma UCL		44.772715		
18280					
18281	**Potential UCL to Use**			Use 95% Student's-t UCL	39.213813
18282					
18283	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18284	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18285	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18286					
18287					
18288	**M|MG/KG|ZINC (gi_sd_ref_2010)**				
18289					
18290	**General Statistics**				
18291	Number of Valid Observations		3	Number of Distinct Observations	3
18292					
18293					
18294	**Warning: This data set only has 3 observations!**				
18295	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18296	**The data set for variable M|MG/KG|ZINC (gi_sd_ref_2010) was not processed!**				
18297					
18298	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18299	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18300					

	A	B	C	D	E
18301					
18302					
18303	**M|MG/KG|ZINC (gi_sd_s_2005)**				
18304					
18305	**General Statistics**				
18306	Number of Valid Observations		8	Number of Distinct Observations	8
18307					
18308	**Raw Statistics**			**Log-transformed Statistics**	
18309	Minimum		28.2	Minimum of Log Data	3.339322
18310	Maximum		57.9	Maximum of Log Data	4.0587174
18311	Mean		41.1	Mean of log Data	3.6912976
18312	Median		41.4	SD of log Data	0.2394382
18313	SD		9.6825321		
18314	Coefficient of Variation		0.2355847		
18315	Skewness		0.3268158		
18316					
18317					
18318	**Warning: There are only 8 Values in this data**				
18319	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
18320	**the resulting calculations may not be reliable enough to draw conclusions**				
18321					
18322	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
18323					
18324	**Relevant UCL Statistics**				
18325	**Normal Distribution Test**			**Lognormal Distribution Test**	
18326	Shapiro Wilk Test Statistic		0.9431456	Shapiro Wilk Test Statistic	0.9385463
18327	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
18328	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
18329					
18330	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18331	95% Student's-t UCL		47.585696	95% H-UCL	49.386656
18332	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	56.323321
18333	95% Adjusted-CLT UCL (Chen-1995)		47.153466	97.5% Chebyshev (MVUE) UCL	62.905091
18334	95% Modified-t UCL (Johnson-1978)		47.651621	99% Chebyshev (MVUE) UCL	75.833703
18335					
18336	**Gamma Distribution Test**			**Data Distribution**	
18337	k star (bias corrected)		12.833042	**Data appear Normal at 5% Significance Level**	
18338	Theta Star		3.2026702		
18339	MLE of Mean		41.1		
18340	MLE of Standard Deviation		11.473001		
18341	nu star		205.32867		
18342	Approximate Chi Square Value (.05)		173.17137	**Nonparametric Statistics**	
18343	Adjusted Level of Significance		0.01946	95% CLT UCL	46.730814
18344	Adjusted Chi Square Value		165.68694	95% Jackknife UCL	47.585696
18345				95% Standard Bootstrap UCL	46.426225
18346	Anderson-Darling Test Statistic		0.3220264	95% Bootstrap-t UCL	47.552225
18347	Anderson-Darling 5% Critical Value		0.7162202	95% Hall's Bootstrap UCL	49.591439
18348	Kolmogorov-Smirnov Test Statistic		0.1817199	95% Percentile Bootstrap UCL	46.2125
18349	Kolmogorov-Smirnov 5% Critical Value		0.293854	95% BCA Bootstrap UCL	46.5875
18350	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	56.021784
18351				97.5% Chebyshev(Mean, Sd) UCL	62.478452
18352	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	75.161326
18353	95% Approximate Gamma UCL		48.732123		
18354	95% Adjusted Gamma UCL		50.933455		
18355					
18356	**Potential UCL to Use**			Use 95% Student's-t UCL	47.585696
18357					
18358	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18359	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18360	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18361					
18362					
18363	**M|MG/KG|ZINC (gi_sd_s_2010)**				
18364					

	A	B	C	D	E
18365	**General Statistics**				
18366	Number of Valid Observations		2	Number of Distinct Observations	2
18367					
18368					
18369	**Warning: This data set only has 2 observations!**				
18370	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18371	**The data set for variable M|MG/KG|ZINC (gi_sd_s_2010) was not processed!**				
18372					
18373	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18374	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18375					
18376					
18377					
18378	**M|MG/KG|ZINC (gi_sd_stillwater_2005)**				
18379					
18380	**General Statistics**				
18381	Number of Valid Observations		4	Number of Distinct Observations	4
18382					
18383					
18384	**Warning: This data set only has 4 observations!**				
18385	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18386	**The data set for variable M|MG/KG|ZINC (gi_sd_stillwater_2005) was not processed!**				
18387					
18388	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18389	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18390					
18391					
18392					
18393	**M|MG/KG|ZINC (gi_sd_stillwater_2009)**				
18394					
18395	**General Statistics**				
18396	Number of Valid Observations		60	Number of Distinct Observations	58
18397					
18398	**Raw Statistics**			**Log-transformed Statistics**	
18399	Minimum		13.6	Minimum of Log Data	2.6100698
18400	Maximum		1160	Maximum of Log Data	7.0561753
18401	Mean		85.806667	Mean of log Data	3.7184027
18402	Median		32.85	SD of log Data	0.966033
18403	SD		181.80538		
18404	Coefficient of Variation		2.1187792		
18405	Skewness		4.4740173		
18406					
18407	**Relevant UCL Statistics**				
18408	**Normal Distribution Test**			**Lognormal Distribution Test**	
18409	Lilliefors Test Statistic		0.3899307	Lilliefors Test Statistic	0.1632235
18410	Lilliefors Critical Value		0.1143821	Lilliefors Critical Value	0.1143821
18411	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
18412					
18413	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18414	95% Student's-t UCL		125.02885	95% H-UCL	87.839175
18415	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	106.39607
18416	95% Adjusted-CLT UCL (Chen-1995)		138.89848	97.5% Chebyshev (MVUE) UCL	124.3233
18417	95% Modified-t UCL (Johnson-1978)		127.28829	99% Chebyshev (MVUE) UCL	159.53787
18418					
18419	**Gamma Distribution Test**			**Data Distribution**	
18420	k star (bias corrected)		0.7785872	**Data do not follow a Discernable Distribution (0.05)**	
18421	Theta Star		110.20817		
18422	MLE of Mean		85.806667		
18423	MLE of Standard Deviation		97.245029		
18424	nu star		93.43046		
18425	Approximate Chi Square Value (.05)		72.138834	**Nonparametric Statistics**	
18426	Adjusted Level of Significance		0.046	95% CLT UCL	124.41298

	A	B	C	D	E
18427	Adjusted Chi Square Value		71.679234	95% Jackknife UCL	125.02885
18428				95% Standard Bootstrap UCL	123.77333
18429	Anderson-Darling Test Statistic		6.9667319	95% Bootstrap-t UCL	170.43614
18430	Anderson-Darling 5% Critical Value		0.7890693	95% Hall's Bootstrap UCL	142.23959
18431	Kolmogorov-Smirnov Test Statistic		0.2485637	95% Percentile Bootstrap UCL	127.30833
18432	Kolmogorov-Smirnov 5% Critical Value		0.118963	95% BCA Bootstrap UCL	144.34167
18433	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	188.11427
18434				97.5% Chebyshev(Mean, Sd) UCL	232.38285
18435	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	319.3399
18436	95% Approximate Gamma UCL		111.13233		
18437	95% Adjusted Gamma UCL		111.84489		
18438					
18439	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	188.11427
18440					
18441	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18442	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18443	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18444					
18445					
18446	**M|MG/KG|ZINC (gi_sd_stillwater_2010)**				
18447					
18448	**General Statistics**				
18449	Number of Valid Observations		11	Number of Distinct Observations	10
18450					
18451	**Raw Statistics**			**Log-transformed Statistics**	
18452	Minimum		30.6	Minimum of Log Data	3.421
18453	Maximum		76.9	Maximum of Log Data	4.3425059
18454	Mean		44.881818	Mean of log Data	3.7734392
18455	Median		43.8	SD of log Data	0.2521985
18456	SD		12.511101		
18457	Coefficient of Variation		0.2787565		
18458	Skewness		1.6977425		
18459					
18460	**Relevant UCL Statistics**				
18461	**Normal Distribution Test**			**Lognormal Distribution Test**	
18462	Shapiro Wilk Test Statistic		0.8396176	Shapiro Wilk Test Statistic	0.9212994
18463	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
18464	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
18465					
18466	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18467	95% Student's-t UCL		51.718854	95% H-UCL	52.306785
18468	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	59.740207
18469	95% Adjusted-CLT UCL (Chen-1995)		53.149864	97.5% Chebyshev (MVUE) UCL	66.203436
18470	95% Modified-t UCL (Johnson-1978)		52.040682	99% Chebyshev (MVUE) UCL	78.899198
18471					
18472	**Gamma Distribution Test**			**Data Distribution**	
18473	k star (bias corrected)		12.066608	**Data appear Gamma Distributed at 5% Significance Level**	
18474	Theta Star		3.7195058		
18475	MLE of Mean		44.881818		
18476	MLE of Standard Deviation		12.920456		
18477	nu star		265.46538		
18478	Approximate Chi Square Value (.05)		228.73538	**Nonparametric Statistics**	
18479	Adjusted Level of Significance		0.02783	95% CLT UCL	51.086599
18480	Adjusted Chi Square Value		223.17493	95% Jackknife UCL	51.718854
18481				95% Standard Bootstrap UCL	50.787958
18482	Anderson-Darling Test Statistic		0.4518195	95% Bootstrap-t UCL	54.445909
18483	Anderson-Darling 5% Critical Value		0.7289339	95% Hall's Bootstrap UCL	84.065483
18484	Kolmogorov-Smirnov Test Statistic		0.1720295	95% Percentile Bootstrap UCL	51.009091
18485	Kolmogorov-Smirnov 5% Critical Value		0.2551522	95% BCA Bootstrap UCL	52.618182
18486	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	61.324626
18487				97.5% Chebyshev(Mean, Sd) UCL	68.439442
18488	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	82.41512
18489	95% Approximate Gamma UCL		52.088876		
18490	95% Adjusted Gamma UCL		53.38668		
18491					
18492	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	52.088876
18493					

	A	B	C	D	E
18494	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18495	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18496	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18497					
18498					
18499	**MISC|%|PERCENT SOLIDS (gi_sd_ne_2005)**				
18500					
18501	**General Statistics**				
18502	Number of Valid Observations		36	Number of Distinct Observations	32
18503					
18504	**Raw Statistics**			**Log-transformed Statistics**	
18505	Minimum		64.3	Minimum of Log Data	4.1635596
18506	Maximum		91.3	Maximum of Log Data	4.5141508
18507	Mean		79.508333	Mean of log Data	4.3741283
18508	Median		79.55	SD of log Data	0.0604444
18509	SD		4.6444668		
18510	Coefficient of Variation		0.0584148		
18511	Skewness		-0.929566		
18512					
18513	**Relevant UCL Statistics**				
18514	**Normal Distribution Test**			**Lognormal Distribution Test**	
18515	Shapiro Wilk Test Statistic		0.9048578	Shapiro Wilk Test Statistic	0.8804583
18516	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
18517	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
18518					
18519	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18520	95% Student's-t UCL		80.816194	95% H-UCL	N/A
18521	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	83.005715
18522	95% Adjusted-CLT UCL (Chen-1995)		80.653435	97.5% Chebyshev (MVUE) UCL	84.517578
18523	95% Modified-t UCL (Johnson-1978)		80.796206	99% Chebyshev (MVUE) UCL	87.487339
18524					
18525	**Gamma Distribution Test**			**Data Distribution**	
18526	k star (bias corrected)		264.55759	**Data do not follow a Discernable Distribution (0.05)**	
18527	Theta Star		0.3005332		
18528	MLE of Mean		79.508333		
18529	MLE of Standard Deviation		4.8882402		
18530	nu star		19048.146		
18531	Approximate Chi Square Value (.05)		18728.24	**Nonparametric Statistics**	
18532	Adjusted Level of Significance		0.0428	95% CLT UCL	80.781578
18533	Adjusted Chi Square Value		18713.919	95% Jackknife UCL	80.816194
18534				95% Standard Bootstrap UCL	80.740541
18535	Anderson-Darling Test Statistic		1.418923	95% Bootstrap-t UCL	80.663361
18536	Anderson-Darling 5% Critical Value		0.74607	95% Hall's Bootstrap UCL	80.763997
18537	Kolmogorov-Smirnov Test Statistic		0.2128655	95% Percentile Bootstrap UCL	80.819444
18538	Kolmogorov-Smirnov 5% Critical Value		0.146302	95% BCA Bootstrap UCL	80.575
18539	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	82.88246
18540				97.5% Chebyshev(Mean, Sd) UCL	84.342448
18541	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	87.21031
18542	95% Approximate Gamma UCL		80.866453		
18543	95% Adjusted Gamma UCL		80.928337		
18544					
18545	**Potential UCL to Use**			Use 95% Student's-t UCL	80.816194
18546				or 95% Modified-t UCL	80.796206
18547					
18548	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18549	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18550	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18551					
18552					
18553	**MISC|%|PERCENT SOLIDS (gi_sd_ne_2009)**				
18554					
18555	**General Statistics**				
18556	Number of Valid Data		0	Number of Detected Data	0

	A	B	C	D	E
18557	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
18558	Number of Missing Values		20	Percent Non-Detects	NaN%
18559					
18560	**Warning: This data set only has 0 observations!**				
18561	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18562	**The data set for variable MISC|%|PERCENT SOLIDS (gi_sd_ne_2009) was not processed!**				
18563					
18564	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18565	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18566					
18567					
18568					
18569	**MISC|%|PERCENT SOLIDS (gi_sd_ne_2010)**				
18570					
18571	**General Statistics**				
18572	Number of Valid Data		0	Number of Detected Data	0
18573	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
18574	Number of Missing Values		16	Percent Non-Detects	NaN%
18575					
18576	**Warning: This data set only has 0 observations!**				
18577	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18578	**The data set for variable MISC|%|PERCENT SOLIDS (gi_sd_ne_2010) was not processed!**				
18579					
18580	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18581	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18582					
18583					
18584					
18585	**MISC|%|PERCENT SOLIDS (gi_sd_nw_2005)**				
18586					
18587	**General Statistics**				
18588	Number of Valid Observations		18	Number of Distinct Observations	16
18589					
18590	**Raw Statistics**			**Log-transformed Statistics**	
18591	Minimum		74.9	Minimum of Log Data	4.3161539
18592	Maximum		87.4	Maximum of Log Data	4.4704953
18593	Mean		82.455556	Mean of log Data	4.4115054
18594	Median		83	SD of log Data	0.0402262
18595	SD		3.2523697		
18596	Coefficient of Variation		0.0394439		
18597	Skewness		-1.014573		
18598					
18599	**Relevant UCL Statistics**				
18600	**Normal Distribution Test**			**Lognormal Distribution Test**	
18601	Shapiro Wilk Test Statistic		0.8738747	Shapiro Wilk Test Statistic	0.8629072
18602	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
18603	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
18604					
18605	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18606	95% Student's-t UCL		83.789122	95% H-UCL	N/A
18607	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	85.865003
18608	95% Adjusted-CLT UCL (Chen-1995)		83.520605	97.5% Chebyshev (MVUE) UCL	87.339916
18609	95% Modified-t UCL (Johnson-1978)		83.758569	99% Chebyshev (MVUE) UCL	90.237096
18610					
18611	**Gamma Distribution Test**			**Data Distribution**	
18612	k star (bias corrected)		552.74308	**Data do not follow a Discernable Distribution (0.05)**	
18613	Theta Star		0.1491752		
18614	MLE of Mean		82.455556		
18615	MLE of Standard Deviation		3.5071817		
18616	nu star		19898.751		
18617	Approximate Chi Square Value (.05)		19571.755	**Nonparametric Statistics**	
18618	Adjusted Level of Significance		0.03574	95% CLT UCL	83.716485

	A	B	C	D	E
18619	Adjusted Chi Square Value		19540.684	95% Jackknife UCL	83.789122
18620				95% Standard Bootstrap UCL	83.684856
18621	Anderson-Darling Test Statistic		1.1654316	95% Bootstrap-t UCL	83.554458
18622	Anderson-Darling 5% Critical Value		0.73725	95% Hall's Bootstrap UCL	83.619465
18623	Kolmogorov-Smirnov Test Statistic		0.2510384	95% Percentile Bootstrap UCL	83.694444
18624	Kolmogorov-Smirnov 5% Critical Value		0.20311	95% BCA Bootstrap UCL	83.511111
18625	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	85.797048
18626				97.5% Chebyshev(Mean, Sd) UCL	87.242914
18627	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	90.083039
18628	95% Approximate Gamma UCL		83.833186		
18629	95% Adjusted Gamma UCL		83.966484		
18630					
18631	**Potential UCL to Use**			Use 95% Student's-t UCL	83.789122
18632				or 95% Modified-t UCL	83.758569
18633					
18634	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18635	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18636	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18637					
18638					
18639	**MISC|%|PERCENT SOLIDS (gi_sd_nw_2009)**				
18640					
18641	**General Statistics**				
18642	Number of Valid Data		0	Number of Detected Data	0
18643	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
18644	Number of Missing Values		7	Percent Non-Detects	NaN%
18645					
18646	**Warning: This data set only has 0 observations!**				
18647	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18648	**The data set for variable MISC|%|PERCENT SOLIDS (gi_sd_nw_2009) was not processed!**				
18649					
18650	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18651	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18652					
18653					
18654					
18655	**MISC|%|PERCENT SOLIDS (gi_sd_nw_2010)**				
18656					
18657	**General Statistics**				
18658	Number of Valid Data		0	Number of Detected Data	0
18659	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
18660	Number of Missing Values		4	Percent Non-Detects	NaN%
18661					
18662	**Warning: This data set only has 0 observations!**				
18663	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18664	**The data set for variable MISC|%|PERCENT SOLIDS (gi_sd_nw_2010) was not processed!**				
18665					
18666	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18667	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18668					
18669					
18670					
18671	**MISC|%|PERCENT SOLIDS (gi_sd_ref_2009)**				
18672					
18673	**General Statistics**				
18674	Number of Valid Data		0	Number of Detected Data	0
18675	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
18676	Number of Missing Values		6	Percent Non-Detects	NaN%

	A	B	C	D	E
18677					
18678	**Warning: This data set only has 0 observations!**				
18679	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18680	**The data set for variable MISC|%|PERCENT SOLIDS (gi_sd_ref_2009) was not processed!**				
18681					
18682	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18683	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18684					
18685					
18686					
18687	**MISC|%|PERCENT SOLIDS (gi_sd_ref_2010)**				
18688					
18689	**General Statistics**				
18690	Number of Valid Data		0	Number of Detected Data	0
18691	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
18692	Number of Missing Values		3	Percent Non-Detects	NaN%
18693					
18694	**Warning: This data set only has 0 observations!**				
18695	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18696	**The data set for variable MISC|%|PERCENT SOLIDS (gi_sd_ref_2010) was not processed!**				
18697					
18698	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18699	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18700					
18701					
18702					
18703	**MISC|%|PERCENT SOLIDS (gi_sd_s_2005)**				
18704					
18705	**General Statistics**				
18706	Number of Valid Observations		8	Number of Distinct Observations	8
18707					
18708	**Raw Statistics**			**Log-transformed Statistics**	
18709	Minimum		73.4	Minimum of Log Data	4.2959239
18710	Maximum		84.7	Maximum of Log Data	4.4391156
18711	Mean		78.8625	Mean of log Data	4.366641
18712	Median		78.85	SD of log Data	0.0493218
18713	SD		3.8931946		
18714	Coefficient of Variation		0.0493669		
18715	Skewness		0.1304773		
18716					
18717					
18718	**Warning: There are only 8 Values in this data**				
18719	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
18720	**the resulting calculations may not be reliable enough to draw conclusions**				
18721					
18722	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
18723					
18724	**Relevant UCL Statistics**				
18725	**Normal Distribution Test**			**Lognormal Distribution Test**	
18726	Shapiro Wilk Test Statistic		0.9732188	Shapiro Wilk Test Statistic	0.9742643
18727	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
18728	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
18729					
18730	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18731	95% Student's-t UCL		81.470297	95% H-UCL	N/A
18732	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	84.857491
18733	95% Adjusted-CLT UCL (Chen-1995)		81.194409	97.5% Chebyshev (MVUE) UCL	87.451552
18734	95% Modified-t UCL (Johnson-1978)		81.48088	99% Chebyshev (MVUE) UCL	92.547082

	A	B	C	D	E
18735					
18736	**Gamma Distribution Test**			**Data Distribution**	
18737	k star (bias corrected)		293.65576	**Data appear Normal at 5% Significance Level**	
18738	Theta Star		0.2685542		
18739	MLE of Mean		78.8625		
18740	MLE of Standard Deviation		4.6020494		
18741	nu star		4698.4921		
18742	Approximate Chi Square Value (.05)		4540.1883	**Nonparametric Statistics**	
18743	Adjusted Level of Significance		0.01946	95% CLT UCL	81.126562
18744	Adjusted Chi Square Value		4500.4946	95% Jackknife UCL	81.470297
18745				95% Standard Bootstrap UCL	80.982903
18746	Anderson-Darling Test Statistic		0.1809783	95% Bootstrap-t UCL	81.531739
18747	Anderson-Darling 5% Critical Value		0.71473	95% Hall's Bootstrap UCL	81.429078
18748	Kolmogorov-Smirnov Test Statistic		0.1382132	95% Percentile Bootstrap UCL	80.9625
18749	Kolmogorov-Smirnov 5% Critical Value		0.29358	95% BCA Bootstrap UCL	80.9
18750	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	84.862316
18751				97.5% Chebyshev(Mean, Sd) UCL	87.458441
18752	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	92.558026
18753	95% Approximate Gamma UCL		81.612217		
18754	95% Adjusted Gamma UCL		82.332025		
18755					
18756	**Potential UCL to Use**			Use 95% Student's-t UCL	81.470297
18757					
18758	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18759	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18760	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18761					
18762					
18763	**MISC|%|PERCENT SOLIDS (gi_sd_s_2010)**				
18764					
18765	**General Statistics**				
18766	Number of Valid Data		0	Number of Detected Data	0
18767	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
18768	Number of Missing Values		2	Percent Non-Detects	NaN%
18769					
18770	**Warning: This data set only has 0 observations!**				
18771	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18772	**The data set for variable MISC|%|PERCENT SOLIDS (gi_sd_s_2010) was not processed!**				
18773					
18774	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18775	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18776					
18777					
18778					
18779	**MISC|%|PERCENT SOLIDS (gi_sd_stillwater_2005)**				
18780					
18781	**General Statistics**				
18782	Number of Valid Observations		4	Number of Distinct Observations	4
18783					
18784					
18785	**Warning: This data set only has 4 observations!**				
18786	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18787	**The data set for variable MISC|%|PERCENT SOLIDS (gi_sd_stillwater_2005) was not processed!**				
18788					
18789	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
18790	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18791					
18792					
18793					
18794	**MISC|%|PERCENT SOLIDS (gi_sd_stillwater_2009)**				
18795					
18796	**General Statistics**				
18797	Number of Valid Data		0	Number of Detected Data	0
18798	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
18799	Number of Missing Values		60	Percent Non-Detects	NaN%
18800					
18801	**Warning: This data set only has 0 observations!**				
18802	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18803	**The data set for variable MISC|%|PERCENT SOLIDS (gi_sd_stillwater_2009) was not processed!**				
18804					
18805	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18806	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18807					
18808					
18809					
18810	**MISC|%|PERCENT SOLIDS (gi_sd_stillwater_2010)**				
18811					
18812	**General Statistics**				
18813	Number of Valid Data		0	Number of Detected Data	0
18814	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
18815	Number of Missing Values		11	Percent Non-Detects	NaN%
18816					
18817	**Warning: This data set only has 0 observations!**				
18818	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18819	**The data set for variable MISC|%|PERCENT SOLIDS (gi_sd_stillwater_2010) was not processed!**				
18820					
18821	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18822	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18823					
18824					
18825					
18826	**MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_ne_2005)**				
18827					
18828	**General Statistics**				
18829	Number of Valid Observations		36	Number of Distinct Observations	23
18830					
18831	**Raw Statistics**			**Log-transformed Statistics**	
18832	Minimum		3000	Minimum of Log Data	8.0063676
18833	Maximum		15000	Maximum of Log Data	9.6158055
18834	Mean		8662.5	Mean of log Data	8.9901809
18835	Median		7900	SD of log Data	0.4151325
18836	SD		3224.7785		
18837	Coefficient of Variation		0.3722688		
18838	Skewness		0.1847744		
18839					
18840	**Relevant UCL Statistics**				
18841	**Normal Distribution Test**			**Lognormal Distribution Test**	
18842	Shapiro Wilk Test Statistic		0.9611695	Shapiro Wilk Test Statistic	0.9417499
18843	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
18844	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
18845					

	A	B	C	D	E
18846	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18847	95% Student's-t UCL		9570.5828	95% H-UCL	9958.8293
18848	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	11440.221
18849	95% Adjusted-CLT UCL (Chen-1995)		9564.2337	97.5% Chebyshev (MVUE) UCL	12615.785
18850	95% Modified-t UCL (Johnson-1978)		9573.3414	99% Chebyshev (MVUE) UCL	14924.952
18851					
18852	**Gamma Distribution Test**			**Data Distribution**	
18853	k star (bias corrected)		6.1524631	**Data appear Normal at 5% Significance Level**	
18854	Theta Star		1407.9727		
18855	MLE of Mean		8662.5		
18856	MLE of Standard Deviation		3492.3579		
18857	nu star		442.97734		
18858	Approximate Chi Square Value (.05)		395.1814	**Nonparametric Statistics**	
18859	Adjusted Level of Significance		0.0428	95% CLT UCL	9546.5481
18860	Adjusted Chi Square Value		393.13806	95% Jackknife UCL	9570.5828
18861				95% Standard Bootstrap UCL	9539.3504
18862	Anderson-Darling Test Statistic		0.3831763	95% Bootstrap-t UCL	9641.7517
18863	Anderson-Darling 5% Critical Value		0.7494488	95% Hall's Bootstrap UCL	9551.6864
18864	Kolmogorov-Smirnov Test Statistic		0.1110293	95% Percentile Bootstrap UCL	9505.5556
18865	Kolmogorov-Smirnov 5% Critical Value		0.1470599	95% BCA Bootstrap UCL	9531.9444
18866	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	11005.247
18867				97.5% Chebyshev(Mean, Sd) UCL	12018.956
18868	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	14010.19
18869	95% Approximate Gamma UCL		9710.202		
18870	95% Adjusted Gamma UCL		9760.6708		
18871					
18872	**Potential UCL to Use**			Use 95% Student's-t UCL	9570.5828
18873					
18874	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18875	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18876	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18877					
18878					
18879	**MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_ne_2009)**				
18880					
18881	**General Statistics**				
18882	Number of Valid Data		0	Number of Detected Data	0
18883	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
18884	Number of Missing Values		20	Percent Non-Detects	NaN%
18885					
18886	**Warning: This data set only has 0 observations!**				
18887	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
18888	**The data set for variable MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_ne_2009) was not processed!**				
18889					
18890	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
18891	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
18892					
18893					
18894					
18895	**MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_ne_2010)**				
18896					
18897	**General Statistics**				
18898	Number of Valid Observations		16	Number of Distinct Observations	16
18899					
18900	**Raw Statistics**			**Log-transformed Statistics**	
18901	Minimum		2330	Minimum of Log Data	7.7536235
18902	Maximum		14700	Maximum of Log Data	9.5956028
18903	Mean		7058.125	Mean of log Data	8.758044
18904	Median		5880	SD of log Data	0.4705751
18905	SD		3445.2503		

	A	B	C	D	E
18906	Coefficient of Variation		0.4881254		
18907	Skewness		1.1345703		
18908					
18909	**Relevant UCL Statistics**				
18910	**Normal Distribution Test**			**Lognormal Distribution Test**	
18911	Shapiro Wilk Test Statistic		0.8822993	Shapiro Wilk Test Statistic	0.9622352
18912	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
18913	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
18914					
18915	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18916	95% Student's-t UCL		8568.0493	95% H-UCL	9083.7943
18917	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	10772.032
18918	95% Adjusted-CLT UCL (Chen-1995)		8735.9015	97.5% Chebyshev (MVUE) UCL	12381.226
18919	95% Modified-t UCL (Johnson-1978)		8608.7668	99% Chebyshev (MVUE) UCL	15542.175
18920					
18921	**Gamma Distribution Test**			**Data Distribution**	
18922	k star (bias corrected)		4.082548	**Data appear Gamma Distributed at 5% Significance Level**	
18923	Theta Star		1728.8529		
18924	MLE of Mean		7058.125		
18925	MLE of Standard Deviation		3493.202		
18926	nu star		130.64154		
18927	Approximate Chi Square Value (.05)		105.2383	**Nonparametric Statistics**	
18928	Adjusted Level of Significance		0.03348	95% CLT UCL	8474.8581
18929	Adjusted Chi Square Value		102.64446	95% Jackknife UCL	8568.0493
18930				95% Standard Bootstrap UCL	8429.7832
18931	Anderson-Darling Test Statistic		0.4309178	95% Bootstrap-t UCL	9054.0183
18932	Anderson-Darling 5% Critical Value		0.7413646	95% Hall's Bootstrap UCL	9082.8916
18933	Kolmogorov-Smirnov Test Statistic		0.1732923	95% Percentile Bootstrap UCL	8484.375
18934	Kolmogorov-Smirnov 5% Critical Value		0.2157893	95% BCA Bootstrap UCL	8609.375
18935	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	10812.499
18936				97.5% Chebyshev(Mean, Sd) UCL	12437.02
18937	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	15628.077
18938	95% Approximate Gamma UCL		8761.8701		
18939	95% Adjusted Gamma UCL		8983.2833		
18940					
18941	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	8761.8701
18942					
18943	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18944	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18945	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18946					
18947					
18948	**MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_nw_2005)**				
18949					
18950	**General Statistics**				
18951	Number of Valid Observations		18	Number of Distinct Observations	16
18952					
18953	**Raw Statistics**			**Log-transformed Statistics**	
18954	Minimum		2300	Minimum of Log Data	7.7406644
18955	Maximum		29000	Maximum of Log Data	10.275051
18956	Mean		7363.8889	Mean of log Data	8.6644827
18957	Median		5700	SD of log Data	0.6785735
18958	SD		6324.4113		
18959	Coefficient of Variation		0.8588412		
18960	Skewness		2.6147593		
18961					
18962	**Relevant UCL Statistics**				
18963	**Normal Distribution Test**			**Lognormal Distribution Test**	
18964	Shapiro Wilk Test Statistic		0.7104101	Shapiro Wilk Test Statistic	0.9455244
18965	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
18966	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
18967					
18968	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
18969	95% Student's-t UCL		9957.0825	95% H-UCL	10497.238
18970	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	12488.05
18971	95% Adjusted-CLT UCL (Chen-1995)		10797.493	97.5% Chebyshev (MVUE) UCL	14783.46

	A	B	C	D	E
18972	95% Modified-t UCL (Johnson-1978)		10110.201	99% Chebyshev (MVUE) UCL	19292.35
18973					
18974	**Gamma Distribution Test**			**Data Distribution**	
18975	k star (bias corrected)		1.9012005	**Data appear Gamma Distributed at 5% Significance Level**	
18976	Theta Star		3873.2838		
18977	MLE of Mean		7363.8889		
18978	MLE of Standard Deviation		5340.6396		
18979	nu star		68.443217		
18980	Approximate Chi Square Value (.05)		50.400858	**Nonparametric Statistics**	
18981	Adjusted Level of Significance		0.03574	95% CLT UCL	9815.8361
18982	Adjusted Chi Square Value		48.915573	95% Jackknife UCL	9957.0825
18983				95% Standard Bootstrap UCL	9772.7019
18984	Anderson-Darling Test Statistic		0.5251062	95% Bootstrap-t UCL	12095.09
18985	Anderson-Darling 5% Critical Value		0.7510042	95% Hall's Bootstrap UCL	21514.75
18986	Kolmogorov-Smirnov Test Statistic		0.1304544	95% Percentile Bootstrap UCL	9944.4444
18987	Kolmogorov-Smirnov 5% Critical Value		0.2060119	95% BCA Bootstrap UCL	10997.222
18988	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	13861.604
18989				97.5% Chebyshev(Mean, Sd) UCL	16673.17
18990	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	22195.948
18991	95% Approximate Gamma UCL		9999.9933		
18992	95% Adjusted Gamma UCL		10303.636		
18993					
18994	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	9999.9933
18995					
18996	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
18997	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
18998	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
18999					
19000					
19001	**MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_nw_2009)**				
19002					
19003	**General Statistics**				
19004	Number of Valid Data		0	Number of Detected Data	0
19005	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19006	Number of Missing Values		7	Percent Non-Detects	NaN%
19007					
19008	**Warning: This data set only has 0 observations!**				
19009	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
19010	**The data set for variable MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_nw_2009) was not processed!**				
19011					
19012	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
19013	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19014					
19015					
19016					
19017	**MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_nw_2010)**				
19018					
19019	**General Statistics**				
19020	Number of Valid Observations		4	Number of Distinct Observations	4
19021					
19022					
19023	**Warning: This data set only has 4 observations!**				
19024	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
19025	**The data set for variable MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_nw_2010) was not processed!**				
19026					

	A	B	C	D	E
19027	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
19028	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
19029					
19030					
19031					
19032	MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_ref_2009)				
19033					
19034	General Statistics				
19035	Number of Valid Data		0	Number of Detected Data	0
19036	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19037	Number of Missing Values		6	Percent Non-Detects	NaN%
19038					
19039	Warning: This data set only has 0 observations!				
19040	Data set is too small to compute reliable and meaningful statistics and estimates!				
19041	The data set for variable MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_ref_2009) was not processed!				
19042					
19043	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
19044	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
19045					
19046					
19047					
19048	MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_ref_2010)				
19049					
19050	General Statistics				
19051	Number of Valid Observations		3	Number of Distinct Observations	3
19052					
19053					
19054	Warning: This data set only has 3 observations!				
19055	Data set is too small to compute reliable and meaningful statistics and estimates!				
19056	The data set for variable MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_ref_2010) was not processed!				
19057					
19058	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
19059	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
19060					
19061					
19062					
19063	MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_s_2005)				
19064					
19065	General Statistics				
19066	Number of Valid Observations		8	Number of Distinct Observations	7
19067					
19068	Raw Statistics			Log-transformed Statistics	
19069	Minimum		5000	Minimum of Log Data	8.5171932
19070	Maximum		10000	Maximum of Log Data	9.2103404
19071	Mean		7787.5	Mean of log Data	8.9295214
19072	Median		7800	SD of log Data	0.2719097
19073	SD		1966.4598		
19074	Coefficient of Variation		0.2525149		
19075	Skewness		-0.352132		
19076					
19077					
19078	Warning: There are only 8 Values in this data				
19079	Note: It should be noted that even though bootstrap methods may be performed on this data set,				

	A	B	C	D	E
19080	the resulting calculations may not be reliable enough to draw conclusions				
19081					
19082	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
19083					
19084	Relevant UCL Statistics				
19085	Normal Distribution Test			Lognormal Distribution Test	
19086	Shapiro Wilk Test Statistic		0.9031518	Shapiro Wilk Test Statistic	0.8811987
19087	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
19088	Data appear Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
19089					
19090	Assuming Normal Distribution			Assuming Lognormal Distribution	
19091	95% Student's-t UCL		9104.703	95% H-UCL	9647.5205
19092	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	11078.218
19093	95% Adjusted-CLT UCL (Chen-1995)		8838.5949	97.5% Chebyshev (MVUE) UCL	12497.132
19094	95% Modified-t UCL (Johnson-1978)		9090.2769	99% Chebyshev (MVUE) UCL	15284.314
19095					
19096	Gamma Distribution Test			Data Distribution	
19097	k star (bias corrected)		10.347785	Data appear Normal at 5% Significance Level	
19098	Theta Star		752.57654		
19099	MLE of Mean		7787.5		
19100	MLE of Standard Deviation		2420.8862		
19101	nu star		165.56456		
19102	Approximate Chi Square Value (.05)		136.81261	Nonparametric Statistics	
19103	Adjusted Level of Significance		0.01946	95% CLT UCL	8931.0821
19104	Adjusted Chi Square Value		130.19585	95% Jackknife UCL	9104.703
19105				95% Standard Bootstrap UCL	8844.7807
19106	Anderson-Darling Test Statistic		0.4155563	95% Bootstrap-t UCL	8939.7787
19107	Anderson-Darling 5% Critical Value		0.7157857	95% Hall's Bootstrap UCL	8753.3914
19108	Kolmogorov-Smirnov Test Statistic		0.1762794	95% Percentile Bootstrap UCL	8850
19109	Kolmogorov-Smirnov 5% Critical Value		0.2940102	95% BCA Bootstrap UCL	8787.5
19110	Data appear Gamma Distributed at 5% Significance Level			95% Chebyshev(Mean, Sd) UCL	10818.018
19111				97.5% Chebyshev(Mean, Sd) UCL	12129.326
19112	Assuming Gamma Distribution			99% Chebyshev(Mean, Sd) UCL	14705.136
19113	95% Approximate Gamma UCL		9424.0871		
19114	95% Adjusted Gamma UCL		9903.0347		
19115					
19116	Potential UCL to Use			Use 95% Student's-t UCL	9104.703
19117					
19118	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
19119	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
19120	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
19121					
19122					
19123	MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_s_2010)				
19124					
19125	General Statistics				
19126	Number of Valid Observations		2	Number of Distinct Observations	2
19127					
19128					
19129	Warning: This data set only has 2 observations!				
19130	Data set is too small to compute reliable and meaningful statistics and estimates!				
19131	The data set for variable MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_s_2010) was not processed!				
19132					
19133	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
19134	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
19135					
19136					

	A	B	C	D	E
19137					
19138	**MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_stillwater_2005)**				
19139					
19140	**General Statistics**				
19141	Number of Valid Observations		4	Number of Distinct Observations	4
19142					
19143					
19144	**Warning: This data set only has 4 observations!**				
19145	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
19146	**The data set for variable MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_stillwater_2005) was not processed!**				
19147					
19148	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
19149	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19150					
19151					
19152					
19153	**MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_stillwater_2009)**				
19154					
19155	**General Statistics**				
19156	Number of Valid Data		0	Number of Detected Data	0
19157	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19158	Number of Missing Values		60	Percent Non-Detects	NaN%
19159					
19160	**Warning: This data set only has 0 observations!**				
19161	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
19162	**The data set for variable MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_stillwater_2009) was not processed!**				
19163					
19164	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
19165	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19166					
19167					
19168					
19169	**MISC|MG/KG|TOTAL ORGANIC CARBON (gi_sd_stillwater_2010)**				
19170					
19171	**General Statistics**				
19172	Number of Valid Observations		11	Number of Distinct Observations	11
19173					
19174	**Raw Statistics**			**Log-transformed Statistics**	
19175	Minimum		2880	Minimum of Log Data	7.9655456
19176	Maximum		13800	Maximum of Log Data	9.5324239
19177	Mean		8481.8182	Mean of log Data	8.9570073
19178	Median		8000	SD of log Data	0.4705452
19179	SD		3376.6309		
19180	Coefficient of Variation		0.3981023		
19181	Skewness		-0.10232		
19182					
19183	**Relevant UCL Statistics**				
19184	**Normal Distribution Test**			**Lognormal Distribution Test**	
19185	Shapiro Wilk Test Statistic		0.969324	Shapiro Wilk Test Statistic	0.9263615
19186	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
19187	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
19188					
19189	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
19190	95% Student's-t UCL		10327.071	95% H-UCL	11919.028
19191	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	13980.953
19192	95% Adjusted-CLT UCL (Chen-1995)		10122.871	97.5% Chebyshev (MVUE) UCL	16319.315
19193	95% Modified-t UCL (Johnson-1978)		10321.837	99% Chebyshev (MVUE) UCL	20912.575
19194					

	A	B	C	D	E
19195	**Gamma Distribution Test**			**Data Distribution**	
19196	k star (bias corrected)		4.2789735	**Data appear Normal at 5% Significance Level**	
19197	Theta Star		1982.2086		
19198	MLE of Mean		8481.8182		
19199	MLE of Standard Deviation		4100.3333		
19200	nu star		94.137417		
19201	Approximate Chi Square Value (.05)		72.760679	**Nonparametric Statistics**	
19202	Adjusted Level of Significance		0.02783	95% CLT UCL	10156.431
19203	Adjusted Chi Square Value		69.702792	95% Jackknife UCL	10327.071
19204				95% Standard Bootstrap UCL	10080.387
19205	Anderson-Darling Test Statistic		0.2829478	95% Bootstrap-t UCL	10236.823
19206	Anderson-Darling 5% Critical Value		0.7310835	95% Hall's Bootstrap UCL	10084.392
19207	Kolmogorov-Smirnov Test Statistic		0.1690428	95% Percentile Bootstrap UCL	10140
19208	Kolmogorov-Smirnov 5% Critical Value		0.2559008	95% BCA Bootstrap UCL	10001.818
19209	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	12919.581
19210				97.5% Chebyshev(Mean, Sd) UCL	14839.804
19211	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	18611.711
19212	95% Approximate Gamma UCL		10973.736		
19213	95% Adjusted Gamma UCL		11455.157		
19214					
19215	**Potential UCL to Use**			Use 95% Student's-t UCL	10327.071
19216					
19217	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
19218	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
19219	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
19220					
19221					
19222	**OS|UG/KG|1,1-BIPHENYL (gi_sd_ne_2005)**				
19223					
19224	**General Statistics**				
19225	Number of Valid Data		36	Number of Detected Data	2
19226	Number of Distinct Detected Data		2	Number of Non-Detect Data	34
19227				Percent Non-Detects	94.44%
19228					
19229	**Raw Statistics**			**Log-transformed Statistics**	
19230	Minimum Detected		41	Minimum Detected	3.7135721
19231	Maximum Detected		68	Maximum Detected	4.2195077
19232	Mean of Detected		54.5	Mean of Detected	3.9665399
19233	SD of Detected		19.091883	SD of Detected	0.3577505
19234	Minimum Non-Detect		320	Minimum Non-Detect	5.768321
19235	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
19236					
19237	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
19238	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
19239	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
19240					
19241	**Warning: Data set has only 2 Distinct Detected Values.**				
19242	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
19243	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
19244					
19245	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
19246					
19247	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
19248	**Those methods will return a 'N/A' value on your output display!**				
19249					
19250	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
19251	**However, results obtained using 4 to 9 distinct values may not be reliable.**				

	A	B	C	D	E
19252	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
19253					
19254					
19255	**UCL Statistics**				
19256	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
19257	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
19258	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
19259	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
19260					
19261	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
19262	DL/2 Substitution Method			DL/2 Substitution Method	
19263	Mean		158.65278	Mean	5.0413663
19264	SD		25.837907	SD	0.2712679
19265	95% DL/2 (t) UCL		165.92861	95% H-Stat (DL/2) UCL	174.02904
19266					
19267	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
19268	**MLE method failed to converge properly**			Mean in Log Scale	N/A
19269				SD in Log Scale	N/A
19270				Mean in Original Scale	N/A
19271				SD in Original Scale	N/A
19272				95% t UCL	N/A
19273				95% Percentile Bootstrap UCL	N/A
19274				95% BCA Bootstrap UCL	N/A
19275					
19276	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
19277	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
19278	Theta Star		N/A		
19279	nu star		N/A		
19280					
19281	A-D Test Statistic		N/A	**Nonparametric Statistics**	
19282	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
19283	K-S Test Statistic		N/A	Mean	54.5
19284	5% K-S Critical Value		N/A	SD	13.5
19285	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	13.5
19286				95% KM (t) UCL	77.309228
19287	**Assuming Gamma Distribution**			95% KM (z) UCL	76.705524
19288	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	86.305949
19289	Minimum		N/A	95% KM (bootstrap t) UCL	81.5
19290	Maximum		N/A	95% KM (BCA) UCL	68
19291	Mean		N/A	95% KM (Percentile Bootstrap) UCL	N/A
19292	Median		N/A	95% KM (Chebyshev) UCL	113.34514
19293	SD		N/A	97.5% KM (Chebyshev) UCL	138.80747
19294	k star		N/A	99% KM (Chebyshev) UCL	188.8233
19295	Theta star		N/A		
19296	Nu star		N/A	**Potential UCLs to Use**	
19297	AppChi2		N/A	95% KM (t) UCL	77.309228
19298	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	N/A
19299	95% Adjusted Gamma UCL		N/A		
19300	**Warning: Recommended UCL exceeds the maximum observation**				
19301	**Note: DL/2 is not a recommended method.**				
19302					
19303	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
19304	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
19305	**For additional insight, the user may want to consult a statistician.**				
19306					
19307					
19308	**OS|UG/KG|1,1-BIPHENYL (gi_sd_ne_2009)**				
19309					
19310	**General Statistics**				
19311	Number of Valid Data		0	Number of Detected Data	0
19312	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19313	Number of Missing Values		20	Percent Non-Detects	NaN%
19314					
19315	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
19316	Data set is too small to compute reliable and meaningful statistics and estimates!				
19317	The data set for variable OS|UG/KG|1,1-BIPHENYL (gi_sd_ne_2009) was not processed!				
19318					
19319	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
19320	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
19321					
19322					
19323					
19324	OS|UG/KG|1,1-BIPHENYL (gi_sd_ne_2010)				
19325					
19326	General Statistics				
19327	Number of Valid Data		0	Number of Detected Data	0
19328	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19329	Number of Missing Values		16	Percent Non-Detects	NaN%
19330					
19331	Warning: This data set only has 0 observations!				
19332	Data set is too small to compute reliable and meaningful statistics and estimates!				
19333	The data set for variable OS|UG/KG|1,1-BIPHENYL (gi_sd_ne_2010) was not processed!				
19334					
19335	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
19336	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
19337					
19338					
19339					
19340	OS|UG/KG|1,1-BIPHENYL (gi_sd_nw_2005)				
19341					
19342	General Statistics				
19343	Number of Valid Data		18	Number of Detected Data	1
19344	Number of Distinct Detected Data		1	Number of Non-Detect Data	17
19345				Percent Non-Detects	94.44%
19346					
19347	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
19348	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
19349					
19350	The data set for variable OS|UG/KG|1,1-BIPHENYL (gi_sd_nw_2005) was not processed!				
19351					
19352					
19353					
19354	OS|UG/KG|1,1-BIPHENYL (gi_sd_nw_2009)				
19355					
19356	General Statistics				
19357	Number of Valid Data		0	Number of Detected Data	0
19358	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19359	Number of Missing Values		7	Percent Non-Detects	NaN%
19360					
19361	Warning: This data set only has 0 observations!				
19362	Data set is too small to compute reliable and meaningful statistics and estimates!				
19363	The data set for variable OS|UG/KG|1,1-BIPHENYL (gi_sd_nw_2009) was not processed!				
19364					
19365	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
19366	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19367					
19368					
19369					
19370	**OS|UG/KG|1,1-BIPHENYL (gi_sd_nw_2010)**				
19371					
19372	**General Statistics**				
19373	Number of Valid Data		0	Number of Detected Data	0
19374	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19375	Number of Missing Values		4	Percent Non-Detects	NaN%
19376					
19377	**Warning: This data set only has 0 observations!**				
19378	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
19379	**The data set for variable OS|UG/KG|1,1-BIPHENYL (gi_sd_nw_2010) was not processed!**				
19380					
19381	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
19382	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19383					
19384					
19385					
19386	**OS|UG/KG|1,1-BIPHENYL (gi_sd_ref_2009)**				
19387					
19388	**General Statistics**				
19389	Number of Valid Data		0	Number of Detected Data	0
19390	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19391	Number of Missing Values		6	Percent Non-Detects	NaN%
19392					
19393	**Warning: This data set only has 0 observations!**				
19394	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
19395	**The data set for variable OS|UG/KG|1,1-BIPHENYL (gi_sd_ref_2009) was not processed!**				
19396					
19397	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
19398	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19399					
19400					
19401					
19402	**OS|UG/KG|1,1-BIPHENYL (gi_sd_ref_2010)**				
19403					
19404	**General Statistics**				
19405	Number of Valid Data		0	Number of Detected Data	0
19406	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19407	Number of Missing Values		3	Percent Non-Detects	NaN%
19408					
19409	**Warning: This data set only has 0 observations!**				
19410	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
19411	**The data set for variable OS|UG/KG|1,1-BIPHENYL (gi_sd_ref_2010) was not processed!**				
19412					
19413	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
19414	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19415					
19416					
19417					
19418	**OS|UG/KG|1,1-BIPHENYL (gi_sd_s_2005)**				

	A	B	C	D	E
19419					
19420	**General Statistics**				
19421	Number of Valid Data		8	Number of Detected Data	1
19422	Number of Distinct Detected Data		1	Number of Non-Detect Data	7
19423				Percent Non-Detects	87.50%
19424					
19425	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**				
19426	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**				
19427					
19428	**The data set for variable OS|UG/KG|1,1-BIPHENYL (gi_sd_s_2005) was not processed!**				
19429					
19430					
19431					
19432	**OS|UG/KG|1,1-BIPHENYL (gi_sd_s_2010)**				
19433					
19434	**General Statistics**				
19435	Number of Valid Data		0	Number of Detected Data	0
19436	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19437	Number of Missing Values		2	Percent Non-Detects	NaN%
19438					
19439	**Warning: This data set only has 0 observations!**				
19440	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
19441	**The data set for variable OS|UG/KG|1,1-BIPHENYL (gi_sd_s_2010) was not processed!**				
19442					
19443	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
19444	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19445					
19446					
19447					
19448	**OS|UG/KG|1,1-BIPHENYL (gi_sd_stillwater_2005)**				
19449					
19450	**General Statistics**				
19451	Number of Valid Data		4	Number of Detected Data	0
19452	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
19453				Percent Non-Detects	100.00%
19454					
19455	**Warning: This data set only has 4 observations!**				
19456	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
19457	**The data set for variable OS|UG/KG|1,1-BIPHENYL (gi_sd_stillwater_2005) was not processed!**				
19458					
19459	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
19460	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19461					
19462					
19463					
19464	**OS|UG/KG|1,1-BIPHENYL (gi_sd_stillwater_2009)**				
19465					
19466	**General Statistics**				
19467	Number of Valid Data		0	Number of Detected Data	0
19468	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19469	Number of Missing Values		60	Percent Non-Detects	NaN%
19470					
19471	**Warning: This data set only has 0 observations!**				
19472	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
19473	**The data set for variable OS|UG/KG|1,1-BIPHENYL (gi_sd_stillwater_2009) was not processed!**				
19474					
19475	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
19476	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19477					
19478					
19479					
19480	**OS|UG/KG|1,1-BIPHENYL (gi_sd_stillwater_2010)**				
19481					
19482	**General Statistics**				
19483	Number of Valid Data		0	Number of Detected Data	0
19484	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19485	Number of Missing Values		11	Percent Non-Detects	NaN%
19486					
19487	**Warning: This data set only has 0 observations!**				
19488	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
19489	**The data set for variable OS|UG/KG|1,1-BIPHENYL (gi_sd_stillwater_2010) was not processed!**				
19490					
19491	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
19492	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19493					
19494					
19495					
19496	**OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_ne_2005)**				
19497					
19498	**General Statistics**				
19499	Number of Valid Data		36	Number of Detected Data	18
19500	Number of Distinct Detected Data		17	Number of Non-Detect Data	18
19501				Percent Non-Detects	50.00%
19502					
19503	**Raw Statistics**			**Log-transformed Statistics**	
19504	Minimum Detected		3.32	Minimum Detected	1.1999648
19505	Maximum Detected		220	Maximum Detected	5.3936275
19506	Mean of Detected		24.93	Mean of Detected	2.2026977
19507	SD of Detected		54.546362	SD of Detected	1.1569733
19508	Minimum Non-Detect		3.2	Minimum Non-Detect	1.1631508
19509	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
19510					
19511	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	18
19512	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	18
19513	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	50.00%
19514					
19515	**UCL Statistics**				
19516	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
19517	Shapiro Wilk Test Statistic		0.4398522	Shapiro Wilk Test Statistic	0.7414977
19518	5% Shapiro Wilk Critical Value		0.897	5% Shapiro Wilk Critical Value	0.897
19519	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
19520					
19521	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
19522	DL/2 Substitution Method			DL/2 Substitution Method	
19523	Mean		13.288611	Mean	1.3508817
19524	SD		39.806312	SD	1.1817436
19525	95% DL/2 (t) UCL		24.497886	95% H-Stat (DL/2) UCL	13.038246
19526					
19527	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
19528	**MLE yields a negative mean**			Mean in Log Scale	0.67305
19529				SD in Log Scale	1.8911512
19530				Mean in Original Scale	12.7802
19531				SD in Original Scale	39.963781

	A	B	C	D	E
19532				95% t UCL	24.033817
19533				95% Percentile Bootstrap UCL	24.70467
19534				95% BCA Bootstrap UCL	30.562977
19535					
19536	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
19537	k star (bias corrected)		0.5440916	**Data do not follow a Discernable Distribution (0.05)**	
19538	Theta Star		45.819494		
19539	nu star		19.587296		
19540					
19541	A-D Test Statistic		3.0235603	**Nonparametric Statistics**	
19542	5% A-D Critical Value		0.7905069	Kaplan-Meier (KM) Method	
19543	K-S Test Statistic		0.7905069	Mean	14.125
19544	5% K-S Critical Value		0.2135077	SD	39.009658
19545	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	6.6901012
19546				95% KM (t) UCL	25.428411
19547	**Assuming Gamma Distribution**			95% KM (z) UCL	25.129237
19548	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	24.95906
19549	Minimum		1E-12	95% KM (bootstrap t) UCL	109.01295
19550	Maximum		220	95% KM (BCA) UCL	27.778333
19551	Mean		27.072662	95% KM (Percentile Bootstrap) UCL	26.082778
19552	Median		7.9	95% KM (Chebyshev) UCL	43.286475
19553	SD		44.622053	97.5% KM (Chebyshev) UCL	55.904669
19554	k star		0.144466	99% KM (Chebyshev) UCL	80.690667
19555	Theta star		187.39813		
19556	Nu star		10.401553	**Potential UCLs to Use**	
19557	AppChi2		4.1942718	95% KM (BCA) UCL	27.778333
19558	95% Gamma Approximate UCL		67.13865		
19559	95% Adjusted Gamma UCL		70.119383		
19560	**Note: DL/2 is not a recommended method.**				
19561					
19562	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
19563	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
19564	**For additional insight, the user may want to consult a statistician.**				
19565					
19566					
19567	**OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_ne_2009)**				
19568					
19569	**General Statistics**				
19570	Number of Valid Data		20	Number of Detected Data	5
19571	Number of Distinct Detected Data		5	Number of Non-Detect Data	15
19572				Percent Non-Detects	75.00%
19573					
19574	**Raw Statistics**			**Log-transformed Statistics**	
19575	Minimum Detected		5.2	Minimum Detected	1.6486586
19576	Maximum Detected		24	Maximum Detected	3.1780538
19577	Mean of Detected		13.88	Mean of Detected	2.4607502
19578	SD of Detected		8.1272382	SD of Detected	0.6844489
19579	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
19580	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
19581					
19582					
19583	**Warning: There are only 5 Detected Values in this data**				
19584	**Note: It should be noted that even though bootstrap may be performed on this data set**				
19585	**the resulting calculations may not be reliable enough to draw conclusions**				
19586					
19587	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
19588					
19589					
19590	**UCL Statistics**				
19591	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
19592	Shapiro Wilk Test Statistic		0.9191002	Shapiro Wilk Test Statistic	0.8834648
19593	5% Shapiro Wilk Critical Value		0.762	5% Shapiro Wilk Critical Value	0.762
19594	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	

	A	B	C	D	E
19595					
19596	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
19597	DL/2 Substitution Method			DL/2 Substitution Method	
19598	Mean		4.7075	Mean	0.990769
19599	SD		6.5898901	SD	0.9256438
19600	95% DL/2 (t) UCL		7.2554537	95% H-Stat (DL/2) UCL	7.0704849
19601					
19602	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
19603	**MLE yields a negative mean**			Mean in Log Scale	0.3452357
19604				SD in Log Scale	1.6240738
19605				Mean in Original Scale	4.3315005
19606				SD in Original Scale	6.8355309
19607				95% t UCL	6.9744302
19608				95% Percentile Bootstrap UCL	6.8165345
19609				95% BCA Bootstrap UCL	7.368199
19610					
19611	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
19612	k star (bias corrected)		1.3745649	**Data appear Normal at 5% Significance Level**	
19613	Theta Star		10.097741		
19614	nu star		13.745649		
19615					
19616	A-D Test Statistic		0.3850119	**Nonparametric Statistics**	
19617	5% A-D Critical Value		0.6824867	Kaplan-Meier (KM) Method	
19618	K-S Test Statistic		0.6824867	Mean	7.37
19619	5% K-S Critical Value		0.35932	SD	5.2284893
19620	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	1.3071223
19621				95% KM (t) UCL	9.6301881
19622	**Assuming Gamma Distribution**			95% KM (z) UCL	9.5200249
19623	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	9.1687034
19624	Minimum		3.3525785	95% KM (bootstrap t) UCL	9.4862933
19625	Maximum		60.502933	95% KM (BCA) UCL	19.25
19626	Mean		29.221319	95% KM (Percentile Bootstrap) UCL	16.1
19627	Median		25.824938	95% KM (Chebyshev) UCL	13.067614
19628	SD		18.232573	97.5% KM (Chebyshev) UCL	15.532976
19629	k star		1.7582221	99% KM (Chebyshev) UCL	20.375703
19630	Theta star		16.619811		
19631	Nu star		70.328882	**Potential UCLs to Use**	
19632	AppChi2		52.022372	95% KM (t) UCL	9.6301881
19633	95% Gamma Approximate UCL		39.50421	95% KM (Percentile Bootstrap) UCL	16.1
19634	95% Adjusted Gamma UCL		40.471947		
19635	**Note: DL/2 is not a recommended method.**				
19636					
19637	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
19638	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
19639	**For additional insight, the user may want to consult a statistician.**				
19640					
19641					
19642	**OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_ne_2010)**				
19643					
19644	**General Statistics**				
19645	Number of Valid Data		16	Number of Detected Data	12
19646	Number of Distinct Detected Data		11	Number of Non-Detect Data	4
19647				Percent Non-Detects	25.00%
19648					
19649	**Raw Statistics**			**Log-transformed Statistics**	
19650	Minimum Detected		1.4	Minimum Detected	0.3364722
19651	Maximum Detected		42	Maximum Detected	3.7376696
19652	Mean of Detected		11.329167	Mean of Detected	1.8627221
19653	SD of Detected		12.372632	SD of Detected	1.1439821
19654	Minimum Non-Detect		8.4	Minimum Non-Detect	2.1282317
19655	Maximum Non-Detect		117	Maximum Non-Detect	4.7621739
19656					
19657	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	16
19658	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
19659	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
19660					
19661	**UCL Statistics**				

	A	B	C	D	E
19662	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
19663	Shapiro Wilk Test Statistic		0.7990903	Shapiro Wilk Test Statistic	0.9289495
19664	5% Shapiro Wilk Critical Value		0.859	5% Shapiro Wilk Critical Value	0.859
19665	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
19666					
19667	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
19668	DL/2 Substitution Method			DL/2 Substitution Method	
19669	Mean		13.8625	Mean	2.0194634
19670	SD		16.234043	SD	1.162541
19671	95% DL/2 (t) UCL		20.977274	95% H-Stat (DL/2) UCL	36.033214
19672					
19673	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
19674	**MLE method failed to converge properly**			Mean in Log Scale	1.7407704
19675				SD in Log Scale	1.0146079
19676				Mean in Original Scale	9.5267544
19677				SD in Original Scale	11.091005
19678				95% t UCL	14.387527
19679				95% Percentile Bootstrap UCL	14.299522
19680				95% BCA Bootstrap UCL	15.287827
19681					
19682	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
19683	k star (bias corrected)		0.8204749	**Data appear Gamma Distributed at 5% Significance Level**	
19684	Theta Star		13.808061		
19685	nu star		19.691397		
19686					
19687	A-D Test Statistic		0.4736211	**Nonparametric Statistics**	
19688	5% A-D Critical Value		0.7562932	Kaplan-Meier (KM) Method	
19689	K-S Test Statistic		0.7562932	Mean	9.9613141
19690	5% K-S Critical Value		0.2522374	SD	11.173593
19691	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	3.066987
19692				95% KM (t) UCL	15.337897
19693	**Assuming Gamma Distribution**			95% KM (z) UCL	15.006059
19694	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	15.318745
19695	Minimum		1.4	95% KM (bootstrap t) UCL	18.882832
19696	Maximum		42	95% KM (BCA) UCL	15.260625
19697	Mean		10.769482	95% KM (Percentile Bootstrap) UCL	14.845089
19698	Median		7.534231	95% KM (Chebyshev) UCL	23.330001
19699	SD		10.832203	97.5% KM (Chebyshev) UCL	29.114642
19700	k star		1.0503656	99% KM (Chebyshev) UCL	40.47745
19701	Theta star		10.25308		
19702	Nu star		33.611698	**Potential UCLs to Use**	
19703	AppChi2		21.354261	95% KM (Chebyshev) UCL	23.330001
19704	95% Gamma Approximate UCL		16.951211		
19705	95% Adjusted Gamma UCL		17.879134		
19706	**Note: DL/2 is not a recommended method.**				
19707					
19708	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
19709	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
19710	**For additional insight, the user may want to consult a statistician.**				
19711					
19712					
19713	**OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_nw_2005)**				
19714					
19715	**General Statistics**				
19716	Number of Valid Data		18	Number of Detected Data	16
19717	Number of Distinct Detected Data		15	Number of Non-Detect Data	2
19718				Percent Non-Detects	11.11%
19719					
19720	**Raw Statistics**			**Log-transformed Statistics**	
19721	Minimum Detected		3.4	Minimum Detected	1.2237754
19722	Maximum Detected		280	Maximum Detected	5.6347896
19723	Mean of Detected		27.0625	Mean of Detected	2.1814049
19724	SD of Detected		68.545692	SD of Detected	1.1879461
19725	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
19726	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
19727					
19728					

	A	B	C	D	E
19729	**UCL Statistics**				
19730	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
19731	Shapiro Wilk Test Statistic		0.3794472	Shapiro Wilk Test Statistic	0.7708357
19732	5% Shapiro Wilk Critical Value		0.887	5% Shapiro Wilk Critical Value	0.887
19733	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
19734					
19735	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
19736	DL/2 Substitution Method			DL/2 Substitution Method	
19737	Mean		24.238889	Mean	1.9946683
19738	SD		64.909783	SD	1.2411949
19739	95% DL/2 (t) UCL		50.853798	95% H-Stat (DL/2) UCL	39.256182
19740					
19741	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
19742	Mean		19.003583	Mean in Log Scale	1.8962413
19743	SD		67.796422	SD in Log Scale	1.3931555
19744	95% MLE (t) UCL		46.802099	Mean in Original Scale	24.133377
19745	95% MLE (Tiku) UCL		44.740531	SD in Original Scale	64.9494
19746				95% t UCL	50.76453
19747				95% Percentile Bootstrap UCL	52.518614
19748				95% BCA Bootstrap UCL	70.538889
19749					
19750	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
19751	k star (bias corrected)		0.4959643	**Data do not follow a Discernable Distribution (0.05)**	
19752	Theta Star		54.565423		
19753	nu star		15.870856		
19754					
19755	A-D Test Statistic		2.5280151	**Nonparametric Statistics**	
19756	5% A-D Critical Value		0.7911787	Kaplan-Meier (KM) Method	
19757	K-S Test Statistic		0.7911787	Mean	24.433333
19758	5% K-S Critical Value		0.2262586	SD	63.013702
19759	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	15.339567
19760				95% KM (t) UCL	51.118148
19761	**Assuming Gamma Distribution**			95% KM (z) UCL	49.664676
19762	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	51.010322
19763	Minimum		1E-12	95% KM (bootstrap t) UCL	306.25299
19764	Maximum		280	95% KM (BCA) UCL	54.666667
19765	Mean		24.055556	95% KM (Percentile Bootstrap) UCL	53.75
19766	Median		5.25	95% KM (Chebyshev) UCL	91.296956
19767	SD		64.979492	97.5% KM (Chebyshev) UCL	120.2289
19768	k star		0.1823138	99% KM (Chebyshev) UCL	177.0601
19769	Theta star		131.94591		
19770	Nu star		6.5632955	**Potential UCLs to Use**	
19771	AppChi2		1.9341774	97.5% KM (Chebyshev) UCL	120.2289
19772	95% Gamma Approximate UCL		81.628357		
19773	95% Adjusted Gamma UCL		92.713207		
19774	**Note: DL/2 is not a recommended method.**				
19775					
19776	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
19777	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
19778	**For additional insight, the user may want to consult a statistician.**				
19779					
19780					
19781	**OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_nw_2009)**				
19782					
19783	**General Statistics**				
19784	Number of Valid Data		7	Number of Detected Data	4
19785	Number of Distinct Detected Data		4	Number of Non-Detect Data	3
19786				Percent Non-Detects	42.86%
19787					
19788	**Raw Statistics**			**Log-transformed Statistics**	
19789	Minimum Detected		3.38	Minimum Detected	1.2178757
19790	Maximum Detected		17	Maximum Detected	2.8332133
19791	Mean of Detected		7.47	Mean of Detected	1.7915951
19792	SD of Detected		6.3872477	SD of Detected	0.7131112
19793	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
19794	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
19795					

	A	B	C	D	E
19796					
19797	**Warning: There are only 4 Distinct Detected Values in this data**				
19798	**Note: It should be noted that even though bootstrap may be performed on this data set**				
19799	**the resulting calculations may not be reliable enough to draw conclusions**				
19800					
19801	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
19802					
19803					
19804	**UCL Statistics**				
19805	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
19806	Shapiro Wilk Test Statistic		0.7234826	Shapiro Wilk Test Statistic	0.8232053
19807	5% Shapiro Wilk Critical Value		0.748	5% Shapiro Wilk Critical Value	0.748
19808	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
19809					
19810	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
19811	DL/2 Substitution Method			DL/2 Substitution Method	
19812	Mean		4.9757143	Mean	1.2383866
19813	SD		5.4841859	SD	0.8545908
19814	95% DL/2 (t) UCL		9.0035917	95% H-Stat (DL/2) UCL	15.707663
19815					
19816	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
19817	Mean		3.3189973	Mean in Log Scale	0.9201263
19818	SD		6.9215158	SD in Log Scale	1.2393787
19819	95% MLE (t) UCL		8.4025261	Mean in Original Scale	4.6387473
19820	95% MLE (Tiku) UCL		9.1754564	SD in Original Scale	5.7386447
19821				95% t UCL	8.8535128
19822				95% Percentile Bootstrap UCL	8.558502
19823				95% BCA Bootstrap UCL	9.4454349
19824					
19825	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
19826	k star (bias corrected)		0.7750844	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
19827	Theta Star		9.6376599		
19828	nu star		6.2006754		
19829					
19830	A-D Test Statistic		0.619241	**Nonparametric Statistics**	
19831	5% A-D Critical Value		0.6600556	Kaplan-Meier (KM) Method	
19832	K-S Test Statistic		0.6600556	Mean	5.7171429
19833	5% K-S Critical Value		0.3973189	SD	4.6455438
19834	**Data follow Appr. Gamma Distribution at 5% Significance Level**			SE of Mean	2.0274816
19835				95% KM (t) UCL	9.656905
19836	**Assuming Gamma Distribution**			95% KM (z) UCL	9.0520532
19837	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	9.2132206
19838	Minimum		1.7550812	95% KM (bootstrap t) UCL	36.650765
19839	Maximum		17	95% KM (BCA) UCL	11.162857
19840	Mean		6.2901036	95% KM (Percentile Bootstrap) UCL	9.9142857
19841	Median		4.6	95% KM (Chebyshev) UCL	14.55473
19842	SD		5.0650422	97.5% KM (Chebyshev) UCL	18.378761
19843	k star		1.458226	99% KM (Chebyshev) UCL	25.89033
19844	Theta star		4.3135315		
19845	Nu star		20.415164	**Potential UCLs to Use**	
19846	AppChi2		11.157768	95% KM (BCA) UCL	11.162857
19847	95% Gamma Approximate UCL		11.508887		
19848	95% Adjusted Gamma UCL		N/A		
19849	**Note: DL/2 is not a recommended method.**				
19850					
19851	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
19852	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
19853	**For additional insight, the user may want to consult a statistician.**				
19854					
19855					
19856	**OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_nw_2010)**				

	A	B	C	D	E
19857					
19858	**General Statistics**				
19859	Number of Valid Observations		4	Number of Distinct Observations	4
19860					
19861					
19862	**Warning: This data set only has 4 observations!**				
19863	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
19864	**The data set for variable OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_nw_2010) was not processed!**				
19865					
19866	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
19867	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19868					
19869					
19870					
19871	**OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_ref_2009)**				
19872					
19873	**General Statistics**				
19874	Number of Valid Data		0	Number of Detected Data	0
19875	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19876	Number of Missing Values		6	Percent Non-Detects	NaN%
19877					
19878	**Warning: This data set only has 0 observations!**				
19879	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
19880	**The data set for variable OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_ref_2009) was not processed!**				
19881					
19882	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
19883	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19884					
19885					
19886					
19887	**OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_ref_2010)**				
19888					
19889	**General Statistics**				
19890	Number of Valid Data		0	Number of Detected Data	0
19891	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
19892	Number of Missing Values		3	Percent Non-Detects	NaN%
19893					
19894	**Warning: This data set only has 0 observations!**				
19895	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
19896	**The data set for variable OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_ref_2010) was not processed!**				
19897					
19898	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
19899	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
19900					
19901					
19902					
19903	**OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_s_2005)**				
19904					
19905	**General Statistics**				
19906	Number of Valid Data		8	Number of Detected Data	5
19907	Number of Distinct Detected Data		5	Number of Non-Detect Data	3
19908				Percent Non-Detects	37.50%

	A	B	C	D	E
19909					
19910	**Raw Statistics**			**Log-transformed Statistics**	
19911	Minimum Detected		7.7	Minimum Detected	2.0412203
19912	Maximum Detected		130	Maximum Detected	4.8675345
19913	Mean of Detected		33.66	Mean of Detected	2.7741996
19914	SD of Detected		53.868989	SD of Detected	1.1774895
19915	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
19916	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
19917					
19918					
19919	**Warning: There are only 5 Detected Values in this data**				
19920	**Note: It should be noted that even though bootstrap may be performed on this data set**				
19921	**the resulting calculations may not be reliable enough to draw conclusions**				
19922					
19923	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
19924					
19925					
19926	**UCL Statistics**				
19927	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
19928	Shapiro Wilk Test Statistic		0.573903	Shapiro Wilk Test Statistic	0.6586368
19929	5% Shapiro Wilk Critical Value		0.762	5% Shapiro Wilk Critical Value	0.762
19930	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
19931					
19932	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
19933	DL/2 Substitution Method			DL/2 Substitution Method	
19934	Mean		21.65625	Mean	1.9216655
19935	SD		43.962114	SD	1.4753588
19936	95% DL/2 (t) UCL		51.103599	95% H-Stat (DL/2) UCL	274.78482
19937					
19938	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
19939	Mean		5.7645511	Mean in Log Scale	1.7101523
19940	SD		56.288544	SD in Log Scale	1.7593067
19941	95% MLE (t) UCL		43.46857	Mean in Original Scale	21.449767
19942	95% MLE (Tiku) UCL		47.256112	SD in Original Scale	44.071893
19943				95% t UCL	50.97065
19944				95% Percentile Bootstrap UCL	51.80892
19945				95% BCA Bootstrap UCL	68.467825
19946					
19947	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
19948	k star (bias corrected)		0.4532398	**Data do not follow a Discernable Distribution (0.05)**	
19949	Theta Star		74.265325		
19950	nu star		4.5323978		
19951					
19952	A-D Test Statistic		1.1298271	**Nonparametric Statistics**	
19953	5% A-D Critical Value		0.6968745	Kaplan-Meier (KM) Method	
19954	K-S Test Statistic		0.6968745	Mean	23.925
19955	5% K-S Critical Value		0.3662201	SD	40.110901
19956	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	15.855226
19957				95% KM (t) UCL	53.963971
19958	**Assuming Gamma Distribution**			95% KM (z) UCL	50.004526
19959	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	52.172373
19960	Minimum		1E-12	95% KM (bootstrap t) UCL	1012.0593
19961	Maximum		130	95% KM (BCA) UCL	55.125
19962	Mean		22.913138	95% KM (Percentile Bootstrap) UCL	54.2625
19963	Median		9.8	95% KM (Chebyshev) UCL	93.036327
19964	SD		43.526844	97.5% KM (Chebyshev) UCL	122.94085
19965	k star		0.1884646	99% KM (Chebyshev) UCL	181.6825
19966	Theta star		121.57792		
19967	Nu star		3.0154342	**Potential UCLs to Use**	
19968	AppChi2		0.3770052	97.5% KM (Chebyshev) UCL	122.94085
19969	95% Gamma Approximate UCL		183.26819		
19970	95% Adjusted Gamma UCL		318.71002		
19971	**Note: DL/2 is not a recommended method.**				
19972					
19973	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
19974	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).				
19975	For additional insight, the user may want to consult a statistician.				
19976					
19977					
19978	OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_s_2010)				
19979					
19980	General Statistics				
19981	Number of Valid Observations		2	Number of Distinct Observations	2
19982					
19983					
19984	Warning: This data set only has 2 observations!				
19985	Data set is too small to compute reliable and meaningful statistics and estimates!				
19986	The data set for variable OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_s_2010) was not processed!				
19987					
19988	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
19989	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
19990					
19991					
19992					
19993	OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_stillwater_2005)				
19994					
19995	General Statistics				
19996	Number of Valid Observations		4	Number of Distinct Observations	4
19997					
19998					
19999	Warning: This data set only has 4 observations!				
20000	Data set is too small to compute reliable and meaningful statistics and estimates!				
20001	The data set for variable OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_stillwater_2005) was not processed!				
20002					
20003	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
20004	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
20005					
20006					
20007					
20008	OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_stillwater_2009)				
20009					
20010	General Statistics				
20011	Number of Valid Data		60	Number of Detected Data	35
20012	Number of Distinct Detected Data		29	Number of Non-Detect Data	25
20013				Percent Non-Detects	41.67%
20014					
20015	Raw Statistics			Log-transformed Statistics	
20016	Minimum Detected		2.78	Minimum Detected	1.0224509
20017	Maximum Detected		41	Maximum Detected	3.7135721
20018	Mean of Detected		13.001714	Mean of Detected	2.2923879
20019	SD of Detected		9.849692	SD of Detected	0.757998
20020	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
20021	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
20022					
20023					
20024	UCL Statistics				
20025	Normal Distribution Test with Detected Values Only			Lognormal Distribution Test with Detected Values Only	
20026	Shapiro Wilk Test Statistic		0.8582107	Shapiro Wilk Test Statistic	0.9443966
20027	5% Shapiro Wilk Critical Value		0.934	5% Shapiro Wilk Critical Value	0.934
20028	Data not Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	

	A	B	C	D	E
20029					
20030	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
20031	DL/2 Substitution Method			DL/2 Substitution Method	
20032	Mean		8.2718333	Mean	1.5458826
20033	SD		9.3679834	SD	1.0604265
20034	95% DL/2 (t) UCL		10.292856	95% H-Stat (DL/2) UCL	11.546966
20035					
20036	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
20037	Mean		4.1465896	Mean in Log Scale	1.6155759
20038	SD		13.821723	SD in Log Scale	1.0585517
20039	95% MLE (t) UCL		7.1284491	Mean in Original Scale	8.5191696
20040	95% MLE (Tiku) UCL		7.6438063	SD in Original Scale	9.2191224
20041				95% t UCL	10.508077
20042				95% Percentile Bootstrap UCL	10.486686
20043				95% BCA Bootstrap UCL	10.80552
20044					
20045	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
20046	k star (bias corrected)		1.8330424	**Data appear Lognormal at 5% Significance Level**	
20047	Theta Star		7.0929697		
20048	nu star		128.31297		
20049					
20050	A-D Test Statistic		0.8064232	**Nonparametric Statistics**	
20051	5% A-D Critical Value		0.7599384	Kaplan-Meier (KM) Method	
20052	K-S Test Statistic		0.7599384	Mean	8.7843333
20053	5% K-S Critical Value		0.1506858	SD	8.9376153
20054	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	1.1710986
20055				95% KM (t) UCL	10.741348
20056	**Assuming Gamma Distribution**			95% KM (z) UCL	10.710619
20057	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	10.731467
20058	Minimum		1E-12	95% KM (bootstrap t) UCL	11.124506
20059	Maximum		41	95% KM (BCA) UCL	10.959333
20060	Mean		11.832024	95% KM (Percentile Bootstrap) UCL	10.806889
20061	Median		11.289657	95% KM (Chebyshev) UCL	13.889034
20062	SD		8.7045941	97.5% KM (Chebyshev) UCL	16.097842
20063	k star		0.3821656	99% KM (Chebyshev) UCL	20.436617
20064	Theta star		30.960464		
20065	Nu star		45.859871	**Potential UCLs to Use**	
20066	AppChi2		31.323088	95% KM (t) UCL	10.741348
20067	95% Gamma Approximate UCL		17.323168	95% KM (% Bootstrap) UCL	10.806889
20068	95% Adjusted Gamma UCL		17.488385		
20069	**Note: DL/2 is not a recommended method.**				
20070					
20071	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
20072	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
20073	**For additional insight, the user may want to consult a statistician.**				
20074					
20075					
20076	**OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_stillwater_2010)**				
20077					
20078	**General Statistics**				
20079	Number of Valid Data		11	Number of Detected Data	1
20080	Number of Distinct Detected Data		1	Number of Non-Detect Data	10
20081				Percent Non-Detects	90.91%
20082					
20083	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**				
20084	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**				
20085					
20086	**The data set for variable OS|UG/KG|2-METHYLNAPHTHALENE (gi_sd_stillwater_2010) was not processed!**				
20087					
20088					
20089					

	A	B	C	D	E
20090	**OS|UG/KG|4-METHYLPHENOL (gi_sd_ne_2005)**				
20091					
20092	**General Statistics**				
20093	Number of Valid Data		36	Number of Detected Data	10
20094	Number of Distinct Detected Data		9	Number of Non-Detect Data	26
20095				Percent Non-Detects	72.22%
20096					
20097	**Raw Statistics**			**Log-transformed Statistics**	
20098	Minimum Detected		43	Minimum Detected	3.7612001
20099	Maximum Detected		1700	Maximum Detected	7.4383835
20100	Mean of Detected		493.2	Mean of Detected	5.614534
20101	SD of Detected		547.55615	SD of Detected	1.2220589
20102	Minimum Non-Detect		330	Minimum Non-Detect	5.7990927
20103	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
20104					
20105					
20106	**UCL Statistics**				
20107	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
20108	Shapiro Wilk Test Statistic		0.7794108	Shapiro Wilk Test Statistic	0.9475726
20109	5% Shapiro Wilk Critical Value		0.842	5% Shapiro Wilk Critical Value	0.842
20110	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
20111					
20112	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
20113	DL/2 Substitution Method			DL/2 Substitution Method	
20114	Mean		256.16667	Mean	5.2472201
20115	SD		315.15543	SD	0.6613616
20116	95% DL/2 (t) UCL		344.91299	95% H-Stat (DL/2) UCL	297.08188
20117					
20118	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
20119	**MLE yields a negative mean**			Mean in Log Scale	4.8682258
20120				SD in Log Scale	1.0649608
20121				Mean in Original Scale	233.38482
20122				SD in Original Scale	333.28401
20123				95% t UCL	327.23607
20124				95% Percentile Bootstrap UCL	331.72138
20125				95% BCA Bootstrap UCL	365.44038
20126					
20127	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
20128	k star (bias corrected)		0.7568706	**Data appear Gamma Distributed at 5% Significance Level**	
20129	Theta Star		651.63058		
20130	nu star		15.137411		
20131					
20132	A-D Test Statistic		0.3028335	**Nonparametric Statistics**	
20133	5% A-D Critical Value		0.748757	Kaplan-Meier (KM) Method	
20134	K-S Test Statistic		0.748757	Mean	238.4
20135	5% K-S Critical Value		0.2738748	SD	326.13103
20136	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	67.189726
20137				95% KM (t) UCL	351.92191
20138	**Assuming Gamma Distribution**			95% KM (z) UCL	348.91726
20139	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	355.56632
20140	Minimum		1E-12	95% KM (bootstrap t) UCL	410.24686
20141	Maximum		1700	95% KM (BCA) UCL	356.52778
20142	Mean		398.07092	95% KM (Percentile Bootstrap) UCL	358.94444
20143	Median		381.03491	95% KM (Chebyshev) UCL	531.27323
20144	SD		332.23282	97.5% KM (Chebyshev) UCL	657.99971
20145	k star		0.4913648	99% KM (Chebyshev) UCL	906.92933
20146	Theta star		810.13322		
20147	Nu star		35.378263	**Potential UCLs to Use**	
20148	AppChi2		22.768754	95% KM (t) UCL	351.92191
20149	95% Gamma Approximate UCL		618.52563		
20150	95% Adjusted Gamma UCL		631.28805		
20151	**Note: DL/2 is not a recommended method.**				
20152					
20153	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
20154	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
20155	**For additional insight, the user may want to consult a statistician.**				
20156					

	A	B	C	D	E
20157					
20158	**OS|UG/KG|4-METHYLPHENOL (gi_sd_ne_2009)**				
20159					
20160	**General Statistics**				
20161	Number of Valid Data		0	Number of Detected Data	0
20162	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
20163	Number of Missing Values		20	Percent Non-Detects	NaN%
20164					
20165	**Warning: This data set only has 0 observations!**				
20166	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
20167	**The data set for variable OS|UG/KG|4-METHYLPHENOL (gi_sd_ne_2009) was not processed!**				
20168					
20169	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
20170	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
20171					
20172					
20173					
20174	**OS|UG/KG|4-METHYLPHENOL (gi_sd_ne_2010)**				
20175					
20176	**General Statistics**				
20177	Number of Valid Data		0	Number of Detected Data	0
20178	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
20179	Number of Missing Values		16	Percent Non-Detects	NaN%
20180					
20181	**Warning: This data set only has 0 observations!**				
20182	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
20183	**The data set for variable OS|UG/KG|4-METHYLPHENOL (gi_sd_ne_2010) was not processed!**				
20184					
20185	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
20186	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
20187					
20188					
20189					
20190	**OS|UG/KG|4-METHYLPHENOL (gi_sd_nw_2005)**				
20191					
20192	**General Statistics**				
20193	Number of Valid Data		18	Number of Detected Data	6
20194	Number of Distinct Detected Data		6	Number of Non-Detect Data	12
20195				Percent Non-Detects	66.67%
20196					
20197	**Raw Statistics**			**Log-transformed Statistics**	
20198	Minimum Detected		43	Minimum Detected	3.7612001
20199	Maximum Detected		480	Maximum Detected	6.1737861
20200	Mean of Detected		185	Mean of Detected	4.9235012
20201	SD of Detected		159.21558	SD of Detected	0.8529679
20202	Minimum Non-Detect		330	Minimum Non-Detect	5.7990927
20203	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
20204					
20205					
20206	**Warning: There are only 6 Detected Values in this data**				
20207	**Note: It should be noted that even though bootstrap may be performed on this data set**				
20208	**the resulting calculations may not be reliable enough to draw conclusions**				
20209					
20210	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
20211					

	A	B	C	D	E
20212					
20213	**UCL Statistics**				
20214	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
20215	Shapiro Wilk Test Statistic		0.8391978	Shapiro Wilk Test Statistic	0.9721478
20216	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788
20217	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
20218					
20219	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
20220	DL/2 Substitution Method			DL/2 Substitution Method	
20221	Mean		171.66667	Mean	5.0451307
20222	SD		86.890059	SD	0.4709761
20223	95% DL/2 (t) UCL		207.29413	95% H-Stat (DL/2) UCL	217.84216
20224					
20225	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
20226	**MLE method failed to converge properly**			Mean in Log Scale	4.7372184
20227				SD in Log Scale	0.7029506
20228				Mean in Original Scale	144.31483
20229				SD in Original Scale	109.56974
20230				95% t UCL	189.24163
20231				95% Percentile Bootstrap UCL	188.56804
20232				95% BCA Bootstrap UCL	198.50171
20233					
20234	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
20235	k star (bias corrected)		1.0278082	**Data appear Normal at 5% Significance Level**	
20236	Theta Star		179.99468		
20237	nu star		12.333698		
20238					
20239	A-D Test Statistic		0.2755144	**Nonparametric Statistics**	
20240	5% A-D Critical Value		0.7054029	Kaplan-Meier (KM) Method	
20241	K-S Test Statistic		0.7054029	Mean	145.66667
20242	5% K-S Critical Value		0.3363698	SD	103.87899
20243	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	37.334825
20244				95% KM (t) UCL	210.61458
20245	**Assuming Gamma Distribution**			95% KM (z) UCL	207.07699
20246	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	214.23745
20247	Minimum		43	95% KM (bootstrap t) UCL	220.32108
20248	Maximum		480	95% KM (BCA) UCL	202.96296
20249	Mean		179.50244	95% KM (Percentile Bootstrap) UCL	206.33333
20250	Median		176.74321	95% KM (Chebyshev) UCL	308.4054
20251	SD		90.2793	97.5% KM (Chebyshev) UCL	378.82258
20252	k star		3.9677007	99% KM (Chebyshev) UCL	517.14349
20253	Theta star		45.240921		
20254	Nu star		142.83723	**Potential UCLs to Use**	
20255	AppChi2		116.21862	95% KM (t) UCL	210.61458
20256	95% Gamma Approximate UCL		220.61551	95% KM (Percentile Bootstrap) UCL	206.33333
20257	95% Adjusted Gamma UCL		225.07658		
20258	**Note: DL/2 is not a recommended method.**				
20259					
20260	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
20261	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
20262	**For additional insight, the user may want to consult a statistician.**				
20263					
20264					
20265	**OS|UG/KG|4-METHYLPHENOL (gi_sd_nw_2009)**				
20266					
20267	**General Statistics**				
20268	Number of Valid Data		0	Number of Detected Data	0
20269	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
20270	Number of Missing Values		7	Percent Non-Detects	NaN%
20271					
20272	**Warning: This data set only has 0 observations!**				
20273	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
20274	**The data set for variable OS|UG/KG|4-METHYLPHENOL (gi_sd_nw_2009) was not processed!**				

	A	B	C	D	E
20275					
20276	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
20277	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
20278					
20279					
20280					
20281	OS|UG/KG|4-METHYLPHENOL (gi_sd_nw_2010)				
20282					
20283	General Statistics				
20284	Number of Valid Data		0	Number of Detected Data	0
20285	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
20286	Number of Missing Values		4	Percent Non-Detects	NaN%
20287					
20288	Warning: This data set only has 0 observations!				
20289	Data set is too small to compute reliable and meaningful statistics and estimates!				
20290	The data set for variable OS|UG/KG|4-METHYLPHENOL (gi_sd_nw_2010) was not processed!				
20291					
20292	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
20293	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
20294					
20295					
20296					
20297	OS|UG/KG|4-METHYLPHENOL (gi_sd_ref_2009)				
20298					
20299	General Statistics				
20300	Number of Valid Data		0	Number of Detected Data	0
20301	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
20302	Number of Missing Values		6	Percent Non-Detects	NaN%
20303					
20304	Warning: This data set only has 0 observations!				
20305	Data set is too small to compute reliable and meaningful statistics and estimates!				
20306	The data set for variable OS|UG/KG|4-METHYLPHENOL (gi_sd_ref_2009) was not processed!				
20307					
20308	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
20309	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
20310					
20311					
20312					
20313	OS|UG/KG|4-METHYLPHENOL (gi_sd_ref_2010)				
20314					
20315	General Statistics				
20316	Number of Valid Data		0	Number of Detected Data	0
20317	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
20318	Number of Missing Values		3	Percent Non-Detects	NaN%
20319					
20320	Warning: This data set only has 0 observations!				
20321	Data set is too small to compute reliable and meaningful statistics and estimates!				
20322	The data set for variable OS|UG/KG|4-METHYLPHENOL (gi_sd_ref_2010) was not processed!				
20323					
20324	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
20325	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
20326					
20327					
20328					
20329	**OS|UG/KG|4-METHYLPHENOL (gi_sd_s_2005)**				
20330					
20331	**General Statistics**				
20332	Number of Valid Data		8	Number of Detected Data	2
20333	Number of Distinct Detected Data		2	Number of Non-Detect Data	6
20334				Percent Non-Detects	75.00%
20335					
20336	**Raw Statistics**			**Log-transformed Statistics**	
20337	Minimum Detected		438	Minimum Detected	6.0822189
20338	Maximum Detected		2100	Maximum Detected	7.6496926
20339	Mean of Detected		1269	Mean of Detected	6.8659558
20340	SD of Detected		1175.2115	SD of Detected	1.1083713
20341	Minimum Non-Detect		330	Minimum Non-Detect	5.7990927
20342	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
20343					
20344					
20345	**Warning: Data set has only 2 Distinct Detected Values.**				
20346	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
20347	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
20348					
20349	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
20350					
20351	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
20352	**Those methods will return a 'N/A' value on your output display!**				
20353					
20354	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
20355	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
20356	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
20357					
20358					
20359	**UCL Statistics**				
20360	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
20361	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
20362	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
20363	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
20364					
20365	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
20366	DL/2 Substitution Method			DL/2 Substitution Method	
20367	Mean		441	Mean	5.545948
20368	SD		677.11004	SD	0.9161208
20369	95% DL/2 (t) UCL		894.55179	95% H-Stat (DL/2) UCL	1189.581
20370					
20371	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
20372	**MLE method failed to converge properly**			Mean in Log Scale	N/A
20373				SD in Log Scale	N/A
20374				Mean in Original Scale	N/A
20375				SD in Original Scale	N/A
20376				95% t UCL	N/A
20377				95% Percentile Bootstrap UCL	N/A
20378				95% BCA Bootstrap UCL	N/A
20379					
20380	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
20381	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
20382	Theta Star		N/A		

	A	B	C	D	E
20383	nu star		N/A		
20384					
20385	A-D Test Statistic		N/A	**Nonparametric Statistics**	
20386	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
20387	K-S Test Statistic		N/A	Mean	645.75
20388	5% K-S Critical Value		N/A	SD	549.65483
20389	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	274.82742
20390				95% KM (t) UCL	1166.4321
20391	**Assuming Gamma Distribution**			95% KM (z) UCL	1097.8009
20392	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	N/A
20393	Minimum		N/A	95% KM (bootstrap t) UCL	N/A
20394	Maximum		N/A	95% KM (BCA) UCL	N/A
20395	Mean		N/A	95% KM (Percentile Bootstrap) UCL	N/A
20396	Median		N/A	95% KM (Chebyshev) UCL	1843.6949
20397	SD		N/A	97.5% KM (Chebyshev) UCL	2362.0467
20398	k star		N/A	99% KM (Chebyshev) UCL	3380.2483
20399	Theta star		N/A		
20400	Nu star		N/A	**Potential UCLs to Use**	
20401	AppChi2		N/A	95% KM (BCA) UCL	N/A
20402	95% Gamma Approximate UCL		N/A		
20403	95% Adjusted Gamma UCL		N/A		
20404	**Note: DL/2 is not a recommended method.**				
20405					
20406	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
20407	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
20408	**For additional insight, the user may want to consult a statistician.**				
20409					
20410					
20411	**OS|UG/KG|4-METHYLPHENOL (gi_sd_s_2010)**				
20412					
20413	**General Statistics**				
20414	Number of Valid Data		0	Number of Detected Data	0
20415	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
20416	Number of Missing Values		2	Percent Non-Detects	NaN%
20417					
20418	**Warning: This data set only has 0 observations!**				
20419	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
20420	**The data set for variable OS|UG/KG|4-METHYLPHENOL (gi_sd_s_2010) was not processed!**				
20421					
20422	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
20423	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
20424					
20425					
20426					
20427	**OS|UG/KG|4-METHYLPHENOL (gi_sd_stillwater_2005)**				
20428					
20429	**General Statistics**				
20430	Number of Valid Data		4	Number of Detected Data	1
20431	Number of Distinct Detected Data		1	Number of Non-Detect Data	3
20432				Percent Non-Detects	75.00%
20433					
20434	**Warning: This data set only has 4 observations!**				
20435	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
20436	**The data set for variable OS|UG/KG|4-METHYLPHENOL (gi_sd_stillwater_2005) was not processed!**				
20437					
20438	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
20439	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
20440					
20441					
20442					
20443	**OS|UG/KG|4-METHYLPHENOL (gi_sd_stillwater_2009)**				
20444					
20445	**General Statistics**				
20446	Number of Valid Data		0	Number of Detected Data	0
20447	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
20448	Number of Missing Values		60	Percent Non-Detects	NaN%
20449					
20450	**Warning: This data set only has 0 observations!**				
20451	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
20452	**The data set for variable OS|UG/KG|4-METHYLPHENOL (gi_sd_stillwater_2009) was not processed!**				
20453					
20454	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
20455	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
20456					
20457					
20458					
20459	**OS|UG/KG|4-METHYLPHENOL (gi_sd_stillwater_2010)**				
20460					
20461	**General Statistics**				
20462	Number of Valid Data		0	Number of Detected Data	0
20463	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
20464	Number of Missing Values		11	Percent Non-Detects	NaN%
20465					
20466	**Warning: This data set only has 0 observations!**				
20467	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
20468	**The data set for variable OS|UG/KG|4-METHYLPHENOL (gi_sd_stillwater_2010) was not processed!**				
20469					
20470	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
20471	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
20472					
20473					
20474					
20475	**OS|UG/KG|ACENAPHTHENE (gi_sd_ne_2005)**				
20476					
20477	**General Statistics**				
20478	Number of Valid Data		36	Number of Detected Data	30
20479	Number of Distinct Detected Data		27	Number of Non-Detect Data	6
20480				Percent Non-Detects	16.67%
20481					
20482	**Raw Statistics**			**Log-transformed Statistics**	
20483	Minimum Detected		3.8	Minimum Detected	1.3350011
20484	Maximum Detected		1300	Maximum Detected	7.1701195
20485	Mean of Detected		84.383333	Mean of Detected	3.0918901
20486	SD of Detected		246.50845	SD of Detected	1.3612848
20487	Minimum Non-Detect		3.2	Minimum Non-Detect	1.1631508
20488	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
20489					
20490	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	6
20491	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	30
20492	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	16.67%
20493					
20494	**UCL Statistics**				
20495	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	

	A	B	C	D	E
20496	Shapiro Wilk Test Statistic		0.3403874	Shapiro Wilk Test Statistic	0.9087337
20497	5% Shapiro Wilk Critical Value		0.927	5% Shapiro Wilk Critical Value	0.927
20498	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
20499					
20500	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
20501	DL/2 Substitution Method			DL/2 Substitution Method	
20502	Mean		70.593056	Mean	2.6591828
20503	SD		226.55538	SD	1.5806236
20504	95% DL/2 (t) UCL		134.39001	95% H-Stat (DL/2) UCL	114.5846
20505					
20506	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
20507	Mean		39.776968	Mean in Log Scale	2.5800608
20508	SD		249.71524	SD in Log Scale	1.7094108
20509	95% MLE (t) UCL		110.09563	Mean in Original Scale	70.508139
20510	95% MLE (Tiku) UCL		106.81555	SD in Original Scale	226.58213
20511				95% t UCL	134.31263
20512				95% Percentile Bootstrap UCL	138.29867
20513				95% BCA Bootstrap UCL	190.72321
20514					
20515	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
20516	k star (bias corrected)		0.4509559	**Data do not follow a Discernable Distribution (0.05)**	
20517	Theta Star		187.12105		
20518	nu star		27.057351		
20519					
20520	A-D Test Statistic		3.2087374	**Nonparametric Statistics**	
20521	5% A-D Critical Value		0.8144252	Kaplan-Meier (KM) Method	
20522	K-S Test Statistic		0.8144252	Mean	70.952778
20523	5% K-S Critical Value		0.1697046	SD	223.27701
20524	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	37.848997
20525				95% KM (t) UCL	134.9014
20526	**Assuming Gamma Distribution**			95% KM (z) UCL	133.20884
20527	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	134.65759
20528	Minimum		1E-12	95% KM (bootstrap t) UCL	583.90103
20529	Maximum		1300	95% KM (BCA) UCL	143.21944
20530	Mean		70.319444	95% KM (Percentile Bootstrap) UCL	142.35833
20531	Median		15	95% KM (Chebyshev) UCL	235.93273
20532	SD		226.64187	97.5% KM (Chebyshev) UCL	307.31969
20533	k star		0.1335414	99% KM (Chebyshev) UCL	447.54555
20534	Theta star		526.57413		
20535	Nu star		9.6149805	**Potential UCLs to Use**	
20536	AppChi2		3.7025796	97.5% KM (Chebyshev) UCL	307.31969
20537	95% Gamma Approximate UCL		182.60785		
20538	95% Adjusted Gamma UCL		191.1612		
20539	**Note: DL/2 is not a recommended method.**				
20540					
20541	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
20542	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
20543	**For additional insight, the user may want to consult a statistician.**				
20544					
20545					
20546	**OS|UG/KG|ACENAPHTHENE (gi_sd_ne_2009)**				
20547					
20548	**General Statistics**				
20549	Number of Valid Data		20	Number of Detected Data	14
20550	Number of Distinct Detected Data		14	Number of Non-Detect Data	6
20551				Percent Non-Detects	30.00%
20552					
20553	**Raw Statistics**			**Log-transformed Statistics**	
20554	Minimum Detected		3.9	Minimum Detected	1.3609766
20555	Maximum Detected		130	Maximum Detected	4.8675345
20556	Mean of Detected		40.5	Mean of Detected	3.1278866
20557	SD of Detected		45.196851	SD of Detected	1.1294888
20558	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
20559	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
20560					
20561					
20562	**UCL Statistics**				
20563	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	

	A	B	C	D	E
20564	Shapiro Wilk Test Statistic		0.7322299	Shapiro Wilk Test Statistic	0.9282233
20565	5% Shapiro Wilk Critical Value		0.874	5% Shapiro Wilk Critical Value	0.874
20566	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
20567					
20568	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
20569	DL/2 Substitution Method			DL/2 Substitution Method	
20570	Mean		28.845	Mean	2.3397532
20571	SD		41.609067	SD	1.5487156
20572	95% DL/2 (t) UCL		44.932973	95% H-Stat (DL/2) UCL	119.79711
20573					
20574	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
20575	Mean		18.362343	Mean in Log Scale	2.2988644
20576	SD		52.15712	SD in Log Scale	1.6394635
20577	95% MLE (t) UCL		38.528677	Mean in Original Scale	28.865528
20578	95% MLE (Tiku) UCL		39.467494	SD in Original Scale	41.598175
20579				95% t UCL	44.94929
20580				95% Percentile Bootstrap UCL	44.585534
20581				95% BCA Bootstrap UCL	48.84578
20582					
20583	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
20584	k star (bias corrected)		0.837993	**Data appear Lognormal at 5% Significance Level**	
20585	Theta Star		48.329758		
20586	nu star		23.463804		
20587					
20588	A-D Test Statistic		0.7679239	**Nonparametric Statistics**	
20589	5% A-D Critical Value		0.7598496	Kaplan-Meier (KM) Method	
20590	K-S Test Statistic		0.7598496	Mean	29.52
20591	5% K-S Critical Value		0.2351015	SD	40.113571
20592	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	9.3082636
20593				95% KM (t) UCL	45.615224
20594	**Assuming Gamma Distribution**			95% KM (z) UCL	44.830731
20595	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	45.301238
20596	Minimum		1E-12	95% KM (bootstrap t) UCL	54.147251
20597	Maximum		130	95% KM (BCA) UCL	46.175
20598	Mean		30.213894	95% KM (Percentile Bootstrap) UCL	44.755
20599	Median		15.5	95% KM (Chebyshev) UCL	70.09378
20600	SD		40.932522	97.5% KM (Chebyshev) UCL	87.650087
20601	k star		0.1634265	99% KM (Chebyshev) UCL	122.13605
20602	Theta star		184.87753		
20603	Nu star		6.5370613	**Potential UCLs to Use**	
20604	AppChi2		1.9201964	97.5% KM (Chebyshev) UCL	87.650087
20605	95% Gamma Approximate UCL		102.85931		
20606	95% Adjusted Gamma UCL		114.2104		
20607	**Note: DL/2 is not a recommended method.**				
20608					
20609	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
20610	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
20611	**For additional insight, the user may want to consult a statistician.**				
20612					
20613					
20614	**OS|UG/KG|ACENAPHTHENE (gi_sd_ne_2010)**				
20615					
20616	**General Statistics**				
20617	Number of Valid Data		16	Number of Detected Data	15
20618	Number of Distinct Detected Data		14	Number of Non-Detect Data	1
20619				Percent Non-Detects	6.25%
20620					
20621	**Raw Statistics**			**Log-transformed Statistics**	
20622	Minimum Detected		2.75	Minimum Detected	1.0116009
20623	Maximum Detected		220	Maximum Detected	5.3936275
20624	Mean of Detected		69.91	Mean of Detected	3.4685865
20625	SD of Detected		71.6179	SD of Detected	1.4862894
20626	Minimum Non-Detect		9	Minimum Non-Detect	2.1972246
20627	Maximum Non-Detect		9	Maximum Non-Detect	2.1972246
20628					
20629					
20630	**UCL Statistics**				
20631	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	

	A	B	C	D	E
20632	Shapiro Wilk Test Statistic		0.8542102	Shapiro Wilk Test Statistic	0.906852
20633	5% Shapiro Wilk Critical Value		0.881	5% Shapiro Wilk Critical Value	0.881
20634	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
20635					
20636	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
20637	DL/2 Substitution Method			DL/2 Substitution Method	
20638	Mean		65.821875	Mean	3.3458047
20639	SD		71.095614	SD	1.5175612
20640	95% DL/2 (t) UCL		96.980423	95% H-Stat (DL/2) UCL	364.39472
20641					
20642	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
20643	Mean		48.248932	Mean in Log Scale	3.3592287
20644	SD		90.938036	SD in Log Scale	1.5010436
20645	95% MLE (t) UCL		88.103671	Mean in Original Scale	65.889261
20646	95% MLE (Tiku) UCL		90.790152	SD in Original Scale	71.034101
20647				95% t UCL	97.02085
20648				95% Percentile Bootstrap UCL	95.092386
20649				95% BCA Bootstrap UCL	101.61114
20650					
20651	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
20652	k star (bias corrected)		0.657703	**Data appear Gamma Distributed at 5% Significance Level**	
20653	Theta Star		106.29417		
20654	nu star		19.731091		
20655					
20656	A-D Test Statistic		0.5745757	**Nonparametric Statistics**	
20657	5% A-D Critical Value		0.7743092	Kaplan-Meier (KM) Method	
20658	K-S Test Statistic		0.7743092	Mean	65.878906
20659	5% K-S Critical Value		0.2300675	SD	68.789457
20660	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	17.801576
20661				95% KM (t) UCL	97.085965
20662	**Assuming Gamma Distribution**			95% KM (z) UCL	95.159893
20663	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	97.017277
20664	Minimum		1E-12	95% KM (bootstrap t) UCL	106.22512
20665	Maximum		220	95% KM (BCA) UCL	95.195313
20666	Mean		65.540625	95% KM (Percentile Bootstrap) UCL	94.2375
20667	Median		43.5	95% KM (Chebyshev) UCL	143.47418
20668	SD		71.362771	97.5% KM (Chebyshev) UCL	177.04971
20669	k star		0.2567973	99% KM (Chebyshev) UCL	243.00235
20670	Theta star		255.22316		
20671	Nu star		8.2175146	**Potential UCLs to Use**	
20672	AppChi2		2.8616154	95% KM (Chebyshev) UCL	143.47418
20673	95% Gamma Approximate UCL		188.20874		
20674	95% Adjusted Gamma UCL		214.26205		
20675	**Note: DL/2 is not a recommended method.**				
20676					
20677	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
20678	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
20679	**For additional insight, the user may want to consult a statistician.**				
20680					
20681					
20682	**OS|UG/KG|ACENAPHTHENE (gi_sd_nw_2005)**				
20683					
20684	**General Statistics**				
20685	Number of Valid Observations		18	Number of Distinct Observations	16
20686					
20687	**Raw Statistics**			**Log-transformed Statistics**	
20688	Minimum		9.1	Minimum of Log Data	2.2082744
20689	Maximum		620	Maximum of Log Data	6.4297195
20690	Mean		72.9	Mean of log Data	3.4691733
20691	Median		23.5	SD of log Data	1.1121134
20692	SD		144.58748		
20693	Coefficient of Variation		1.9833673		
20694	Skewness		3.5967396		
20695					
20696	**Relevant UCL Statistics**				
20697	**Normal Distribution Test**			**Lognormal Distribution Test**	
20698	Shapiro Wilk Test Statistic		0.4641472	Shapiro Wilk Test Statistic	0.8858533
20699	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897

	A	B	C	D	E
20700	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
20701					
20702	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
20703	95% Student's-t UCL		132.18509	95% H-UCL	126.98957
20704	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	129.54356
20705	95% Adjusted-CLT UCL (Chen-1995)		159.82672	97.5% Chebyshev (MVUE) UCL	161.09481
20706	95% Modified-t UCL (Johnson-1978)		137.00031	99% Chebyshev (MVUE) UCL	223.07114
20707					
20708	**Gamma Distribution Test**			**Data Distribution**	
20709	k star (bias corrected)		0.6474318	**Data do not follow a Discernable Distribution (0.05)**	
20710	Theta Star		112.59873		
20711	MLE of Mean		72.9		
20712	MLE of Standard Deviation		90.600482		
20713	nu star		23.307545		
20714	Approximate Chi Square Value (.05)		13.323284	**Nonparametric Statistics**	
20715	Adjusted Level of Significance		0.03574	95% CLT UCL	128.95595
20716	Adjusted Chi Square Value		12.60139	95% Jackknife UCL	132.18509
20717				95% Standard Bootstrap UCL	125.9385
20718	Anderson-Darling Test Statistic		1.7139376	95% Bootstrap-t UCL	365.84513
20719	Anderson-Darling 5% Critical Value		0.7795049	95% Hall's Bootstrap UCL	347.64606
20720	Kolmogorov-Smirnov Test Statistic		0.2529336	95% Percentile Bootstrap UCL	136.72222
20721	Kolmogorov-Smirnov 5% Critical Value		0.2116873	95% BCA Bootstrap UCL	172.1
20722	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	221.44951
20723				97.5% Chebyshev(Mean, Sd) UCL	285.72701
20724	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	411.98769
20725	95% Approximate Gamma UCL		127.53013		
20726	95% Adjusted Gamma UCL		134.83592		
20727					
20728	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	221.44951
20729					
20730	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
20731	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
20732	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
20733					
20734					
20735	**OS|UG/KG|ACENAPHTHENE (gi_sd_nw_2009)**				
20736					
20737	**General Statistics**				
20738	Number of Valid Data		7	Number of Detected Data	6
20739	Number of Distinct Detected Data		5	Number of Non-Detect Data	1
20740				Percent Non-Detects	14.29%
20741					
20742	**Raw Statistics**			**Log-transformed Statistics**	
20743	Minimum Detected		12	Minimum Detected	2.4849066
20744	Maximum Detected		84	Maximum Detected	4.4308168
20745	Mean of Detected		31	Mean of Detected	3.2170861
20746	SD of Detected		26.525459	SD of Detected	0.6650618
20747	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
20748	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
20749					
20750					
20751	**Warning: There are only 6 Detected Values in this data**				
20752	**Note: It should be noted that even though bootstrap may be performed on this data set**				
20753	**the resulting calculations may not be reliable enough to draw conclusions**				
20754					
20755	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
20756					
20757					
20758	**UCL Statistics**				
20759	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
20760	Shapiro Wilk Test Statistic		0.6855354	Shapiro Wilk Test Statistic	0.8706926
20761	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788

	A	B	C	D	E
20762	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
20763					
20764	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
20765	DL/2 Substitution Method			DL/2 Substitution Method	
20766	Mean		26.807143	Mean	2.8290417
20767	SD		26.634446	SD	1.1927441
20768	95% DL/2 (t) UCL		46.368894	95% H-Stat (DL/2) UCL	273.78015
20769					
20770	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
20771	Mean		24.793583	Mean in Log Scale	2.9906087
20772	SD		27.536359	SD in Log Scale	0.8530143
20773	95% MLE (t) UCL		45.017748	Mean in Original Scale	27.301826
20774	95% MLE (Tiku) UCL		44.806826	SD in Original Scale	26.116446
20775				95% t UCL	46.483131
20776				95% Percentile Bootstrap UCL	44.603653
20777				95% BCA Bootstrap UCL	47.301826
20778					
20779	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
20780	k star (bias corrected)		1.340626	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
20781	Theta Star		23.123526		
20782	nu star		16.087512		
20783					
20784	A-D Test Statistic		0.663767	**Nonparametric Statistics**	
20785	5% A-D Critical Value		0.702888	Kaplan-Meier (KM) Method	
20786	K-S Test Statistic		0.702888	Mean	28.285714
20787	5% K-S Critical Value		0.3352424	SD	23.383231
20788	**Data follow Appr. Gamma Distribution at 5% Significance Level**			SE of Mean	9.6815776
20789				95% KM (t) UCL	47.098765
20790	**Assuming Gamma Distribution**			95% KM (z) UCL	44.210492
20791	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	46.609935
20792	Minimum		0.6939547	95% KM (bootstrap t) UCL	82.160705
20793	Maximum		84	95% KM (BCA) UCL	48.857143
20794	Mean		26.670565	95% KM (Percentile Bootstrap) UCL	45.714286
20795	Median		24	95% KM (Chebyshev) UCL	70.486733
20796	SD		26.786963	97.5% KM (Chebyshev) UCL	88.747147
20797	k star		0.6657511	99% KM (Chebyshev) UCL	124.6162
20798	Theta star		40.060867		
20799	Nu star		9.3205149	**Potential UCLs to Use**	
20800	AppChi2		3.5217012	95% KM (BCA) UCL	48.857143
20801	95% Gamma Approximate UCL		70.586171		
20802	95% Adjusted Gamma UCL		98.094941		
20803	**Note: DL/2 is not a recommended method.**				
20804					
20805	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
20806	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
20807	**For additional insight, the user may want to consult a statistician.**				
20808					
20809					
20810	**OS|UG/KG|ACENAPHTHENE (gi_sd_nw_2010)**				
20811					
20812	**General Statistics**				
20813	Number of Valid Observations		4	Number of Distinct Observations	4
20814					
20815					
20816	**Warning: This data set only has 4 observations!**				
20817	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
20818	**The data set for variable OS|UG/KG|ACENAPHTHENE (gi_sd_nw_2010) was not processed!**				
20819					
20820	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
20821	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				

	A	B	C	D	E
20822					
20823					
20824					
20825	OS|UG/KG|ACENAPHTHENE (gi_sd_ref_2009)				
20826					
20827	General Statistics				
20828	Number of Valid Data		0	Number of Detected Data	0
20829	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
20830	Number of Missing Values		6	Percent Non-Detects	NaN%
20831					
20832	Warning: This data set only has 0 observations!				
20833	Data set is too small to compute reliable and meaningful statistics and estimates!				
20834	The data set for variable OS|UG/KG|ACENAPHTHENE (gi_sd_ref_2009) was not processed!				
20835					
20836	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
20837	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
20838					
20839					
20840					
20841	OS|UG/KG|ACENAPHTHENE (gi_sd_ref_2010)				
20842					
20843	General Statistics				
20844	Number of Valid Data		0	Number of Detected Data	0
20845	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
20846	Number of Missing Values		3	Percent Non-Detects	NaN%
20847					
20848	Warning: This data set only has 0 observations!				
20849	Data set is too small to compute reliable and meaningful statistics and estimates!				
20850	The data set for variable OS|UG/KG|ACENAPHTHENE (gi_sd_ref_2010) was not processed!				
20851					
20852	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
20853	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
20854					
20855					
20856					
20857	OS|UG/KG|ACENAPHTHENE (gi_sd_s_2005)				
20858					
20859	General Statistics				
20860	Number of Valid Observations		8	Number of Distinct Observations	8
20861					
20862	Raw Statistics			Log-transformed Statistics	
20863	Minimum		6.6	Minimum of Log Data	1.8870696
20864	Maximum		1000	Maximum of Log Data	6.9077553
20865	Mean		161.2625	Mean of log Data	3.8303358
20866	Median		52.75	SD of log Data	1.5368895
20867	SD		340.03446		
20868	Coefficient of Variation		2.1085774		
20869	Skewness		2.7908994		
20870					
20871					
20872	Warning: There are only 8 Values in this data				
20873	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
20874	the resulting calculations may not be reliable enough to draw conclusions				
20875					
20876	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
20877					
20878	Relevant UCL Statistics				
20879	Normal Distribution Test			Lognormal Distribution Test	

	A	B	C	D	E
20880	Shapiro Wilk Test Statistic		0.4948763	Shapiro Wilk Test Statistic	0.9154586
20881	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
20882	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
20883					
20884	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
20885	95% Student's-t UCL		389.02938	95% H-UCL	2499.6844
20886	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	397.48235
20887	95% Adjusted-CLT UCL (Chen-1995)		485.76015	97.5% Chebyshev (MVUE) UCL	518.55786
20888	95% Modified-t UCL (Johnson-1978)		408.80025	99% Chebyshev (MVUE) UCL	756.38726
20889					
20890	**Gamma Distribution Test**			**Data Distribution**	
20891	k star (bias corrected)		0.3996455	**Data appear Lognormal at 5% Significance Level**	
20892	Theta Star		403.51385		
20893	MLE of Mean		161.2625		
20894	MLE of Standard Deviation		255.09146		
20895	nu star		6.3943282		
20896	Approximate Chi Square Value (.05)		1.8445842	**Nonparametric Statistics**	
20897	Adjusted Level of Significance		0.01946	95% CLT UCL	359.00736
20898	Adjusted Chi Square Value		1.2931713	95% Jackknife UCL	389.02938
20899				95% Standard Bootstrap UCL	345.44236
20900	Anderson-Darling Test Statistic		0.9055133	95% Bootstrap-t UCL	1946.2231
20901	Anderson-Darling 5% Critical Value		0.7619494	95% Hall's Bootstrap UCL	1659.4413
20902	Kolmogorov-Smirnov Test Statistic		0.3556654	95% Percentile Bootstrap UCL	397.075
20903	Kolmogorov-Smirnov 5% Critical Value		0.3088697	95% BCA Bootstrap UCL	419.375
20904	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	685.2908
20905				97.5% Chebyshev(Mean, Sd) UCL	912.03827
20906	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1357.4398
20907	95% Approximate Gamma UCL		559.0232		
20908	95% Adjusted Gamma UCL		797.39271		
20909					
20910	**Potential UCL to Use**			Use 99% Chebyshev (Mean, Sd) UCL	1357.4398
20911	**Recommended UCL exceeds the maximum observation**				
20912					
20913	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
20914	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
20915	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
20916					
20917					
20918	**OS|UG/KG|ACENAPHTHENE (gi_sd_s_2010)**				
20919					
20920	**General Statistics**				
20921	Number of Valid Observations		2	Number of Distinct Observations	2
20922					
20923					
20924	**Warning: This data set only has 2 observations!**				
20925	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
20926	**The data set for variable OS|UG/KG|ACENAPHTHENE (gi_sd_s_2010) was not processed!**				
20927					
20928	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
20929	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
20930					
20931					
20932					
20933	**OS|UG/KG|ACENAPHTHENE (gi_sd_stillwater_2005)**				
20934					
20935	**General Statistics**				
20936	Number of Valid Observations		4	Number of Distinct Observations	4
20937					
20938					

	A	B	C	D	E
20939	**Warning: This data set only has 4 observations!**				
20940	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
20941	**The data set for variable OS|UG/KG|ACENAPHTHENE (gi_sd_stillwater_2005) was not processed!**				
20942					
20943	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
20944	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
20945					
20946					
20947					
20948	**OS|UG/KG|ACENAPHTHENE (gi_sd_stillwater_2009)**				
20949					
20950	**General Statistics**				
20951	Number of Valid Data		60	Number of Detected Data	38
20952	Number of Distinct Detected Data		34	Number of Non-Detect Data	22
20953				Percent Non-Detects	36.67%
20954					
20955	**Raw Statistics**			**Log-transformed Statistics**	
20956	Minimum Detected		3.4	Minimum Detected	1.2237754
20957	Maximum Detected		210	Maximum Detected	5.3471075
20958	Mean of Detected		36.217105	Mean of Detected	2.9806359
20959	SD of Detected		47.984736	SD of Detected	1.1101717
20960	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
20961	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
20962					
20963					
20964	**UCL Statistics**				
20965	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
20966	Shapiro Wilk Test Statistic		0.6475088	Shapiro Wilk Test Statistic	0.9596318
20967	5% Shapiro Wilk Critical Value		0.938	5% Shapiro Wilk Critical Value	0.938
20968	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
20969					
20970	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
20971	DL/2 Substitution Method			DL/2 Substitution Method	
20972	Mean		23.5425	Mean	2.0713537
20973	SD		41.546894	SD	1.4917158
20974	95% DL/2 (t) UCL		32.50571	95% H-Stat (DL/2) UCL	44.78047
20975					
20976	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
20977	Mean		8.3610002	Mean in Log Scale	1.9693077
20978	SD		56.203952	SD in Log Scale	1.6811647
20979	95% MLE (t) UCL		20.486282	Mean in Original Scale	23.540948
20980	95% MLE (Tiku) UCL		21.611982	SD in Original Scale	41.552611
20981				95% t UCL	32.505391
20982				95% Percentile Bootstrap UCL	32.189138
20983				95% BCA Bootstrap UCL	34.540971
20984					
20985	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
20986	k star (bias corrected)		0.8956474	**Data appear Lognormal at 5% Significance Level**	
20987	Theta Star		40.436791		
20988	nu star		68.069199		
20989					
20990	A-D Test Statistic		0.9348816	**Nonparametric Statistics**	
20991	5% A-D Critical Value		0.7795724	Kaplan-Meier (KM) Method	
20992	K-S Test Statistic		0.7795724	Mean	24.184167
20993	5% K-S Critical Value		0.1476874	SD	40.865525
20994	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	5.3465347
20995				95% KM (t) UCL	33.118723
20996	**Assuming Gamma Distribution**			95% KM (z) UCL	32.978434
20997	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	33.074779
20998	Minimum		1E-12	95% KM (bootstrap t) UCL	37.48647
20999	Maximum		210	95% KM (BCA) UCL	33.96
21000	Mean		27.818938	95% KM (Percentile Bootstrap) UCL	33.5825
21001	Median		16.556245	95% KM (Chebyshev) UCL	47.489171
21002	SD		40.525903	97.5% KM (Chebyshev) UCL	57.573265

	A	B	C	D	E
21003	k star		0.1711391	99% KM (Chebyshev) UCL	77.381516
21004	Theta star		162.55164		
21005	Nu star		20.53669	**Potential UCLs to Use**	
21006	AppChi2		11.247737	95% KM (Chebyshev) UCL	47.489171
21007	95% Gamma Approximate UCL		50.793231		
21008	95% Adjusted Gamma UCL		51.571432		
21009	**Note: DL/2 is not a recommended method.**				
21010					
21011	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
21012	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
21013	**For additional insight, the user may want to consult a statistician.**				
21014					
21015					
21016	**OS|UG/KG|ACENAPHTHENE (gi_sd_stillwater_2010)**				
21017					
21018	**General Statistics**				
21019	Number of Valid Observations		11	Number of Distinct Observations	11
21020					
21021	**Raw Statistics**			**Log-transformed Statistics**	
21022	Minimum		13	Minimum of Log Data	2.5649494
21023	Maximum		230	Maximum of Log Data	5.4380793
21024	Mean		82.363636	Mean of log Data	3.9991592
21025	Median		44	SD of log Data	0.9830938
21026	SD		75.578135		
21027	Coefficient of Variation		0.9176153		
21028	Skewness		1.104796		
21029					
21030	**Relevant UCL Statistics**				
21031	**Normal Distribution Test**			**Lognormal Distribution Test**	
21032	Shapiro Wilk Test Statistic		0.8368833	Shapiro Wilk Test Statistic	0.9443341
21033	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
21034	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
21035					
21036	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
21037	95% Student's-t UCL		123.66539	95% H-UCL	222.36484
21038	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	197.45092
21039	95% Adjusted-CLT UCL (Chen-1995)		127.95685	97.5% Chebyshev (MVUE) UCL	246.80258
21040	95% Modified-t UCL (Johnson-1978)		124.93052	99% Chebyshev (MVUE) UCL	343.74434
21041					
21042	**Gamma Distribution Test**			**Data Distribution**	
21043	k star (bias corrected)		1.0468724	**Data appear Gamma Distributed at 5% Significance Level**	
21044	Theta Star		78.675911		
21045	MLE of Mean		82.363636		
21046	MLE of Standard Deviation		80.498659		
21047	nu star		23.031192		
21048	Approximate Chi Square Value (.05)		13.114318	**Nonparametric Statistics**	
21049	Adjusted Level of Significance		0.02783	95% CLT UCL	119.84601
21050	Adjusted Chi Square Value		11.910234	95% Jackknife UCL	123.66539
21051				95% Standard Bootstrap UCL	118.60923
21052	Anderson-Darling Test Statistic		0.3677204	95% Bootstrap-t UCL	145.33312
21053	Anderson-Darling 5% Critical Value		0.7448906	95% Hall's Bootstrap UCL	133.55937
21054	Kolmogorov-Smirnov Test Statistic		0.1861005	95% Percentile Bootstrap UCL	121
21055	Kolmogorov-Smirnov 5% Critical Value		0.2604783	95% BCA Bootstrap UCL	123.81818
21056	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	181.69277
21057				97.5% Chebyshev(Mean, Sd) UCL	224.67256
21058	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	309.09804
21059	95% Approximate Gamma UCL		144.64593		
21060	95% Adjusted Gamma UCL		159.26913		
21061					
21062	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	144.64593
21063					
21064	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
21065	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				

	A	B	C	D	E
21066	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
21067					
21068					
21069	**OS|UG/KG|ACENAPHTHYLENE (gi_sd_ne_2005)**				
21070					
21071	**General Statistics**				
21072	Number of Valid Data		36	Number of Detected Data	30
21073	Number of Distinct Detected Data		26	Number of Non-Detect Data	6
21074				Percent Non-Detects	16.67%
21075					
21076	**Raw Statistics**			**Log-transformed Statistics**	
21077	Minimum Detected		3.4	Minimum Detected	1.2237754
21078	Maximum Detected		26	Maximum Detected	3.2580965
21079	Mean of Detected		8.5573333	Mean of Detected	1.990713
21080	SD of Detected		5.3827944	SD of Detected	0.5478235
21081	Minimum Non-Detect		3.2	Minimum Non-Detect	1.1631508
21082	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
21083					
21084	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	6
21085	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	30
21086	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	16.67%
21087					
21088	**UCL Statistics**				
21089	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
21090	Shapiro Wilk Test Statistic		0.8281412	Shapiro Wilk Test Statistic	0.9450904
21091	5% Shapiro Wilk Critical Value		0.927	5% Shapiro Wilk Critical Value	0.927
21092	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
21093					
21094	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
21095	DL/2 Substitution Method			DL/2 Substitution Method	
21096	Mean		7.4040278	Mean	1.7411112
21097	SD		5.5541039	SD	0.754382
21098	95% DL/2 (t) UCL		8.9680379	95% H-Stat (DL/2) UCL	9.9419502
21099					
21100	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
21101	Mean		7.0755517	Mean in Log Scale	1.7810619
21102	SD		5.9832165	SD in Log Scale	0.6923462
21103	95% MLE (t) UCL		8.760398	Mean in Original Scale	7.4824756
21104	95% MLE (Tiku) UCL		8.7406339	SD in Original Scale	5.4742702
21105				95% t UCL	9.0240049
21106				95% Percentile Bootstrap UCL	8.9481736
21107				95% BCA Bootstrap UCL	9.2226121
21108					
21109	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
21110	k star (bias corrected)		3.0471948	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
21111	Theta Star		2.8082659		
21112	nu star		182.83169		
21113					
21114	A-D Test Statistic		0.7690693	**Nonparametric Statistics**	
21115	5% A-D Critical Value		0.751392	Kaplan-Meier (KM) Method	
21116	K-S Test Statistic		0.751392	Mean	7.6977778
21117	5% K-S Critical Value		0.1609803	SD	5.1994931
21118	**Data follow Appr. Gamma Distribution at 5% Significance Level**			SE of Mean	0.8813966
21119				95% KM (t) UCL	9.1869612
21120	**Assuming Gamma Distribution**			95% KM (z) UCL	9.1475462
21121	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	9.1468392
21122	Minimum		1E-12	95% KM (bootstrap t) UCL	9.5751161
21123	Maximum		26	95% KM (BCA) UCL	9.4527778
21124	Mean		7.4346332	95% KM (Percentile Bootstrap) UCL	9.1055556
21125	Median		5.7	95% KM (Chebyshev) UCL	11.539697
21126	SD		5.540666	97.5% KM (Chebyshev) UCL	13.202098
21127	k star		0.575068	99% KM (Chebyshev) UCL	16.467563
21128	Theta star		12.928269		
21129	Nu star		41.404893	**Potential UCLs to Use**	
21130	AppChi2		27.65676	95% KM (BCA) UCL	9.4527778
21131	95% Gamma Approximate UCL		11.130378		
21132	95% Adjusted Gamma UCL		11.339957		
21133	**Note: DL/2 is not a recommended method.**				

	A	B	C	D	E
21134					
21135	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
21136	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
21137	**For additional insight, the user may want to consult a statistician.**				
21138					
21139					
21140	**OS|UG/KG|ACENAPHTHYLENE (gi_sd_ne_2009)**				
21141					
21142	**General Statistics**				
21143	Number of Valid Data		20	Number of Detected Data	9
21144	Number of Distinct Detected Data		9	Number of Non-Detect Data	11
21145				Percent Non-Detects	55.00%
21146					
21147	**Raw Statistics**			**Log-transformed Statistics**	
21148	Minimum Detected		3.9	Minimum Detected	1.3609766
21149	Maximum Detected		31	Maximum Detected	3.4339872
21150	Mean of Detected		9.5222222	Mean of Detected	2.031965
21151	SD of Detected		8.4041326	SD of Detected	0.6421492
21152	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
21153	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
21154					
21155					
21156	**Warning: There are only 9 Detected Values in this data**				
21157	**Note: It should be noted that even though bootstrap may be performed on this data set**				
21158	**the resulting calculations may not be reliable enough to draw conclusions**				
21159					
21160	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
21161					
21162					
21163	**UCL Statistics**				
21164	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
21165	Shapiro Wilk Test Statistic		0.655376	Shapiro Wilk Test Statistic	0.8809326
21166	5% Shapiro Wilk Critical Value		0.829	5% Shapiro Wilk Critical Value	0.829
21167	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
21168					
21169	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
21170	DL/2 Substitution Method			DL/2 Substitution Method	
21171	Mean		5.1925	Mean	1.1898106
21172	SD		6.7737744	SD	0.8856852
21173	95% DL/2 (t) UCL		7.8115518	95% H-Stat (DL/2) UCL	8.0398744
21174					
21175	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
21176	Mean		0.8255517	Mean in Log Scale	0.9597701
21177	SD		10.811769	SD in Log Scale	1.1884252
21178	95% MLE (t) UCL		5.0058773	Mean in Original Scale	5.0058076
21179	95% MLE (Tiku) UCL		6.3654004	SD in Original Scale	6.9001842
21180				95% t UCL	7.6737352
21181				95% Percentile Bootstrap UCL	7.4808021
21182				95% BCA Bootstrap UCL	9.2074316
21183					
21184	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
21185	k star (bias corrected)		1.6802202	**Data appear Gamma Distributed at 5% Significance Level**	
21186	Theta Star		5.6672467		
21187	nu star		30.243963		
21188					
21189	A-D Test Statistic		0.6851306	**Nonparametric Statistics**	
21190	5% A-D Critical Value		0.7285546	Kaplan-Meier (KM) Method	
21191	K-S Test Statistic		0.7285546	Mean	6.43
21192	5% K-S Critical Value		0.2820135	SD	6.0062551
21193	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	1.4245085
21194				95% KM (t) UCL	8.8931643
21195	**Assuming Gamma Distribution**			95% KM (z) UCL	8.7731079

	A	B	C	D	E
21196	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	8.7686856
21197	Minimum		1E-12	95% KM (bootstrap t) UCL	13.409616
21198	Maximum		31	95% KM (BCA) UCL	9.93
21199	Mean		10.586151	95% KM (Percentile Bootstrap) UCL	9.1
21200	Median		8.6336818	95% KM (Chebyshev) UCL	12.639288
21201	SD		7.4165728	97.5% KM (Chebyshev) UCL	15.326053
21202	k star		0.3760013	99% KM (Chebyshev) UCL	20.60368
21203	Theta star		28.154563		
21204	Nu star		15.04005	**Potential UCLs to Use**	
21205	AppChi2		7.2894193	95% KM (t) UCL	8.8931643
21206	95% Gamma Approximate UCL		21.842103		
21207	95% Adjusted Gamma UCL		23.191305		
21208	**Note: DL/2 is not a recommended method.**				
21209					
21210	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
21211	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
21212	**For additional insight, the user may want to consult a statistician.**				
21213					
21214					
21215	**OS|UG/KG|ACENAPHTHYLENE (gi_sd_ne_2010)**				
21216					
21217	**General Statistics**				
21218	Number of Valid Data		16	Number of Detected Data	12
21219	Number of Distinct Detected Data		11	Number of Non-Detect Data	4
21220				Percent Non-Detects	25.00%
21221					
21222	**Raw Statistics**			**Log-transformed Statistics**	
21223	Minimum Detected		1.9	Minimum Detected	0.6418539
21224	Maximum Detected		47	Maximum Detected	3.8501476
21225	Mean of Detected		10.5625	Mean of Detected	1.9227242
21226	SD of Detected		12.31077	SD of Detected	0.9438385
21227	Minimum Non-Detect		18	Minimum Non-Detect	2.8903718
21228	Maximum Non-Detect		89	Maximum Non-Detect	4.4886364
21229					
21230	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	16
21231	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
21232	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
21233					
21234	**UCL Statistics**				
21235	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
21236	Shapiro Wilk Test Statistic		0.654956	Shapiro Wilk Test Statistic	0.9404511
21237	5% Shapiro Wilk Critical Value		0.859	5% Shapiro Wilk Critical Value	0.859
21238	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
21239					
21240	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
21241	DL/2 Substitution Method			DL/2 Substitution Method	
21242	Mean		13.640625	Mean	2.1830647
21243	SD		13.735807	SD	0.9792699
21244	95% DL/2 (t) UCL		19.660516	95% H-Stat (DL/2) UCL	28.168877
21245					
21246	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
21247	**MLE method failed to converge properly**			Mean in Log Scale	1.8946744
21248				SD in Log Scale	0.8100291
21249				Mean in Original Scale	9.4513161
21250				SD in Original Scale	10.728713
21251				95% t UCL	14.15331
21252				95% Percentile Bootstrap UCL	14.297472
21253				95% BCA Bootstrap UCL	17.519221
21254					
21255	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
21256	k star (bias corrected)		1.0243713	**Data appear Gamma Distributed at 5% Significance Level**	
21257	Theta Star		10.311202		
21258	nu star		24.584912		
21259					
21260	A-D Test Statistic		0.5000411	**Nonparametric Statistics**	
21261	5% A-D Critical Value		0.7501872	Kaplan-Meier (KM) Method	
21262	K-S Test Statistic		0.7501872	Mean	9.9

	A	B	C	D	E
21263	5% K-S Critical Value		0.2506987	SD	10.810765
21264	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	2.9779042
21265				95% KM (t) UCL	15.120416
21266	**Assuming Gamma Distribution**			95% KM (z) UCL	14.798217
21267	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	15.106838
21268	Minimum		1.9	95% KM (bootstrap t) UCL	20.107603
21269	Maximum		47	95% KM (BCA) UCL	15.028571
21270	Mean		10.597596	95% KM (Percentile Bootstrap) UCL	14.9575
21271	Median		10.55678	95% KM (Chebyshev) UCL	22.880383
21272	SD		10.54331	97.5% KM (Chebyshev) UCL	28.497006
21273	k star		1.4074719	99% KM (Chebyshev) UCL	39.529773
21274	Theta star		7.5295258		
21275	Nu star		45.039101	**Potential UCLs to Use**	
21276	AppChi2		30.644608	95% KM (Percentile Bootstrap) UCL	14.9575
21277	95% Gamma Approximate UCL		15.575536		
21278	95% Adjusted Gamma UCL		16.292507		
21279	**Note: DL/2 is not a recommended method.**				
21280					
21281	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
21282	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
21283	**For additional insight, the user may want to consult a statistician.**				
21284					
21285					
21286	**OS|UG/KG|ACENAPHTHYLENE (gi_sd_nw_2005)**				
21287					
21288	**General Statistics**				
21289	Number of Valid Data		18	Number of Detected Data	14
21290	Number of Distinct Detected Data		13	Number of Non-Detect Data	4
21291				Percent Non-Detects	22.22%
21292					
21293	**Raw Statistics**			**Log-transformed Statistics**	
21294	Minimum Detected		3.2	Minimum Detected	1.1631508
21295	Maximum Detected		42	Maximum Detected	3.7376696
21296	Mean of Detected		9.9214286	Mean of Detected	1.9233011
21297	SD of Detected		11.494291	SD of Detected	0.7822195
21298	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
21299	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
21300					
21301					
21302	**UCL Statistics**				
21303	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
21304	Shapiro Wilk Test Statistic		0.6033462	Shapiro Wilk Test Statistic	0.8178675
21305	5% Shapiro Wilk Critical Value		0.874	5% Shapiro Wilk Critical Value	0.874
21306	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
21307					
21308	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
21309	DL/2 Substitution Method			DL/2 Substitution Method	
21310	Mean		8.0833333	Mean	1.6071842
21311	SD		10.656108	SD	0.9155473
21312	95% DL/2 (t) UCL		12.452649	95% H-Stat (DL/2) UCL	13.26763
21313					
21314	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
21315	Mean		5.8907888	Mean in Log Scale	1.6070562
21316	SD		12.682255	SD in Log Scale	0.9273406
21317	95% MLE (t) UCL		11.090884	Mean in Original Scale	8.0994629
21318	95% MLE (Tiku) UCL		11.225599	SD in Original Scale	10.648476
21319				95% t UCL	12.46565
21320				95% Percentile Bootstrap UCL	12.361965
21321				95% BCA Bootstrap UCL	13.953913
21322					
21323	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
21324	k star (bias corrected)		1.2191428	**Data do not follow a Discernable Distribution (0.05)**	
21325	Theta Star		8.1380368		
21326	nu star		34.135997		
21327					
21328	A-D Test Statistic		1.5574641	**Nonparametric Statistics**	
21329	5% A-D Critical Value		0.750817	Kaplan-Meier (KM) Method	

	A	B	C	D	E
21330	K-S Test Statistic		0.750817	Mean	8.4277778
21331	5% K-S Critical Value		0.2327731	SD	10.160097
21332	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	2.4851575
21333				95% KM (t) UCL	12.750975
21334	**Assuming Gamma Distribution**			95% KM (z) UCL	12.515498
21335	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	12.68038
21336	Minimum		1E-12	95% KM (bootstrap t) UCL	24.905115
21337	Maximum		42	95% KM (BCA) UCL	12.944444
21338	Mean		8.0629787	95% KM (Percentile Bootstrap) UCL	12.638889
21339	Median		4.55	95% KM (Chebyshev) UCL	19.260328
21340	SD		10.702089	97.5% KM (Chebyshev) UCL	23.947582
21341	k star		0.2092885	99% KM (Chebyshev) UCL	33.154783
21342	Theta star		38.525666		
21343	Nu star		7.5343858	**Potential UCLs to Use**	
21344	AppChi2		2.4684385	95% KM (BCA) UCL	12.944444
21345	95% Gamma Approximate UCL		24.610535		
21346	95% Adjusted Gamma UCL		27.627103		
21347	**Note: DL/2 is not a recommended method.**				
21348					
21349	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
21350	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
21351	**For additional insight, the user may want to consult a statistician.**				
21352					
21353					
21354	**OS|UG/KG|ACENAPHTHYLENE (gi_sd_nw_2009)**				
21355					
21356	**General Statistics**				
21357	Number of Valid Data		7	Number of Detected Data	4
21358	Number of Distinct Detected Data		4	Number of Non-Detect Data	3
21359				Percent Non-Detects	42.86%
21360					
21361	**Raw Statistics**			**Log-transformed Statistics**	
21362	Minimum Detected		3.02	Minimum Detected	1.1052568
21363	Maximum Detected		8.3	Maximum Detected	2.1162555
21364	Mean of Detected		6.255	Mean of Detected	1.7590358
21365	SD of Detected		2.4819549	SD of Detected	0.4715658
21366	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
21367	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
21368					
21369					
21370	**Warning: There are only 4 Distinct Detected Values in this data**				
21371	**Note: It should be noted that even though bootstrap may be performed on this data set**				
21372	**the resulting calculations may not be reliable enough to draw conclusions**				
21373					
21374	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
21375					
21376					
21377	**UCL Statistics**				
21378	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
21379	Shapiro Wilk Test Statistic		0.8865441	Shapiro Wilk Test Statistic	0.8582049
21380	5% Shapiro Wilk Critical Value		0.748	5% Shapiro Wilk Critical Value	0.748
21381	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
21382					
21383	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
21384	DL/2 Substitution Method			DL/2 Substitution Method	
21385	Mean		4.2814286	Mean	1.2197813
21386	SD		3.0230637	SD	0.7506901
21387	95% DL/2 (t) UCL		6.5017271	95% H-Stat (DL/2) UCL	11.356139
21388					
21389	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
21390	Mean		2.9621103	Mean in Log Scale	1.4801726
21391	SD		4.3748701	SD in Log Scale	0.505763
21392	95% MLE (t) UCL		6.1752472	Mean in Original Scale	4.9031102
21393	95% MLE (Tiku) UCL		7.2540454	SD in Original Scale	2.4776633

	A	B	C	D	E
21394				95% t UCL	6.7228377
21395				95% Percentile Bootstrap UCL	6.3485714
21396				95% BCA Bootstrap UCL	6.4864992
21397					
21398	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
21399	k star (bias corrected)		1.8886076	**Data appear Normal at 5% Significance Level**	
21400	Theta Star		3.3119638		
21401	nu star		15.108861		
21402					
21403	A-D Test Statistic		0.4149259	**Nonparametric Statistics**	
21404	5% A-D Critical Value		0.6583013	Kaplan-Meier (KM) Method	
21405	K-S Test Statistic		0.6583013	Mean	4.8685714
21406	5% K-S Critical Value		0.3955275	SD	2.2809987
21407	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.9955095
21408				95% KM (t) UCL	6.8030258
21409	**Assuming Gamma Distribution**			95% KM (z) UCL	6.5060388
21410	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	6.9975922
21411	Minimum		3.02	95% KM (bootstrap t) UCL	6.2195369
21412	Maximum		8.3	95% KM (BCA) UCL	8.1571429
21413	Mean		6.2463095	95% KM (Percentile Bootstrap) UCL	8.1285714
21414	Median		6.3158338	95% KM (Chebyshev) UCL	9.2078965
21415	SD		1.9042793	97.5% KM (Chebyshev) UCL	11.085526
21416	k star		6.0536161	99% KM (Chebyshev) UCL	14.773765
21417	Theta star		1.0318311		
21418	Nu star		84.750626	**Potential UCLs to Use**	
21419	AppChi2		64.531604	95% KM (t) UCL	6.8030258
21420	95% Gamma Approximate UCL		8.2034012	95% KM (Percentile Bootstrap) UCL	8.1285714
21421	95% Adjusted Gamma UCL		N/A		
21422	**Note: DL/2 is not a recommended method.**				
21423					
21424	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
21425	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
21426	**For additional insight, the user may want to consult a statistician.**				
21427					
21428					
21429	**OS|UG/KG|ACENAPHTHYLENE (gi_sd_nw_2010)**				
21430					
21431	**General Statistics**				
21432	Number of Valid Observations		4	Number of Distinct Observations	3
21433					
21434					
21435	**Warning: This data set only has 4 observations!**				
21436	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
21437	**The data set for variable OS|UG/KG|ACENAPHTHYLENE (gi_sd_nw_2010) was not processed!**				
21438					
21439	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
21440	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
21441					
21442					
21443					
21444	**OS|UG/KG|ACENAPHTHYLENE (gi_sd_ref_2009)**				
21445					
21446	**General Statistics**				
21447	Number of Valid Data		0	Number of Detected Data	0
21448	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
21449	Number of Missing Values		6	Percent Non-Detects	NaN%
21450					
21451	**Warning: This data set only has 0 observations!**				
21452	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
21453	**The data set for variable OS|UG/KG|ACENAPHTHYLENE (gi_sd_ref_2009) was not processed!**				
21454					
21455	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
21456	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
21457					
21458					
21459					
21460	**OS|UG/KG|ACENAPHTHYLENE (gi_sd_ref_2010)**				
21461					
21462	**General Statistics**				
21463	Number of Valid Data		0	Number of Detected Data	0
21464	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
21465	Number of Missing Values		3	Percent Non-Detects	NaN%
21466					
21467	**Warning: This data set only has 0 observations!**				
21468	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
21469	**The data set for variable OS|UG/KG|ACENAPHTHYLENE (gi_sd_ref_2010) was not processed!**				
21470					
21471	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
21472	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
21473					
21474					
21475					
21476	**OS|UG/KG|ACENAPHTHYLENE (gi_sd_s_2005)**				
21477					
21478	**General Statistics**				
21479	Number of Valid Data		8	Number of Detected Data	7
21480	Number of Distinct Detected Data		7	Number of Non-Detect Data	1
21481				Percent Non-Detects	12.50%
21482					
21483	**Raw Statistics**			**Log-transformed Statistics**	
21484	Minimum Detected		3.3	Minimum Detected	1.1939225
21485	Maximum Detected		11	Maximum Detected	2.3978953
21486	Mean of Detected		6.6357143	Mean of Detected	1.8155852
21487	SD of Detected		2.7311039	SD of Detected	0.4316819
21488	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
21489	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
21490					
21491					
21492	**Warning: There are only 7 Detected Values in this data**				
21493	**Note: It should be noted that even though bootstrap may be performed on this data set**				
21494	**the resulting calculations may not be reliable enough to draw conclusions**				
21495					
21496	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
21497					
21498					
21499	**UCL Statistics**				
21500	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
21501	Shapiro Wilk Test Statistic		0.9677636	Shapiro Wilk Test Statistic	0.9700487
21502	5% Shapiro Wilk Critical Value		0.803	5% Shapiro Wilk Critical Value	0.803
21503	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
21504					
21505	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
21506	DL/2 Substitution Method			DL/2 Substitution Method	
21507	Mean		6.0125	Mean	1.651234
21508	SD		3.0822939	SD	0.6130404

	A	B	C	D	E
21509	95% DL/2 (t) UCL		8.0771274	95% H-Stat (DL/2) UCL	11.382619
21510					
21511	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
21512	Mean		6.0235152	Mean in Log Scale	1.6800186
21513	SD		2.9043912	SD in Log Scale	0.5538541
21514	95% MLE (t) UCL		7.9689772	Mean in Original Scale	6.0659082
21515	95% MLE (Tiku) UCL		7.9591084	SD in Original Scale	2.9984661
21516				95% t UCL	8.0743848
21517				95% Percentile Bootstrap UCL	7.66875
21518				95% BCA Bootstrap UCL	7.775
21519					
21520	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
21521	k star (bias corrected)		3.9042658	**Data appear Normal at 5% Significance Level**	
21522	Theta Star		1.6996062		
21523	nu star		54.659721		
21524					
21525	A-D Test Statistic		0.1732097	**Nonparametric Statistics**	
21526	5% A-D Critical Value		0.7094002	Kaplan-Meier (KM) Method	
21527	K-S Test Statistic		0.7094002	Mean	6.21875
21528	5% K-S Critical Value		0.3126502	SD	2.6098297
21529	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.9966452
21530				95% KM (t) UCL	8.1069726
21531	**Assuming Gamma Distribution**			95% KM (z) UCL	7.8580854
21532	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	8.0769628
21533	Minimum		2.0563529	95% KM (bootstrap t) UCL	8.36509
21534	Maximum		11	95% KM (BCA) UCL	7.975
21535	Mean		6.0632941	95% KM (Percentile Bootstrap) UCL	7.95625
21536	Median		5.925	95% KM (Chebyshev) UCL	10.563026
21537	SD		3.0024467	97.5% KM (Chebyshev) UCL	12.442797
21538	k star		2.7133775	99% KM (Chebyshev) UCL	16.135244
21539	Theta star		2.2345929		
21540	Nu star		43.41404	**Potential UCLs to Use**	
21541	AppChi2		29.305187	95% KM (t) UCL	8.1069726
21542	95% Gamma Approximate UCL		8.9824404	95% KM (Percentile Bootstrap) UCL	7.95625
21543	95% Adjusted Gamma UCL		9.9683822		
21544	**Note: DL/2 is not a recommended method.**				
21545					
21546	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
21547	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
21548	**For additional insight, the user may want to consult a statistician.**				
21549					
21550					
21551	**OS|UG/KG|ACENAPHTHYLENE (gi_sd_s_2010)**				
21552					
21553	**General Statistics**				
21554	Number of Valid Data		2	Number of Detected Data	1
21555	Number of Distinct Detected Data		1	Number of Non-Detect Data	1
21556				Percent Non-Detects	50.00%
21557					
21558	**Warning: This data set only has 2 observations!**				
21559	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
21560	**The data set for variable OS|UG/KG|ACENAPHTHYLENE (gi_sd_s_2010) was not processed!**				
21561					
21562	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
21563	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
21564					
21565					
21566					
21567	**OS|UG/KG|ACENAPHTHYLENE (gi_sd_stillwater_2005)**				
21568					
21569	**General Statistics**				
21570	Number of Valid Observations		4	Number of Distinct Observations	4

	A	B	C	D	E
21571					
21572					
21573	**Warning: This data set only has 4 observations!**				
21574	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
21575	**The data set for variable OS|UG/KG|ACENAPHTHYLENE (gi_sd_stillwater_2005) was not processed!**				
21576					
21577	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
21578	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
21579					
21580					
21581					
21582	**OS|UG/KG|ACENAPHTHYLENE (gi_sd_stillwater_2009)**				
21583					
21584	**General Statistics**				
21585	Number of Valid Data		60	Number of Detected Data	44
21586	Number of Distinct Detected Data		38	Number of Non-Detect Data	16
21587				Percent Non-Detects	26.67%
21588					
21589	**Raw Statistics**			**Log-transformed Statistics**	
21590	Minimum Detected		3.6	Minimum Detected	1.2809338
21591	Maximum Detected		590	Maximum Detected	6.3801225
21592	Mean of Detected		66.252273	Mean of Detected	3.4876424
21593	SD of Detected		102.70792	SD of Detected	1.1860808
21594	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
21595	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
21596					
21597					
21598	**UCL Statistics**				
21599	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
21600	Shapiro Wilk Test Statistic		0.5853818	Shapiro Wilk Test Statistic	0.9810312
21601	5% Shapiro Wilk Critical Value		0.944	5% Shapiro Wilk Critical Value	0.944
21602	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
21603					
21604	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
21605	DL/2 Substitution Method			DL/2 Substitution Method	
21606	Mean		49.025	Mean	2.6911445
21607	SD		92.293922	SD	1.6731648
21608	95% DL/2 (t) UCL		68.93623	95% H-Stat (DL/2) UCL	126.15714
21609					
21610	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
21611	Mean		27.664846	Mean in Log Scale	2.738823
21612	SD		112.86423	SD in Log Scale	1.6531077
21613	95% MLE (t) UCL		52.013856	Mean in Original Scale	49.235384
21614	95% MLE (Tiku) UCL		52.466548	SD in Original Scale	92.187478
21615				95% t UCL	69.12365
21616				95% Percentile Bootstrap UCL	70.723509
21617				95% BCA Bootstrap UCL	77.875157
21618					
21619	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
21620	k star (bias corrected)		0.7941805	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
21621	Theta Star		83.422184		
21622	nu star		69.887885		
21623					
21624	A-D Test Statistic		0.984278	**Nonparametric Statistics**	
21625	5% A-D Critical Value		0.7853342	Kaplan-Meier (KM) Method	
21626	K-S Test Statistic		0.7853342	Mean	49.545
21627	5% K-S Critical Value		0.1381426	SD	91.25608
21628	**Data follow Appr. Gamma Distribution at 5% Significance Level**			SE of Mean	11.917312
21629				95% KM (t) UCL	69.459936
21630	**Assuming Gamma Distribution**			95% KM (z) UCL	69.147233
21631	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	69.280985
21632	Minimum		1E-12	95% KM (bootstrap t) UCL	84.745843
21633	Maximum		590	95% KM (BCA) UCL	73.228333

	A	B	C	D	E
21634	Mean		49.558744	95% KM (Percentile Bootstrap) UCL	71.351667
21635	Median		19	95% KM (Chebyshev) UCL	101.49136
21636	SD		92.083275	97.5% KM (Chebyshev) UCL	123.96859
21637	k star		0.1312342	99% KM (Chebyshev) UCL	168.12075
21638	Theta star		377.63585		
21639	Nu star		15.748106	**Potential UCLs to Use**	
21640	AppChi2		7.7847681	95% KM (Chebyshev) UCL	101.49136
21641	95% Gamma Approximate UCL		100.25428		
21642	95% Adjusted Gamma UCL		102.06638		
21643	**Note: DL/2 is not a recommended method.**				
21644					
21645	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
21646	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
21647	**For additional insight, the user may want to consult a statistician.**				
21648					
21649					
21650	**OS|UG/KG|ACENAPHTHYLENE (gi_sd_stillwater_2010)**				
21651					
21652	**General Statistics**				
21653	Number of Valid Observations		11	Number of Distinct Observations	10
21654					
21655	**Raw Statistics**			**Log-transformed Statistics**	
21656	Minimum		12	Minimum of Log Data	2.4849066
21657	Maximum		210	Maximum of Log Data	5.3471075
21658	Mean		58.727273	Mean of log Data	3.6987579
21659	Median		35	SD of log Data	0.8843592
21660	SD		58.917045		
21661	Coefficient of Variation		1.0032314		
21662	Skewness		1.9659527		
21663					
21664	**Relevant UCL Statistics**				
21665	**Normal Distribution Test**			**Lognormal Distribution Test**	
21666	Shapiro Wilk Test Statistic		0.7688431	Shapiro Wilk Test Statistic	0.9643049
21667	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
21668	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
21669					
21670	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
21671	95% Student's-t UCL		90.924118	95% H-UCL	130.01343
21672	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	126.8262
21673	95% Adjusted-CLT UCL (Chen-1995)		99.197987	97.5% Chebyshev (MVUE) UCL	157.00727
21674	95% Modified-t UCL (Johnson-1978)		92.679089	99% Chebyshev (MVUE) UCL	216.29214
21675					
21676	**Gamma Distribution Test**			**Data Distribution**	
21677	k star (bias corrected)		1.1376803	**Data appear Gamma Distributed at 5% Significance Level**	
21678	Theta Star		51.620189		
21679	MLE of Mean		58.727273		
21680	MLE of Standard Deviation		55.059177		
21681	nu star		25.028967		
21682	Approximate Chi Square Value (.05)		14.633785	**Nonparametric Statistics**	
21683	Adjusted Level of Significance		0.02783	95% CLT UCL	87.946712
21684	Adjusted Chi Square Value		13.353194	95% Jackknife UCL	90.924118
21685				95% Standard Bootstrap UCL	86.414334
21686	Anderson-Darling Test Statistic		0.3737914	95% Bootstrap-t UCL	119.51549
21687	Anderson-Darling 5% Critical Value		0.7425557	95% Hall's Bootstrap UCL	203.56013
21688	Kolmogorov-Smirnov Test Statistic		0.1609064	95% Percentile Bootstrap UCL	87.909091
21689	Kolmogorov-Smirnov 5% Critical Value		0.2598116	95% BCA Bootstrap UCL	97.363636
21690	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	136.15944
21691				97.5% Chebyshev(Mean, Sd) UCL	169.6644
21692	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	235.47841
21693	95% Approximate Gamma UCL		100.44448		
21694	95% Adjusted Gamma UCL		110.07726		
21695					
21696	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	100.44448
21697					
21698	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
21699	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
21700	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
21701					
21702					
21703	OS|UG/KG|ANTHRACENE (gi_sd_ne_2005)				
21704					
21705	General Statistics				
21706	Number of Valid Observations		36	Number of Distinct Observations	32
21707					
21708	Raw Statistics			Log-transformed Statistics	
21709	Minimum		7.5	Minimum of Log Data	2.014903
21710	Maximum		1300	Maximum of Log Data	7.1701195
21711	Mean		124.81944	Mean of log Data	3.9135972
21712	Median		51.5	SD of log Data	1.2432416
21713	SD		250.13871		
21714	Coefficient of Variation		2.0040044		
21715	Skewness		3.8030592		
21716					
21717	Relevant UCL Statistics				
21718	Normal Distribution Test			Lognormal Distribution Test	
21719	Shapiro Wilk Test Statistic		0.4771634	Shapiro Wilk Test Statistic	0.9469117
21720	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
21721	Data not Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
21722					
21723	Assuming Normal Distribution			Assuming Lognormal Distribution	
21724	95% Student's-t UCL		195.25736	95% H-UCL	190.23131
21725	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	220.22979
21726	95% Adjusted-CLT UCL (Chen-1995)		221.62831	97.5% Chebyshev (MVUE) UCL	270.24991
21727	95% Modified-t UCL (Johnson-1978)		199.66149	99% Chebyshev (MVUE) UCL	368.50475
21728					
21729	Gamma Distribution Test			Data Distribution	
21730	k star (bias corrected)		0.6293357	Data appear Lognormal at 5% Significance Level	
21731	Theta Star		198.33524		
21732	MLE of Mean		124.81944		
21733	MLE of Standard Deviation		157.34069		
21734	nu star		45.31217		
21735	Approximate Chi Square Value (.05)		30.870193	Nonparametric Statistics	
21736	Adjusted Level of Significance		0.0428	95% CLT UCL	193.39304
21737	Adjusted Chi Square Value		30.328035	95% Jackknife UCL	195.25736
21738				95% Standard Bootstrap UCL	193.55699
21739	Anderson-Darling Test Statistic		2.1137394	95% Bootstrap-t UCL	323.38602
21740	Anderson-Darling 5% Critical Value		0.796146	95% Hall's Bootstrap UCL	480.44311
21741	Kolmogorov-Smirnov Test Statistic		0.2142493	95% Percentile Bootstrap UCL	200.775
21742	Kolmogorov-Smirnov 5% Critical Value		0.1534967	95% BCA Bootstrap UCL	234.79444
21743	Data not Gamma Distributed at 5% Significance Level			95% Chebyshev(Mean, Sd) UCL	306.541
21744				97.5% Chebyshev(Mean, Sd) UCL	385.17207
21745	Assuming Gamma Distribution			99% Chebyshev(Mean, Sd) UCL	539.62757
21746	95% Approximate Gamma UCL		183.21362		
21747	95% Adjusted Gamma UCL		186.48884		
21748					
21749	Potential UCL to Use			Use 95% H-UCL	190.23131
21750					
21751	ProUCL computes and outputs H-statistic based UCLs for historical reasons only.				
21752	H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.				
21753	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.				
21754	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.				
21755					
21756	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
21757	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				

	A	B	C	D	E
21758	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
21759					
21760					
21761	**OS|UG/KG|ANTHRACENE (gi_sd_ne_2009)**				
21762					
21763	**General Statistics**				
21764	Number of Valid Data		20	Number of Detected Data	17
21765	Number of Distinct Detected Data		17	Number of Non-Detect Data	3
21766				Percent Non-Detects	15.00%
21767					
21768	**Raw Statistics**			**Log-transformed Statistics**	
21769	Minimum Detected		5.9	Minimum Detected	1.7749524
21770	Maximum Detected		220	Maximum Detected	5.3936275
21771	Mean of Detected		64.229412	Mean of Detected	3.5709482
21772	SD of Detected		70.565898	SD of Detected	1.1742147
21773	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
21774	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
21775					
21776					
21777	**UCL Statistics**				
21778	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
21779	Shapiro Wilk Test Statistic		0.7637827	Shapiro Wilk Test Statistic	0.9400955
21780	5% Shapiro Wilk Critical Value		0.892	5% Shapiro Wilk Critical Value	0.892
21781	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
21782					
21783	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
21784	DL/2 Substitution Method			DL/2 Substitution Method	
21785	Mean		54.8425	Mean	3.1104222
21786	SD		68.694212	SD	1.5576075
21787	95% DL/2 (t) UCL		81.402832	95% H-Stat (DL/2) UCL	265.82953
21788					
21789	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
21790	Mean		48.132109	Mean in Log Scale	3.1590342
21791	SD		75.28234	SD in Log Scale	1.481509
21792	95% MLE (t) UCL		77.239714	Mean in Original Scale	54.960448
21793	95% MLE (Tiku) UCL		76.512396	SD in Original Scale	68.599429
21794				95% t UCL	81.484133
21795				95% Percentile Bootstrap UCL	81.553917
21796				95% BCA Bootstrap UCL	86.99
21797					
21798	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
21799	k star (bias corrected)		0.8449184	**Data appear Gamma Distributed at 5% Significance Level**	
21800	Theta Star		76.018476		
21801	nu star		28.727227		
21802					
21803	A-D Test Statistic		0.5375683	**Nonparametric Statistics**	
21804	5% A-D Critical Value		0.7668922	Kaplan-Meier (KM) Method	
21805	K-S Test Statistic		0.7668922	Mean	55.48
21806	5% K-S Critical Value		0.2152779	SD	66.463769
21807	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	15.319142
21808				95% KM (t) UCL	81.968831
21809	**Assuming Gamma Distribution**			95% KM (z) UCL	80.677746
21810	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	81.741155
21811	Minimum		1E-12	95% KM (bootstrap t) UCL	91.427428
21812	Maximum		220	95% KM (BCA) UCL	84.25
21813	Mean		54.595	95% KM (Percentile Bootstrap) UCL	82.62
21814	Median		34	95% KM (Chebyshev) UCL	122.25459
21815	SD		68.898304	97.5% KM (Chebyshev) UCL	151.14801
21816	k star		0.161151	99% KM (Chebyshev) UCL	207.90354
21817	Theta star		338.78161		
21818	Nu star		6.4460406	**Potential UCLs to Use**	
21819	AppChi2		1.8718892	95% KM (Chebyshev) UCL	122.25459
21820	95% Gamma Approximate UCL		188.00343		
21821	95% Adjusted Gamma UCL		208.96726		
21822	**Note: DL/2 is not a recommended method.**				
21823					
21824	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
21825	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
21826	**For additional insight, the user may want to consult a statistician.**				
21827					
21828					
21829	**OS|UG/KG|ANTHRACENE (gi_sd_ne_2010)**				
21830					
21831	**General Statistics**				
21832	Number of Valid Data		16	Number of Detected Data	13
21833	Number of Distinct Detected Data		13	Number of Non-Detect Data	3
21834				Percent Non-Detects	18.75%
21835					
21836	**Raw Statistics**			**Log-transformed Statistics**	
21837	Minimum Detected		11	Minimum Detected	2.3978953
21838	Maximum Detected		500	Maximum Detected	6.2146081
21839	Mean of Detected		146.84615	Mean of Detected	4.4060304
21840	SD of Detected		149.56317	SD of Detected	1.2241846
21841	Minimum Non-Detect		9	Minimum Non-Detect	2.1972246
21842	Maximum Non-Detect		130	Maximum Non-Detect	4.8675345
21843					
21844	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	10
21845	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	6
21846	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	62.50%
21847					
21848	**UCL Statistics**				
21849	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
21850	Shapiro Wilk Test Statistic		0.8467337	Shapiro Wilk Test Statistic	0.9400889
21851	5% Shapiro Wilk Critical Value		0.866	5% Shapiro Wilk Critical Value	0.866
21852	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
21853					
21854	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
21855	DL/2 Substitution Method			DL/2 Substitution Method	
21856	Mean		124	Mean	4.0413505
21857	SD		143.06607	SD	1.4520695
21858	95% DL/2 (t) UCL		186.70051	95% H-Stat (DL/2) UCL	597.16283
21859					
21860	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
21861	Mean		56.76602	Mean in Log Scale	3.9859049
21862	SD		212.62324	SD in Log Scale	1.457292
21863	95% MLE (t) UCL		149.95083	Mean in Original Scale	121.50652
21864	95% MLE (Tiku) UCL		194.90332	SD in Original Scale	144.50009
21865				95% t UCL	184.8355
21866				95% Percentile Bootstrap UCL	182.24158
21867				95% BCA Bootstrap UCL	197.3707
21868					
21869	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
21870	k star (bias corrected)		0.8132652	**Data appear Gamma Distributed at 5% Significance Level**	
21871	Theta Star		180.56367		
21872	nu star		21.144896		
21873					
21874	A-D Test Statistic		0.3338407	**Nonparametric Statistics**	
21875	5% A-D Critical Value		0.7578865	Kaplan-Meier (KM) Method	
21876	K-S Test Statistic		0.7578865	Mean	122.98611
21877	5% K-S Critical Value		0.243137	SD	139.09744
21878	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	36.273801
21879				95% KM (t) UCL	186.57591
21880	**Assuming Gamma Distribution**			95% KM (z) UCL	182.6512
21881	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	185.20612
21882	Minimum		1E-12	95% KM (bootstrap t) UCL	215.32743
21883	Maximum		500	95% KM (BCA) UCL	187.375
21884	Mean		124.52372	95% KM (Percentile Bootstrap) UCL	183.7875
21885	Median		79.689776	95% KM (Chebyshev) UCL	281.09994
21886	SD		143.20443	97.5% KM (Chebyshev) UCL	349.51593
21887	k star		0.1802294	99% KM (Chebyshev) UCL	483.90588
21888	Theta star		690.91794		
21889	Nu star		5.7673406	**Potential UCLs to Use**	
21890	AppChi2		1.5221461	95% KM (Chebyshev) UCL	281.09994
21891	95% Gamma Approximate UCL		471.81458		
21892	95% Adjusted Gamma UCL		557.09546		
21893	**Note: DL/2 is not a recommended method.**				

	A	B	C	D	E
21894					
21895	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
21896	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
21897	**For additional insight, the user may want to consult a statistician.**				
21898					
21899					
21900	**OS|UG/KG|ANTHRACENE (gi_sd_nw_2005)**				
21901					
21902	**General Statistics**				
21903	Number of Valid Observations		18	Number of Distinct Observations	18
21904					
21905	**Raw Statistics**			**Log-transformed Statistics**	
21906	Minimum		28	Minimum of Log Data	3.3322045
21907	Maximum		880	Maximum of Log Data	6.7799219
21908	Mean		159.11111	Mean of log Data	4.5451768
21909	Median		64.5	SD of log Data	0.9456728
21910	SD		216.8157		
21911	Coefficient of Variation		1.3626685		
21912	Skewness		2.6649962		
21913					
21914	**Relevant UCL Statistics**				
21915	**Normal Distribution Test**			**Lognormal Distribution Test**	
21916	Shapiro Wilk Test Statistic		0.6119476	Shapiro Wilk Test Statistic	0.9044306
21917	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
21918	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
21919					
21920	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
21921	95% Student's-t UCL		248.01189	95% H-UCL	264.92687
21922	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	294.73462
21923	95% Adjusted-CLT UCL (Chen-1995)		277.46971	97.5% Chebyshev (MVUE) UCL	360.65438
21924	95% Modified-t UCL (Johnson-1978)		253.36201	99% Chebyshev (MVUE) UCL	490.14097
21925					
21926	**Gamma Distribution Test**			**Data Distribution**	
21927	k star (bias corrected)		0.9452668	**Data appear Lognormal at 5% Significance Level**	
21928	Theta Star		168.32403		
21929	MLE of Mean		159.11111		
21930	MLE of Standard Deviation		163.65275		
21931	nu star		34.029604		
21932	Approximate Chi Square Value (.05)		21.68805	**Nonparametric Statistics**	
21933	Adjusted Level of Significance		0.03574	95% CLT UCL	243.16963
21934	Adjusted Chi Square Value		20.744008	95% Jackknife UCL	248.01189
21935				95% Standard Bootstrap UCL	243.23774
21936	Anderson-Darling Test Statistic		1.310281	95% Bootstrap-t UCL	415.64838
21937	Anderson-Darling 5% Critical Value		0.7647396	95% Hall's Bootstrap UCL	560.96142
21938	Kolmogorov-Smirnov Test Statistic		0.2378418	95% Percentile Bootstrap UCL	246.66667
21939	Kolmogorov-Smirnov 5% Critical Value		0.2090427	95% BCA Bootstrap UCL	286.88889
21940	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	381.86806
21941				97.5% Chebyshev(Mean, Sd) UCL	478.25517
21942	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	667.58899
21943	95% Approximate Gamma UCL		249.65306		
21944	95% Adjusted Gamma UCL		261.01456		
21945					
21946	**Potential UCL to Use**			Use 95% H-UCL	264.92687
21947					
21948	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
21949	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
21950	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
21951	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
21952					
21953	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
21954	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
21955	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
21956					
21957					
21958	OS|UG/KG|ANTHRACENE (gi_sd_nw_2009)				
21959					
21960	General Statistics				
21961	Number of Valid Observations		7	Number of Distinct Observations	5
21962					
21963	Raw Statistics			Log-transformed Statistics	
21964	Minimum		3.6	Minimum of Log Data	1.2809338
21965	Maximum		130	Maximum of Log Data	4.8675345
21966	Mean		50.8	Mean of log Data	3.5332522
21967	Median		57	SD of log Data	1.1437244
21968	SD		40.744079		
21969	Coefficient of Variation		0.8020488		
21970	Skewness		1.2354877		
21971					
21972					
21973	Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!				
21974					
21975	It is suggested to collect at least 8 to 10 observations using these statistical methods!				
21976	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
21977					
21978					
21979	Warning: There are only 7 Values in this data				
21980	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
21981	the resulting calculations may not be reliable enough to draw conclusions				
21982					
21983	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
21984					
21985	Relevant UCL Statistics				
21986	Normal Distribution Test			Lognormal Distribution Test	
21987	Shapiro Wilk Test Statistic		0.8733925	Shapiro Wilk Test Statistic	0.8653256
21988	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
21989	Data appear Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
21990					
21991	Assuming Normal Distribution			Assuming Lognormal Distribution	
21992	95% Student's-t UCL		80.724616	95% H-UCL	448.86295
21993	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	167.04055
21994	95% Adjusted-CLT UCL (Chen-1995)		83.814404	97.5% Chebyshev (MVUE) UCL	214.24476
21995	95% Modified-t UCL (Johnson-1978)		81.923159	99% Chebyshev (MVUE) UCL	306.96829
21996					
21997	Gamma Distribution Test			Data Distribution	
21998	k star (bias corrected)		0.9011869	Data appear Normal at 5% Significance Level	
21999	Theta Star		56.370103		
22000	MLE of Mean		50.8		
22001	MLE of Standard Deviation		53.512627		
22002	nu star		12.616617		
22003	Approximate Chi Square Value (.05)		5.6358646	Nonparametric Statistics	
22004	Adjusted Level of Significance		0.01584	95% CLT UCL	76.130441
22005	Adjusted Chi Square Value		4.3103304	95% Jackknife UCL	80.724616
22006				95% Standard Bootstrap UCL	74.665724
22007	Anderson-Darling Test Statistic		0.3922285	95% Bootstrap-t UCL	93.003922
22008	Anderson-Darling 5% Critical Value		0.7223617	95% Hall's Bootstrap UCL	192.83946
22009	Kolmogorov-Smirnov Test Statistic		0.2344492	95% Percentile Bootstrap UCL	74.714286
22010	Kolmogorov-Smirnov 5% Critical Value		0.3174741	95% BCA Bootstrap UCL	80.8
22011	Data appear Gamma Distributed at 5% Significance Level			95% Chebyshev(Mean, Sd) UCL	117.92624
22012				97.5% Chebyshev(Mean, Sd) UCL	146.97181
22013	Assuming Gamma Distribution			99% Chebyshev(Mean, Sd) UCL	204.02622
22014	95% Approximate Gamma UCL		113.72242		

	A	B	C	D	E
22015	95% Adjusted Gamma UCL		148.6949		
22016					
22017	**Potential UCL to Use**			Use 95% Student's-t UCL	80.724616
22018					
22019	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
22020	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
22021	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
22022					
22023					
22024	**OS|UG/KG|ANTHRACENE (gi_sd_nw_2010)**				
22025					
22026	**General Statistics**				
22027	Number of Valid Observations		4	Number of Distinct Observations	4
22028					
22029					
22030	**Warning: This data set only has 4 observations!**				
22031	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
22032	**The data set for variable OS|UG/KG|ANTHRACENE (gi_sd_nw_2010) was not processed!**				
22033					
22034	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
22035	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
22036					
22037					
22038					
22039	**OS|UG/KG|ANTHRACENE (gi_sd_ref_2009)**				
22040					
22041	**General Statistics**				
22042	Number of Valid Data		0	Number of Detected Data	0
22043	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
22044	Number of Missing Values		6	Percent Non-Detects	NaN%
22045					
22046	**Warning: This data set only has 0 observations!**				
22047	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
22048	**The data set for variable OS|UG/KG|ANTHRACENE (gi_sd_ref_2009) was not processed!**				
22049					
22050	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
22051	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
22052					
22053					
22054					
22055	**OS|UG/KG|ANTHRACENE (gi_sd_ref_2010)**				
22056					
22057	**General Statistics**				
22058	Number of Valid Data		0	Number of Detected Data	0
22059	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
22060	Number of Missing Values		3	Percent Non-Detects	NaN%
22061					
22062	**Warning: This data set only has 0 observations!**				
22063	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
22064	**The data set for variable OS|UG/KG|ANTHRACENE (gi_sd_ref_2010) was not processed!**				
22065					

	A	B	C	D	E
22066	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
22067	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
22068					
22069					
22070					
22071	**OS|UG/KG|ANTHRACENE (gi_sd_s_2005)**				
22072					
22073	**General Statistics**				
22074	Number of Valid Observations		8	Number of Distinct Observations	7
22075					
22076	**Raw Statistics**			**Log-transformed Statistics**	
22077	Minimum		14	Minimum of Log Data	2.6390573
22078	Maximum		1200	Maximum of Log Data	7.0900768
22079	Mean		231.875	Mean of log Data	4.5940558
22080	Median		107.5	SD of log Data	1.3355945
22081	SD		395.57966		
22082	Coefficient of Variation		1.7060039		
22083	Skewness		2.7044829		
22084					
22085					
22086	**Warning: There are only 8 Values in this data**				
22087	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
22088	**the resulting calculations may not be reliable enough to draw conclusions**				
22089					
22090	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
22091					
22092	**Relevant UCL Statistics**				
22093	**Normal Distribution Test**			**Lognormal Distribution Test**	
22094	Shapiro Wilk Test Statistic		0.5603865	Shapiro Wilk Test Statistic	0.9570223
22095	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
22096	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
22097					
22098	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22099	95% Student's-t UCL		496.84798	95% H-UCL	2109.2214
22100	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	629.56626
22101	95% Adjusted-CLT UCL (Chen-1995)		604.81404	97.5% Chebyshev (MVUE) UCL	813.78968
22102	95% Modified-t UCL (Johnson-1978)		519.13628	99% Chebyshev (MVUE) UCL	1175.6609
22103					
22104	**Gamma Distribution Test**			**Data Distribution**	
22105	k star (bias corrected)		0.5258794	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
22106	Theta Star		440.92806		
22107	MLE of Mean		231.875		
22108	MLE of Standard Deviation		319.7502		
22109	nu star		8.414071		
22110	Approximate Chi Square Value (.05)		2.9770835	**Nonparametric Statistics**	
22111	Adjusted Level of Significance		0.01946	95% CLT UCL	461.92181
22112	Adjusted Chi Square Value		2.2218526	95% Jackknife UCL	496.84798
22113				95% Standard Bootstrap UCL	444.44268
22114	Anderson-Darling Test Statistic		0.6093379	95% Bootstrap-t UCL	1421.2847
22115	Anderson-Darling 5% Critical Value		0.7480212	95% Hall's Bootstrap UCL	1556.744
22116	Kolmogorov-Smirnov Test Statistic		0.3114307	95% Percentile Bootstrap UCL	501.5
22117	Kolmogorov-Smirnov 5% Critical Value		0.3048868	95% BCA Bootstrap UCL	619.625
22118	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	841.5042
22119				97.5% Chebyshev(Mean, Sd) UCL	1105.2912
22120	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1623.4498
22121	95% Approximate Gamma UCL		655.34364		
22122	95% Adjusted Gamma UCL		878.10179		
22123					
22124	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	655.34364
22125					
22126	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
22127	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
22128	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
22129					
22130					
22131	OS|UG/KG|ANTHRACENE (gi_sd_s_2010)				
22132					
22133	General Statistics				
22134	Number of Valid Data		2	Number of Detected Data	1
22135	Number of Distinct Detected Data		1	Number of Non-Detect Data	1
22136				Percent Non-Detects	50.00%
22137					
22138	Warning: This data set only has 2 observations!				
22139	Data set is too small to compute reliable and meaningful statistics and estimates!				
22140	The data set for variable OS|UG/KG|ANTHRACENE (gi_sd_s_2010) was not processed!				
22141					
22142	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
22143	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
22144					
22145					
22146					
22147	OS|UG/KG|ANTHRACENE (gi_sd_stillwater_2005)				
22148					
22149	General Statistics				
22150	Number of Valid Observations		4	Number of Distinct Observations	4
22151					
22152					
22153	Warning: This data set only has 4 observations!				
22154	Data set is too small to compute reliable and meaningful statistics and estimates!				
22155	The data set for variable OS|UG/KG|ANTHRACENE (gi_sd_stillwater_2005) was not processed!				
22156					
22157	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
22158	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
22159					
22160					
22161					
22162	OS|UG/KG|ANTHRACENE (gi_sd_stillwater_2009)				
22163					
22164	General Statistics				
22165	Number of Valid Data		60	Number of Detected Data	47
22166	Number of Distinct Detected Data		44	Number of Non-Detect Data	13
22167				Percent Non-Detects	21.67%
22168					
22169	Raw Statistics			Log-transformed Statistics	
22170	Minimum Detected		4.3	Minimum Detected	1.458615
22171	Maximum Detected		3400	Maximum Detected	8.1315307
22172	Mean of Detected		209.38936	Mean of Detected	4.1343727
22173	SD of Detected		517.13882	SD of Detected	1.5957575
22174	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
22175	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
22176					
22177					
22178	UCL Statistics				
22179	Normal Distribution Test with Detected Values Only			Lognormal Distribution Test with Detected Values Only	
22180	Shapiro Wilk Test Statistic		0.3881473	Shapiro Wilk Test Statistic	0.9595306
22181	5% Shapiro Wilk Critical Value		0.946	5% Shapiro Wilk Critical Value	0.946

	A	B	C	D	E
22182	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
22183					
22184	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22185	DL/2 Substitution Method			DL/2 Substitution Method	
22186	Mean		164.37917	Mean	3.3470933
22187	SD		464.70997	SD	2.0649915
22188	95% DL/2 (t) UCL		264.63438	95% H-Stat (DL/2) UCL	702.46111
22189					
22190	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
22191	Mean		77.409977	Mean in Log Scale	3.3402052
22192	SD		537.5333	SD in Log Scale	2.1116082
22193	95% MLE (t) UCL		193.37589	Mean in Original Scale	164.48025
22194	95% MLE (Tiku) UCL		191.42143	SD in Original Scale	464.67444
22195				95% t UCL	264.7278
22196				95% Percentile Bootstrap UCL	271.59331
22197				95% BCA Bootstrap UCL	345.11541
22198					
22199	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
22200	k star (bias corrected)		0.5024943	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
22201	Theta Star		416.69994		
22202	nu star		47.234468		
22203					
22204	A-D Test Statistic		1.3308212	**Nonparametric Statistics**	
22205	5% A-D Critical Value		0.811807	Kaplan-Meier (KM) Method	
22206	K-S Test Statistic		0.811807	Mean	164.95333
22207	5% K-S Critical Value		0.136358	SD	460.61961
22208	**Data follow Appr. Gamma Distribution at 5% Significance Level**			SE of Mean	60.108627
22209				95% KM (t) UCL	265.40044
22210	**Assuming Gamma Distribution**			95% KM (z) UCL	263.82323
22211	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	265.1047
22212	Minimum		1E-12	95% KM (bootstrap t) UCL	469.90342
22213	Maximum		3400	95% KM (BCA) UCL	265.505
22214	Mean		164.02167	95% KM (Percentile Bootstrap) UCL	270.41333
22215	Median		37.5	95% KM (Chebyshev) UCL	426.96077
22216	SD		464.83777	97.5% KM (Chebyshev) UCL	540.33159
22217	k star		0.109039	99% KM (Chebyshev) UCL	763.02662
22218	Theta star		1504.2471		
22219	Nu star		13.084685	**Potential UCLs to Use**	
22220	AppChi2		5.949682	95% KM (Chebyshev) UCL	426.96077
22221	95% Gamma Approximate UCL		360.72043		
22222	95% Adjusted Gamma UCL		368.06164		
22223	**Note: DL/2 is not a recommended method.**				
22224					
22225	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
22226	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
22227	**For additional insight, the user may want to consult a statistician.**				
22228					
22229					
22230	**OS|UG/KG|ANTHRACENE (gi_sd_stillwater_2010)**				
22231					
22232	**General Statistics**				
22233	Number of Valid Observations		11	Number of Distinct Observations	11
22234					
22235	**Raw Statistics**			**Log-transformed Statistics**	
22236	Minimum		57	Minimum of Log Data	4.0430513
22237	Maximum		4400	Maximum of Log Data	8.3893598
22238	Mean		956.77273	Mean of log Data	5.8375625
22239	Median		240	SD of log Data	1.4701386
22240	SD		1437.1475		
22241	Coefficient of Variation		1.5020783		
22242	Skewness		1.7431736		
22243					
22244	**Relevant UCL Statistics**				
22245	**Normal Distribution Test**			**Lognormal Distribution Test**	
22246	Shapiro Wilk Test Statistic		0.6703304	Shapiro Wilk Test Statistic	0.8740418
22247	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85

	A	B	C	D	E
22248	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
22249					
22250	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22251	95% Student's-t UCL		1742.1416	95% H-UCL	6391.9654
22252	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	2635.4501
22253	95% Adjusted-CLT UCL (Chen-1995)		1912.8637	97.5% Chebyshev (MVUE) UCL	3405.6092
22254	95% Modified-t UCL (Johnson-1978)		1780.0992	99% Chebyshev (MVUE) UCL	4918.4376
22255					
22256	**Gamma Distribution Test**			**Data Distribution**	
22257	k star (bias corrected)		0.4983742	**Data appear Lognormal at 5% Significance Level**	
22258	Theta Star		1919.7878		
22259	MLE of Mean		956.77273		
22260	MLE of Standard Deviation		1355.2862		
22261	nu star		10.964233		
22262	Approximate Chi Square Value (.05)		4.5530132	**Nonparametric Statistics**	
22263	Adjusted Level of Significance		0.02783	95% CLT UCL	1669.5146
22264	Adjusted Chi Square Value		3.9019492	95% Jackknife UCL	1742.1416
22265				95% Standard Bootstrap UCL	1641.6754
22266	Anderson-Darling Test Statistic		1.0794644	95% Bootstrap-t UCL	2276.3546
22267	Anderson-Darling 5% Critical Value		0.7735185	95% Hall's Bootstrap UCL	1587.8829
22268	Kolmogorov-Smirnov Test Statistic		0.3446242	95% Percentile Bootstrap UCL	1730.8182
22269	Kolmogorov-Smirnov 5% Critical Value		0.2673802	95% BCA Bootstrap UCL	1908.0455
22270	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	2845.5546
22271				97.5% Chebyshev(Mean, Sd) UCL	3662.832
22272	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	5268.2153
22273	95% Approximate Gamma UCL		2304.0299		
22274	95% Adjusted Gamma UCL		2688.4714		
22275					
22276	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	2845.5546
22277					
22278	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
22279	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
22280	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
22281					
22282					
22283	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ne_2005)**				
22284					
22285	**General Statistics**				
22286	Number of Valid Observations		36	Number of Distinct Observations	32
22287					
22288	**Raw Statistics**			**Log-transformed Statistics**	
22289	Minimum		16	Minimum of Log Data	2.7725887
22290	Maximum		1400	Maximum of Log Data	7.2442275
22291	Mean		194.13889	Mean of log Data	4.5484803
22292	Median		90	SD of log Data	1.1594903
22293	SD		296.69938		
22294	Coefficient of Variation		1.5282841		
22295	Skewness		2.9294183		
22296					
22297	**Relevant UCL Statistics**				
22298	**Normal Distribution Test**			**Lognormal Distribution Test**	
22299	Shapiro Wilk Test Statistic		0.6032844	Shapiro Wilk Test Statistic	0.9584797
22300	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
22301	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
22302					
22303	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22304	95% Student's-t UCL		277.68807	95% H-UCL	306.23153
22305	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	361.4431
22306	95% Adjusted-CLT UCL (Chen-1995)		301.27413	97.5% Chebyshev (MVUE) UCL	440.10906
22307	95% Modified-t UCL (Johnson-1978)		281.71195	99% Chebyshev (MVUE) UCL	594.6331
22308					
22309	**Gamma Distribution Test**			**Data Distribution**	
22310	k star (bias corrected)		0.7714233	**Data appear Lognormal at 5% Significance Level**	
22311	Theta Star		251.66325		
22312	MLE of Mean		194.13889		

	A	B	C	D	E
22313	MLE of Standard Deviation		221.03761		
22314	nu star		55.542477		
22315	Approximate Chi Square Value (.05)		39.415332	**Nonparametric Statistics**	
22316	Adjusted Level of Significance		0.0428	95% CLT UCL	275.47673
22317	Adjusted Chi Square Value		38.797728	95% Jackknife UCL	277.68807
22318				95% Standard Bootstrap UCL	273.91259
22319	Anderson-Darling Test Statistic		1.4160808	95% Bootstrap-t UCL	341.16896
22320	Anderson-Darling 5% Critical Value		0.7846368	95% Hall's Bootstrap UCL	593.51773
22321	Kolmogorov-Smirnov Test Statistic		0.187657	95% Percentile Bootstrap UCL	278.86111
22322	Kolmogorov-Smirnov 5% Critical Value		0.1522067	95% BCA Bootstrap UCL	301.66667
22323	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	409.68599
22324				97.5% Chebyshev(Mean, Sd) UCL	502.9534
22325	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	686.15915
22326	95% Approximate Gamma UCL		273.57259		
22327	95% Adjusted Gamma UCL		277.92748		
22328					
22329	**Potential UCL to Use**			Use 95% H-UCL	306.23153
22330					
22331	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
22332	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
22333	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
22334	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
22335					
22336	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
22337	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
22338	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
22339					
22340					
22341	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ne_2009)**				
22342					
22343	**General Statistics**				
22344	Number of Valid Data		20	Number of Detected Data	19
22345	Number of Distinct Detected Data		16	Number of Non-Detect Data	1
22346				Percent Non-Detects	5.00%
22347					
22348	**Raw Statistics**			**Log-transformed Statistics**	
22349	Minimum Detected		4.4	Minimum Detected	1.4816045
22350	Maximum Detected		540	Maximum Detected	6.2915691
22351	Mean of Detected		118.42105	Mean of Detected	3.9134849
22352	SD of Detected		156.05432	SD of Detected	1.4289362
22353	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
22354	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
22355					
22356					
22357	**UCL Statistics**				
22358	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
22359	Shapiro Wilk Test Statistic		0.729712	Shapiro Wilk Test Statistic	0.9630147
22360	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
22361	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
22362					
22363	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22364	DL/2 Substitution Method			DL/2 Substitution Method	
22365	Mean		112.5825	Mean	3.7428494
22366	SD		154.12005	SD	1.5864179
22367	95% DL/2 (t) UCL		172.17238	95% H-Stat (DL/2) UCL	545.55723
22368					
22369	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
22370	Mean		108.01338	Mean in Log Scale	3.7361032
22371	SD		155.78626	SD in Log Scale	1.601149
22372	95% MLE (t) UCL		168.24749	Mean in Original Scale	112.57209
22373	95% MLE (Tiku) UCL		164.00192	SD in Original Scale	154.12794
22374				95% t UCL	172.16502

	A	B	C	D	E
22375				95% Percentile Bootstrap UCL	173.24
22376				95% BCA Bootstrap UCL	184.14709
22377					
22378	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
22379	k star (bias corrected)		0.6261159	**Data appear Gamma Distributed at 5% Significance Level**	
22380	Theta Star		189.13599		
22381	nu star		23.792405		
22382					
22383	A-D Test Statistic		0.5465078	**Nonparametric Statistics**	
22384	5% A-D Critical Value		0.7834066	Kaplan-Meier (KM) Method	
22385	K-S Test Statistic		0.7834066	Mean	112.72
22386	5% K-S Critical Value		0.2068412	SD	150.11726
22387	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	34.487061
22388				95% KM (t) UCL	172.35271
22389	**Assuming Gamma Distribution**			95% KM (z) UCL	169.44617
22390	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	172.1459
22391	Minimum		1E-12	95% KM (bootstrap t) UCL	196.83792
22392	Maximum		540	95% KM (BCA) UCL	178.345
22393	Mean		112.5	95% KM (Percentile Bootstrap) UCL	171.415
22394	Median		44	95% KM (Chebyshev) UCL	263.04561
22395	SD		154.18298	97.5% KM (Chebyshev) UCL	328.09163
22396	k star		0.2802153	99% KM (Chebyshev) UCL	455.86193
22397	Theta star		401.47701		
22398	Nu star		11.208612	**Potential UCLs to Use**	
22399	AppChi2		4.710503	95% KM (Chebyshev) UCL	263.04561
22400	95% Gamma Approximate UCL		267.69303		
22401	95% Adjusted Gamma UCL		287.81349		
22402	**Note: DL/2 is not a recommended method.**				
22403					
22404	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
22405	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
22406	**For additional insight, the user may want to consult a statistician.**				
22407					
22408					
22409	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ne_2010)**				
22410					
22411	**General Statistics**				
22412	Number of Valid Observations		16	Number of Distinct Observations	15
22413					
22414	**Raw Statistics**			**Log-transformed Statistics**	
22415	Minimum		25	Minimum of Log Data	3.2188758
22416	Maximum		910	Maximum of Log Data	6.8134446
22417	Mean		242.25	Mean of log Data	4.9338851
22418	Median		148	SD of log Data	1.1471924
22419	SD		251.02019		
22420	Coefficient of Variation		1.036203		
22421	Skewness		1.4513283		
22422					
22423	**Relevant UCL Statistics**				
22424	**Normal Distribution Test**			**Lognormal Distribution Test**	
22425	Shapiro Wilk Test Statistic		0.8252077	Shapiro Wilk Test Statistic	0.9423949
22426	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
22427	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
22428					
22429	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22430	95% Student's-t UCL		352.26276	95% H-UCL	640.30135
22431	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	604.67803
22432	95% Adjusted-CLT UCL (Chen-1995)		369.80245	97.5% Chebyshev (MVUE) UCL	757.20436
22433	95% Modified-t UCL (Johnson-1978)		356.05768	99% Chebyshev (MVUE) UCL	1056.8128
22434					
22435	**Gamma Distribution Test**			**Data Distribution**	
22436	k star (bias corrected)		0.8817725	**Data appear Gamma Distributed at 5% Significance Level**	
22437	Theta Star		274.73072		
22438	MLE of Mean		242.25		
22439	MLE of Standard Deviation		257.97968		
22440	nu star		28.21672		
22441	Approximate Chi Square Value (.05)		17.096849	**Nonparametric Statistics**	

	A	B	C	D	E
22442	Adjusted Level of Significance		0.03348	95% CLT UCL	345.47287
22443	Adjusted Chi Square Value		16.116016	95% Jackknife UCL	352.26276
22444				95% Standard Bootstrap UCL	340.73335
22445	Anderson-Darling Test Statistic		0.4533844	95% Bootstrap-t UCL	397.94211
22446	Anderson-Darling 5% Critical Value		0.7627149	95% Hall's Bootstrap UCL	383.16836
22447	Kolmogorov-Smirnov Test Statistic		0.1969582	95% Percentile Bootstrap UCL	342.9375
22448	Kolmogorov-Smirnov 5% Critical Value		0.2210064	95% BCA Bootstrap UCL	358.4375
22449	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	515.7929
22450				97.5% Chebyshev(Mean, Sd) UCL	634.15514
22451	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	866.65483
22452	95% Approximate Gamma UCL		399.81055		
22453	95% Adjusted Gamma UCL		424.14331		
22454					
22455	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	399.81055
22456					
22457	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
22458	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
22459	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
22460					
22461					
22462	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_nw_2005)**				
22463					
22464	**General Statistics**				
22465	Number of Valid Observations		18	Number of Distinct Observations	16
22466					
22467	**Raw Statistics**			**Log-transformed Statistics**	
22468	Minimum		72	Minimum of Log Data	4.2766661
22469	Maximum		1600	Maximum of Log Data	7.3777589
22470	Mean		353.44444	Mean of log Data	5.3288315
22471	Median		176	SD of log Data	0.9951615
22472	SD		443.20945		
22473	Coefficient of Variation		1.253972		
22474	Skewness		2.0145646		
22475					
22476	**Relevant UCL Statistics**				
22477	**Normal Distribution Test**			**Lognormal Distribution Test**	
22478	Shapiro Wilk Test Statistic		0.6646796	Shapiro Wilk Test Statistic	0.88623
22479	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
22480	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
22481					
22482	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22483	95% Student's-t UCL		535.17328	95% H-UCL	638.43202
22484	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	694.76018
22485	95% Adjusted-CLT UCL (Chen-1995)		578.27756	97.5% Chebyshev (MVUE) UCL	854.50326
22486	95% Modified-t UCL (Johnson-1978)		543.44063	99% Chebyshev (MVUE) UCL	1168.2876
22487					
22488	**Gamma Distribution Test**			**Data Distribution**	
22489	k star (bias corrected)		0.9233145	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
22490	Theta Star		382.79963		
22491	MLE of Mean		353.44444		
22492	MLE of Standard Deviation		367.82931		
22493	nu star		33.239322		
22494	Approximate Chi Square Value (.05)		21.057285	**Nonparametric Statistics**	
22495	Adjusted Level of Significance		0.03574	95% CLT UCL	525.27485
22496	Adjusted Chi Square Value		20.128321	95% Jackknife UCL	535.17328
22497				95% Standard Bootstrap UCL	522.26672
22498	Anderson-Darling Test Statistic		1.2335685	95% Bootstrap-t UCL	652.92897
22499	Anderson-Darling 5% Critical Value		0.7652849	95% Hall's Bootstrap UCL	544.58947
22500	Kolmogorov-Smirnov Test Statistic		0.1993815	95% Percentile Bootstrap UCL	546.94444
22501	Kolmogorov-Smirnov 5% Critical Value		0.2091592	95% BCA Bootstrap UCL	575.77778
22502	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	808.79887
22503				97.5% Chebyshev(Mean, Sd) UCL	1005.8311
22504	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1392.8627
22505	95% Approximate Gamma UCL		557.91872		
22506	95% Adjusted Gamma UCL		583.66784		
22507					

	A	B	C	D	E
22508	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	557.91872
22509					
22510	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
22511	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
22512	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
22513					
22514					
22515	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_nw_2009)**				
22516					
22517	**General Statistics**				
22518	Number of Valid Observations		7	Number of Distinct Observations	7
22519					
22520	**Raw Statistics**			**Log-transformed Statistics**	
22521	Minimum		7.6	Minimum of Log Data	2.0281482
22522	Maximum		190	Maximum of Log Data	5.2470241
22523	Mean		97.514286	Mean of log Data	4.2580191
22524	Median		96	SD of log Data	1.076909
22525	SD		61.665102		
22526	Coefficient of Variation		0.6323699		
22527	Skewness		0.1069274		
22528					
22529					
22530	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
22531					
22532	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
22533	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
22534					
22535					
22536	**Warning: There are only 7 Values in this data**				
22537	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
22538	**the resulting calculations may not be reliable enough to draw conclusions**				
22539					
22540	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
22541					
22542	**Relevant UCL Statistics**				
22543	**Normal Distribution Test**			**Lognormal Distribution Test**	
22544	Shapiro Wilk Test Statistic		0.9883687	Shapiro Wilk Test Statistic	0.824496
22545	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
22546	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
22547					
22548	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22549	95% Student's-t UCL		142.80441	95% H-UCL	706.23832
22550	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	313.90722
22551	95% Adjusted-CLT UCL (Chen-1995)		136.85774	97.5% Chebyshev (MVUE) UCL	400.82498
22552	95% Modified-t UCL (Johnson-1978)		142.9614	99% Chebyshev (MVUE) UCL	571.55809
22553					
22554	**Gamma Distribution Test**			**Data Distribution**	
22555	k star (bias corrected)		1.0669472	**Data appear Normal at 5% Significance Level**	
22556	Theta Star		91.395602		
22557	MLE of Mean		97.514286		
22558	MLE of Standard Deviation		94.405385		
22559	nu star		14.937261		
22560	Approximate Chi Square Value (.05)		7.2179319	**Nonparametric Statistics**	
22561	Adjusted Level of Significance		0.01584	95% CLT UCL	135.85125
22562	Adjusted Chi Square Value		5.6774917	95% Jackknife UCL	142.80441
22563				95% Standard Bootstrap UCL	133.83463
22564	Anderson-Darling Test Statistic		0.3499425	95% Bootstrap-t UCL	143.58567
22565	Anderson-Darling 5% Critical Value		0.7186978	95% Hall's Bootstrap UCL	144.28913
22566	Kolmogorov-Smirnov Test Statistic		0.2037698	95% Percentile Bootstrap UCL	133.37143

	A	B	C	D	E
22567	Kolmogorov-Smirnov 5% Critical Value		0.3162481	95% BCA Bootstrap UCL	132.71429
22568	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	199.10809
22569				97.5% Chebyshev(Mean, Sd) UCL	243.06781
22570	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	329.41817
22571	95% Approximate Gamma UCL		201.80246		
22572	95% Adjusted Gamma UCL		256.55632		
22573					
22574	**Potential UCL to Use**			Use 95% Student's-t UCL	142.80441
22575					
22576	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
22577	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
22578	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
22579					
22580					
22581	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_nw_2010)**				
22582					
22583	**General Statistics**				
22584	Number of Valid Observations		4	Number of Distinct Observations	3
22585					
22586					
22587	**Warning: This data set only has 4 observations!**				
22588	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
22589	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_nw_2010) was not processed!**				
22590					
22591	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
22592	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
22593					
22594					
22595					
22596	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ref_2009)**				
22597					
22598	**General Statistics**				
22599	Number of Valid Data		0	Number of Detected Data	0
22600	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
22601	Number of Missing Values		6	Percent Non-Detects	NaN%
22602					
22603	**Warning: This data set only has 0 observations!**				
22604	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
22605	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ref_2009) was not processed!**				
22606					
22607	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
22608	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
22609					
22610					
22611					
22612	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ref_2010)**				
22613					
22614	**General Statistics**				
22615	Number of Valid Data		0	Number of Detected Data	0
22616	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
22617	Number of Missing Values		3	Percent Non-Detects	NaN%
22618					

	A	B	C	D	E
22619	**Warning: This data set only has 0 observations!**				
22620	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
22621	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ref_2010) was not processed!**				
22622					
22623	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
22624	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
22625					
22626					
22627					
22628	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_s_2005)**				
22629					
22630	**General Statistics**				
22631	Number of Valid Observations		8	Number of Distinct Observations	8
22632					
22633	**Raw Statistics**			**Log-transformed Statistics**	
22634	Minimum		34	Minimum of Log Data	3.5263605
22635	Maximum		1700	Maximum of Log Data	7.4383835
22636	Mean		391.625	Mean of log Data	5.3450609
22637	Median		207.5	SD of log Data	1.1855699
22638	SD		543.8902		
22639	Coefficient of Variation		1.3888036		
22640	Skewness		2.5276826		
22641					
22642					
22643	**Warning: There are only 8 Values in this data**				
22644	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
22645	**the resulting calculations may not be reliable enough to draw conclusions**				
22646					
22647	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
22648					
22649	**Relevant UCL Statistics**				
22650	**Normal Distribution Test**			**Lognormal Distribution Test**	
22651	Shapiro Wilk Test Statistic		0.6398371	Shapiro Wilk Test Statistic	0.9670252
22652	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
22653	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
22654					
22655	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22656	95% Student's-t UCL		755.94152	95% H-UCL	2426.7934
22657	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1069.5999
22658	95% Adjusted-CLT UCL (Chen-1995)		891.54264	97.5% Chebyshev (MVUE) UCL	1370.744
22659	95% Modified-t UCL (Johnson-1978)		784.58281	99% Chebyshev (MVUE) UCL	1962.2835
22660					
22661	**Gamma Distribution Test**			**Data Distribution**	
22662	k star (bias corrected)		0.6652747	**Data appear Gamma Distributed at 5% Significance Level**	
22663	Theta Star		588.66661		
22664	MLE of Mean		391.625		
22665	MLE of Standard Deviation		480.14223		
22666	nu star		10.644395		
22667	Approximate Chi Square Value (.05)		4.348417	**Nonparametric Statistics**	
22668	Adjusted Level of Significance		0.01946	95% CLT UCL	707.92085
22669	Adjusted Chi Square Value		3.3898132	95% Jackknife UCL	755.94152
22670				95% Standard Bootstrap UCL	695.01284
22671	Anderson-Darling Test Statistic		0.438434	95% Bootstrap-t UCL	1671.6508
22672	Anderson-Darling 5% Critical Value		0.7381538	95% Hall's Bootstrap UCL	2150.5448
22673	Kolmogorov-Smirnov Test Statistic		0.205304	95% Percentile Bootstrap UCL	741.75
22674	Kolmogorov-Smirnov 5% Critical Value		0.3021765	95% BCA Bootstrap UCL	912.25
22675	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1229.8161
22676				97.5% Chebyshev(Mean, Sd) UCL	1592.5021
22677	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	2304.9284
22678	95% Approximate Gamma UCL		958.65031		
22679	95% Adjusted Gamma UCL		1229.7466		

	A	B	C	D	E
22680					
22681	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	958.65031
22682					
22683	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
22684	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
22685	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
22686					
22687					
22688	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_s_2010)**				
22689					
22690	**General Statistics**				
22691	Number of Valid Observations		2	Number of Distinct Observations	2
22692					
22693					
22694	**Warning: This data set only has 2 observations!**				
22695	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
22696	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_s_2010) was not processed!**				
22697					
22698	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
22699	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
22700					
22701					
22702					
22703	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_stillwater_2005)**				
22704					
22705	**General Statistics**				
22706	Number of Valid Observations		4	Number of Distinct Observations	4
22707					
22708					
22709	**Warning: This data set only has 4 observations!**				
22710	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
22711	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_stillwater_2005) was not processed!**				
22712					
22713	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
22714	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
22715					
22716					
22717					
22718	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_stillwater_2009)**				
22719					
22720	**General Statistics**				
22721	Number of Valid Data		60	Number of Detected Data	53
22722	Number of Distinct Detected Data		49	Number of Non-Detect Data	7
22723				Percent Non-Detects	11.67%
22724					
22725	**Raw Statistics**			**Log-transformed Statistics**	
22726	Minimum Detected		2.58	Minimum Detected	0.9477894
22727	Maximum Detected		5400	Maximum Detected	8.5941542
22728	Mean of Detected		343.60151	Mean of Detected	4.4641382
22729	SD of Detected		775.41179	SD of Detected	1.878567
22730	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
22731	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
22732					
22733					

	A	B	C	D	E
22734	**UCL Statistics**				
22735	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
22736	Lilliefors Test Statistic		0.3300431	Lilliefors Test Statistic	0.0924859
22737	5% Lilliefors Critical Value		0.1217015	5% Lilliefors Critical Value	0.1217015
22738	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
22739					
22740	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22741	DL/2 Substitution Method			DL/2 Substitution Method	
22742	Mean		303.70717	Mean	4.0017459
22743	SD		736.3299	SD	2.1809579
22744	95% DL/2 (t) UCL		462.5609	95% H-Stat (DL/2) UCL	1951.9291
22745					
22746	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
22747	Mean		228.77905	Mean in Log Scale	3.994526
22748	SD		800.67846	SD in Log Scale	2.2058008
22749	95% MLE (t) UCL		401.51516	Mean in Original Scale	303.73672
22750	95% MLE (Tiku) UCL		391.17647	SD in Original Scale	736.31766
22751				95% t UCL	462.58782
22752				95% Percentile Bootstrap UCL	473.49826
22753				95% BCA Bootstrap UCL	588.26207
22754					
22755	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
22756	k star (bias corrected)		0.4529718	**Data appear Gamma Distributed at 5% Significance Level**	
22757	Theta Star		758.54938		
22758	nu star		48.015015		
22759					
22760	A-D Test Statistic		0.7692408	**Nonparametric Statistics**	
22761	5% A-D Critical Value		0.8227262	Kaplan-Meier (KM) Method	
22762	K-S Test Statistic		0.8227262	Mean	303.81567
22763	5% K-S Critical Value		0.1296669	SD	730.12321
22764	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	95.160516
22765				95% KM (t) UCL	462.83774
22766	**Assuming Gamma Distribution**			95% KM (z) UCL	460.34079
22767	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	462.57265
22768	Minimum		1E-12	95% KM (bootstrap t) UCL	683.94976
22769	Maximum		5400	95% KM (BCA) UCL	490.68067
22770	Mean		303.51467	95% KM (Percentile Bootstrap) UCL	474.599
22771	Median		86.5	95% KM (Chebyshev) UCL	718.61074
22772	SD		736.41039	97.5% KM (Chebyshev) UCL	898.0929
22773	k star		0.1567961	99% KM (Chebyshev) UCL	1250.6509
22774	Theta star		1935.728		
22775	Nu star		18.815536	**Potential UCLs to Use**	
22776	AppChi2		9.9828019	95% KM (Chebyshev) UCL	718.61074
22777	95% Gamma Approximate UCL		572.06297		
22778	95% Adjusted Gamma UCL		581.3132		
22779	**Note: DL/2 is not a recommended method.**				
22780					
22781	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
22782	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
22783	**For additional insight, the user may want to consult a statistician.**				
22784					
22785					
22786	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_sd_stillwater_2010)**				
22787					
22788	**General Statistics**				
22789	Number of Valid Observations		11	Number of Distinct Observations	11
22790					
22791	**Raw Statistics**			**Log-transformed Statistics**	
22792	Minimum		160	Minimum of Log Data	5.0751738
22793	Maximum		5200	Maximum of Log Data	8.5564139
22794	Mean		1292.2727	Mean of log Data	6.5692831
22795	Median		650	SD of log Data	1.1386733
22796	SD		1564.4701		
22797	Coefficient of Variation		1.2106346		
22798	Skewness		1.8823266		
22799					
22800	**Relevant UCL Statistics**				

	A	B	C	D	E
22801	**Normal Distribution Test**			**Lognormal Distribution Test**	
22802	Shapiro Wilk Test Statistic		0.7436952	Shapiro Wilk Test Statistic	0.9502184
22803	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
22804	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
22805					
22806	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22807	95% Student's-t UCL		2147.2206	95% H-UCL	4426.3268
22808	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3252.673
22809	95% Adjusted-CLT UCL (Chen-1995)		2354.2145	97.5% Chebyshev (MVUE) UCL	4118.3427
22810	95% Modified-t UCL (Johnson-1978)		2191.8395	99% Chebyshev (MVUE) UCL	5818.7833
22811					
22812	**Gamma Distribution Test**			**Data Distribution**	
22813	k star (bias corrected)		0.7685414	**Data appear Gamma Distributed at 5% Significance Level**	
22814	Theta Star		1681.4615		
22815	MLE of Mean		1292.2727		
22816	MLE of Standard Deviation		1474.0783		
22817	nu star		16.90791		
22818	Approximate Chi Square Value (.05)		8.6064656	**Nonparametric Statistics**	
22819	Adjusted Level of Significance		0.02783	95% CLT UCL	2068.1592
22820	Adjusted Chi Square Value		7.65933	95% Jackknife UCL	2147.2206
22821				95% Standard Bootstrap UCL	2036.8071
22822	Anderson-Darling Test Statistic		0.4657202	95% Bootstrap-t UCL	3049.2654
22823	Anderson-Darling 5% Critical Value		0.7527167	95% Hall's Bootstrap UCL	2789.0979
22824	Kolmogorov-Smirnov Test Statistic		0.1915683	95% Percentile Bootstrap UCL	2110
22825	Kolmogorov-Smirnov 5% Critical Value		0.2626523	95% BCA Bootstrap UCL	2309.0909
22826	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3348.3893
22827				97.5% Chebyshev(Mean, Sd) UCL	4238.0726
22828	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	5985.6831
22829	95% Approximate Gamma UCL		2538.7461		
22830	95% Adjusted Gamma UCL		2852.6818		
22831					
22832	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	2538.7461
22833					
22834	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
22835	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
22836	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
22837					
22838					
22839	**OS|UG/KG|BENZO(A)PYRENE (gi_sd_ne_2005)**				
22840					
22841	**General Statistics**				
22842	Number of Valid Observations		36	Number of Distinct Observations	33
22843					
22844	**Raw Statistics**			**Log-transformed Statistics**	
22845	Minimum		15	Minimum of Log Data	2.7080502
22846	Maximum		980	Maximum of Log Data	6.8875526
22847	Mean		156.43056	Mean of log Data	4.4350153
22848	Median		77.5	SD of log Data	1.083109
22849	SD		214.2857		
22850	Coefficient of Variation		1.3698455		
22851	Skewness		2.6880137		
22852					
22853	**Relevant UCL Statistics**				
22854	**Normal Distribution Test**			**Lognormal Distribution Test**	
22855	Shapiro Wilk Test Statistic		0.6435956	Shapiro Wilk Test Statistic	0.9599902
22856	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
22857	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
22858					
22859	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22860	95% Student's-t UCL		216.77242	95% H-UCL	238.73541
22861	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	285.4761
22862	95% Adjusted-CLT UCL (Chen-1995)		232.27164	97.5% Chebyshev (MVUE) UCL	344.98719
22863	95% Modified-t UCL (Johnson-1978)		219.4391	99% Chebyshev (MVUE) UCL	461.88521
22864					
22865	**Gamma Distribution Test**			**Data Distribution**	

	A	B	C	D	E
22866	k star (bias corrected)		0.8814477	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
22867	Theta Star		177.47003		
22868	MLE of Mean		156.43056		
22869	MLE of Standard Deviation		166.61853		
22870	nu star		63.464238		
22871	Approximate Chi Square Value (.05)		46.137502	**Nonparametric Statistics**	
22872	Adjusted Level of Significance		0.0428	95% CLT UCL	215.17532
22873	Adjusted Chi Square Value		45.466119	95% Jackknife UCL	216.77242
22874				95% Standard Bootstrap UCL	214.39069
22875	Anderson-Darling Test Statistic		1.1824614	95% Bootstrap-t UCL	256.18488
22876	Anderson-Darling 5% Critical Value		0.7790397	95% Hall's Bootstrap UCL	282.22637
22877	Kolmogorov-Smirnov Test Statistic		0.1445105	95% Percentile Bootstrap UCL	216.01389
22878	Kolmogorov-Smirnov 5% Critical Value		0.1514981	95% BCA Bootstrap UCL	236.72222
22879	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	312.1055
22880				97.5% Chebyshev(Mean, Sd) UCL	379.46618
22881	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	511.78318
22882	95% Approximate Gamma UCL		215.17736		
22883	95% Adjusted Gamma UCL		218.35481		
22884					
22885	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	215.17736
22886					
22887	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
22888	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
22889	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
22890					
22891					
22892	**OS|UG/KG|BENZO(A)PYRENE (gi_sd_ne_2009)**				
22893					
22894	**General Statistics**				
22895	Number of Valid Data		20	Number of Detected Data	19
22896	Number of Distinct Detected Data		19	Number of Non-Detect Data	1
22897				Percent Non-Detects	5.00%
22898					
22899	**Raw Statistics**			**Log-transformed Statistics**	
22900	Minimum Detected		2.72	Minimum Detected	1.0006319
22901	Maximum Detected		480	Maximum Detected	6.1737861
22902	Mean of Detected		99.601053	Mean of Detected	3.7916602
22903	SD of Detected		127.82615	SD of Detected	1.4109966
22904	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
22905	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
22906					
22907					
22908	**UCL Statistics**				
22909	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
22910	Shapiro Wilk Test Statistic		0.7389179	Shapiro Wilk Test Statistic	0.9725832
22911	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
22912	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
22913					
22914	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22915	DL/2 Substitution Method			DL/2 Substitution Method	
22916	Mean		94.7035	Mean	3.627116
22917	SD		126.33	SD	1.5580831
22918	95% DL/2 (t) UCL		143.54847	95% H-Stat (DL/2) UCL	446.28794
22919					
22920	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
22921	Mean		86.739244	Mean in Log Scale	3.6507102
22922	SD		132.8316	SD in Log Scale	1.5111137
22923	95% MLE (t) UCL		138.09803	Mean in Original Scale	94.753249
22924	95% MLE (Tiku) UCL		135.56525	SD in Original Scale	126.29162
22925				95% t UCL	143.58338
22926				95% Percentile Bootstrap UCL	143.28
22927				95% BCA Bootstrap UCL	162.9705
22928					
22929	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
22930	k star (bias corrected)		0.658876	**Data appear Gamma Distributed at 5% Significance Level**	

	A	B	C	D	E
22931	Theta Star		151.16814		
22932	nu star		25.037286		
22933					
22934	A-D Test Statistic		0.4527919	**Nonparametric Statistics**	
22935	5% A-D Critical Value		0.7796689	Kaplan-Meier (KM) Method	
22936	K-S Test Statistic		0.7796689	Mean	94.757
22937	5% K-S Critical Value		0.2062343	SD	123.09104
22938	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	28.278214
22939				95% KM (t) UCL	143.65379
22940	**Assuming Gamma Distribution**			95% KM (z) UCL	141.27052
22941	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	143.4265
22942	Minimum		1E-12	95% KM (bootstrap t) UCL	167.84831
22943	Maximum		480	95% KM (BCA) UCL	140.37
22944	Mean		94.621	95% KM (Percentile Bootstrap) UCL	143.756
22945	Median		40	95% KM (Chebyshev) UCL	218.01888
22946	SD		126.39449	97.5% KM (Chebyshev) UCL	271.35439
22947	k star		0.2854316	99% KM (Chebyshev) UCL	376.12168
22948	Theta star		331.50144		
22949	Nu star		11.417266	**Potential UCLs to Use**	
22950	AppChi2		4.845739	95% KM (Chebyshev) UCL	218.01888
22951	95% Gamma Approximate UCL		222.94083		
22952	95% Adjusted Gamma UCL		239.48828		
22953	**Note: DL/2 is not a recommended method.**				
22954					
22955	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
22956	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
22957	**For additional insight, the user may want to consult a statistician.**				
22958					
22959					
22960	**OS|UG/KG|BENZO(A)PYRENE (gi_sd_ne_2010)**				
22961					
22962	**General Statistics**				
22963	Number of Valid Observations		16	Number of Distinct Observations	16
22964					
22965	**Raw Statistics**			**Log-transformed Statistics**	
22966	Minimum		28	Minimum of Log Data	3.3322045
22967	Maximum		890	Maximum of Log Data	6.7912215
22968	Mean		240.6875	Mean of log Data	4.9588679
22969	Median		160	SD of log Data	1.1116382
22970	SD		244.01877		
22971	Coefficient of Variation		1.0138407		
22972	Skewness		1.4583957		
22973					
22974	**Relevant UCL Statistics**				
22975	**Normal Distribution Test**			**Lognormal Distribution Test**	
22976	Shapiro Wilk Test Statistic		0.8288424	Shapiro Wilk Test Statistic	0.9450832
22977	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
22978	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
22979					
22980	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
22981	95% Student's-t UCL		347.6318	95% H-UCL	603.7977
22982	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	586.31294
22983	95% Adjusted-CLT UCL (Chen-1995)		364.79745	97.5% Chebyshev (MVUE) UCL	732.01143
22984	95% Modified-t UCL (Johnson-1978)		351.33884	99% Chebyshev (MVUE) UCL	1018.2079
22985					
22986	**Gamma Distribution Test**			**Data Distribution**	
22987	k star (bias corrected)		0.9268784	**Data appear Gamma Distributed at 5% Significance Level**	
22988	Theta Star		259.67537		
22989	MLE of Mean		240.6875		
22990	MLE of Standard Deviation		250.00123		
22991	nu star		29.66011		
22992	Approximate Chi Square Value (.05)		18.225815	**Nonparametric Statistics**	
22993	Adjusted Level of Significance		0.03348	95% CLT UCL	341.03129
22994	Adjusted Chi Square Value		17.209795	95% Jackknife UCL	347.6318
22995				95% Standard Bootstrap UCL	339.2612
22996	Anderson-Darling Test Statistic		0.3919267	95% Bootstrap-t UCL	390.41201
22997	Anderson-Darling 5% Critical Value		0.761759	95% Hall's Bootstrap UCL	378.41112
22998	Kolmogorov-Smirnov Test Statistic		0.1822471	95% Percentile Bootstrap UCL	340
22999	Kolmogorov-Smirnov 5% Critical Value		0.2207555	95% BCA Bootstrap UCL	359.5

	A	B	C	D	E
23000	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	506.6008
23001				97.5% Chebyshev(Mean, Sd) UCL	621.66169
23002	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	847.67654
23003	95% Approximate Gamma UCL		391.68716		
23004	95% Adjusted Gamma UCL		414.81132		
23005					
23006	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	391.68716
23007					
23008	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
23009	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
23010	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
23011					
23012					
23013	**OS|UG/KG|BENZO(A)PYRENE (gi_sd_nw_2005)**				
23014					
23015	**General Statistics**				
23016	Number of Valid Observations		18	Number of Distinct Observations	16
23017					
23018	**Raw Statistics**			**Log-transformed Statistics**	
23019	Minimum		63	Minimum of Log Data	4.1431347
23020	Maximum		960	Maximum of Log Data	6.8669333
23021	Mean		243.94444	Mean of log Data	5.0947221
23022	Median		130	SD of log Data	0.8782484
23023	SD		255.98701		
23024	Coefficient of Variation		1.049366		
23025	Skewness		1.903082		
23026					
23027	**Relevant UCL Statistics**				
23028	**Normal Distribution Test**			**Lognormal Distribution Test**	
23029	Shapiro Wilk Test Statistic		0.7282792	Shapiro Wilk Test Statistic	0.8998098
23030	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
23031	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
23032					
23033	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
23034	95% Student's-t UCL		348.9066	95% H-UCL	405.71733
23035	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	462.83458
23036	95% Adjusted-CLT UCL (Chen-1995)		372.10852	97.5% Chebyshev (MVUE) UCL	562.15905
23037	95% Modified-t UCL (Johnson-1978)		353.41738	99% Chebyshev (MVUE) UCL	757.26274
23038					
23039	**Gamma Distribution Test**			**Data Distribution**	
23040	k star (bias corrected)		1.1921441	**Data appear Lognormal at 5% Significance Level**	
23041	Theta Star		204.62664		
23042	MLE of Mean		243.94444		
23043	MLE of Standard Deviation		223.42232		
23044	nu star		42.917187		
23045	Approximate Chi Square Value (.05)		28.89674	**Nonparametric Statistics**	
23046	Adjusted Level of Significance		0.03574	95% CLT UCL	343.18951
23047	Adjusted Chi Square Value		27.793719	95% Jackknife UCL	348.9066
23048				95% Standard Bootstrap UCL	340.21811
23049	Anderson-Darling Test Statistic		0.9297156	95% Bootstrap-t UCL	423.2364
23050	Anderson-Darling 5% Critical Value		0.7586071	95% Hall's Bootstrap UCL	428.2165
23051	Kolmogorov-Smirnov Test Statistic		0.2301008	95% Percentile Bootstrap UCL	346.44444
23052	Kolmogorov-Smirnov 5% Critical Value		0.2077333	95% BCA Bootstrap UCL	372.16667
23053	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	506.9461
23054				97.5% Chebyshev(Mean, Sd) UCL	620.74712
23055	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	844.2872
23056	95% Approximate Gamma UCL		362.30417		
23057	95% Adjusted Gamma UCL		376.68257		
23058					
23059	**Potential UCL to Use**			Use 95% H-UCL	405.71733
23060					
23061	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
23062	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				

	A	B	C	D	E
23063	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.				
23064	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.				
23065					
23066	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
23067	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
23068	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
23069					
23070					
23071	OS|UG/KG|BENZO(A)PYRENE (gi_sd_nw_2009)				
23072					
23073	General Statistics				
23074	Number of Valid Observations		7	Number of Distinct Observations	7
23075					
23076	Raw Statistics			Log-transformed Statistics	
23077	Minimum		8.6	Minimum of Log Data	2.1517622
23078	Maximum		150	Maximum of Log Data	5.0106353
23079	Mean		82.942857	Mean of log Data	4.1350935
23080	Median		77	SD of log Data	0.9789803
23081	SD		50.618404		
23082	Coefficient of Variation		0.6102805		
23083	Skewness		-0.100712		
23084					
23085					
23086	Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!				
23087					
23088	It is suggested to collect at least 8 to 10 observations using these statistical methods!				
23089	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
23090					
23091					
23092	Warning: There are only 7 Values in this data				
23093	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
23094	the resulting calculations may not be reliable enough to draw conclusions				
23095					
23096	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
23097					
23098	Relevant UCL Statistics				
23099	Normal Distribution Test			Lognormal Distribution Test	
23100	Shapiro Wilk Test Statistic		0.9498009	Shapiro Wilk Test Statistic	0.830746
23101	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
23102	Data appear Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
23103					
23104	Assuming Normal Distribution			Assuming Lognormal Distribution	
23105	95% Student's-t UCL		120.1197	95% H-UCL	432.02249
23106	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	242.24097
23107	95% Adjusted-CLT UCL (Chen-1995)		113.63397	97.5% Chebyshev (MVUE) UCL	307.05088
23108	95% Modified-t UCL (Johnson-1978)		119.99832	99% Chebyshev (MVUE) UCL	434.35741
23109					
23110	Gamma Distribution Test			Data Distribution	
23111	k star (bias corrected)		1.1902673	Data appear Normal at 5% Significance Level	
23112	Theta Star		69.684229		
23113	MLE of Mean		82.942857		
23114	MLE of Standard Deviation		76.025055		
23115	nu star		16.663742		
23116	Approximate Chi Square Value (.05)		8.4324674	Nonparametric Statistics	
23117	Adjusted Level of Significance		0.01584	95% CLT UCL	114.41213
23118	Adjusted Chi Square Value		6.7418731	95% Jackknife UCL	120.1197

	A	B	C	D	E
23119				95% Standard Bootstrap UCL	111.86403
23120	Anderson-Darling Test Statistic		0.3975489	95% Bootstrap-t UCL	120.24482
23121	Anderson-Darling 5% Critical Value		0.7159613	95% Hall's Bootstrap UCL	111.99408
23122	Kolmogorov-Smirnov Test Statistic		0.2109831	95% Percentile Bootstrap UCL	110.85714
23123	Kolmogorov-Smirnov 5% Critical Value		0.3154281	95% BCA Bootstrap UCL	110.42857
23124	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	166.33713
23125				97.5% Chebyshev(Mean, Sd) UCL	202.4219
23126	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	273.30344
23127	95% Approximate Gamma UCL		163.90675		
23128	95% Adjusted Gamma UCL		205.00807		
23129					
23130	**Potential UCL to Use**			Use 95% Student's-t UCL	120.1197
23131					
23132	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
23133	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
23134	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
23135					
23136					
23137	**OS|UG/KG|BENZO(A)PYRENE (gi_sd_nw_2010)**				
23138					
23139	**General Statistics**				
23140	Number of Valid Observations		4	Number of Distinct Observations	3
23141					
23142					
23143	**Warning: This data set only has 4 observations!**				
23144	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
23145	**The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_sd_nw_2010) was not processed!**				
23146					
23147	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
23148	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
23149					
23150					
23151					
23152	**OS|UG/KG|BENZO(A)PYRENE (gi_sd_ref_2009)**				
23153					
23154	**General Statistics**				
23155	Number of Valid Data		0	Number of Detected Data	0
23156	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
23157	Number of Missing Values		6	Percent Non-Detects	NaN%
23158					
23159	**Warning: This data set only has 0 observations!**				
23160	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
23161	**The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_sd_ref_2009) was not processed!**				
23162					
23163	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
23164	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
23165					
23166					
23167					
23168	**OS|UG/KG|BENZO(A)PYRENE (gi_sd_ref_2010)**				
23169					
23170	**General Statistics**				
23171	Number of Valid Data		0	Number of Detected Data	0

	A	B	C	D	E
23172	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
23173	Number of Missing Values		3	Percent Non-Detects	NaN%
23174					
23175	**Warning: This data set only has 0 observations!**				
23176	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
23177	**The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_sd_ref_2010) was not processed!**				
23178					
23179	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
23180	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
23181					
23182					
23183					
23184	**OS|UG/KG|BENZO(A)PYRENE (gi_sd_s_2005)**				
23185					
23186	**General Statistics**				
23187	Number of Valid Observations		8	Number of Distinct Observations	8
23188					
23189	**Raw Statistics**			**Log-transformed Statistics**	
23190	Minimum		36	Minimum of Log Data	3.5835189
23191	Maximum		1400	Maximum of Log Data	7.2442275
23192	Mean		323.375	Mean of log Data	5.1985038
23193	Median		167.5	SD of log Data	1.1042935
23194	SD		446.43123		
23195	Coefficient of Variation		1.3805372		
23196	Skewness		2.5519513		
23197					
23198					
23199	**Warning: There are only 8 Values in this data**				
23200	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
23201	**the resulting calculations may not be reliable enough to draw conclusions**				
23202					
23203	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
23204					
23205	**Relevant UCL Statistics**				
23206	**Normal Distribution Test**			**Lognormal Distribution Test**	
23207	Shapiro Wilk Test Statistic		0.6299292	Shapiro Wilk Test Statistic	0.9665964
23208	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
23209	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
23210					
23211	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
23212	95% Student's-t UCL		622.41012	95% H-UCL	1551.995
23213	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	821.25089
23214	95% Adjusted-CLT UCL (Chen-1995)		735.16013	97.5% Chebyshev (MVUE) UCL	1046.7782
23215	95% Modified-t UCL (Johnson-1978)		646.14493	99% Chebyshev (MVUE) UCL	1489.783
23216					
23217	**Gamma Distribution Test**			**Data Distribution**	
23218	k star (bias corrected)		0.7053513	**Data appear Gamma Distributed at 5% Significance Level**	
23219	Theta Star		458.45949		
23220	MLE of Mean		323.375		
23221	MLE of Standard Deviation		385.0381		
23222	nu star		11.285621		
23223	Approximate Chi Square Value (.05)		4.7603341	**Nonparametric Statistics**	
23224	Adjusted Level of Significance		0.01946	95% CLT UCL	582.99421
23225	Adjusted Chi Square Value		3.746728	95% Jackknife UCL	622.41012
23226				95% Standard Bootstrap UCL	572.49373
23227	Anderson-Darling Test Statistic		0.4855017	95% Bootstrap-t UCL	1291.569
23228	Anderson-Darling 5% Critical Value		0.7356838	95% Hall's Bootstrap UCL	1571.1068
23229	Kolmogorov-Smirnov Test Statistic		0.2464227	95% Percentile Bootstrap UCL	624.5
23230	Kolmogorov-Smirnov 5% Critical Value		0.3015096	95% BCA Bootstrap UCL	780.75
23231	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1011.3717
23232				97.5% Chebyshev(Mean, Sd) UCL	1309.0685
23233	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1893.836

	A	B	C	D	E
23234	95% Approximate Gamma UCL		766.64528		
23235	95% Adjusted Gamma UCL		974.0466		
23236					
23237	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	766.64528
23238					
23239	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
23240	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
23241	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
23242					
23243					
23244	**OS|UG/KG|BENZO(A)PYRENE (gi_sd_s_2010)**				
23245					
23246	**General Statistics**				
23247	Number of Valid Observations		2	Number of Distinct Observations	2
23248					
23249					
23250	**Warning: This data set only has 2 observations!**				
23251	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
23252	**The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_sd_s_2010) was not processed!**				
23253					
23254	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
23255	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
23256					
23257					
23258					
23259	**OS|UG/KG|BENZO(A)PYRENE (gi_sd_stillwater_2005)**				
23260					
23261	**General Statistics**				
23262	Number of Valid Observations		4	Number of Distinct Observations	4
23263					
23264					
23265	**Warning: This data set only has 4 observations!**				
23266	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
23267	**The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_sd_stillwater_2005) was not processed!**				
23268					
23269	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
23270	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
23271					
23272					
23273					
23274	**OS|UG/KG|BENZO(A)PYRENE (gi_sd_stillwater_2009)**				
23275					
23276	**General Statistics**				
23277	Number of Valid Data		60	Number of Detected Data	50
23278	Number of Distinct Detected Data		42	Number of Non-Detect Data	10
23279				Percent Non-Detects	16.67%
23280					
23281	**Raw Statistics**			**Log-transformed Statistics**	
23282	Minimum Detected		3.92	Minimum Detected	1.3660917
23283	Maximum Detected		2700	Maximum Detected	7.9010071
23284	Mean of Detected		274.4604	Mean of Detected	4.5723638
23285	SD of Detected		441.28857	SD of Detected	1.648723
23286	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
23287	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
23288					

	A	B	C	D	E
23289					
23290	**UCL Statistics**				
23291	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
23292	Shapiro Wilk Test Statistic		0.6072655	Shapiro Wilk Test Statistic	0.9557526
23293	5% Shapiro Wilk Critical Value		0.947	5% Shapiro Wilk Critical Value	0.947
23294	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
23295					
23296	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
23297	DL/2 Substitution Method			DL/2 Substitution Method	
23298	Mean		228.992	Mean	3.8937657
23299	SD		415.02005	SD	2.1445426
23300	95% DL/2 (t) UCL		318.52725	95% H-Stat (DL/2) UCL	1556.8375
23301					
23302	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
23303	Mean		176.67421	Mean in Log Scale	3.9536003
23304	SD		466.21522	SD in Log Scale	2.0726529
23305	95% MLE (t) UCL		277.25417	Mean in Original Scale	229.20949
23306	95% MLE (Tiku) UCL		273.71031	SD in Original Scale	414.89976
23307				95% t UCL	318.7188
23308				95% Percentile Bootstrap UCL	325.7449
23309				95% BCA Bootstrap UCL	353.23483
23310					
23311	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
23312	k star (bias corrected)		0.571366	**Data appear Gamma Distributed at 5% Significance Level**	
23313	Theta Star		480.35832		
23314	nu star		57.136598		
23315					
23316	A-D Test Statistic		0.483663	**Nonparametric Statistics**	
23317	5% A-D Critical Value		0.8064332	Kaplan-Meier (KM) Method	
23318	K-S Test Statistic		0.8064332	Mean	229.37033
23319	5% K-S Critical Value		0.1316433	SD	411.33884
23320	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	53.642753
23321				95% KM (t) UCL	319.01236
23322	**Assuming Gamma Distribution**			95% KM (z) UCL	317.60481
23323	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	318.84856
23324	Minimum		1E-12	95% KM (bootstrap t) UCL	376.20054
23325	Maximum		2700	95% KM (BCA) UCL	344.035
23326	Mean		228.717	95% KM (Percentile Bootstrap) UCL	324.227
23327	Median		88.5	95% KM (Chebyshev) UCL	463.19367
23328	SD		415.17368	97.5% KM (Chebyshev) UCL	564.36922
23329	k star		0.1312299	99% KM (Chebyshev) UCL	763.10899
23330	Theta star		1742.8729		
23331	Nu star		15.747586	**Potential UCLs to Use**	
23332	AppChi2		7.7844023	95% KM (Chebyshev) UCL	463.19367
23333	95% Gamma Approximate UCL		462.68684		
23334	95% Adjusted Gamma UCL		471.05007		
23335	**Note: DL/2 is not a recommended method.**				
23336					
23337	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
23338	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
23339	**For additional insight, the user may want to consult a statistician.**				
23340					
23341					
23342	**OS|UG/KG|BENZO(A)PYRENE (gi_sd_stillwater_2010)**				
23343					
23344	**General Statistics**				
23345	Number of Valid Observations		11	Number of Distinct Observations	11
23346					
23347	**Raw Statistics**			**Log-transformed Statistics**	
23348	Minimum		118	Minimum of Log Data	4.7706846
23349	Maximum		3800	Maximum of Log Data	8.2427563
23350	Mean		992.09091	Mean of log Data	6.3892472
23351	Median		600	SD of log Data	1.0752111
23352	SD		1108.8264		
23353	Coefficient of Variation		1.1176662		
23354	Skewness		1.926245		
23355					

	A	B	C	D	E
23356	**Relevant UCL Statistics**				
23357	**Normal Distribution Test**			**Lognormal Distribution Test**	
23358	Shapiro Wilk Test Statistic		0.7635431	Shapiro Wilk Test Statistic	0.9708184
23359	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
23360	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
23361					
23362	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
23363	95% Student's-t UCL		1598.0397	95% H-UCL	3091.33
23364	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	2469.1883
23365	95% Adjusted-CLT UCL (Chen-1995)		1749.4781	97.5% Chebyshev (MVUE) UCL	3110.9156
23366	95% Modified-t UCL (Johnson-1978)		1630.4014	99% Chebyshev (MVUE) UCL	4371.4646
23367					
23368	**Gamma Distribution Test**			**Data Distribution**	
23369	k star (bias corrected)		0.8725872	**Data appear Gamma Distributed at 5% Significance Level**	
23370	Theta Star		1136.9533		
23371	MLE of Mean		992.09091		
23372	MLE of Standard Deviation		1062.0551		
23373	nu star		19.196918		
23374	Approximate Chi Square Value (.05)		10.261316	**Nonparametric Statistics**	
23375	Adjusted Level of Significance		0.02783	95% CLT UCL	1542.0045
23376	Adjusted Chi Square Value		9.213621	95% Jackknife UCL	1598.0397
23377				95% Standard Bootstrap UCL	1530.9361
23378	Anderson-Darling Test Statistic		0.3357495	95% Bootstrap-t UCL	2268.8543
23379	Anderson-Darling 5% Critical Value		0.7493719	95% Hall's Bootstrap UCL	3785.2754
23380	Kolmogorov-Smirnov Test Statistic		0.2051813	95% Percentile Bootstrap UCL	1551.8182
23381	Kolmogorov-Smirnov 5% Critical Value		0.261758	95% BCA Bootstrap UCL	1721.8182
23382	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	2449.3744
23383				97.5% Chebyshev(Mean, Sd) UCL	3079.9421
23384	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4318.5703
23385	95% Approximate Gamma UCL		1856.0084		
23386	95% Adjusted Gamma UCL		2067.0579		
23387					
23388	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	1856.0084
23389					
23390	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
23391	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
23392	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
23393					
23394					
23395	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ne_2005)**				
23396					
23397	**General Statistics**				
23398	Number of Valid Observations		36	Number of Distinct Observations	30
23399					
23400	**Raw Statistics**			**Log-transformed Statistics**	
23401	Minimum		24	Minimum of Log Data	3.1780538
23402	Maximum		1200	Maximum of Log Data	7.0900768
23403	Mean		204.08333	Mean of log Data	4.7525828
23404	Median		109	SD of log Data	1.0315915
23405	SD		265.18375		
23406	Coefficient of Variation		1.2993895		
23407	Skewness		2.5373231		
23408					
23409	**Relevant UCL Statistics**				
23410	**Normal Distribution Test**			**Lognormal Distribution Test**	
23411	Shapiro Wilk Test Statistic		0.6601457	Shapiro Wilk Test Statistic	0.9494453
23412	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
23413	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
23414					
23415	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
23416	95% Student's-t UCL		278.75786	95% H-UCL	300.80351
23417	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	362.02456
23418	95% Adjusted-CLT UCL (Chen-1995)		296.75244	97.5% Chebyshev (MVUE) UCL	435.14372
23419	95% Modified-t UCL (Johnson-1978)		281.87294	99% Chebyshev (MVUE) UCL	578.77215
23420					
23421	**Gamma Distribution Test**			**Data Distribution**	

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23422	k star (bias corrected)		0.9515144	**Data appear Lognormal at 5% Significance Level**	
23423	Theta Star		214.48265		
23424	MLE of Mean		204.08333		
23425	MLE of Standard Deviation		209.21839		
23426	nu star		68.509038		
23427	Approximate Chi Square Value (.05)		50.457397	**Nonparametric Statistics**	
23428	Adjusted Level of Significance		0.0428	95% CLT UCL	276.78141
23429	Adjusted Chi Square Value		49.753494	95% Jackknife UCL	278.75786
23430				95% Standard Bootstrap UCL	276.4779
23431	Anderson-Darling Test Statistic		1.3115644	95% Bootstrap-t UCL	322.64396
23432	Anderson-Darling 5% Critical Value		0.7759538	95% Hall's Bootstrap UCL	349.415
23433	Kolmogorov-Smirnov Test Statistic		0.1704532	95% Percentile Bootstrap UCL	282.52778
23434	Kolmogorov-Smirnov 5% Critical Value		0.1510961	95% BCA Bootstrap UCL	301.83333
23435	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	396.73486
23436				97.5% Chebyshev(Mean, Sd) UCL	480.09533
23437	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	643.84083
23438	95% Approximate Gamma UCL		277.09619		
23439	95% Adjusted Gamma UCL		281.0165		
23440					
23441	**Potential UCL to Use**			Use 95% H-UCL	300.80351
23442					
23443	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
23444	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
23445	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
23446	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
23447					
23448	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
23449	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
23450	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
23451					
23452					
23453	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ne_2009)**				
23454					
23455	**General Statistics**				
23456	Number of Valid Data		20	Number of Detected Data	19
23457	Number of Distinct Detected Data		18	Number of Non-Detect Data	1
23458				Percent Non-Detects	5.00%
23459					
23460	**Raw Statistics**			**Log-transformed Statistics**	
23461	Minimum Detected		4.9	Minimum Detected	1.5892352
23462	Maximum Detected		590	Maximum Detected	6.3801225
23463	Mean of Detected		133.20526	Mean of Detected	4.0997973
23464	SD of Detected		168.11881	SD of Detected	1.3615569
23465	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
23466	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
23467					
23468					
23469	**UCL Statistics**				
23470	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
23471	Shapiro Wilk Test Statistic		0.7457941	Shapiro Wilk Test Statistic	0.9597431
23472	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
23473	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
23474					
23475	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
23476	DL/2 Substitution Method			DL/2 Substitution Method	
23477	Mean		126.6275	Mean	3.9198462
23478	SD		166.25793	SD	1.5504563
23479	95% DL/2 (t) UCL		190.91044	95% H-Stat (DL/2) UCL	584.66931
23480					
23481	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
23482	Mean		121.7555	Mean in Log Scale	3.9315368

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23483	SD		168.11824	SD in Log Scale	1.5239746
23484	95% MLE (t) UCL		186.75772	Mean in Original Scale	126.64923
23485	95% MLE (Tiku) UCL		182.37868	SD in Original Scale	166.24076
23486				95% t UCL	190.92553
23487				95% Percentile Bootstrap UCL	186.50423
23488				95% BCA Bootstrap UCL	203.395
23489					
23490	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
23491	k star (bias corrected)		0.6709379	**Data appear Gamma Distributed at 5% Significance Level**	
23492	Theta Star		198.53591		
23493	nu star		25.49564		
23494					
23495	A-D Test Statistic		0.6201408	**Nonparametric Statistics**	
23496	5% A-D Critical Value		0.7785862	Kaplan-Meier (KM) Method	
23497	K-S Test Statistic		0.7785862	Mean	126.79
23498	5% K-S Critical Value		0.2060541	SD	161.92436
23499	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	37.199554
23500				95% KM (t) UCL	191.11297
23501	**Assuming Gamma Distribution**			95% KM (z) UCL	187.97782
23502	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	190.74345
23503	Minimum		1E-12	95% KM (bootstrap t) UCL	222.21532
23504	Maximum		590	95% KM (BCA) UCL	188.05
23505	Mean		126.545	95% KM (Percentile Bootstrap) UCL	188.435
23506	Median		50	95% KM (Chebyshev) UCL	288.93909
23507	SD		166.3236	97.5% KM (Chebyshev) UCL	359.10114
23508	k star		0.285619	99% KM (Chebyshev) UCL	496.92088
23509	Theta star		443.0553		
23510	Nu star		11.424759	**Potential UCLs to Use**	
23511	AppChi2		4.8506086	95% KM (Chebyshev) UCL	288.93909
23512	95% Gamma Approximate UCL		298.05458		
23513	95% Adjusted Gamma UCL		320.16736		
23514	**Note: DL/2 is not a recommended method.**				
23515					
23516	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
23517	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
23518	**For additional insight, the user may want to consult a statistician.**				
23519					
23520					
23521	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ne_2010)**				
23522					
23523	**General Statistics**				
23524	Number of Valid Observations		16	Number of Distinct Observations	16
23525					
23526	**Raw Statistics**			**Log-transformed Statistics**	
23527	Minimum		22	Minimum of Log Data	3.0910425
23528	Maximum		700	Maximum of Log Data	6.5510803
23529	Mean		193.46875	Mean of log Data	4.7934675
23530	Median		135	SD of log Data	1.0503184
23531	SD		190.08046		
23532	Coefficient of Variation		0.9824866		
23533	Skewness		1.5099401		
23534					
23535	**Relevant UCL Statistics**				
23536	**Normal Distribution Test**			**Lognormal Distribution Test**	
23537	Shapiro Wilk Test Statistic		0.8308215	Shapiro Wilk Test Statistic	0.9679935
23538	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
23539	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
23540					
23541	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
23542	95% Student's-t UCL		276.77391	95% H-UCL	445.64583
23543	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	452.0035
23544	95% Adjusted-CLT UCL (Chen-1995)		290.79954	97.5% Chebyshev (MVUE) UCL	561.25523
23545	95% Modified-t UCL (Johnson-1978)		279.76359	99% Chebyshev (MVUE) UCL	775.8591
23546					
23547	**Gamma Distribution Test**			**Data Distribution**	
23548	k star (bias corrected)		1.0161296	**Data appear Gamma Distributed at 5% Significance Level**	
23549	Theta Star		190.39771		

	A	B	C	D	E
23550	MLE of Mean		193.46875		
23551	MLE of Standard Deviation		191.92709		
23552	nu star		32.516148		
23553	Approximate Chi Square Value (.05)		20.481773	**Nonparametric Statistics**	
23554	Adjusted Level of Significance		0.03348	95% CLT UCL	271.63238
23555	Adjusted Chi Square Value		19.398512	95% Jackknife UCL	276.77391
23556				95% Standard Bootstrap UCL	268.30112
23557	Anderson-Darling Test Statistic		0.2660788	95% Bootstrap-t UCL	319.58455
23558	Anderson-Darling 5% Critical Value		0.7598674	95% Hall's Bootstrap UCL	301.74529
23559	Kolmogorov-Smirnov Test Statistic		0.1474035	95% Percentile Bootstrap UCL	272.25
23560	Kolmogorov-Smirnov 5% Critical Value		0.220259	95% BCA Bootstrap UCL	280.6875
23561	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	400.60413
23562				97.5% Chebyshev(Mean, Sd) UCL	490.23178
23563	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	666.28793
23564	95% Approximate Gamma UCL		307.14423		
23565	95% Adjusted Gamma UCL		324.29592		
23566					
23567	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	307.14423
23568					
23569	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
23570	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
23571	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
23572					
23573					
23574	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_nw_2005)**				
23575					
23576	**General Statistics**				
23577	Number of Valid Observations		18	Number of Distinct Observations	17
23578					
23579	**Raw Statistics**			**Log-transformed Statistics**	
23580	Minimum		73	Minimum of Log Data	4.2904594
23581	Maximum		1200	Maximum of Log Data	7.0900768
23582	Mean		298.16667	Mean of log Data	5.2846935
23583	Median		170	SD of log Data	0.8698453
23584	SD		334.05939		
23585	Coefficient of Variation		1.1203781		
23586	Skewness		2.118465		
23587					
23588	**Relevant UCL Statistics**				
23589	**Normal Distribution Test**			**Lognormal Distribution Test**	
23590	Shapiro Wilk Test Statistic		0.6688681	Shapiro Wilk Test Statistic	0.9038473
23591	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
23592	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
23593					
23594	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
23595	95% Student's-t UCL		435.14079	95% H-UCL	483.39752
23596	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	552.96151
23597	95% Adjusted-CLT UCL (Chen-1995)		469.69008	97.5% Chebyshev (MVUE) UCL	670.97877
23598	95% Modified-t UCL (Johnson-1978)		441.6935	99% Chebyshev (MVUE) UCL	902.80085
23599					
23600	**Gamma Distribution Test**			**Data Distribution**	
23601	k star (bias corrected)		1.1647026	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
23602	Theta Star		256.00241		
23603	MLE of Mean		298.16667		
23604	MLE of Standard Deviation		276.28135		
23605	nu star		41.929292		
23606	Approximate Chi Square Value (.05)		28.086172	**Nonparametric Statistics**	
23607	Adjusted Level of Significance		0.03574	95% CLT UCL	427.68006
23608	Adjusted Chi Square Value		26.999963	95% Jackknife UCL	435.14079
23609				95% Standard Bootstrap UCL	425.88829
23610	Anderson-Darling Test Statistic		1.0349303	95% Bootstrap-t UCL	626.63588
23611	Anderson-Darling 5% Critical Value		0.7592888	95% Hall's Bootstrap UCL	1019.9424
23612	Kolmogorov-Smirnov Test Statistic		0.1884933	95% Percentile Bootstrap UCL	435.88889
23613	Kolmogorov-Smirnov 5% Critical Value		0.2078789	95% BCA Bootstrap UCL	460.94444
23614	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	641.38006
23615				97.5% Chebyshev(Mean, Sd) UCL	789.88878

	A	B	C	D	E
23616	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1081.6054
23617	95% Approximate Gamma UCL		445.12714		
23618	95% Adjusted Gamma UCL		463.0346		
23619					
23620	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	445.12714
23621					
23622	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
23623	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
23624	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
23625					
23626					
23627	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_nw_2009)**				
23628					
23629	**General Statistics**				
23630	Number of Valid Observations		7	Number of Distinct Observations	6
23631					
23632	**Raw Statistics**			**Log-transformed Statistics**	
23633	Minimum		11	Minimum of Log Data	2.3978953
23634	Maximum		170	Maximum of Log Data	5.1357984
23635	Mean		102.42857	Mean of log Data	4.3442572
23636	Median		100	SD of log Data	0.9758142
23637	SD		62.596212		
23638	Coefficient of Variation		0.6111206		
23639	Skewness		-0.237626		
23640					
23641					
23642	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
23643					
23644	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
23645	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
23646					
23647					
23648	**Warning: There are only 7 Values in this data**				
23649	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
23650	**the resulting calculations may not be reliable enough to draw conclusions**				
23651					
23652	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
23653					
23654	**Relevant UCL Statistics**				
23655	**Normal Distribution Test**			**Lognormal Distribution Test**	
23656	Shapiro Wilk Test Statistic		0.8878358	Shapiro Wilk Test Statistic	0.8159737
23657	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
23658	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
23659					
23660	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
23661	95% Student's-t UCL		148.40255	95% H-UCL	526.52177
23662	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	297.29342
23663	95% Adjusted-CLT UCL (Chen-1995)		139.07388	97.5% Chebyshev (MVUE) UCL	376.73599
23664	95% Modified-t UCL (Johnson-1978)		148.0484	99% Chebyshev (MVUE) UCL	532.78553
23665					
23666	**Gamma Distribution Test**			**Data Distribution**	
23667	k star (bias corrected)		1.1836503	**Data appear Normal at 5% Significance Level**	
23668	Theta Star		86.53618		
23669	MLE of Mean		102.42857		
23670	MLE of Standard Deviation		94.147635		
23671	nu star		16.571104		
23672	Approximate Chi Square Value (.05)		8.3665892	**Nonparametric Statistics**	
23673	Adjusted Level of Significance		0.01584	95% CLT UCL	141.3444
23674	Adjusted Chi Square Value		6.6838643	95% Jackknife UCL	148.40255

	A	B	C	D	E
23675				95% Standard Bootstrap UCL	138.57062
23676	Anderson-Darling Test Statistic		0.4919691	95% Bootstrap-t UCL	144.07663
23677	Anderson-Darling 5% Critical Value		0.7161081	95% Hall's Bootstrap UCL	131.4871
23678	Kolmogorov-Smirnov Test Statistic		0.2443847	95% Percentile Bootstrap UCL	139.57143
23679	Kolmogorov-Smirnov 5% Critical Value		0.3154721	95% BCA Bootstrap UCL	136.71429
23680	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	205.55639
23681				97.5% Chebyshev(Mean, Sd) UCL	250.17988
23682	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	337.83408
23683	95% Approximate Gamma UCL		202.87293		
23684	95% Adjusted Gamma UCL		253.94808		
23685					
23686	**Potential UCL to Use**			Use 95% Student's-t UCL	148.40255
23687					
23688	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
23689	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
23690	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
23691					
23692					
23693	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_nw_2010)**				
23694					
23695	**General Statistics**				
23696	Number of Valid Observations		4	Number of Distinct Observations	3
23697					
23698					
23699	**Warning: This data set only has 4 observations!**				
23700	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
23701	**The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_nw_2010) was not processed!**				
23702					
23703	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
23704	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
23705					
23706					
23707					
23708	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ref_2009)**				
23709					
23710	**General Statistics**				
23711	Number of Valid Data		0	Number of Detected Data	0
23712	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
23713	Number of Missing Values		6	Percent Non-Detects	NaN%
23714					
23715	**Warning: This data set only has 0 observations!**				
23716	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
23717	**The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ref_2009) was not processed!**				
23718					
23719	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
23720	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
23721					
23722					
23723					
23724	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ref_2010)**				
23725					
23726	**General Statistics**				
23727	Number of Valid Data		0	Number of Detected Data	0

	A	B	C	D	E
23728	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
23729	Number of Missing Values		3	Percent Non-Detects	NaN%
23730					
23731	**Warning: This data set only has 0 observations!**				
23732	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
23733	**The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ref_2010) was not processed!**				
23734					
23735	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
23736	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
23737					
23738					
23739					
23740	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_s_2005)**				
23741					
23742	**General Statistics**				
23743	Number of Valid Observations		8	Number of Distinct Observations	8
23744					
23745	**Raw Statistics**			**Log-transformed Statistics**	
23746	Minimum		50	Minimum of Log Data	3.912023
23747	Maximum		1200	Maximum of Log Data	7.0900768
23748	Mean		325.125	Mean of log Data	5.3739702
23749	Median		222.5	SD of log Data	0.947255
23750	SD		366.63935		
23751	Coefficient of Variation		1.1276873		
23752	Skewness		2.4341026		
23753					
23754					
23755	**Warning: There are only 8 Values in this data**				
23756	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
23757	**the resulting calculations may not be reliable enough to draw conclusions**				
23758					
23759	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
23760					
23761	**Relevant UCL Statistics**				
23762	**Normal Distribution Test**			**Lognormal Distribution Test**	
23763	Shapiro Wilk Test Statistic		0.6754689	Shapiro Wilk Test Statistic	0.9555734
23764	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
23765	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
23766					
23767	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
23768	95% Student's-t UCL		570.71275	95% H-UCL	1100.0125
23769	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	783.10661
23770	95% Adjusted-CLT UCL (Chen-1995)		657.53959	97.5% Chebyshev (MVUE) UCL	985.8884
23771	95% Modified-t UCL (Johnson-1978)		589.3052	99% Chebyshev (MVUE) UCL	1384.214
23772					
23773	**Gamma Distribution Test**			**Data Distribution**	
23774	k star (bias corrected)		0.9341936	**Data appear Gamma Distributed at 5% Significance Level**	
23775	Theta Star		348.02744		
23776	MLE of Mean		325.125		
23777	MLE of Standard Deviation		336.38136		
23778	nu star		14.947097		
23779	Approximate Chi Square Value (.05)		7.2247678	**Nonparametric Statistics**	
23780	Adjusted Level of Significance		0.01946	95% CLT UCL	538.34176
23781	Adjusted Chi Square Value		5.9205802	95% Jackknife UCL	570.71275
23782				95% Standard Bootstrap UCL	525.9046
23783	Anderson-Darling Test Statistic		0.4530446	95% Bootstrap-t UCL	1001.1832
23784	Anderson-Darling 5% Critical Value		0.7303829	95% Hall's Bootstrap UCL	1457.3586
23785	Kolmogorov-Smirnov Test Statistic		0.2548066	95% Percentile Bootstrap UCL	553.25
23786	Kolmogorov-Smirnov 5% Critical Value		0.2996098	95% BCA Bootstrap UCL	623.125
23787	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	890.15418
23788				97.5% Chebyshev(Mean, Sd) UCL	1134.6428

	A	B	C	D	E
23789	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1614.8932
23790	95% Approximate Gamma UCL		672.641		
23791	95% Adjusted Gamma UCL		820.81061		
23792					
23793	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	672.641
23794					
23795	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
23796	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
23797	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
23798					
23799					
23800	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_s_2010)**				
23801					
23802	**General Statistics**				
23803	Number of Valid Observations		2	Number of Distinct Observations	2
23804					
23805					
23806	**Warning: This data set only has 2 observations!**				
23807	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
23808	**The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_s_2010) was not processed!**				
23809					
23810	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
23811	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
23812					
23813					
23814					
23815	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_stillwater_2005)**				
23816					
23817	**General Statistics**				
23818	Number of Valid Observations		4	Number of Distinct Observations	4
23819					
23820					
23821	**Warning: This data set only has 4 observations!**				
23822	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
23823	**The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_stillwater_2005) was not processed!**				
23824					
23825	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
23826	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
23827					
23828					
23829					
23830	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_stillwater_2009)**				
23831					
23832	**General Statistics**				
23833	Number of Valid Data		60	Number of Detected Data	54
23834	Number of Distinct Detected Data		50	Number of Non-Detect Data	6
23835				Percent Non-Detects	10.00%
23836					
23837	**Raw Statistics**			**Log-transformed Statistics**	
23838	Minimum Detected		3.38	Minimum Detected	1.2178757
23839	Maximum Detected		4800	Maximum Detected	8.4763712
23840	Mean of Detected		447.06074	Mean of Detected	4.8062459
23841	SD of Detected		786.01835	SD of Detected	1.9019133
23842	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225

	A	B	C	D	E
23843	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
23844					
23845					
23846	**UCL Statistics**				
23847	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
23848	Lilliefors Test Statistic		0.2862185	Lilliefors Test Statistic	0.1058191
23849	5% Lilliefors Critical Value		0.1205693	5% Lilliefors Critical Value	0.1205693
23850	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
23851					
23852	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
23853	DL/2 Substitution Method			DL/2 Substitution Method	
23854	Mean		402.51967	Mean	4.3756988
23855	SD		757.06868	SD	2.2239671
23856	95% DL/2 (t) UCL		565.84753	95% H-Stat (DL/2) UCL	3273.154
23857					
23858	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
23859	Mean		349.45139	Mean in Log Scale	4.3738717
23860	SD		806.03898	SD in Log Scale	2.2363836
23861	95% MLE (t) UCL		523.34397	Mean in Original Scale	402.5476
23862	95% MLE (Tiku) UCL		511.6493	SD in Original Scale	757.05372
23863				95% t UCL	565.87223
23864				95% Percentile Bootstrap UCL	581.39136
23865				95% BCA Bootstrap UCL	627.79987
23866					
23867	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
23868	k star (bias corrected)		0.4763332	**Data appear Gamma Distributed at 5% Significance Level**	
23869	Theta Star		938.54631		
23870	nu star		51.443982		
23871					
23872	A-D Test Statistic		0.5218355	**Nonparametric Statistics**	
23873	5% A-D Critical Value		0.8170374	Kaplan-Meier (KM) Method	
23874	K-S Test Statistic		0.8170374	Mean	402.69267
23875	5% K-S Critical Value		0.1281336	SD	750.64107
23876	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	97.817293
23877				95% KM (t) UCL	566.15446
23878	**Assuming Gamma Distribution**			95% KM (z) UCL	563.5878
23879	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	565.98986
23880	Minimum		1E-12	95% KM (bootstrap t) UCL	687.93966
23881	Maximum		4800	95% KM (BCA) UCL	587.056
23882	Mean		402.35467	95% KM (Percentile Bootstrap) UCL	573.20833
23883	Median		140	95% KM (Chebyshev) UCL	829.06836
23884	SD		757.15769	97.5% KM (Chebyshev) UCL	1013.5615
23885	k star		0.1727163	99% KM (Chebyshev) UCL	1375.9624
23886	Theta star		2329.5699		
23887	Nu star		20.725954	**Potential UCLs to Use**	
23888	AppChi2		11.388043	95% KM (Chebyshev) UCL	829.06836
23889	95% Gamma Approximate UCL		732.27546		
23890	95% Adjusted Gamma UCL		743.43172		
23891	**Note: DL/2 is not a recommended method.**				
23892					
23893	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
23894	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
23895	**For additional insight, the user may want to consult a statistician.**				
23896					
23897					
23898	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_stillwater_2010)**				
23899					
23900	**General Statistics**				
23901	Number of Valid Observations		11	Number of Distinct Observations	10
23902					
23903	**Raw Statistics**			**Log-transformed Statistics**	
23904	Minimum		145	Minimum of Log Data	4.9767337
23905	Maximum		4100	Maximum of Log Data	8.3187423
23906	Mean		1078.6364	Mean of log Data	6.4304618
23907	Median		590	SD of log Data	1.1011671
23908	SD		1250.1442		
23909	Coefficient of Variation		1.1590043		

	A	B	C	D	E
23910	Skewness		1.7713152		
23911					
23912	**Relevant UCL Statistics**				
23913	**Normal Distribution Test**			**Lognormal Distribution Test**	
23914	Shapiro Wilk Test Statistic		0.7567252	Shapiro Wilk Test Statistic	0.9513543
23915	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
23916	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
23917					
23918	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
23919	95% Student's-t UCL		1761.8121	95% H-UCL	3461.7506
23920	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	2675.1595
23921	95% Adjusted-CLT UCL (Chen-1995)		1913.737	97.5% Chebyshev (MVUE) UCL	3377.4044
23922	95% Modified-t UCL (Johnson-1978)		1795.3637	99% Chebyshev (MVUE) UCL	4756.8285
23923					
23924	**Gamma Distribution Test**			**Data Distribution**	
23925	k star (bias corrected)		0.8163617	**Data appear Gamma Distributed at 5% Significance Level**	
23926	Theta Star		1321.2726		
23927	MLE of Mean		1078.6364		
23928	MLE of Standard Deviation		1193.8059		
23929	nu star		17.959958		
23930	Approximate Chi Square Value (.05)		9.3619349	**Nonparametric Statistics**	
23931	Adjusted Level of Significance		0.02783	95% CLT UCL	1698.6354
23932	Adjusted Chi Square Value		8.367828	95% Jackknife UCL	1761.8121
23933				95% Standard Bootstrap UCL	1662.4172
23934	Anderson-Darling Test Statistic		0.4392398	95% Bootstrap-t UCL	2572.5164
23935	Anderson-Darling 5% Critical Value		0.7508176	95% Hall's Bootstrap UCL	2766.2191
23936	Kolmogorov-Smirnov Test Statistic		0.2220965	95% Percentile Bootstrap UCL	1723.1818
23937	Kolmogorov-Smirnov 5% Critical Value		0.2621709	95% BCA Bootstrap UCL	1867.2727
23938	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	2721.6477
23939				97.5% Chebyshev(Mean, Sd) UCL	3432.58
23940	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4829.0689
23941	95% Approximate Gamma UCL		2069.2585		
23942	95% Adjusted Gamma UCL		2315.0887		
23943					
23944	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	2069.2585
23945					
23946	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
23947	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
23948	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
23949					
23950					
23951	**OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ne_2005)**				
23952					
23953	**General Statistics**				
23954	Number of Valid Observations		36	Number of Distinct Observations	32
23955					
23956	**Raw Statistics**			**Log-transformed Statistics**	
23957	Minimum		7.2	Minimum of Log Data	1.974081
23958	Maximum		410	Maximum of Log Data	6.0161572
23959	Mean		85.338889	Mean of log Data	3.8832157
23960	Median		49	SD of log Data	1.0573807
23961	SD		103.90053		
23962	Coefficient of Variation		1.2175051		
23963	Skewness		2.0348438		
23964					
23965	**Relevant UCL Statistics**				
23966	**Normal Distribution Test**			**Lognormal Distribution Test**	
23967	Shapiro Wilk Test Statistic		0.6951529	Shapiro Wilk Test Statistic	0.9625046
23968	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
23969	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
23970					
23971	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
23972	95% Student's-t UCL		114.5968	95% H-UCL	131.61487
23973	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	157.92723
23974	95% Adjusted-CLT UCL (Chen-1995)		120.0976	97.5% Chebyshev (MVUE) UCL	190.34211
23975	95% Modified-t UCL (Johnson-1978)		115.5756	99% Chebyshev (MVUE) UCL	254.01486

	A	B	C	D	E
23976					
23977	**Gamma Distribution Test**			**Data Distribution**	
23978	k star (bias corrected)		0.9552692	**Data appear Lognormal at 5% Significance Level**	
23979	Theta Star		89.334912		
23980	MLE of Mean		85.338889		
23981	MLE of Standard Deviation		87.314043		
23982	nu star		68.779382		
23983	Approximate Chi Square Value (.05)		50.689666	**Nonparametric Statistics**	
23984	Adjusted Level of Significance		0.0428	95% CLT UCL	113.82242
23985	Adjusted Chi Square Value		49.984054	95% Jackknife UCL	114.5968
23986				95% Standard Bootstrap UCL	114.10976
23987	Anderson-Darling Test Statistic		1.1532657	95% Bootstrap-t UCL	124.88217
23988	Anderson-Darling 5% Critical Value		0.7758728	95% Hall's Bootstrap UCL	115.45065
23989	Kolmogorov-Smirnov Test Statistic		0.1584246	95% Percentile Bootstrap UCL	114.75
23990	Kolmogorov-Smirnov 5% Critical Value		0.1510832	95% BCA Bootstrap UCL	121.81944
23991	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	160.82087
23992				97.5% Chebyshev(Mean, Sd) UCL	193.48199
23993	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	257.63843
23994	95% Approximate Gamma UCL		115.79394		
23995	95% Adjusted Gamma UCL		117.42857		
23996					
23997	**Potential UCL to Use**			Use 95% H-UCL	131.61487
23998					
23999	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
24000	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
24001	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
24002	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
24003					
24004	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24005	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
24006	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
24007					
24008					
24009	**OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ne_2009)**				
24010					
24011	**General Statistics**				
24012	Number of Valid Data		20	Number of Detected Data	18
24013	Number of Distinct Detected Data		17	Number of Non-Detect Data	2
24014				Percent Non-Detects	10.00%
24015					
24016	**Raw Statistics**			**Log-transformed Statistics**	
24017	Minimum Detected		4.3	Minimum Detected	1.458615
24018	Maximum Detected		290	Maximum Detected	5.6698809
24019	Mean of Detected		63.3	Mean of Detected	3.4285318
24020	SD of Detected		77.906671	SD of Detected	1.2906644
24021	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
24022	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
24023					
24024					
24025	**UCL Statistics**				
24026	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
24027	Shapiro Wilk Test Statistic		0.7494772	Shapiro Wilk Test Statistic	0.9499079
24028	5% Shapiro Wilk Critical Value		0.897	5% Shapiro Wilk Critical Value	0.897
24029	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
24030					
24031	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24032	DL/2 Substitution Method			DL/2 Substitution Method	
24033	Mean		57.135	Mean	3.1357562
24034	SD		76.096179	SD	1.517408
24035	95% DL/2 (t) UCL		86.557272	95% H-Stat (DL/2) UCL	242.27893
24036					

	A	B	C	D	E
24037	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
24038	Mean		52.414855	Mean in Log Scale	3.1225078
24039	SD		79.908488	SD in Log Scale	1.5445849
24040	95% MLE (t) UCL		83.311141	Mean in Original Scale	57.120095
24041	95% MLE (Tiku) UCL		81.747079	SD in Original Scale	76.107745
24042				95% t UCL	86.546839
24043				95% Percentile Bootstrap UCL	85.39
24044				95% BCA Bootstrap UCL	94.2503
24045					
24046	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
24047	k star (bias corrected)		0.722119	**Data appear Gamma Distributed at 5% Significance Level**	
24048	Theta Star		87.658681		
24049	nu star		25.996284		
24050					
24051	A-D Test Statistic		0.5333257	**Nonparametric Statistics**	
24052	5% A-D Critical Value		0.7746767	Kaplan-Meier (KM) Method	
24053	K-S Test Statistic		0.7746767	Mean	57.4
24054	5% K-S Critical Value		0.2108561	SD	73.975144
24055	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	17.020904
24056				95% KM (t) UCL	86.831403
24057	**Assuming Gamma Distribution**			95% KM (z) UCL	85.396895
24058	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	86.667142
24059	Minimum		1E-12	95% KM (bootstrap t) UCL	105.54401
24060	Maximum		290	95% KM (BCA) UCL	90.44
24061	Mean		56.97	95% KM (Percentile Bootstrap) UCL	85.89
24062	Median		25.5	95% KM (Chebyshev) UCL	131.5924
24063	SD		76.224406	97.5% KM (Chebyshev) UCL	163.69551
24064	k star		0.2017369	99% KM (Chebyshev) UCL	226.75585
24065	Theta star		282.39749		
24066	Nu star		8.0694768	**Potential UCLs to Use**	
24067	AppChi2		2.7753166	95% KM (Chebyshev) UCL	131.5924
24068	95% Gamma Approximate UCL		165.64528		
24069	95% Adjusted Gamma UCL		181.31958		
24070	**Note: DL/2 is not a recommended method.**				
24071					
24072	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24073	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
24074	**For additional insight, the user may want to consult a statistician.**				
24075					
24076					
24077	**OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ne_2010)**				
24078					
24079	**General Statistics**				
24080	Number of Valid Observations		16	Number of Distinct Observations	15
24081					
24082	**Raw Statistics**			**Log-transformed Statistics**	
24083	Minimum		21	Minimum of Log Data	3.0445224
24084	Maximum		490	Maximum of Log Data	6.1944054
24085	Mean		137.75	Mean of log Data	4.4804502
24086	Median		99	SD of log Data	1.0053747
24087	SD		133.28641		
24088	Coefficient of Variation		0.9675964		
24089	Skewness		1.4992535		
24090					
24091	**Relevant UCL Statistics**				
24092	**Normal Distribution Test**			**Lognormal Distribution Test**	
24093	Shapiro Wilk Test Statistic		0.8275653	Shapiro Wilk Test Statistic	0.9461486
24094	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
24095	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
24096					
24097	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24098	95% Student's-t UCL		196.16445	95% H-UCL	295.86543
24099	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	308.72905
24100	95% Adjusted-CLT UCL (Chen-1995)		205.90424	97.5% Chebyshev (MVUE) UCL	381.72529
24101	95% Modified-t UCL (Johnson-1978)		198.24601	99% Chebyshev (MVUE) UCL	525.11229
24102					
24103	**Gamma Distribution Test**			**Data Distribution**	

	A	B	C	D	E
24104	k star (bias corrected)		1.0688989	**Data appear Gamma Distributed at 5% Significance Level**	
24105	Theta Star		128.87094		
24106	MLE of Mean		137.75		
24107	MLE of Standard Deviation		133.23653		
24108	nu star		34.204764		
24109	Approximate Chi Square Value (.05)		21.828109	**Nonparametric Statistics**	
24110	Adjusted Level of Significance		0.03348	95% CLT UCL	192.55916
24111	Adjusted Chi Square Value		20.706449	95% Jackknife UCL	196.16445
24112				95% Standard Bootstrap UCL	192.15383
24113	Anderson-Darling Test Statistic		0.3779537	95% Bootstrap-t UCL	219.04449
24114	Anderson-Darling 5% Critical Value		0.758749	95% Hall's Bootstrap UCL	224.28613
24115	Kolmogorov-Smirnov Test Statistic		0.1730747	95% Percentile Bootstrap UCL	191.875
24116	Kolmogorov-Smirnov 5% Critical Value		0.2199654	95% BCA Bootstrap UCL	210.8125
24117	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	282.9955
24118				97.5% Chebyshev(Mean, Sd) UCL	345.84334
24119	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	469.29575
24120	95% Approximate Gamma UCL		215.85499		
24121	95% Adjusted Gamma UCL		227.54776		
24122					
24123	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	215.85499
24124					
24125	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24126	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
24127	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
24128					
24129					
24130	**OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_nw_2005)**				
24131					
24132	**General Statistics**				
24133	Number of Valid Observations		18	Number of Distinct Observations	16
24134					
24135	**Raw Statistics**			**Log-transformed Statistics**	
24136	Minimum		42	Minimum of Log Data	3.7376696
24137	Maximum		300	Maximum of Log Data	5.7037825
24138	Mean		111.55556	Mean of log Data	4.5121187
24139	Median		82	SD of log Data	0.6386137
24140	SD		77.938303		
24141	Coefficient of Variation		0.6986501		
24142	Skewness		1.3242048		
24143					
24144	**Relevant UCL Statistics**				
24145	**Normal Distribution Test**			**Lognormal Distribution Test**	
24146	Shapiro Wilk Test Statistic		0.8235101	Shapiro Wilk Test Statistic	0.9122822
24147	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
24148	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
24149					
24150	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24151	95% Student's-t UCL		143.51254	95% H-UCL	156.27663
24152	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	186.45636
24153	95% Adjusted-CLT UCL (Chen-1995)		147.89842	97.5% Chebyshev (MVUE) UCL	219.42864
24154	95% Modified-t UCL (Johnson-1978)		144.46815	99% Chebyshev (MVUE) UCL	284.1963
24155					
24156	**Gamma Distribution Test**			**Data Distribution**	
24157	k star (bias corrected)		2.2245479	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
24158	Theta Star		50.147518		
24159	MLE of Mean		111.55556		
24160	MLE of Standard Deviation		74.794613		
24161	nu star		80.083725		
24162	Approximate Chi Square Value (.05)		60.464306	**Nonparametric Statistics**	
24163	Adjusted Level of Significance		0.03574	95% CLT UCL	141.7719
24164	Adjusted Chi Square Value		58.828788	95% Jackknife UCL	143.51254
24165				95% Standard Bootstrap UCL	141.64185
24166	Anderson-Darling Test Statistic		0.7319304	95% Bootstrap-t UCL	152.48264
24167	Anderson-Darling 5% Critical Value		0.7483424	95% Hall's Bootstrap UCL	157.61726
24168	Kolmogorov-Smirnov Test Statistic		0.2286657	95% Percentile Bootstrap UCL	143.11111
24169	Kolmogorov-Smirnov 5% Critical Value		0.2055075	95% BCA Bootstrap UCL	145.38889

	A	B	C	D	E
24170	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	191.62955
24171				97.5% Chebyshev(Mean, Sd) UCL	226.27763
24172	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	294.33708
24173	95% Approximate Gamma UCL		147.75303		
24174	95% Adjusted Gamma UCL		151.86076		
24175					
24176	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	147.75303
24177					
24178	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24179	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
24180	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
24181					
24182					
24183	**OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_nw_2009)**				
24184					
24185	**General Statistics**				
24186	Number of Valid Observations		7	Number of Distinct Observations	7
24187					
24188	**Raw Statistics**			**Log-transformed Statistics**	
24189	Minimum		5.1	Minimum of Log Data	1.6292405
24190	Maximum		77	Maximum of Log Data	4.3438054
24191	Mean		47.8	Mean of log Data	3.586563
24192	Median		50	SD of log Data	0.9747014
24193	SD		28.490876		
24194	Coefficient of Variation		0.5960434		
24195	Skewness		-0.35325		
24196					
24197					
24198	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
24199					
24200	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
24201	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
24202					
24203					
24204	**Warning: There are only 7 Values in this data**				
24205	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
24206	**the resulting calculations may not be reliable enough to draw conclusions**				
24207					
24208	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
24209					
24210	**Relevant UCL Statistics**				
24211	**Normal Distribution Test**			**Lognormal Distribution Test**	
24212	Shapiro Wilk Test Statistic		0.8945492	Shapiro Wilk Test Statistic	0.8106604
24213	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
24214	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
24215					
24216	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24217	95% Student's-t UCL		68.725212	95% H-UCL	245.82471
24218	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	139.14094
24219	95% Adjusted-CLT UCL (Chen-1995)		63.976392	97.5% Chebyshev (MVUE) UCL	176.30622
24220	95% Modified-t UCL (Johnson-1978)		68.485584	99% Chebyshev (MVUE) UCL	249.3102
24221					
24222	**Gamma Distribution Test**			**Data Distribution**	
24223	k star (bias corrected)		1.1996972	**Data appear Normal at 5% Significance Level**	
24224	Theta Star		39.843387		
24225	MLE of Mean		47.8		
24226	MLE of Standard Deviation		43.640737		
24227	nu star		16.795761		

	A	B	C	D	E
24228	Approximate Chi Square Value (.05)		8.5264814	**Nonparametric Statistics**	
24229	Adjusted Level of Significance		0.01584	95% CLT UCL	65.51267
24230	Adjusted Chi Square Value		6.8247074	95% Jackknife UCL	68.725212
24231				95% Standard Bootstrap UCL	63.973599
24232	Anderson-Darling Test Statistic		0.4878574	95% Bootstrap-t UCL	67.143004
24233	Anderson-Darling 5% Critical Value		0.7157521	95% Hall's Bootstrap UCL	61.159926
24234	Kolmogorov-Smirnov Test Statistic		0.2294784	95% Percentile Bootstrap UCL	64.071429
24235	Kolmogorov-Smirnov 5% Critical Value		0.3153653	95% BCA Bootstrap UCL	64.071429
24236	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	94.738973
24237				97.5% Chebyshev(Mean, Sd) UCL	115.0495
24238	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	154.94561
24239	95% Approximate Gamma UCL		94.158108		
24240	95% Adjusted Gamma UCL		117.63689		
24241					
24242	**Potential UCL to Use**			Use 95% Student's-t UCL	68.725212
24243					
24244	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24245	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
24246	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
24247					
24248					
24249	**OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_nw_2010)**				
24250					
24251	**General Statistics**				
24252	Number of Valid Observations		4	Number of Distinct Observations	4
24253					
24254					
24255	**Warning: This data set only has 4 observations!**				
24256	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
24257	**The data set for variable OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_nw_2010) was not processed!**				
24258					
24259	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
24260	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
24261					
24262					
24263					
24264	**OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ref_2009)**				
24265					
24266	**General Statistics**				
24267	Number of Valid Data		0	Number of Detected Data	0
24268	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
24269	Number of Missing Values		6	Percent Non-Detects	NaN%
24270					
24271	**Warning: This data set only has 0 observations!**				
24272	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
24273	**The data set for variable OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ref_2009) was not processed!**				
24274					
24275	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
24276	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
24277					
24278					
24279					
24280	**OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ref_2010)**				

	A	B	C	D	E
24281					
24282	**General Statistics**				
24283	Number of Valid Data		0	Number of Detected Data	0
24284	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
24285	Number of Missing Values		3	Percent Non-Detects	NaN%
24286					
24287	**Warning: This data set only has 0 observations!**				
24288	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
24289	**The data set for variable OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ref_2010) was not processed!**				
24290					
24291	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
24292	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
24293					
24294					
24295					
24296	**OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_s_2005)**				
24297					
24298	**General Statistics**				
24299	Number of Valid Observations		8	Number of Distinct Observations	8
24300					
24301	**Raw Statistics**			**Log-transformed Statistics**	
24302	Minimum		24	Minimum of Log Data	3.1780538
24303	Maximum		850	Maximum of Log Data	6.7452363
24304	Mean		179.875	Mean of log Data	4.5327729
24305	Median		95.5	SD of log Data	1.1294349
24306	SD		275.35143		
24307	Coefficient of Variation		1.5307932		
24308	Skewness		2.6455404		
24309					
24310					
24311	**Warning: There are only 8 Values in this data**				
24312	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
24313	**the resulting calculations may not be reliable enough to draw conclusions**				
24314					
24315	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
24316					
24317	**Relevant UCL Statistics**				
24318	**Normal Distribution Test**			**Lognormal Distribution Test**	
24319	Shapiro Wilk Test Statistic		0.5873243	Shapiro Wilk Test Statistic	0.9243073
24320	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
24321	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
24322					
24323	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24324	95% Student's-t UCL		364.31494	95% H-UCL	873.20653
24325	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	437.61188
24326	95% Adjusted-CLT UCL (Chen-1995)		437.29922	97.5% Chebyshev (MVUE) UCL	558.75906
24327	95% Modified-t UCL (Johnson-1978)		379.49105	99% Chebyshev (MVUE) UCL	796.72922
24328					
24329	**Gamma Distribution Test**			**Data Distribution**	
24330	k star (bias corrected)		0.6383019	**Data appear Gamma Distributed at 5% Significance Level**	
24331	Theta Star		281.80237		
24332	MLE of Mean		179.875		
24333	MLE of Standard Deviation		225.14263		
24334	nu star		10.212831		
24335	Approximate Chi Square Value (.05)		4.0752195	**Nonparametric Statistics**	
24336	Adjusted Level of Significance		0.01946	95% CLT UCL	340.00386
24337	Adjusted Chi Square Value		3.1544461	95% Jackknife UCL	364.31494
24338				95% Standard Bootstrap UCL	327.07432
24339	Anderson-Darling Test Statistic		0.6516747	95% Bootstrap-t UCL	890.36704
24340	Anderson-Darling 5% Critical Value		0.7398162	95% Hall's Bootstrap UCL	1021.7612
24341	Kolmogorov-Smirnov Test Statistic		0.2752232	95% Percentile Bootstrap UCL	367
24342	Kolmogorov-Smirnov 5% Critical Value		0.3026253	95% BCA Bootstrap UCL	452.25

	A	B	C	D	E
24343	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	604.22005
24344				97.5% Chebyshev(Mean, Sd) UCL	787.8345
24345	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1148.5095
24346	95% Approximate Gamma UCL		450.78135		
24347	95% Adjusted Gamma UCL		582.36308		
24348					
24349	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	450.78135
24350					
24351	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24352	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
24353	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
24354					
24355					
24356	**OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_s_2010)**				
24357					
24358	**General Statistics**				
24359	Number of Valid Observations		2	Number of Distinct Observations	2
24360					
24361					
24362	**Warning: This data set only has 2 observations!**				
24363	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
24364	**The data set for variable OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_s_2010) was not processed!**				
24365					
24366	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
24367	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
24368					
24369					
24370					
24371	**OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_stillwater_2005)**				
24372					
24373	**General Statistics**				
24374	Number of Valid Observations		4	Number of Distinct Observations	4
24375					
24376					
24377	**Warning: This data set only has 4 observations!**				
24378	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
24379	**The data set for variable OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_stillwater_2005) was not processed!**				
24380					
24381	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
24382	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
24383					
24384					
24385					
24386	**OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_stillwater_2009)**				
24387					
24388	**General Statistics**				
24389	Number of Valid Data		60	Number of Detected Data	48
24390	Number of Distinct Detected Data		42	Number of Non-Detect Data	12
24391				Percent Non-Detects	20.00%
24392					
24393	**Raw Statistics**			**Log-transformed Statistics**	
24394	Minimum Detected		3.3	Minimum Detected	1.1939225
24395	Maximum Detected		1100	Maximum Detected	7.0030655

	A	B	C	D	E
24396	Mean of Detected		138.15625	Mean of Detected	4.0674875
24397	SD of Detected		198.10109	SD of Detected	1.4242063
24398	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
24399	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
24400					
24401					
24402	**UCL Statistics**				
24403	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
24404	Shapiro Wilk Test Statistic		0.6716996	Shapiro Wilk Test Statistic	0.972529
24405	5% Shapiro Wilk Critical Value		0.947	5% Shapiro Wilk Critical Value	0.947
24406	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
24407					
24408	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24409	DL/2 Substitution Method			DL/2 Substitution Method	
24410	Mean		110.855	Mean	3.3541451
24411	SD		185.18685	SD	1.9198291
24412	95% DL/2 (t) UCL		150.80669	95% H-Stat (DL/2) UCL	464.32428
24413					
24414	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
24415	Mean		82.100997	Mean in Log Scale	3.4142267
24416	SD		214.44314	SD in Log Scale	1.8589501
24417	95% MLE (t) UCL		128.36435	Mean in Original Scale	111.0758
24418	95% MLE (Tiku) UCL		127.63916	SD in Original Scale	185.05625
24419				95% t UCL	150.99931
24420				95% Percentile Bootstrap UCL	153.21986
24421				95% BCA Bootstrap UCL	166.00393
24422					
24423	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
24424	k star (bias corrected)		0.6717781	**Data appear Gamma Distributed at 5% Significance Level**	
24425	Theta Star		205.65756		
24426	nu star		64.490701		
24427					
24428	A-D Test Statistic		0.648611	**Nonparametric Statistics**	
24429	5% A-D Critical Value		0.7961438	Kaplan-Meier (KM) Method	
24430	K-S Test Statistic		0.7961438	Mean	111.185
24431	5% K-S Critical Value		0.1334499	SD	183.44198
24432	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	23.932871
24433				95% KM (t) UCL	151.17905
24434	**Assuming Gamma Distribution**			95% KM (z) UCL	150.55107
24435	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	151.00737
24436	Minimum		1E-12	95% KM (bootstrap t) UCL	172.3591
24437	Maximum		1100	95% KM (BCA) UCL	150.96167
24438	Mean		110.525	95% KM (Percentile Bootstrap) UCL	153.56333
24439	Median		41.5	95% KM (Chebyshev) UCL	215.50596
24440	SD		185.38584	97.5% KM (Chebyshev) UCL	260.64573
24441	k star		0.1197781	99% KM (Chebyshev) UCL	349.31406
24442	Theta star		922.74788		
24443	Nu star		14.373374	**Potential UCLs to Use**	
24444	AppChi2		6.8277582	95% KM (Chebyshev) UCL	215.50596
24445	95% Gamma Approximate UCL		232.67038		
24446	95% Adjusted Gamma UCL		237.12759		
24447	**Note: DL/2 is not a recommended method.**				
24448					
24449	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24450	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
24451	**For additional insight, the user may want to consult a statistician.**				
24452					
24453					
24454	**OS|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_stillwater_2010)**				
24455					
24456	**General Statistics**				
24457	Number of Valid Observations		11	Number of Distinct Observations	10
24458					
24459	**Raw Statistics**			**Log-transformed Statistics**	
24460	Minimum		61.5	Minimum of Log Data	4.1190372
24461	Maximum		1600	Maximum of Log Data	7.3777589
24462	Mean		452.22727	Mean of log Data	5.6943901

	A	B	C	D	E
24463	Median		330	SD of log Data	0.9707231
24464	SD		461.6716		
24465	Coefficient of Variation		1.020884		
24466	Skewness		1.8510101		
24467					
24468	**Relevant UCL Statistics**				
24469	**Normal Distribution Test**			**Lognormal Distribution Test**	
24470	Shapiro Wilk Test Statistic		0.7736667	Shapiro Wilk Test Statistic	0.9680243
24471	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
24472	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
24473					
24474	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24475	95% Student's-t UCL		704.52046	95% H-UCL	1174.5298
24476	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1056.4725
24477	95% Adjusted-CLT UCL (Chen-1995)		764.19948	97.5% Chebyshev (MVUE) UCL	1319.0289
24478	95% Modified-t UCL (Johnson-1978)		717.46832	99% Chebyshev (MVUE) UCL	1834.77
24479					
24480	**Gamma Distribution Test**			**Data Distribution**	
24481	k star (bias corrected)		1.0301371	**Data appear Gamma Distributed at 5% Significance Level**	
24482	Theta Star		438.99719		
24483	MLE of Mean		452.22727		
24484	MLE of Standard Deviation		445.56313		
24485	nu star		22.663015		
24486	Approximate Chi Square Value (.05)		12.836563	**Nonparametric Statistics**	
24487	Adjusted Level of Significance		0.02783	95% CLT UCL	681.18962
24488	Adjusted Chi Square Value		11.646923	95% Jackknife UCL	704.52046
24489				95% Standard Bootstrap UCL	676.47938
24490	Anderson-Darling Test Statistic		0.3859002	95% Bootstrap-t UCL	996.20979
24491	Anderson-Darling 5% Critical Value		0.7453209	95% Hall's Bootstrap UCL	1752.4121
24492	Kolmogorov-Smirnov Test Statistic		0.2339249	95% Percentile Bootstrap UCL	694.45455
24493	Kolmogorov-Smirnov 5% Critical Value		0.2606012	95% BCA Bootstrap UCL	754.95455
24494	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1058.9826
24495				97.5% Chebyshev(Mean, Sd) UCL	1321.5262
24496	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1837.2421
24497	95% Approximate Gamma UCL		798.4095		
24498	95% Adjusted Gamma UCL		879.9606		
24499					
24500	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	798.4095
24501					
24502	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24503	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
24504	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
24505					
24506					
24507	**OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ne_2005)**				
24508					
24509	**General Statistics**				
24510	Number of Valid Observations		36	Number of Distinct Observations	32
24511					
24512	**Raw Statistics**			**Log-transformed Statistics**	
24513	Minimum		8.6	Minimum of Log Data	2.1517622
24514	Maximum		760	Maximum of Log Data	6.6333184
24515	Mean		82.161111	Mean of log Data	3.7491931
24516	Median		37.5	SD of log Data	1.0683994
24517	SD		135.35097		
24518	Coefficient of Variation		1.6473848		
24519	Skewness		3.9781058		
24520					
24521	**Relevant UCL Statistics**				
24522	**Normal Distribution Test**			**Lognormal Distribution Test**	
24523	Shapiro Wilk Test Statistic		0.534938	Shapiro Wilk Test Statistic	0.9487282
24524	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
24525	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
24526					
24527	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24528	95% Student's-t UCL		120.27532	95% H-UCL	117.26563

	A	B	C	D	E
24529	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	140.50939
24530	95% Adjusted-CLT UCL (Chen-1995)		135.24796	97.5% Chebyshev (MVUE) UCL	169.54346
24531	95% Modified-t UCL (Johnson-1978)		122.7681	99% Chebyshev (MVUE) UCL	226.57527
24532					
24533	**Gamma Distribution Test**			**Data Distribution**	
24534	k star (bias corrected)		0.8324727	**Data appear Lognormal at 5% Significance Level**	
24535	Theta Star		98.695261		
24536	MLE of Mean		82.161111		
24537	MLE of Standard Deviation		90.049499		
24538	nu star		59.938035		
24539	Approximate Chi Square Value (.05)		43.135367	**Nonparametric Statistics**	
24540	Adjusted Level of Significance		0.0428	95% CLT UCL	119.26653
24541	Adjusted Chi Square Value		42.487486	95% Jackknife UCL	120.27532
24542				95% Standard Bootstrap UCL	119.42147
24543	Anderson-Darling Test Statistic		1.6053616	95% Bootstrap-t UCL	168.01891
24544	Anderson-Darling 5% Critical Value		0.7815311	95% Hall's Bootstrap UCL	273.48901
24545	Kolmogorov-Smirnov Test Statistic		0.1726099	95% Percentile Bootstrap UCL	121.56111
24546	Kolmogorov-Smirnov 5% Critical Value		0.1518135	95% BCA Bootstrap UCL	137.61389
24547	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	180.49131
24548				97.5% Chebyshev(Mean, Sd) UCL	223.03887
24549	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	306.6153
24550	95% Approximate Gamma UCL		114.16561		
24551	95% Adjusted Gamma UCL		115.9065		
24552					
24553	**Potential UCL to Use**			Use 95% H-UCL	117.26563
24554					
24555	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
24556	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
24557	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
24558	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
24559					
24560	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24561	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
24562	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
24563					
24564					
24565	**OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ne_2009)**				
24566					
24567	**General Statistics**				
24568	Number of Valid Data		20	Number of Detected Data	19
24569	Number of Distinct Detected Data		16	Number of Non-Detect Data	1
24570				Percent Non-Detects	5.00%
24571					
24572	**Raw Statistics**			**Log-transformed Statistics**	
24573	Minimum Detected		2.62	Minimum Detected	0.9631743
24574	Maximum Detected		240	Maximum Detected	5.4806389
24575	Mean of Detected		58.569474	Mean of Detected	3.3717614
24576	SD of Detected		69.138268	SD of Detected	1.3000934
24577	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
24578	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
24579					
24580					
24581	**UCL Statistics**				
24582	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
24583	Shapiro Wilk Test Statistic		0.7667874	Shapiro Wilk Test Statistic	0.9721593
24584	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
24585	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
24586					
24587	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24588	DL/2 Substitution Method			DL/2 Substitution Method	
24589	Mean		55.7235	Mean	3.2282121

	A	B	C	D	E
24590	SD		68.487278	SD	1.4189471
24591	95% DL/2 (t) UCL		82.203822	95% H-Stat (DL/2) UCL	201.48563
24592					
24593	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
24594	Mean		51.533908	Mean in Log Scale	3.2418974
24595	SD		72.032682	SD in Log Scale	1.3923274
24596	95% MLE (t) UCL		79.385045	Mean in Original Scale	55.749473
24597	95% MLE (Tiku) UCL		78.124383	SD in Original Scale	68.465787
24598				95% t UCL	82.221486
24599				95% Percentile Bootstrap UCL	81.417947
24600				95% BCA Bootstrap UCL	85.496
24601					
24602	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
24603	k star (bias corrected)		0.7456964	**Data appear Gamma Distributed at 5% Significance Level**	
24604	Theta Star		78.543327		
24605	nu star		28.336462		
24606					
24607	A-D Test Statistic		0.3964203	**Nonparametric Statistics**	
24608	5% A-D Critical Value		0.775195	Kaplan-Meier (KM) Method	
24609	K-S Test Statistic		0.775195	Mean	55.772
24610	5% K-S Critical Value		0.2054256	SD	66.714177
24611	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	15.326525
24612				95% KM (t) UCL	82.273597
24613	**Assuming Gamma Distribution**			95% KM (z) UCL	80.98189
24614	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	82.186552
24615	Minimum		1E-12	95% KM (bootstrap t) UCL	94.831783
24616	Maximum		240	95% KM (BCA) UCL	81.227
24617	Mean		55.641	95% KM (Percentile Bootstrap) UCL	82.031
24618	Median		25	95% KM (Chebyshev) UCL	122.57877
24619	SD		68.556802	97.5% KM (Chebyshev) UCL	151.48612
24620	k star		0.298403	99% KM (Chebyshev) UCL	208.26899
24621	Theta star		186.46263		
24622	Nu star		11.936118	**Potential UCLs to Use**	
24623	AppChi2		5.1849674	95% KM (Chebyshev) UCL	122.57877
24624	95% Gamma Approximate UCL		128.08905		
24625	95% Adjusted Gamma UCL		137.31399		
24626	**Note: DL/2 is not a recommended method.**				
24627					
24628	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24629	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
24630	**For additional insight, the user may want to consult a statistician.**				
24631					
24632					
24633	**OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ne_2010)**				
24634					
24635	**General Statistics**				
24636	Number of Valid Observations		16	Number of Distinct Observations	15
24637					
24638	**Raw Statistics**			**Log-transformed Statistics**	
24639	Minimum		24	Minimum of Log Data	3.1780538
24640	Maximum		630	Maximum of Log Data	6.4457198
24641	Mean		168.8125	Mean of log Data	4.6587285
24642	Median		106.5	SD of log Data	1.0401285
24643	SD		166.41002		
24644	Coefficient of Variation		0.9857684		
24645	Skewness		1.5780555		
24646					
24647	**Relevant UCL Statistics**				
24648	**Normal Distribution Test**			**Lognormal Distribution Test**	
24649	Shapiro Wilk Test Statistic		0.8250407	Shapiro Wilk Test Statistic	0.9476754
24650	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
24651	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
24652					
24653	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24654	95% Student's-t UCL		241.74379	95% H-UCL	380.89797
24655	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	388.92744
24656	95% Adjusted-CLT UCL (Chen-1995)		254.77981	97.5% Chebyshev (MVUE) UCL	482.47756
24657	95% Modified-t UCL (Johnson-1978)		244.47925	99% Chebyshev (MVUE) UCL	666.23866

	A	B	C	D	E
24658					
24659	**Gamma Distribution Test**			**Data Distribution**	
24660	k star (bias corrected)		1.0191092	**Data appear Gamma Distributed at 5% Significance Level**	
24661	Theta Star		165.64712		
24662	MLE of Mean		168.8125		
24663	MLE of Standard Deviation		167.22232		
24664	nu star		32.611494		
24665	Approximate Chi Square Value (.05)		20.557557	**Nonparametric Statistics**	
24666	Adjusted Level of Significance		0.03348	95% CLT UCL	237.24253
24667	Adjusted Chi Square Value		19.472102	95% Jackknife UCL	241.74379
24668				95% Standard Bootstrap UCL	235.28946
24669	Anderson-Darling Test Statistic		0.3747546	95% Bootstrap-t UCL	276.52471
24670	Anderson-Darling 5% Critical Value		0.7598042	95% Hall's Bootstrap UCL	282.12331
24671	Kolmogorov-Smirnov Test Statistic		0.1605753	95% Percentile Bootstrap UCL	237.625
24672	Kolmogorov-Smirnov 5% Critical Value		0.2202424	95% BCA Bootstrap UCL	248.5
24673	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	350.15362
24674				97.5% Chebyshev(Mean, Sd) UCL	428.62007
24675	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	582.75221
24676	95% Approximate Gamma UCL		267.79583		
24677	95% Adjusted Gamma UCL		282.72386		
24678					
24679	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	267.79583
24680					
24681	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24682	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
24683	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
24684					
24685					
24686	**OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_nw_2005)**				
24687					
24688	**General Statistics**				
24689	Number of Valid Observations		18	Number of Distinct Observations	17
24690					
24691	**Raw Statistics**			**Log-transformed Statistics**	
24692	Minimum		24	Minimum of Log Data	3.1780538
24693	Maximum		910	Maximum of Log Data	6.8134446
24694	Mean		161.19444	Mean of log Data	4.3249826
24695	Median		51	SD of log Data	1.1244014
24696	SD		260.16223		
24697	Coefficient of Variation		1.6139652		
24698	Skewness		2.4419927		
24699					
24700	**Relevant UCL Statistics**				
24701	**Normal Distribution Test**			**Lognormal Distribution Test**	
24702	Shapiro Wilk Test Statistic		0.5625671	Shapiro Wilk Test Statistic	0.8593835
24703	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
24704	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
24705					
24706	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24707	95% Student's-t UCL		267.86857	95% H-UCL	307.08784
24708	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	310.81469
24709	95% Adjusted-CLT UCL (Chen-1995)		299.7717	97.5% Chebyshev (MVUE) UCL	386.93284
24710	95% Modified-t UCL (Johnson-1978)		273.75111	99% Chebyshev (MVUE) UCL	536.45221
24711					
24712	**Gamma Distribution Test**			**Data Distribution**	
24713	k star (bias corrected)		0.6914381	**Data do not follow a Discernable Distribution (0.05)**	
24714	Theta Star		233.12923		
24715	MLE of Mean		161.19444		
24716	MLE of Standard Deviation		193.85339		
24717	nu star		24.891773		
24718	Approximate Chi Square Value (.05)		14.528804	**Nonparametric Statistics**	
24719	Adjusted Level of Significance		0.03574	95% CLT UCL	262.05823
24720	Adjusted Chi Square Value		13.771335	95% Jackknife UCL	267.86857
24721				95% Standard Bootstrap UCL	259.49644
24722	Anderson-Darling Test Statistic		1.7015445	95% Bootstrap-t UCL	517.74332
24723	Anderson-Darling 5% Critical Value		0.7763482	95% Hall's Bootstrap UCL	673.52942
24724	Kolmogorov-Smirnov Test Statistic		0.2298995	95% Percentile Bootstrap UCL	267.05556

	A	B	C	D	E
24725	Kolmogorov-Smirnov 5% Critical Value		0.2111492	95% BCA Bootstrap UCL	304.58333
24726	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	428.48573
24727				97.5% Chebyshev(Mean, Sd) UCL	544.14288
24728	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	771.32896
24729	95% Approximate Gamma UCL		276.16971		
24730	95% Adjusted Gamma UCL		291.35995		
24731					
24732	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	428.48573
24733					
24734	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24735	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
24736	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
24737					
24738					
24739	**OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_nw_2009)**				
24740					
24741	**General Statistics**				
24742	Number of Valid Observations		7	Number of Distinct Observations	7
24743					
24744	**Raw Statistics**			**Log-transformed Statistics**	
24745	Minimum		6.5	Minimum of Log Data	1.8718022
24746	Maximum		130	Maximum of Log Data	4.8675345
24747	Mean		57.642857	Mean of log Data	3.7823133
24748	Median		45	SD of log Data	0.936453
24749	SD		38.389142		
24750	Coefficient of Variation		0.6659826		
24751	Skewness		0.9841204		
24752					
24753					
24754	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
24755					
24756	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
24757	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
24758					
24759					
24760	**Warning: There are only 7 Values in this data**				
24761	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
24762	**the resulting calculations may not be reliable enough to draw conclusions**				
24763					
24764	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
24765					
24766	**Relevant UCL Statistics**				
24767	**Normal Distribution Test**			**Lognormal Distribution Test**	
24768	Shapiro Wilk Test Statistic		0.920165	Shapiro Wilk Test Statistic	0.8458224
24769	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
24770	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
24771					
24772	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24773	95% Student's-t UCL		85.837881	95% H-UCL	261.50063
24774	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	160.53335
24775	95% Adjusted-CLT UCL (Chen-1995)		87.276097	97.5% Chebyshev (MVUE) UCL	202.76519
24776	95% Modified-t UCL (Johnson-1978)		86.737394	99% Chebyshev (MVUE) UCL	285.72146
24777					
24778	**Gamma Distribution Test**			**Data Distribution**	
24779	k star (bias corrected)		1.2318618	**Data appear Normal at 5% Significance Level**	
24780	Theta Star		46.793281		
24781	MLE of Mean		57.642857		
24782	MLE of Standard Deviation		51.935521		

	A	B	C	D	E
24783	nu star		17.246066		
24784	Approximate Chi Square Value (.05)		8.8482908	**Nonparametric Statistics**	
24785	Adjusted Level of Significance		0.01584	95% CLT UCL	81.509242
24786	Adjusted Chi Square Value		7.1086866	95% Jackknife UCL	85.837881
24787				95% Standard Bootstrap UCL	79.797363
24788	Anderson-Darling Test Statistic		0.3966939	95% Bootstrap-t UCL	94.691498
24789	Anderson-Darling 5% Critical Value		0.7150383	95% Hall's Bootstrap UCL	129.08993
24790	Kolmogorov-Smirnov Test Statistic		0.2618865	95% Percentile Bootstrap UCL	80.428571
24791	Kolmogorov-Smirnov 5% Critical Value		0.3151515	95% BCA Bootstrap UCL	83.714286
24792	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	120.88931
24793				97.5% Chebyshev(Mean, Sd) UCL	148.2561
24794	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	202.01286
24795	95% Approximate Gamma UCL		112.3508		
24796	95% Adjusted Gamma UCL		139.84475		
24797					
24798	**Potential UCL to Use**			Use 95% Student's-t UCL	85.837881
24799					
24800	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24801	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
24802	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
24803					
24804					
24805	**OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_nw_2010)**				
24806					
24807	**General Statistics**				
24808	Number of Valid Observations		4	Number of Distinct Observations	3
24809					
24810					
24811	**Warning: This data set only has 4 observations!**				
24812	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
24813	**The data set for variable OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_nw_2010) was not processed!**				
24814					
24815	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
24816	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
24817					
24818					
24819					
24820	**OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ref_2009)**				
24821					
24822	**General Statistics**				
24823	Number of Valid Data		0	Number of Detected Data	0
24824	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
24825	Number of Missing Values		6	Percent Non-Detects	NaN%
24826					
24827	**Warning: This data set only has 0 observations!**				
24828	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
24829	**The data set for variable OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ref_2009) was not processed!**				
24830					
24831	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
24832	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
24833					
24834					
24835					

	A	B	C	D	E
24836	**OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ref_2010)**				
24837					
24838	**General Statistics**				
24839	Number of Valid Data		0	Number of Detected Data	0
24840	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
24841	Number of Missing Values		3	Percent Non-Detects	NaN%
24842					
24843	**Warning: This data set only has 0 observations!**				
24844	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
24845	**The data set for variable OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ref_2010) was not processed!**				
24846					
24847	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
24848	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
24849					
24850					
24851					
24852	**OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_s_2005)**				
24853					
24854	**General Statistics**				
24855	Number of Valid Observations		8	Number of Distinct Observations	7
24856					
24857	**Raw Statistics**			**Log-transformed Statistics**	
24858	Minimum		18	Minimum of Log Data	2.8903718
24859	Maximum		1200	Maximum of Log Data	7.0900768
24860	Mean		226.625	Mean of log Data	4.5936311
24861	Median		88.5	SD of log Data	1.2622475
24862	SD		396.57099		
24863	Coefficient of Variation		1.7498996		
24864	Skewness		2.7365621		
24865					
24866					
24867	**Warning: There are only 8 Values in this data**				
24868	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
24869	**the resulting calculations may not be reliable enough to draw conclusions**				
24870					
24871	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
24872					
24873	**Relevant UCL Statistics**				
24874	**Normal Distribution Test**			**Lognormal Distribution Test**	
24875	Shapiro Wilk Test Statistic		0.5408896	Shapiro Wilk Test Statistic	0.9256466
24876	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
24877	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
24878					
24879	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24880	95% Student's-t UCL		492.26201	95% H-UCL	1550.6523
24881	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	564.50804
24882	95% Adjusted-CLT UCL (Chen-1995)		602.1978	97.5% Chebyshev (MVUE) UCL	726.78472
24883	95% Modified-t UCL (Johnson-1978)		514.8712	99% Chebyshev (MVUE) UCL	1045.5458
24884					
24885	**Gamma Distribution Test**			**Data Distribution**	
24886	k star (bias corrected)		0.5363954	**Data appear Lognormal at 5% Significance Level**	
24887	Theta Star		422.49617		
24888	MLE of Mean		226.625		
24889	MLE of Standard Deviation		309.43205		
24890	nu star		8.5823263		
24891	Approximate Chi Square Value (.05)		3.0767029	**Nonparametric Statistics**	
24892	Adjusted Level of Significance		0.01946	95% CLT UCL	457.24831
24893	Adjusted Chi Square Value		2.3054043	95% Jackknife UCL	492.26201
24894				95% Standard Bootstrap UCL	442.23126
24895	Anderson-Darling Test Statistic		0.7809701	95% Bootstrap-t UCL	1692.9206
24896	Anderson-Darling 5% Critical Value		0.7468609	95% Hall's Bootstrap UCL	1589.5638

	A	B	C	D	E
24897	Kolmogorov-Smirnov Test Statistic		0.3076597	95% Percentile Bootstrap UCL	496.875
24898	Kolmogorov-Smirnov 5% Critical Value		0.304555	95% BCA Bootstrap UCL	627
24899	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	837.78195
24900				97.5% Chebyshev(Mean, Sd) UCL	1102.23
24901	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1621.6871
24902	95% Approximate Gamma UCL		632.16038		
24903	95% Adjusted Gamma UCL		843.65668		
24904					
24905	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	837.78195
24906					
24907	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
24908	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
24909	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
24910					
24911					
24912	**OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_s_2010)**				
24913					
24914	**General Statistics**				
24915	Number of Valid Observations		2	Number of Distinct Observations	2
24916					
24917					
24918	**Warning: This data set only has 2 observations!**				
24919	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
24920	**The data set for variable OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_s_2010) was not processed!**				
24921					
24922	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
24923	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
24924					
24925					
24926					
24927	**OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_stillwater_2005)**				
24928					
24929	**General Statistics**				
24930	Number of Valid Observations		4	Number of Distinct Observations	4
24931					
24932					
24933	**Warning: This data set only has 4 observations!**				
24934	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
24935	**The data set for variable OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_stillwater_2005) was not processed!**				
24936					
24937	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
24938	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
24939					
24940					
24941					
24942	**OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_stillwater_2009)**				
24943					
24944	**General Statistics**				
24945	Number of Valid Data		60	Number of Detected Data	49
24946	Number of Distinct Detected Data		43	Number of Non-Detect Data	11
24947				Percent Non-Detects	18.33%
24948					
24949	**Raw Statistics**			**Log-transformed Statistics**	

	A	B	C	D	E
24950	Minimum Detected		3.4	Minimum Detected	1.2237754
24951	Maximum Detected		2500	Maximum Detected	7.824046
24952	Mean of Detected		190.95918	Mean of Detected	4.2549363
24953	SD of Detected		376.92595	SD of Detected	1.5388121
24954	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
24955	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
24956					
24957					
24958	**UCL Statistics**				
24959	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
24960	Shapiro Wilk Test Statistic		0.4565278	Shapiro Wilk Test Statistic	0.9537893
24961	5% Shapiro Wilk Critical Value		0.947	5% Shapiro Wilk Critical Value	0.947
24962	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
24963					
24964	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
24965	DL/2 Substitution Method			DL/2 Substitution Method	
24966	Mean		156.2525	Mean	3.5666734
24967	SD		347.91039	SD	2.0180116
24968	95% DL/2 (t) UCL		231.30971	95% H-Stat (DL/2) UCL	759.55997
24969					
24970	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
24971	Mean		105.20124	Mean in Log Scale	3.6224612
24972	SD		394.03932	SD in Log Scale	1.9583751
24973	95% MLE (t) UCL		190.21017	Mean in Original Scale	156.45846
24974	95% MLE (Tiku) UCL		187.42465	SD in Original Scale	347.81824
24975				95% t UCL	231.49579
24976				95% Percentile Bootstrap UCL	238.94371
24977				95% BCA Bootstrap UCL	276.56621
24978					
24979	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
24980	k star (bias corrected)		0.5929292	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
24981	Theta Star		322.0607		
24982	nu star		58.107059		
24983					
24984	A-D Test Statistic		0.8201428	**Nonparametric Statistics**	
24985	5% A-D Critical Value		0.8040383	Kaplan-Meier (KM) Method	
24986	K-S Test Statistic		0.8040383	Mean	156.57333
24987	5% K-S Critical Value		0.1328114	SD	344.85582
24988	**Data follow Appr. Gamma Distribution at 5% Significance Level**			SE of Mean	44.982061
24989				95% KM (t) UCL	231.74254
24990	**Assuming Gamma Distribution**			95% KM (z) UCL	230.56224
24991	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	231.4673
24992	Minimum		1E-12	95% KM (bootstrap t) UCL	341.90374
24993	Maximum		2500	95% KM (BCA) UCL	232.92833
24994	Mean		155.95	95% KM (Percentile Bootstrap) UCL	234.87167
24995	Median		58	95% KM (Chebyshev) UCL	352.64559
24996	SD		348.04766	97.5% KM (Chebyshev) UCL	437.48621
24997	k star		0.1246295	99% KM (Chebyshev) UCL	604.13919
24998	Theta star		1251.3094		
24999	Nu star		14.955534	**Potential UCLs to Use**	
25000	AppChi2		7.2306321	95% KM (Chebyshev) UCL	352.64559
25001	95% Gamma Approximate UCL		322.5604		
25002	95% Adjusted Gamma UCL		328.58493		
25003	**Note: DL/2 is not a recommended method.**				
25004					
25005	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
25006	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
25007	**For additional insight, the user may want to consult a statistician.**				
25008					
25009					
25010	**OS|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_stillwater_2010)**				
25011					
25012	**General Statistics**				
25013	Number of Valid Observations		11	Number of Distinct Observations	11
25014					
25015	**Raw Statistics**			**Log-transformed Statistics**	

	A	B	C	D	E
25016	Minimum		125	Minimum of Log Data	4.8283137
25017	Maximum		3900	Maximum of Log Data	8.2687318
25018	Mean		931.81818	Mean of log Data	6.2773103
25019	Median		530	SD of log Data	1.0922931
25020	SD		1140.0927		
25021	Coefficient of Variation		1.2235141		
25022	Skewness		2.1070517		
25023					
25024	**Relevant UCL Statistics**				
25025	**Normal Distribution Test**			**Lognormal Distribution Test**	
25026	Shapiro Wilk Test Statistic		0.7160105	Shapiro Wilk Test Statistic	0.9450018
25027	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
25028	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
25029					
25030	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
25031	95% Student's-t UCL		1554.8533	95% H-UCL	2897.451
25032	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	2264.8961
25033	95% Adjusted-CLT UCL (Chen-1995)		1730.5855	97.5% Chebyshev (MVUE) UCL	2857.4425
25034	95% Modified-t UCL (Johnson-1978)		1591.2508	99% Chebyshev (MVUE) UCL	4021.3852
25035					
25036	**Gamma Distribution Test**			**Data Distribution**	
25037	k star (bias corrected)		0.8080803	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
25038	Theta Star		1153.1257		
25039	MLE of Mean		931.81818		
25040	MLE of Standard Deviation		1036.5826		
25041	nu star		17.777766		
25042	Approximate Chi Square Value (.05)		9.2304563	**Nonparametric Statistics**	
25043	Adjusted Level of Significance		0.02783	95% CLT UCL	1497.2381
25044	Adjusted Chi Square Value		8.2443886	95% Jackknife UCL	1554.8533
25045				95% Standard Bootstrap UCL	1461.3777
25046	Anderson-Darling Test Statistic		0.5206295	95% Bootstrap-t UCL	2419.6158
25047	Anderson-Darling 5% Critical Value		0.7510306	95% Hall's Bootstrap UCL	3497.4886
25048	Kolmogorov-Smirnov Test Statistic		0.2623725	95% Percentile Bootstrap UCL	1511.8182
25049	Kolmogorov-Smirnov 5% Critical Value		0.2622317	95% BCA Bootstrap UCL	1713.1818
25050	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	2430.1935
25051				97.5% Chebyshev(Mean, Sd) UCL	3078.5418
25052	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4352.0963
25053	95% Approximate Gamma UCL		1794.6725		
25054	95% Adjusted Gamma UCL		2009.3238		
25055					
25056	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	1794.6725
25057					
25058	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
25059	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
25060	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
25061					
25062					
25063	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_ne_2005)**				
25064					
25065	**General Statistics**				
25066	Number of Valid Data		36	Number of Detected Data	19
25067	Number of Distinct Detected Data		15	Number of Non-Detect Data	17
25068				Percent Non-Detects	47.22%
25069					
25070	**Raw Statistics**			**Log-transformed Statistics**	
25071	Minimum Detected		34	Minimum Detected	3.5263605
25072	Maximum Detected		62	Maximum Detected	4.1271344
25073	Mean of Detected		47.368421	Mean of Detected	3.8432634
25074	SD of Detected		8.3746345	SD of Detected	0.1761034
25075	Minimum Non-Detect		320	Minimum Non-Detect	5.768321
25076	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
25077					
25078	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
25079	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
25080	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
25081					

	A	B	C	D	E
25082	**UCL Statistics**				
25083	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
25084	Shapiro Wilk Test Statistic		0.9478225	Shapiro Wilk Test Statistic	0.9624158
25085	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
25086	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
25087					
25088	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
25089	DL/2 Substitution Method			DL/2 Substitution Method	
25090	Mean		102.70833	Mean	4.4382511
25091	SD		59.644467	SD	0.6503403
25092	95% DL/2 (t) UCL		119.50394	95% H-Stat (DL/2) UCL	130.70581
25093					
25094	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
25095	**MLE method failed to converge properly**			Mean in Log Scale	3.8432634
25096				SD in Log Scale	0.1659892
25097				Mean in Original Scale	47.306768
25098				SD in Original Scale	7.8796947
25099				95% t UCL	49.525654
25100				95% Percentile Bootstrap UCL	49.510889
25101				95% BCA Bootstrap UCL	49.600146
25102					
25103	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
25104	k star (bias corrected)		28.832559	**Data appear Normal at 5% Significance Level**	
25105	Theta Star		1.6428795		
25106	nu star		1095.6372		
25107					
25108	A-D Test Statistic		0.2712197	**Nonparametric Statistics**	
25109	5% A-D Critical Value		0.740361	Kaplan-Meier (KM) Method	
25110	K-S Test Statistic		0.740361	Mean	47.368421
25111	5% K-S Critical Value		0.1980974	SD	8.1512707
25112	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	1.9212729
25113				95% KM (t) UCL	50.614551
25114	**Assuming Gamma Distribution**			95% KM (z) UCL	50.528634
25115	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	50.656856
25116	Minimum		30.74454	95% KM (bootstrap t) UCL	50.837082
25117	Maximum		62	95% KM (BCA) UCL	50.571429
25118	Mean		47.510699	95% KM (Percentile Bootstrap) UCL	50.363636
25119	Median		48.417883	95% KM (Chebyshev) UCL	55.743056
25120	SD		7.6765047	97.5% KM (Chebyshev) UCL	59.366767
25121	k star		34.659348	99% KM (Chebyshev) UCL	66.484845
25122	Theta star		1.3707903		
25123	Nu star		2495.473	**Potential UCLs to Use**	
25124	AppChi2		2380.4178	95% KM (t) UCL	50.614551
25125	95% Gamma Approximate UCL		49.807084	95% KM (Percentile Bootstrap) UCL	50.363636
25126	95% Adjusted Gamma UCL		49.913551		
25127	**Note: DL/2 is not a recommended method.**				
25128					
25129	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
25130	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
25131	**For additional insight, the user may want to consult a statistician.**				
25132					
25133					
25134	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_ne_2009)**				
25135					
25136	**General Statistics**				
25137	Number of Valid Data		0	Number of Detected Data	0
25138	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25139	Number of Missing Values		20	Percent Non-Detects	NaN%
25140					
25141	**Warning: This data set only has 0 observations!**				
25142	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
25143	**The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_ne_2009) was not processed!**				
25144					

	A	B	C	D	E
25145	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
25146	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
25147					
25148					
25149					
25150	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_ne_2010)**				
25151					
25152	**General Statistics**				
25153	Number of Valid Data		0	Number of Detected Data	0
25154	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25155	Number of Missing Values		16	Percent Non-Detects	NaN%
25156					
25157	**Warning: This data set only has 0 observations!**				
25158	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
25159	**The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_ne_2010) was not processed!**				
25160					
25161	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
25162	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
25163					
25164					
25165					
25166	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_nw_2005)**				
25167					
25168	**General Statistics**				
25169	Number of Valid Data		18	Number of Detected Data	3
25170	Number of Distinct Detected Data		3	Number of Non-Detect Data	15
25171				Percent Non-Detects	83.33%
25172					
25173	**Raw Statistics**			**Log-transformed Statistics**	
25174	Minimum Detected		46	Minimum Detected	3.8286414
25175	Maximum Detected		56	Maximum Detected	4.0253517
25176	Mean of Detected		51	Mean of Detected	3.9286062
25177	SD of Detected		5	SD of Detected	0.0983947
25178	Minimum Non-Detect		330	Minimum Non-Detect	5.7990927
25179	Maximum Non-Detect		380	Maximum Non-Detect	5.9401713
25180					
25181	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	18
25182	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
25183	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
25184					
25185	**Warning: There are only 3 Distinct Detected Values in this data set**				
25186	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
25187	**Those methods will return a 'N/A' value on your output display!**				
25188					
25189	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
25190	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
25191	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
25192					
25193					
25194	**UCL Statistics**				
25195	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
25196	Shapiro Wilk Test Statistic		0.9999808	Shapiro Wilk Test Statistic	0.9991779
25197	5% Shapiro Wilk Critical Value		0.767	5% Shapiro Wilk Critical Value	0.767
25198	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	

	A	B	C	D	E
25199					
25200	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
25201	DL/2 Substitution Method			DL/2 Substitution Method	
25202	Mean		147.38889	Mean	4.91756
25203	SD		44.774124	SD	0.4575411
25204	95% DL/2 (t) UCL		165.74759	95% H-Stat (DL/2) UCL	189.06656
25205					
25206	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
25207	**MLE method failed to converge properly**			Mean in Log Scale	3.9286062
25208				SD in Log Scale	0.1150969
25209				Mean in Original Scale	51.154843
25210				SD in Original Scale	5.8921944
25211				95% t UCL	53.570815
25212				95% Percentile Bootstrap UCL	53.351175
25213				95% BCA Bootstrap UCL	53.441805
25214					
25215	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
25216	k star (bias corrected)		N/A	**Data appear Normal at 5% Significance Level**	
25217	Theta Star		N/A		
25218	nu star		N/A		
25219					
25220	A-D Test Statistic		N/A	**Nonparametric Statistics**	
25221	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
25222	K-S Test Statistic		N/A	Mean	51
25223	5% K-S Critical Value		N/A	SD	4.0824829
25224	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	2.8867513
25225				95% KM (t) UCL	56.021812
25226	**Assuming Gamma Distribution**			95% KM (z) UCL	55.748283
25227	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	56.977152
25228	Minimum		N/A	95% KM (bootstrap t) UCL	58.071068
25229	Maximum		N/A	95% KM (BCA) UCL	53.5
25230	Mean		N/A	95% KM (Percentile Bootstrap) UCL	N/A
25231	Median		N/A	95% KM (Chebyshev) UCL	63.583057
25232	SD		N/A	97.5% KM (Chebyshev) UCL	69.027756
25233	k star		N/A	99% KM (Chebyshev) UCL	79.722813
25234	Theta star		N/A		
25235	Nu star		N/A	**Potential UCLs to Use**	
25236	AppChi2		N/A	95% KM (t) UCL	56.021812
25237	95% Gamma Approximate UCL		N/A	95% KM (Percentile Bootstrap) UCL	N/A
25238	95% Adjusted Gamma UCL		N/A		
25239	**Warning: Recommended UCL exceeds the maximum observation**				
25240	**Note: DL/2 is not a recommended method.**				
25241					
25242	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
25243	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
25244	**For additional insight, the user may want to consult a statistician.**				
25245					
25246					
25247	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_nw_2009)**				
25248					
25249	**General Statistics**				
25250	Number of Valid Data		0	Number of Detected Data	0
25251	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25252	Number of Missing Values		7	Percent Non-Detects	NaN%
25253					
25254	**Warning: This data set only has 0 observations!**				
25255	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
25256	**The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_nw_2009) was not processed!**				
25257					
25258	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
25259	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
25260					
25261					
25262					
25263	OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_nw_2010)				
25264					
25265	General Statistics				
25266	Number of Valid Data		0	Number of Detected Data	0
25267	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25268	Number of Missing Values		4	Percent Non-Detects	NaN%
25269					
25270	Warning: This data set only has 0 observations!				
25271	Data set is too small to compute reliable and meaningful statistics and estimates!				
25272	The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_nw_2010) was not processed!				
25273					
25274	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
25275	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
25276					
25277					
25278					
25279	OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_ref_2009)				
25280					
25281	General Statistics				
25282	Number of Valid Data		0	Number of Detected Data	0
25283	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25284	Number of Missing Values		6	Percent Non-Detects	NaN%
25285					
25286	Warning: This data set only has 0 observations!				
25287	Data set is too small to compute reliable and meaningful statistics and estimates!				
25288	The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_ref_2009) was not processed!				
25289					
25290	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
25291	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
25292					
25293					
25294					
25295	OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_ref_2010)				
25296					
25297	General Statistics				
25298	Number of Valid Data		0	Number of Detected Data	0
25299	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25300	Number of Missing Values		3	Percent Non-Detects	NaN%
25301					
25302	Warning: This data set only has 0 observations!				
25303	Data set is too small to compute reliable and meaningful statistics and estimates!				
25304	The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_ref_2010) was not processed!				
25305					
25306	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
25307	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
25308					

	A	B	C	D	E
25309					
25310					
25311	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_s_2005)**				
25312					
25313	**General Statistics**				
25314	Number of Valid Data		8	Number of Detected Data	7
25315	Number of Distinct Detected Data		7	Number of Non-Detect Data	1
25316				Percent Non-Detects	12.50%
25317					
25318	**Raw Statistics**			**Log-transformed Statistics**	
25319	Minimum Detected		39.5	Minimum Detected	3.6763007
25320	Maximum Detected		100	Maximum Detected	4.6051702
25321	Mean of Detected		55.5	Mean of Detected	3.9729298
25322	SD of Detected		20.229928	SD of Detected	0.2977474
25323	Minimum Non-Detect		330	Minimum Non-Detect	5.7990927
25324	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
25325					
25326					
25327	**Warning: There are only 7 Detected Values in this data**				
25328	**Note: It should be noted that even though bootstrap may be performed on this data set**				
25329	**the resulting calculations may not be reliable enough to draw conclusions**				
25330					
25331	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
25332					
25333					
25334	**UCL Statistics**				
25335	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
25336	Shapiro Wilk Test Statistic		0.6852821	Shapiro Wilk Test Statistic	0.7804368
25337	5% Shapiro Wilk Critical Value		0.803	5% Shapiro Wilk Critical Value	0.803
25338	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
25339					
25340	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
25341	DL/2 Substitution Method			DL/2 Substitution Method	
25342	Mean		69.1875	Mean	4.1145567
25343	SD		43.006592	SD	0.4862657
25344	95% DL/2 (t) UCL		97.994807	95% H-Stat (DL/2) UCL	105.76029
25345					
25346	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
25347	**MLE method failed to converge properly**			Mean in Log Scale	3.9729298
25348				SD in Log Scale	0.2756605
25349				Mean in Original Scale	55.204999
25350				SD in Original Scale	18.747851
25351				95% t UCL	67.76296
25352				95% Percentile Bootstrap UCL	67.5
25353				95% BCA Bootstrap UCL	71.784997
25354					
25355	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
25356	k star (bias corrected)		6.7642756	**Data do not follow a Discernable Distribution (0.05)**	
25357	Theta Star		8.2048697		
25358	nu star		94.699858		
25359					
25360	A-D Test Statistic		0.9120468	**Nonparametric Statistics**	
25361	5% A-D Critical Value		0.7081793	Kaplan-Meier (KM) Method	
25362	K-S Test Statistic		0.7081793	Mean	55.5
25363	5% K-S Critical Value		0.3118515	SD	18.729274
25364	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	7.6461942
25365				95% KM (t) UCL	69.986316
25366	**Assuming Gamma Distribution**			95% KM (z) UCL	68.07687
25367	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	70.136437
25368	Minimum		39.5	95% KM (bootstrap t) UCL	102.71762
25369	Maximum		100	95% KM (BCA) UCL	70
25370	Mean		55.782406	95% KM (Percentile Bootstrap) UCL	69.285714
25371	Median		49.5	95% KM (Chebyshev) UCL	88.828988
25372	SD		18.746299	97.5% KM (Chebyshev) UCL	103.25047
25373	k star		8.3861967	99% KM (Chebyshev) UCL	131.57867
25374	Theta star		6.651693		
25375	Nu star		134.17915	**Potential UCLs to Use**	

	A	B	C	D	E
25376	AppChi2		108.41771	95% KM (Chebyshev) UCL	88.828988
25377	95% Gamma Approximate UCL		69.037019		
25378	95% Adjusted Gamma UCL		72.978353		
25379	**Note: DL/2 is not a recommended method.**				
25380					
25381	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
25382	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
25383	**For additional insight, the user may want to consult a statistician.**				
25384					
25385					
25386	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_s_2010)**				
25387					
25388	**General Statistics**				
25389	Number of Valid Data		0	Number of Detected Data	0
25390	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25391	Number of Missing Values		2	Percent Non-Detects	NaN%
25392					
25393	**Warning: This data set only has 0 observations!**				
25394	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
25395	**The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_s_2010) was not processed!**				
25396					
25397	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
25398	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
25399					
25400					
25401					
25402	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_stillwater_2005)**				
25403					
25404	**General Statistics**				
25405	Number of Valid Data		4	Number of Detected Data	0
25406	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
25407				Percent Non-Detects	100.00%
25408					
25409	**Warning: This data set only has 4 observations!**				
25410	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
25411	**The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_stillwater_2005) was not processed!**				
25412					
25413	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
25414	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
25415					
25416					
25417					
25418	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_stillwater_2009)**				
25419					
25420	**General Statistics**				
25421	Number of Valid Data		0	Number of Detected Data	0
25422	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25423	Number of Missing Values		60	Percent Non-Detects	NaN%
25424					
25425	**Warning: This data set only has 0 observations!**				
25426	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
25427	**The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_stillwater_2009) was not processed!**				
25428					
25429	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
25430	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
25431					
25432					
25433					
25434	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_stillwater_2010)**				
25435					
25436	**General Statistics**				
25437	Number of Valid Data		0	Number of Detected Data	0
25438	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25439	Number of Missing Values		11	Percent Non-Detects	NaN%
25440					
25441	**Warning: This data set only has 0 observations!**				
25442	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
25443	**The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_sd_stillwater_2010) was not processed!**				
25444					
25445	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
25446	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
25447					
25448					
25449					
25450	**OS|UG/KG|CARBAZOLE (gi_sd_ne_2005)**				
25451					
25452	**General Statistics**				
25453	Number of Valid Data		36	Number of Detected Data	8
25454	Number of Distinct Detected Data		8	Number of Non-Detect Data	28
25455				Percent Non-Detects	77.78%
25456					
25457	**Raw Statistics**			**Log-transformed Statistics**	
25458	Minimum Detected		59	Minimum Detected	4.0775374
25459	Maximum Detected		910	Maximum Detected	6.8134446
25460	Mean of Detected		259.25	Mean of Detected	5.0550949
25461	SD of Detected		309.76754	SD of Detected	1.0011675
25462	Minimum Non-Detect		320	Minimum Non-Detect	5.768321
25463	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
25464					
25465	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	34
25466	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	2
25467	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	94.44%
25468					
25469	**Warning: There are only 8 Detected Values in this data**				
25470	**Note: It should be noted that even though bootstrap may be performed on this data set**				
25471	**the resulting calculations may not be reliable enough to draw conclusions**				
25472					
25473	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
25474					
25475					
25476	**UCL Statistics**				
25477	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
25478	Shapiro Wilk Test Statistic		0.6939458	Shapiro Wilk Test Statistic	0.8511127
25479	5% Shapiro Wilk Critical Value		0.818	5% Shapiro Wilk Critical Value	0.818
25480	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
25481					

	A	B	C	D	E
25482	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
25483	DL/2 Substitution Method			DL/2 Substitution Method	
25484	Mean		185.73611	Mean	5.0933665
25485	SD		144.15346	SD	0.4482513
25486	95% DL/2 (t) UCL		226.32907	95% H-Stat (DL/2) UCL	207.62615
25487					
25488	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
25489	**MLE method failed to converge properly**			Mean in Log Scale	4.7078976
25490				SD in Log Scale	0.7736851
25491				Mean in Original Scale	154.13553
25492				SD in Original Scale	166.17271
25493				95% t UCL	200.929
25494				95% Percentile Bootstrap UCL	203.40726
25495				95% BCA Bootstrap UCL	216.05066
25496					
25497	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
25498	k star (bias corrected)		0.7909685	**Data appear Lognormal at 5% Significance Level**	
25499	Theta Star		327.76273		
25500	nu star		12.655496		
25501					
25502	A-D Test Statistic		0.8385979	**Nonparametric Statistics**	
25503	5% A-D Critical Value		0.7336278	Kaplan-Meier (KM) Method	
25504	K-S Test Statistic		0.7336278	Mean	135.90741
25505	5% K-S Critical Value		0.3007831	SD	154.58256
25506	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	30.313023
25507				95% KM (t) UCL	187.12346
25508	**Assuming Gamma Distribution**			95% KM (z) UCL	185.76789
25509	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	186.29649
25510	Minimum		59	95% KM (bootstrap t) UCL	220.65812
25511	Maximum		910	95% KM (BCA) UCL	188.61111
25512	Mean		259.80375	95% KM (Percentile Bootstrap) UCL	187.11111
25513	Median		254.96867	95% KM (Chebyshev) UCL	268.03881
25514	SD		140.0312	97.5% KM (Chebyshev) UCL	325.21217
25515	k star		4.1612324	99% KM (Chebyshev) UCL	437.51817
25516	Theta star		62.434329		
25517	Nu star		299.60873	**Potential UCLs to Use**	
25518	AppChi2		260.51316	95% KM (BCA) UCL	188.61111
25519	95% Gamma Approximate UCL		298.79286		
25520	95% Adjusted Gamma UCL		300.69865		
25521	**Note: DL/2 is not a recommended method.**				
25522					
25523	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
25524	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
25525	**For additional insight, the user may want to consult a statistician.**				
25526					
25527					
25528	**OS|UG/KG|CARBAZOLE (gi_sd_ne_2009)**				
25529					
25530	**General Statistics**				
25531	Number of Valid Data		0	Number of Detected Data	0
25532	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25533	Number of Missing Values		20	Percent Non-Detects	NaN%
25534					
25535	**Warning: This data set only has 0 observations!**				
25536	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
25537	**The data set for variable OS|UG/KG|CARBAZOLE (gi_sd_ne_2009) was not processed!**				
25538					
25539	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
25540	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
25541					
25542					
25543					

	A	B	C	D	E
25544	OS|UG/KG|CARBAZOLE (gi_sd_ne_2010)				
25545					
25546	General Statistics				
25547	Number of Valid Data		0	Number of Detected Data	0
25548	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25549	Number of Missing Values		16	Percent Non-Detects	NaN%
25550					
25551	Warning: This data set only has 0 observations!				
25552	Data set is too small to compute reliable and meaningful statistics and estimates!				
25553	The data set for variable OS|UG/KG|CARBAZOLE (gi_sd_ne_2010) was not processed!				
25554					
25555	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
25556	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
25557					
25558					
25559					
25560	OS|UG/KG|CARBAZOLE (gi_sd_nw_2005)				
25561					
25562	General Statistics				
25563	Number of Valid Data		18	Number of Detected Data	9
25564	Number of Distinct Detected Data		9	Number of Non-Detect Data	9
25565				Percent Non-Detects	50.00%
25566					
25567	Raw Statistics			Log-transformed Statistics	
25568	Minimum Detected		35	Minimum Detected	3.5553481
25569	Maximum Detected		710	Maximum Detected	6.565265
25570	Mean of Detected		163.55556	Mean of Detected	4.6572288
25571	SD of Detected		212.30939	SD of Detected	0.8786294
25572	Minimum Non-Detect		330	Minimum Non-Detect	5.7990927
25573	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
25574					
25575					
25576	Warning: There are only 9 Detected Values in this data				
25577	Note: It should be noted that even though bootstrap may be performed on this data set				
25578	the resulting calculations may not be reliable enough to draw conclusions				
25579					
25580	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.				
25581					
25582					
25583	UCL Statistics				
25584	Normal Distribution Test with Detected Values Only			Lognormal Distribution Test with Detected Values Only	
25585	Shapiro Wilk Test Statistic		0.5963505	Shapiro Wilk Test Statistic	0.8859688
25586	5% Shapiro Wilk Critical Value		0.829	5% Shapiro Wilk Critical Value	0.829
25587	Data not Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
25588					
25589	Assuming Normal Distribution			Assuming Lognormal Distribution	
25590	DL/2 Substitution Method			DL/2 Substitution Method	
25591	Mean		164.27778	Mean	4.8815871
25592	SD		145.64494	SD	0.6454354
25593	95% DL/2 (t) UCL		223.99646	95% H-Stat (DL/2) UCL	228.21055
25594					
25595	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
25596	MLE method failed to converge properly			Mean in Log Scale	4.5590801
25597				SD in Log Scale	0.7623406
25598				Mean in Original Scale	133.9167
25599				SD in Original Scale	155.54221
25600				95% t UCL	197.69355
25601				95% Percentile Bootstrap UCL	202.18854
25602				95% BCA Bootstrap UCL	240.18403
25603					
25604	Gamma Distribution Test with Detected Values Only			Data Distribution Test with Detected Values Only	

	A	B	C	D	E
25605	k star (bias corrected)		0.925742	**Data appear Lognormal at 5% Significance Level**	
25606	Theta Star		176.6751		
25607	nu star		16.663356		
25608					
25609	A-D Test Statistic		0.9164247	**Nonparametric Statistics**	
25610	5% A-D Critical Value		0.7384139	Kaplan-Meier (KM) Method	
25611	K-S Test Statistic		0.7384139	Mean	129.40278
25612	5% K-S Critical Value		0.2852794	SD	150.8048
25613	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	40.32625
25614				95% KM (t) UCL	199.55459
25615	**Assuming Gamma Distribution**			95% KM (z) UCL	195.73356
25616	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	198.71927
25617	Minimum		35	95% KM (bootstrap t) UCL	406.41698
25618	Maximum		710	95% KM (BCA) UCL	201.94444
25619	Mean		159.7367	95% KM (Percentile Bootstrap) UCL	195.92593
25620	Median		115.52656	95% KM (Chebyshev) UCL	305.18082
25621	SD		149.4139	97.5% KM (Chebyshev) UCL	381.24013
25622	k star		1.8733978	99% KM (Chebyshev) UCL	530.6439
25623	Theta star		85.265765		
25624	Nu star		67.442322	**Potential UCLs to Use**	
25625	AppChi2		49.541661	95% KM (t) UCL	199.55459
25626	95% Gamma Approximate UCL		217.45363	95% KM (% Bootstrap) UCL	195.92593
25627	95% Adjusted Gamma UCL		224.11158		
25628	**Note: DL/2 is not a recommended method.**				
25629					
25630	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
25631	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
25632	**For additional insight, the user may want to consult a statistician.**				
25633					
25634					
25635	**OS|UG/KG|CARBAZOLE (gi_sd_nw_2009)**				
25636					
25637	**General Statistics**				
25638	Number of Valid Data		0	Number of Detected Data	0
25639	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25640	Number of Missing Values		7	Percent Non-Detects	NaN%
25641					
25642	**Warning: This data set only has 0 observations!**				
25643	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
25644	**The data set for variable OS|UG/KG|CARBAZOLE (gi_sd_nw_2009) was not processed!**				
25645					
25646	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
25647	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
25648					
25649					
25650					
25651	**OS|UG/KG|CARBAZOLE (gi_sd_nw_2010)**				
25652					
25653	**General Statistics**				
25654	Number of Valid Data		0	Number of Detected Data	0
25655	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25656	Number of Missing Values		4	Percent Non-Detects	NaN%
25657					
25658	**Warning: This data set only has 0 observations!**				
25659	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
25660	**The data set for variable OS|UG/KG|CARBAZOLE (gi_sd_nw_2010) was not processed!**				
25661					
25662	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
25663	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
25664					
25665					
25666					
25667	OS|UG/KG|CARBAZOLE (gi_sd_ref_2009)				
25668					
25669	General Statistics				
25670	Number of Valid Data		0	Number of Detected Data	0
25671	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25672	Number of Missing Values		6	Percent Non-Detects	NaN%
25673					
25674	Warning: This data set only has 0 observations!				
25675	Data set is too small to compute reliable and meaningful statistics and estimates!				
25676	The data set for variable OS|UG/KG|CARBAZOLE (gi_sd_ref_2009) was not processed!				
25677					
25678	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
25679	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
25680					
25681					
25682					
25683	OS|UG/KG|CARBAZOLE (gi_sd_ref_2010)				
25684					
25685	General Statistics				
25686	Number of Valid Data		0	Number of Detected Data	0
25687	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25688	Number of Missing Values		3	Percent Non-Detects	NaN%
25689					
25690	Warning: This data set only has 0 observations!				
25691	Data set is too small to compute reliable and meaningful statistics and estimates!				
25692	The data set for variable OS|UG/KG|CARBAZOLE (gi_sd_ref_2010) was not processed!				
25693					
25694	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
25695	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
25696					
25697					
25698					
25699	OS|UG/KG|CARBAZOLE (gi_sd_s_2005)				
25700					
25701	General Statistics				
25702	Number of Valid Data		8	Number of Detected Data	5
25703	Number of Distinct Detected Data		5	Number of Non-Detect Data	3
25704				Percent Non-Detects	37.50%
25705					
25706	Raw Statistics			Log-transformed Statistics	
25707	Minimum Detected		43	Minimum Detected	3.7612001
25708	Maximum Detected		600	Maximum Detected	6.3969297
25709	Mean of Detected		187.4	Mean of Detected	4.7731339
25710	SD of Detected		232.39471	SD of Detected	0.9845616
25711	Minimum Non-Detect		330	Minimum Non-Detect	5.7990927
25712	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
25713					
25714					
25715	Warning: There are only 5 Detected Values in this data				
25716	Note: It should be noted that even though bootstrap may be performed on this data set				
25717	the resulting calculations may not be reliable enough to draw conclusions				
25718					

	A	B	C	D	E
25719	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
25720					
25721					
25722	**UCL Statistics**				
25723	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
25724	Shapiro Wilk Test Statistic		0.6686938	Shapiro Wilk Test Statistic	0.8822341
25725	5% Shapiro Wilk Critical Value		0.762	5% Shapiro Wilk Critical Value	0.762
25726	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
25727					
25728	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
25729	DL/2 Substitution Method			DL/2 Substitution Method	
25730	Mean		179	Mean	4.8979383
25731	SD		176.056	SD	0.7639304
25732	95% DL/2 (t) UCL		296.92841	95% H-Stat (DL/2) UCL	411.14947
25733					
25734	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
25735	**MLE method failed to converge properly**			Mean in Log Scale	4.6446366
25736				SD in Log Scale	0.8293341
25737				Mean in Original Scale	152.45173
25738				SD in Original Scale	184.38841
25739				95% t UCL	275.96148
25740				95% Percentile Bootstrap UCL	270.61659
25741				95% BCA Bootstrap UCL	326.71146
25742					
25743	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
25744	k star (bias corrected)		0.6239495	**Data appear Gamma Distributed at 5% Significance Level**	
25745	Theta Star		300.34484		
25746	nu star		6.2394945		
25747					
25748	A-D Test Statistic		0.6270998	**Nonparametric Statistics**	
25749	5% A-D Critical Value		0.6890973	Kaplan-Meier (KM) Method	
25750	K-S Test Statistic		0.6890973	Mean	148.71875
25751	5% K-S Critical Value		0.3631686	SD	172.62753
25752	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	68.8412
25753				95% KM (t) UCL	279.14381
25754	**Assuming Gamma Distribution**			95% KM (z) UCL	261.95245
25755	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	274.20491
25756	Minimum		43	95% KM (bootstrap t) UCL	694.58823
25757	Maximum		600	95% KM (BCA) UCL	276.875
25758	Mean		182.49278	95% KM (Percentile Bootstrap) UCL	276.875
25759	Median		108.65413	95% KM (Chebyshev) UCL	448.79059
25760	SD		180.47531	97.5% KM (Chebyshev) UCL	578.63191
25761	k star		1.1642981	99% KM (Chebyshev) UCL	833.68005
25762	Theta star		156.7406		
25763	Nu star		18.628769	**Potential UCLs to Use**	
25764	AppChi2		9.846798	95% KM (BCA) UCL	276.875
25765	95% Gamma Approximate UCL		345.25089		
25766	95% Adjusted Gamma UCL		410.48759		
25767	**Note: DL/2 is not a recommended method.**				
25768					
25769	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
25770	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
25771	**For additional insight, the user may want to consult a statistician.**				
25772					
25773					
25774	**OS|UG/KG|CARBAZOLE (gi_sd_s_2010)**				
25775					
25776	**General Statistics**				
25777	Number of Valid Data		0	Number of Detected Data	0
25778	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25779	Number of Missing Values		2	Percent Non-Detects	NaN%
25780					
25781	**Warning: This data set only has 0 observations!**				
25782	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
25783	**The data set for variable OS|UG/KG|CARBAZOLE (gi_sd_s_2010) was not processed!**				
25784					
25785	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
25786	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
25787					
25788					
25789					
25790	**OS|UG/KG|CARBAZOLE (gi_sd_stillwater_2005)**				
25791					
25792	**General Statistics**				
25793	Number of Valid Observations		4	Number of Distinct Observations	4
25794					
25795					
25796	**Warning: This data set only has 4 observations!**				
25797	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
25798	**The data set for variable OS|UG/KG|CARBAZOLE (gi_sd_stillwater_2005) was not processed!**				
25799					
25800	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
25801	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
25802					
25803					
25804					
25805	**OS|UG/KG|CARBAZOLE (gi_sd_stillwater_2009)**				
25806					
25807	**General Statistics**				
25808	Number of Valid Data		0	Number of Detected Data	0
25809	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25810	Number of Missing Values		60	Percent Non-Detects	NaN%
25811					
25812	**Warning: This data set only has 0 observations!**				
25813	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
25814	**The data set for variable OS|UG/KG|CARBAZOLE (gi_sd_stillwater_2009) was not processed!**				
25815					
25816	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
25817	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
25818					
25819					
25820					
25821	**OS|UG/KG|CARBAZOLE (gi_sd_stillwater_2010)**				
25822					
25823	**General Statistics**				
25824	Number of Valid Data		0	Number of Detected Data	0
25825	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
25826	Number of Missing Values		11	Percent Non-Detects	NaN%
25827					
25828	**Warning: This data set only has 0 observations!**				
25829	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
25830	**The data set for variable OS|UG/KG|CARBAZOLE (gi_sd_stillwater_2010) was not processed!**				
25831					

	A	B	C	D	E
25832	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
25833	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
25834					
25835					
25836					
25837	**OS|UG/KG|CHRYSENE (gi_sd_ne_2005)**				
25838					
25839	**General Statistics**				
25840	Number of Valid Observations		36	Number of Distinct Observations	30
25841					
25842	**Raw Statistics**			**Log-transformed Statistics**	
25843	Minimum		18	Minimum of Log Data	2.8903718
25844	Maximum		1200	Maximum of Log Data	7.0900768
25845	Mean		172.51389	Mean of log Data	4.4170001
25846	Median		71.75	SD of log Data	1.1358913
25847	SD		272.40677		
25848	Coefficient of Variation		1.5790426		
25849	Skewness		2.8798294		
25850					
25851	**Relevant UCL Statistics**				
25852	**Normal Distribution Test**			**Lognormal Distribution Test**	
25853	Shapiro Wilk Test Statistic		0.5804142	Shapiro Wilk Test Statistic	0.928285
25854	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
25855	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
25856					
25857	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
25858	95% Student's-t UCL		249.22239	95% H-UCL	257.25062
25859	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	304.99567
25860	95% Adjusted-CLT UCL (Chen-1995)		270.47637	97.5% Chebyshev (MVUE) UCL	370.52783
25861	95% Modified-t UCL (Johnson-1978)		252.85426	99% Chebyshev (MVUE) UCL	499.25307
25862					
25863	**Gamma Distribution Test**			**Data Distribution**	
25864	k star (bias corrected)		0.7592588	**Data do not follow a Discernable Distribution (0.05)**	
25865	Theta Star		227.21357		
25866	MLE of Mean		172.51389		
25867	MLE of Standard Deviation		197.98357		
25868	nu star		54.66663		
25869	Approximate Chi Square Value (.05)		38.677271	**Nonparametric Statistics**	
25870	Adjusted Level of Significance		0.0428	95% CLT UCL	247.1921
25871	Adjusted Chi Square Value		38.06584	95% Jackknife UCL	249.22239
25872				95% Standard Bootstrap UCL	245.60331
25873	Anderson-Darling Test Statistic		1.9460643	95% Bootstrap-t UCL	321.51487
25874	Anderson-Darling 5% Critical Value		0.7852556	95% Hall's Bootstrap UCL	373.72373
25875	Kolmogorov-Smirnov Test Statistic		0.1946452	95% Percentile Bootstrap UCL	249.43056
25876	Kolmogorov-Smirnov 5% Critical Value		0.1522851	95% BCA Bootstrap UCL	272.41667
25877	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	370.41282
25878				97.5% Chebyshev(Mean, Sd) UCL	456.04385
25879	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	624.24942
25880	95% Approximate Gamma UCL		243.83192		
25881	95% Adjusted Gamma UCL		247.74845		
25882					
25883	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	370.41282
25884					
25885	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
25886	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
25887	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
25888					
25889					
25890	**OS|UG/KG|CHRYSENE (gi_sd_ne_2009)**				
25891					
25892	**General Statistics**				
25893	Number of Valid Data		20	Number of Detected Data	19
25894	Number of Distinct Detected Data		17	Number of Non-Detect Data	1
25895				Percent Non-Detects	5.00%
25896					

	A	B	C	D	E
25897	**Raw Statistics**			**Log-transformed Statistics**	
25898	Minimum Detected		4	Minimum Detected	1.3862944
25899	Maximum Detected		450	Maximum Detected	6.1092476
25900	Mean of Detected		105.27895	Mean of Detected	3.868653
25901	SD of Detected		130.66442	SD of Detected	1.3747554
25902	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
25903	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
25904					
25905					
25906	**UCL Statistics**				
25907	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
25908	Shapiro Wilk Test Statistic		0.7513999	Shapiro Wilk Test Statistic	0.9617822
25909	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
25910	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
25911					
25912	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
25913	DL/2 Substitution Method			DL/2 Substitution Method	
25914	Mean		100.0975	Mean	3.7002591
25915	SD		129.27315	SD	1.5354515
25916	95% DL/2 (t) UCL		150.08043	95% H-Stat (DL/2) UCL	449.08987
25917					
25918	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
25919	Mean		96.3389	Mean in Log Scale	3.6985701
25920	SD		130.71456	SD in Log Scale	1.5391702
25921	95% MLE (t) UCL		146.87914	Mean in Original Scale	100.09476
25922	95% MLE (Tiku) UCL		143.50933	SD in Original Scale	129.27535
25923				95% t UCL	150.07854
25924				95% Percentile Bootstrap UCL	149.73
25925				95% BCA Bootstrap UCL	159.42976
25926					
25927	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
25928	k star (bias corrected)		0.6738756	**Data appear Gamma Distributed at 5% Significance Level**	
25929	Theta Star		156.22905		
25930	nu star		25.607274		
25931					
25932	A-D Test Statistic		0.5467813	**Nonparametric Statistics**	
25933	5% A-D Critical Value		0.778453	Kaplan-Meier (KM) Method	
25934	K-S Test Statistic		0.778453	Mean	100.215
25935	5% K-S Critical Value		0.2060294	SD	125.90909
25936	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	28.925617
25937				95% KM (t) UCL	150.23123
25938	**Assuming Gamma Distribution**			95% KM (z) UCL	147.79341
25939	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	150.0237
25940	Minimum		1E-12	95% KM (bootstrap t) UCL	176.37518
25941	Maximum		450	95% KM (BCA) UCL	153.45
25942	Mean		100.015	95% KM (Percentile Bootstrap) UCL	149.48
25943	Median		42.5	95% KM (Chebyshev) UCL	226.29884
25944	SD		129.3398	97.5% KM (Chebyshev) UCL	280.85542
25945	k star		0.2870905	99% KM (Chebyshev) UCL	388.02125
25946	Theta star		348.37444		
25947	Nu star		11.483621	**Potential UCLs to Use**	
25948	AppChi2		4.8888914	95% KM (Chebyshev) UCL	226.29884
25949	95% Gamma Approximate UCL		234.92736		
25950	95% Adjusted Gamma UCL		252.29589		
25951	**Note: DL/2 is not a recommended method.**				
25952					
25953	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
25954	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
25955	**For additional insight, the user may want to consult a statistician.**				
25956					
25957					
25958	**OS|UG/KG|CHRYSENE (gi_sd_ne_2010)**				
25959					
25960	**General Statistics**				
25961	Number of Valid Observations		16	Number of Distinct Observations	15
25962					
25963	**Raw Statistics**			**Log-transformed Statistics**	
25964	Minimum		31	Minimum of Log Data	3.4339872

	A	B	C	D	E
25965	Maximum		940	Maximum of Log Data	6.8458799
25966	Mean		247.125	Mean of log Data	5.016664
25967	Median		165	SD of log Data	1.0736302
25968	SD		249.38187		
25969	Coefficient of Variation		1.0091325		
25970	Skewness		1.6298706		
25971					
25972	**Relevant UCL Statistics**				
25973	**Normal Distribution Test**			**Lognormal Distribution Test**	
25974	Shapiro Wilk Test Statistic		0.8234215	Shapiro Wilk Test Statistic	0.9583117
25975	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
25976	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
25977					
25978	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
25979	95% Student's-t UCL		356.41974	95% H-UCL	586.6408
25980	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	585.62719
25981	95% Adjusted-CLT UCL (Chen-1995)		376.81846	97.5% Chebyshev (MVUE) UCL	728.71925
25982	95% Modified-t UCL (Johnson-1978)		360.6537	99% Chebyshev (MVUE) UCL	1009.7959
25983					
25984	**Gamma Distribution Test**			**Data Distribution**	
25985	k star (bias corrected)		0.9775093	**Data appear Gamma Distributed at 5% Significance Level**	
25986	Theta Star		252.8109		
25987	MLE of Mean		247.125		
25988	MLE of Standard Deviation		249.95178		
25989	nu star		31.280297		
25990	Approximate Chi Square Value (.05)		19.502168	**Nonparametric Statistics**	
25991	Adjusted Level of Significance		0.03348	95% CLT UCL	349.67417
25992	Adjusted Chi Square Value		18.447633	95% Jackknife UCL	356.41974
25993				95% Standard Bootstrap UCL	343.93799
25994	Anderson-Darling Test Statistic		0.2786386	95% Bootstrap-t UCL	398.9599
25995	Anderson-Darling 5% Critical Value		0.7606859	95% Hall's Bootstrap UCL	406.50532
25996	Kolmogorov-Smirnov Test Statistic		0.1337488	95% Percentile Bootstrap UCL	350.3125
25997	Kolmogorov-Smirnov 5% Critical Value		0.2204738	95% BCA Bootstrap UCL	372.25
25998	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	518.88259
25999				97.5% Chebyshev(Mean, Sd) UCL	636.47232
26000	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	867.45457
26001	95% Approximate Gamma UCL		396.37354		
26002	95% Adjusted Gamma UCL		419.03172		
26003					
26004	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	396.37354
26005					
26006	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
26007	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
26008	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
26009					
26010					
26011	**OS|UG/KG|CHRYSENE (gi_sd_nw_2005)**				
26012					
26013	**General Statistics**				
26014	Number of Valid Observations		18	Number of Distinct Observations	18
26015					
26016	**Raw Statistics**			**Log-transformed Statistics**	
26017	Minimum		47	Minimum of Log Data	3.8501476
26018	Maximum		1500	Maximum of Log Data	7.3132204
26019	Mean		304.13889	Mean of log Data	5.0220733
26020	Median		123.25	SD of log Data	1.1093532
26021	SD		441.26009		
26022	Coefficient of Variation		1.4508506		
26023	Skewness		2.1004533		
26024					
26025	**Relevant UCL Statistics**				
26026	**Normal Distribution Test**			**Lognormal Distribution Test**	
26027	Shapiro Wilk Test Statistic		0.6158207	Shapiro Wilk Test Statistic	0.8719551
26028	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
26029	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
26030					
26031	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	

	A	B	C	D	E
26032	95% Student's-t UCL		485.06843	95% H-UCL	596.41131
26033	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	609.46262
26034	95% Adjusted-CLT UCL (Chen-1995)		530.2329	97.5% Chebyshev (MVUE) UCL	757.71649
26035	95% Modified-t UCL (Johnson-1978)		493.65034	99% Chebyshev (MVUE) UCL	1048.9325
26036					
26037	**Gamma Distribution Test**			**Data Distribution**	
26038	k star (bias corrected)		0.7429684	**Data do not follow a Discernable Distribution (0.05)**	
26039	Theta Star		409.35642		
26040	MLE of Mean		304.13889		
26041	MLE of Standard Deviation		352.84729		
26042	nu star		26.746862		
26043	Approximate Chi Square Value (.05)		15.95568	**Nonparametric Statistics**	
26044	Adjusted Level of Significance		0.03574	95% CLT UCL	475.21354
26045	Adjusted Chi Square Value		15.157926	95% Jackknife UCL	485.06843
26046				95% Standard Bootstrap UCL	473.31512
26047	Anderson-Darling Test Statistic		1.5267755	95% Bootstrap-t UCL	657.29046
26048	Anderson-Darling 5% Critical Value		0.7735409	95% Hall's Bootstrap UCL	502.10365
26049	Kolmogorov-Smirnov Test Statistic		0.2562317	95% Percentile Bootstrap UCL	484.61111
26050	Kolmogorov-Smirnov 5% Critical Value		0.2106569	95% BCA Bootstrap UCL	535.88889
26051	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	757.49053
26052				97.5% Chebyshev(Mean, Sd) UCL	953.65615
26053	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1338.9855
26054	95% Approximate Gamma UCL		509.8348		
26055	95% Adjusted Gamma UCL		536.66715		
26056					
26057	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	757.49053
26058					
26059	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
26060	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
26061	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
26062					
26063					
26064	**OS|UG/KG|CHRYSENE (gi_sd_nw_2009)**				
26065					
26066	**General Statistics**				
26067	Number of Valid Observations		7	Number of Distinct Observations	7
26068					
26069	**Raw Statistics**			**Log-transformed Statistics**	
26070	Minimum		8.8	Minimum of Log Data	2.1747517
26071	Maximum		150	Maximum of Log Data	5.0106353
26072	Mean		88.257143	Mean of log Data	4.1804883
26073	Median		99	SD of log Data	1.0081602
26074	SD		54.471976		
26075	Coefficient of Variation		0.6171962		
26076	Skewness		-0.270373		
26077					
26078					
26079	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
26080					
26081	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
26082	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
26083					
26084					
26085	**Warning: There are only 7 Values in this data**				
26086	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
26087	**the resulting calculations may not be reliable enough to draw conclusions**				
26088					
26089	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
26090					
26091	**Relevant UCL Statistics**				
26092	**Normal Distribution Test**			**Lognormal Distribution Test**	

	A	B	C	D	E
26093	Shapiro Wilk Test Statistic		0.9221117	Shapiro Wilk Test Statistic	0.8263932
26094	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
26095	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
26096					
26097	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
26098	95% Student's-t UCL		128.26425	95% H-UCL	502.79234
26099	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	263.94739
26100	95% Adjusted-CLT UCL (Chen-1995)		119.87405	97.5% Chebyshev (MVUE) UCL	335.33485
26101	95% Modified-t UCL (Johnson-1978)		127.91359	99% Chebyshev (MVUE) UCL	475.5617
26102					
26103	**Gamma Distribution Test**			**Data Distribution**	
26104	k star (bias corrected)		1.1334452	**Data appear Normal at 5% Significance Level**	
26105	Theta Star		77.866263		
26106	MLE of Mean		88.257143		
26107	MLE of Standard Deviation		82.899058		
26108	nu star		15.868233		
26109	Approximate Chi Square Value (.05)		7.8692972	**Nonparametric Statistics**	
26110	Adjusted Level of Significance		0.01584	95% CLT UCL	122.12217
26111	Adjusted Chi Square Value		6.2469538	95% Jackknife UCL	128.26425
26112				95% Standard Bootstrap UCL	119.64142
26113	Anderson-Darling Test Statistic		0.4391418	95% Bootstrap-t UCL	127.71553
26114	Anderson-Darling 5% Critical Value		0.7172222	95% Hall's Bootstrap UCL	113.07519
26115	Kolmogorov-Smirnov Test Statistic		0.2287905	95% Percentile Bootstrap UCL	119.14286
26116	Kolmogorov-Smirnov 5% Critical Value		0.3158059	95% BCA Bootstrap UCL	119.71429
26117	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	178.00021
26118				97.5% Chebyshev(Mean, Sd) UCL	216.83211
26119	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	293.10985
26120	95% Approximate Gamma UCL		177.96823		
26121	95% Adjusted Gamma UCL		224.18685		
26122					
26123	**Potential UCL to Use**			Use 95% Student's-t UCL	128.26425
26124					
26125	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
26126	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
26127	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
26128					
26129					
26130	**OS|UG/KG|CHRYSENE (gi_sd_nw_2010)**				
26131					
26132	**General Statistics**				
26133	Number of Valid Observations		4	Number of Distinct Observations	3
26134					
26135					
26136	**Warning: This data set only has 4 observations!**				
26137	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
26138	**The data set for variable OS|UG/KG|CHRYSENE (gi_sd_nw_2010) was not processed!**				
26139					
26140	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
26141	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
26142					
26143					
26144					
26145	**OS|UG/KG|CHRYSENE (gi_sd_ref_2009)**				
26146					
26147	**General Statistics**				
26148	Number of Valid Data		0	Number of Detected Data	0
26149	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
26150	Number of Missing Values		6	Percent Non-Detects	NaN%
26151					
26152	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
26153	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
26154	**The data set for variable OS|UG/KG|CHRYSENE (gi_sd_ref_2009) was not processed!**				
26155					
26156	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
26157	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
26158					
26159					
26160					
26161	**OS|UG/KG|CHRYSENE (gi_sd_ref_2010)**				
26162					
26163	**General Statistics**				
26164	Number of Valid Data		0	Number of Detected Data	0
26165	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
26166	Number of Missing Values		3	Percent Non-Detects	NaN%
26167					
26168	**Warning: This data set only has 0 observations!**				
26169	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
26170	**The data set for variable OS|UG/KG|CHRYSENE (gi_sd_ref_2010) was not processed!**				
26171					
26172	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
26173	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
26174					
26175					
26176					
26177	**OS|UG/KG|CHRYSENE (gi_sd_s_2005)**				
26178					
26179	**General Statistics**				
26180	Number of Valid Observations		8	Number of Distinct Observations	6
26181					
26182	**Raw Statistics**			**Log-transformed Statistics**	
26183	Minimum		34	Minimum of Log Data	3.5263605
26184	Maximum		1600	Maximum of Log Data	7.3777589
26185	Mean		361.125	Mean of log Data	5.2929717
26186	Median		187.5	SD of log Data	1.1243977
26187	SD		510.8104		
26188	Coefficient of Variation		1.4144975		
26189	Skewness		2.6076506		
26190					
26191					
26192	**Warning: There are only 8 Values in this data**				
26193	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
26194	**the resulting calculations may not be reliable enough to draw conclusions**				
26195					
26196	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
26197					
26198	**Relevant UCL Statistics**				
26199	**Normal Distribution Test**			**Lognormal Distribution Test**	
26200	Shapiro Wilk Test Statistic		0.6089778	Shapiro Wilk Test Statistic	0.9548091
26201	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
26202	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
26203					
26204	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
26205	95% Student's-t UCL		703.28352	95% H-UCL	1833.6259
26206	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	929.14046
26207	95% Adjusted-CLT UCL (Chen-1995)		836.09318	97.5% Chebyshev (MVUE) UCL	1185.9525
26208	95% Modified-t UCL (Johnson-1978)		731.03384	99% Chebyshev (MVUE) UCL	1690.4101
26209					

	A	B	C	D	E
26210	**Gamma Distribution Test**			**Data Distribution**	
26211	k star (bias corrected)		0.6904589	**Data appear Gamma Distributed at 5% Significance Level**	
26212	Theta Star		523.0217		
26213	MLE of Mean		361.125		
26214	MLE of Standard Deviation		434.59891		
26215	nu star		11.047343		
26216	Approximate Chi Square Value (.05)		4.6064625	**Nonparametric Statistics**	
26217	Adjusted Level of Significance		0.01946	95% CLT UCL	658.18351
26218	Adjusted Chi Square Value		3.6131319	95% Jackknife UCL	703.28352
26219				95% Standard Bootstrap UCL	638.91986
26220	Anderson-Darling Test Statistic		0.5576186	95% Bootstrap-t UCL	1572.2585
26221	Anderson-Darling 5% Critical Value		0.7366016	95% Hall's Bootstrap UCL	1894.3544
26222	Kolmogorov-Smirnov Test Statistic		0.2846531	95% Percentile Bootstrap UCL	701.125
26223	Kolmogorov-Smirnov 5% Critical Value		0.3017574	95% BCA Bootstrap UCL	868.5
26224	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1148.3367
26225				97.5% Chebyshev(Mean, Sd) UCL	1488.9638
26226	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	2158.0599
26227	95% Approximate Gamma UCL		866.05973		
26228	95% Adjusted Gamma UCL		1104.1589		
26229					
26230	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	866.05973
26231					
26232	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
26233	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
26234	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
26235					
26236					
26237	**OS|UG/KG|CHRYSENE (gi_sd_s_2010)**				
26238					
26239	**General Statistics**				
26240	Number of Valid Observations		2	Number of Distinct Observations	2
26241					
26242					
26243	**Warning: This data set only has 2 observations!**				
26244	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
26245	**The data set for variable OS|UG/KG|CHRYSENE (gi_sd_s_2010) was not processed!**				
26246					
26247	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
26248	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
26249					
26250					
26251					
26252	**OS|UG/KG|CHRYSENE (gi_sd_stillwater_2005)**				
26253					
26254	**General Statistics**				
26255	Number of Valid Observations		4	Number of Distinct Observations	4
26256					
26257					
26258	**Warning: This data set only has 4 observations!**				
26259	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
26260	**The data set for variable OS|UG/KG|CHRYSENE (gi_sd_stillwater_2005) was not processed!**				
26261					
26262	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
26263	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
26264					

	A	B	C	D	E
26265					
26266					
26267	**OS|UG/KG|CHRYSENE (gi_sd_stillwater_2009)**				
26268					
26269	**General Statistics**				
26270	Number of Valid Data		60	Number of Detected Data	52
26271	Number of Distinct Detected Data		42	Number of Non-Detect Data	8
26272				Percent Non-Detects	13.33%
26273					
26274	**Raw Statistics**			**Log-transformed Statistics**	
26275	Minimum Detected		2.98	Minimum Detected	1.0919233
26276	Maximum Detected		7600	Maximum Detected	8.9359035
26277	Mean of Detected		485.27269	Mean of Detected	4.7702669
26278	SD of Detected		1130.7732	SD of Detected	1.8927645
26279	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
26280	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
26281					
26282					
26283	**UCL Statistics**				
26284	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
26285	Lilliefors Test Statistic		0.334866	Lilliefors Test Statistic	0.1409121
26286	5% Lilliefors Critical Value		0.1228661	5% Lilliefors Critical Value	0.1228661
26287	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
26288					
26289	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
26290	DL/2 Substitution Method			DL/2 Substitution Method	
26291	Mean		420.78967	Mean	4.2010013
26292	SD		1064.3108	SD	2.2888643
26293	95% DL/2 (t) UCL		650.40108	95% H-Stat (DL/2) UCL	3434.5698
26294					
26295	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
26296	Mean		295.62907	Mean in Log Scale	4.2308471
26297	SD		1171.2564	SD in Log Scale	2.2575834
26298	95% MLE (t) UCL		548.31261	Mean in Original Scale	420.91772
26299	95% MLE (Tiku) UCL		535.07815	SD in Original Scale	1064.2598
26300				95% t UCL	650.51811
26301				95% Percentile Bootstrap UCL	677.36743
26302				95% BCA Bootstrap UCL	815.29541
26303					
26304	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
26305	k star (bias corrected)		0.4421823	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
26306	Theta Star		1097.4494		
26307	nu star		45.986957		
26308					
26309	A-D Test Statistic		0.9391334	**Nonparametric Statistics**	
26310	5% A-D Critical Value		0.8252473	Kaplan-Meier (KM) Method	
26311	K-S Test Statistic		0.8252473	Mean	420.967
26312	5% K-S Critical Value		0.1309783	SD	1055.334
26313	**Data follow Appr. Gamma Distribution at 5% Significance Level**			SE of Mean	137.57226
26314				95% KM (t) UCL	650.86305
26315	**Assuming Gamma Distribution**			95% KM (z) UCL	647.25324
26316	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	650.40247
26317	Minimum		1E-12	95% KM (bootstrap t) UCL	1068.2503
26318	Maximum		7600	95% KM (BCA) UCL	688.725
26319	Mean		420.56967	95% KM (Percentile Bootstrap) UCL	668.68
26320	Median		135	95% KM (Chebyshev) UCL	1020.6306
26321	SD		1064.3991	97.5% KM (Chebyshev) UCL	1280.1055
26322	k star		0.1431338	99% KM (Chebyshev) UCL	1789.7937
26323	Theta star		2938.2984		
26324	Nu star		17.17605	**Potential UCLs to Use**	
26325	AppChi2		8.7981407	95% KM (Chebyshev) UCL	1020.6306
26326	95% Gamma Approximate UCL		821.05139		
26327	95% Adjusted Gamma UCL		835.10306		
26328	**Note: DL/2 is not a recommended method.**				
26329					
26330	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
26331	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				

	A	B	C	D	E
26332	**For additional insight, the user may want to consult a statistician.**				
26333					
26334					
26335	**OS|UG/KG|CHRYSENE (gi_sd_stillwater_2010)**				
26336					
26337	**General Statistics**				
26338	Number of Valid Observations		11	Number of Distinct Observations	10
26339					
26340	**Raw Statistics**			**Log-transformed Statistics**	
26341	Minimum		240	Minimum of Log Data	5.4806389
26342	Maximum		6900	Maximum of Log Data	8.8392767
26343	Mean		1889.5455	Mean of log Data	6.9287761
26344	Median		840	SD of log Data	1.1490566
26345	SD		2258.004		
26346	Coefficient of Variation		1.1949985		
26347	Skewness		1.5039585		
26348					
26349	**Relevant UCL Statistics**				
26350	**Normal Distribution Test**			**Lognormal Distribution Test**	
26351	Shapiro Wilk Test Statistic		0.7399371	Shapiro Wilk Test Statistic	0.919408
26352	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
26353	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
26354					
26355	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
26356	95% Student's-t UCL		3123.4941	95% H-UCL	6535.885
26357	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	4733.8598
26358	95% Adjusted-CLT UCL (Chen-1995)		3339.2587	97.5% Chebyshev (MVUE) UCL	5998.3654
26359	95% Modified-t UCL (Johnson-1978)		3174.9478	99% Chebyshev (MVUE) UCL	8482.2417
26360					
26361	**Gamma Distribution Test**			**Data Distribution**	
26362	k star (bias corrected)		0.7475077	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
26363	Theta Star		2527.794		
26364	MLE of Mean		1889.5455		
26365	MLE of Standard Deviation		2185.4935		
26366	nu star		16.445169		
26367	Approximate Chi Square Value (.05)		8.2771558	**Nonparametric Statistics**	
26368	Adjusted Level of Significance		0.02783	95% CLT UCL	3009.3846
26369	Adjusted Chi Square Value		7.3511166	95% Jackknife UCL	3123.4941
26370				95% Standard Bootstrap UCL	2973.7742
26371	Anderson-Darling Test Statistic		0.6881322	95% Bootstrap-t UCL	4068.3594
26372	Anderson-Darling 5% Critical Value		0.7539858	95% Hall's Bootstrap UCL	2950.4629
26373	Kolmogorov-Smirnov Test Statistic		0.2764959	95% Percentile Bootstrap UCL	2994.0909
26374	Kolmogorov-Smirnov 5% Critical Value		0.2629484	95% BCA Bootstrap UCL	3356.3636
26375	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	4857.1442
26376				97.5% Chebyshev(Mean, Sd) UCL	6141.2265
26377	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	8663.5576
26378	95% Approximate Gamma UCL		3754.1754		
26379	95% Adjusted Gamma UCL		4227.0986		
26380					
26381	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	3754.1754
26382					
26383	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
26384	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
26385	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
26386					
26387					
26388	**OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ne_2005)**				
26389					
26390	**General Statistics**				
26391	Number of Valid Data		36	Number of Detected Data	34
26392	Number of Distinct Detected Data		31	Number of Non-Detect Data	2
26393				Percent Non-Detects	5.56%
26394					
26395	**Raw Statistics**			**Log-transformed Statistics**	
26396	Minimum Detected		3.6	Minimum Detected	1.2809338
26397	Maximum Detected		150	Maximum Detected	5.0106353

	A	B	C	D	E
26398	Mean of Detected		28.570588	Mean of Detected	2.7870148
26399	SD of Detected		36.550227	SD of Detected	1.0349006
26400	Minimum Non-Detect		3.2	Minimum Non-Detect	1.1631508
26401	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
26402					
26403	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	2
26404	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	34
26405	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	5.56%
26406					
26407	**UCL Statistics**				
26408	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
26409	Shapiro Wilk Test Statistic		0.6638472	Shapiro Wilk Test Statistic	0.9481408
26410	5% Shapiro Wilk Critical Value		0.933	5% Shapiro Wilk Critical Value	0.933
26411	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
26412					
26413	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
26414	DL/2 Substitution Method			DL/2 Substitution Method	
26415	Mean		27.073611	Mean	2.6591467
26416	SD		36.038387	SD	1.1383002
26417	95% DL/2 (t) UCL		37.221856	95% H-Stat (DL/2) UCL	44.546278
26418					
26419	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
26420	Mean		25.911174	Mean in Log Scale	2.6501029
26421	SD		36.930101	SD in Log Scale	1.1565403
26422	95% MLE (t) UCL		36.310521	Mean in Original Scale	27.06004
26423	95% MLE (Tiku) UCL		35.546654	SD in Original Scale	36.048287
26424				95% t UCL	37.211072
26425				95% Percentile Bootstrap UCL	37.521151
26426				95% BCA Bootstrap UCL	38.751706
26427					
26428	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
26429	k star (bias corrected)		0.9484713	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
26430	Theta Star		30.122777		
26431	nu star		64.496046		
26432					
26433	A-D Test Statistic		1.2976158	**Nonparametric Statistics**	
26434	5% A-D Critical Value		0.7752887	Kaplan-Meier (KM) Method	
26435	K-S Test Statistic		0.7752887	Mean	27.183333
26436	5% K-S Critical Value		0.1553054	SD	35.458548
26437	**Data follow Appr. Gamma Distribution at 5% Significance Level**			SE of Mean	5.9986315
26438				95% KM (t) UCL	37.318456
26439	**Assuming Gamma Distribution**			95% KM (z) UCL	37.050204
26440	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	37.309935
26441	Minimum		1E-12	95% KM (bootstrap t) UCL	42.936296
26442	Maximum		150	95% KM (BCA) UCL	36.575
26443	Mean		26.983333	95% KM (Percentile Bootstrap) UCL	37.161111
26444	Median		14.5	95% KM (Chebyshev) UCL	53.330762
26445	SD		36.105872	97.5% KM (Chebyshev) UCL	64.644775
26446	k star		0.3042888	99% KM (Chebyshev) UCL	86.868963
26447	Theta star		88.67673		
26448	Nu star		21.908792	**Potential UCLs to Use**	
26449	AppChi2		12.269933	95% KM (Chebyshev) UCL	53.330762
26450	95% Gamma Approximate UCL		48.180559		
26451	95% Adjusted Gamma UCL		49.505139		
26452	**Note: DL/2 is not a recommended method.**				
26453					
26454	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
26455	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
26456	**For additional insight, the user may want to consult a statistician.**				
26457					
26458					
26459	**OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ne_2009)**				
26460					
26461	**General Statistics**				
26462	Number of Valid Data		20	Number of Detected Data	14

	A	B	C	D	E
26463	Number of Distinct Detected Data		12	Number of Non-Detect Data	6
26464				Percent Non-Detects	30.00%
26465					
26466	**Raw Statistics**			**Log-transformed Statistics**	
26467	Minimum Detected		3.3	Minimum Detected	1.1939225
26468	Maximum Detected		110	Maximum Detected	4.7004804
26469	Mean of Detected		29.292857	Mean of Detected	2.8205262
26470	SD of Detected		32.209255	SD of Detected	1.1228818
26471	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
26472	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
26473					
26474					
26475	**UCL Statistics**				
26476	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
26477	Shapiro Wilk Test Statistic		0.7853108	Shapiro Wilk Test Statistic	0.9493859
26478	5% Shapiro Wilk Critical Value		0.874	5% Shapiro Wilk Critical Value	0.874
26479	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
26480					
26481	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
26482	DL/2 Substitution Method			DL/2 Substitution Method	
26483	Mean		21	Mean	2.1246009
26484	SD		29.6435	SD	1.4325622
26485	95% DL/2 (t) UCL		32.461536	95% H-Stat (DL/2) UCL	69.358154
26486					
26487	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
26488	Mean		13.678783	Mean in Log Scale	1.9812641
26489	SD		37.002539	SD in Log Scale	1.6500822
26490	95% MLE (t) UCL		27.985661	Mean in Original Scale	20.872883
26491	95% MLE (Tiku) UCL		28.644203	SD in Original Scale	29.733725
26492				95% t UCL	32.369304
26493				95% Percentile Bootstrap UCL	32.20697
26494				95% BCA Bootstrap UCL	34.418381
26495					
26496	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
26497	k star (bias corrected)		0.8590709	**Data appear Gamma Distributed at 5% Significance Level**	
26498	Theta Star		34.098301		
26499	nu star		24.053984		
26500					
26501	A-D Test Statistic		0.4485578	**Nonparametric Statistics**	
26502	5% A-D Critical Value		0.7593501	Kaplan-Meier (KM) Method	
26503	K-S Test Statistic		0.7593501	Mean	21.495
26504	5% K-S Critical Value		0.2349728	SD	28.569485
26505	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	6.6294844
26506				95% KM (t) UCL	32.958259
26507	**Assuming Gamma Distribution**			95% KM (z) UCL	32.399532
26508	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	32.595555
26509	Minimum		1E-12	95% KM (bootstrap t) UCL	37.718408
26510	Maximum		110	95% KM (BCA) UCL	34.035
26511	Mean		21.874616	95% KM (Percentile Bootstrap) UCL	33.51
26512	Median		10.4	95% KM (Chebyshev) UCL	50.392253
26513	SD		29.234353	97.5% KM (Chebyshev) UCL	62.896117
26514	k star		0.1648421	99% KM (Chebyshev) UCL	87.457537
26515	Theta star		132.70041		
26516	Nu star		6.5936847	**Potential UCLs to Use**	
26517	AppChi2		1.9504045	95% KM (BCA) UCL	34.035
26518	95% Gamma Approximate UCL		73.950981		
26519	95% Adjusted Gamma UCL		82.059977		
26520	**Note: DL/2 is not a recommended method.**				
26521					
26522	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
26523	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
26524	**For additional insight, the user may want to consult a statistician.**				
26525					
26526					
26527	**OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ne_2010)**				
26528					
26529	**General Statistics**				

	A	B	C	D	E
26530	Number of Valid Observations		16	Number of Distinct Observations	16
26531					
26532	**Raw Statistics**			**Log-transformed Statistics**	
26533	Minimum		6.8	Minimum of Log Data	1.9169226
26534	Maximum		170	Maximum of Log Data	5.1357984
26535	Mean		48.4125	Mean of log Data	3.4053695
26536	Median		29.5	SD of log Data	1.0517401
26537	SD		46.827782		
26538	Coefficient of Variation		0.9672663		
26539	Skewness		1.3598196		
26540					
26541	**Relevant UCL Statistics**				
26542	**Normal Distribution Test**			**Lognormal Distribution Test**	
26543	Shapiro Wilk Test Statistic		0.8381667	Shapiro Wilk Test Statistic	0.9411431
26544	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
26545	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
26546					
26547	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
26548	95% Student's-t UCL		68.935365	95% H-UCL	111.55837
26549	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	113.04285
26550	95% Adjusted-CLT UCL (Chen-1995)		71.921222	97.5% Chebyshev (MVUE) UCL	140.3843
26551	95% Modified-t UCL (Johnson-1978)		69.598671	99% Chebyshev (MVUE) UCL	194.09128
26552					
26553	**Gamma Distribution Test**			**Data Distribution**	
26554	k star (bias corrected)		1.0110356	**Data appear Gamma Distributed at 5% Significance Level**	
26555	Theta Star		47.88407		
26556	MLE of Mean		48.4125		
26557	MLE of Standard Deviation		48.14756		
26558	nu star		32.353139		
26559	Approximate Chi Square Value (.05)		20.352278	**Nonparametric Statistics**	
26560	Adjusted Level of Significance		0.03348	95% CLT UCL	67.668712
26561	Adjusted Chi Square Value		19.272775	95% Jackknife UCL	68.935365
26562				95% Standard Bootstrap UCL	66.825432
26563	Anderson-Darling Test Statistic		0.399716	95% Bootstrap-t UCL	75.404391
26564	Anderson-Darling 5% Critical Value		0.7599753	95% Hall's Bootstrap UCL	74.569383
26565	Kolmogorov-Smirnov Test Statistic		0.1465131	95% Percentile Bootstrap UCL	68.2625
26566	Kolmogorov-Smirnov 5% Critical Value		0.2202873	95% BCA Bootstrap UCL	70.8625
26567	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	99.441892
26568				97.5% Chebyshev(Mean, Sd) UCL	121.52235
26569	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	164.89514
26570	95% Approximate Gamma UCL		76.959266		
26571	95% Adjusted Gamma UCL		81.269894		
26572					
26573	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	76.959266
26574					
26575	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
26576	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
26577	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
26578					
26579					
26580	**OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_nw_2005)**				
26581					
26582	**General Statistics**				
26583	Number of Valid Observations		18	Number of Distinct Observations	17
26584					
26585	**Raw Statistics**			**Log-transformed Statistics**	
26586	Minimum		12	Minimum of Log Data	2.4849066
26587	Maximum		190	Maximum of Log Data	5.2470241
26588	Mean		41.361111	Mean of log Data	3.3808067
26589	Median		25	SD of log Data	0.786654
26590	SD		43.76132		
26591	Coefficient of Variation		1.0580306		
26592	Skewness		2.6364131		
26593					
26594	**Relevant UCL Statistics**				
26595	**Normal Distribution Test**			**Lognormal Distribution Test**	
26596	Shapiro Wilk Test Statistic		0.6687653	Shapiro Wilk Test Statistic	0.9064374
26597	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897

	A	B	C	D	E
26598	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
26599					
26600	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
26601	95% Student's-t UCL		59.304532	95% H-UCL	62.65234
26602	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	73.289355
26603	95% Adjusted-CLT UCL (Chen-1995)		65.175945	97.5% Chebyshev (MVUE) UCL	88.039552
26604	95% Modified-t UCL (Johnson-1978)		60.3728	99% Chebyshev (MVUE) UCL	117.01346
26605					
26606	**Gamma Distribution Test**			**Data Distribution**	
26607	k star (bias corrected)		1.3790766	**Data appear Lognormal at 5% Significance Level**	
26608	Theta Star		29.991888		
26609	MLE of Mean		41.361111		
26610	MLE of Standard Deviation		35.220702		
26611	nu star		49.646757		
26612	Approximate Chi Square Value (.05)		34.469522	**Nonparametric Statistics**	
26613	Adjusted Level of Significance		0.03574	95% CLT UCL	58.327187
26614	Adjusted Chi Square Value		33.256719	95% Jackknife UCL	59.304532
26615				95% Standard Bootstrap UCL	57.822332
26616	Anderson-Darling Test Statistic		0.9262294	95% Bootstrap-t UCL	80.590539
26617	Anderson-Darling 5% Critical Value		0.7554504	95% Hall's Bootstrap UCL	134.00326
26618	Kolmogorov-Smirnov Test Statistic		0.2071687	95% Percentile Bootstrap UCL	59.222222
26619	Kolmogorov-Smirnov 5% Critical Value		0.207029	95% BCA Bootstrap UCL	67.944444
26620	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	86.321593
26621				97.5% Chebyshev(Mean, Sd) UCL	105.77603
26622	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	143.9905
26623	95% Approximate Gamma UCL		59.572774		
26624	95% Adjusted Gamma UCL		61.745268		
26625					
26626	**Potential UCL to Use**			Use 95% H-UCL	62.65234
26627					
26628	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
26629	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
26630	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
26631	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
26632					
26633	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
26634	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
26635	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
26636					
26637					
26638	**OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_nw_2009)**				
26639					
26640	**General Statistics**				
26641	Number of Valid Data		7	Number of Detected Data	6
26642	Number of Distinct Detected Data		6	Number of Non-Detect Data	1
26643				Percent Non-Detects	14.29%
26644					
26645	**Raw Statistics**			**Log-transformed Statistics**	
26646	Minimum Detected		9.1	Minimum Detected	2.2082744
26647	Maximum Detected		29	Maximum Detected	3.3672958
26648	Mean of Detected		20.266667	Mean of Detected	2.9088449
26649	SD of Detected		9.0513351	SD of Detected	0.5121134
26650	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
26651	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
26652					
26653					
26654	**Warning: There are only 6 Detected Values in this data**				
26655	**Note: It should be noted that even though bootstrap may be performed on this data set**				
26656	**the resulting calculations may not be reliable enough to draw conclusions**				

	A	B	C	D	E
26657					
26658	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
26659					
26660					
26661	**UCL Statistics**				
26662	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
26663	Shapiro Wilk Test Statistic		0.834297	Shapiro Wilk Test Statistic	0.8401581
26664	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788
26665	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
26666					
26667	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
26668	DL/2 Substitution Method			DL/2 Substitution Method	
26669	Mean		17.607143	Mean	2.564835
26670	SD		10.852819	SD	1.0232057
26671	95% DL/2 (t) UCL		25.57803	95% H-Stat (DL/2) UCL	105.68304
26672					
26673	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
26674	Mean		17.085725	Mean in Log Scale	2.734773
26675	SD		11.05632	SD in Log Scale	0.6562449
26676	95% MLE (t) UCL		25.206073	Mean in Original Scale	18.145904
26677	95% MLE (Tiku) UCL		25.468541	SD in Original Scale	9.987775
26678				95% t UCL	25.481457
26679				95% Percentile Bootstrap UCL	23.631619
26680				95% BCA Bootstrap UCL	23.56019
26681					
26682	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
26683	k star (bias corrected)		2.6882342	**Data appear Normal at 5% Significance Level**	
26684	Theta Star		7.5390257		
26685	nu star		32.25881		
26686					
26687	A-D Test Statistic		0.5573992	**Nonparametric Statistics**	
26688	5% A-D Critical Value		0.6980586	Kaplan-Meier (KM) Method	
26689	K-S Test Statistic		0.6980586	Mean	18.671429
26690	5% K-S Critical Value		0.3327804	SD	8.5899799
26691	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	3.5565896
26692				95% KM (t) UCL	25.582523
26693	**Assuming Gamma Distribution**			95% KM (z) UCL	24.521498
26694	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	25.469977
26695	Minimum		6.3204827	95% KM (bootstrap t) UCL	25.435237
26696	Maximum		29	95% KM (BCA) UCL	24.785714
26697	Mean		18.274355	95% KM (Percentile Bootstrap) UCL	24.785714
26698	Median		17	95% KM (Chebyshev) UCL	34.174243
26699	SD		9.8008863	97.5% KM (Chebyshev) UCL	40.882323
26700	k star		2.1055669	99% KM (Chebyshev) UCL	54.059048
26701	Theta star		8.6790664		
26702	Nu star		29.477936	**Potential UCLs to Use**	
26703	AppChi2		18.082891	95% KM (t) UCL	25.582523
26704	95% Gamma Approximate UCL		29.790052	95% KM (Percentile Bootstrap) UCL	24.785714
26705	95% Adjusted Gamma UCL		34.864249		
26706	**Note: DL/2 is not a recommended method.**				
26707					
26708	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
26709	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
26710	**For additional insight, the user may want to consult a statistician.**				
26711					
26712					
26713	**OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_nw_2010)**				
26714					
26715	**General Statistics**				
26716	Number of Valid Observations		4	Number of Distinct Observations	4
26717					
26718					
26719	**Warning: This data set only has 4 observations!**				

	A	B	C	D	E
26720	Data set is too small to compute reliable and meaningful statistics and estimates!				
26721	The data set for variable OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_nw_2010) was not processed!				
26722					
26723	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
26724	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
26725					
26726					
26727					
26728	OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ref_2009)				
26729					
26730	General Statistics				
26731	Number of Valid Data		0	Number of Detected Data	0
26732	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
26733	Number of Missing Values		6	Percent Non-Detects	NaN%
26734					
26735	Warning: This data set only has 0 observations!				
26736	Data set is too small to compute reliable and meaningful statistics and estimates!				
26737	The data set for variable OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ref_2009) was not processed!				
26738					
26739	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
26740	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
26741					
26742					
26743					
26744	OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ref_2010)				
26745					
26746	General Statistics				
26747	Number of Valid Data		0	Number of Detected Data	0
26748	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
26749	Number of Missing Values		3	Percent Non-Detects	NaN%
26750					
26751	Warning: This data set only has 0 observations!				
26752	Data set is too small to compute reliable and meaningful statistics and estimates!				
26753	The data set for variable OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ref_2010) was not processed!				
26754					
26755	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
26756	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
26757					
26758					
26759					
26760	OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_s_2005)				
26761					
26762	General Statistics				
26763	Number of Valid Observations		8	Number of Distinct Observations	8
26764					
26765	Raw Statistics			Log-transformed Statistics	
26766	Minimum		5.9	Minimum of Log Data	1.7749524
26767	Maximum		190	Maximum of Log Data	5.2470241
26768	Mean		44.8625	Mean of log Data	3.2485335
26769	Median		25.5	SD of log Data	1.0721389
26770	SD		60.397089		
26771	Coefficient of Variation		1.3462711		
26772	Skewness		2.5162241		

	A	B	C	D	E
26773					
26774					
26775	Warning: There are only 8 Values in this data				
26776	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
26777	the resulting calculations may not be reliable enough to draw conclusions				
26778					
26779	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
26780					
26781	Relevant UCL Statistics				
26782	Normal Distribution Test			Lognormal Distribution Test	
26783	Shapiro Wilk Test Statistic		0.6424482	Shapiro Wilk Test Statistic	0.9681872
26784	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
26785	Data not Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
26786					
26787	Assuming Normal Distribution			Assuming Lognormal Distribution	
26788	95% Student's-t UCL		85.318565	95% H-UCL	197.24868
26789	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	111.57833
26790	95% Adjusted-CLT UCL (Chen-1995)		100.28416	97.5% Chebyshev (MVUE) UCL	141.89017
26791	95% Modified-t UCL (Johnson-1978)		88.484661	99% Chebyshev (MVUE) UCL	201.43193
26792					
26793	Gamma Distribution Test			Data Distribution	
26794	k star (bias corrected)		0.7306298	Data appear Gamma Distributed at 5% Significance Level	
26795	Theta Star		61.402503		
26796	MLE of Mean		44.8625		
26797	MLE of Standard Deviation		52.484948		
26798	nu star		11.690077		
26799	Approximate Chi Square Value (.05)		5.0235927	Nonparametric Statistics	
26800	Adjusted Level of Significance		0.01946	95% CLT UCL	79.986039
26801	Adjusted Chi Square Value		3.9759963	95% Jackknife UCL	85.318565
26802				95% Standard Bootstrap UCL	78.781203
26803	Anderson-Darling Test Statistic		0.4549783	95% Bootstrap-t UCL	168.63091
26804	Anderson-Darling 5% Critical Value		0.7349949	95% Hall's Bootstrap UCL	212.8133
26805	Kolmogorov-Smirnov Test Statistic		0.235703	95% Percentile Bootstrap UCL	84.3625
26806	Kolmogorov-Smirnov 5% Critical Value		0.3012773	95% BCA Bootstrap UCL	103.9875
26807	Data appear Gamma Distributed at 5% Significance Level			95% Chebyshev(Mean, Sd) UCL	137.94067
26808				97.5% Chebyshev(Mean, Sd) UCL	178.21566
26809	Assuming Gamma Distribution			99% Chebyshev(Mean, Sd) UCL	257.32809
26810	95% Approximate Gamma UCL		104.39662		
26811	95% Adjusted Gamma UCL		131.90306		
26812					
26813	Potential UCL to Use			Use 95% Approximate Gamma UCL	104.39662
26814					
26815	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
26816	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
26817	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
26818					
26819					
26820	OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_s_2010)				
26821					
26822	General Statistics				
26823	Number of Valid Observations		2	Number of Distinct Observations	2
26824					
26825					
26826	Warning: This data set only has 2 observations!				
26827	Data set is too small to compute reliable and meaningful statistics and estimates!				
26828	The data set for variable OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_s_2010) was not processed!				
26829					

	A	B	C	D	E
26830	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
26831	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
26832					
26833					
26834					
26835	**OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_stillwater_2005)**				
26836					
26837	**General Statistics**				
26838	Number of Valid Observations		4	Number of Distinct Observations	4
26839					
26840					
26841	**Warning: This data set only has 4 observations!**				
26842	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
26843	**The data set for variable OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_stillwater_2005) was not processed!**				
26844					
26845	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
26846	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
26847					
26848					
26849					
26850	**OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_stillwater_2009)**				
26851					
26852	**General Statistics**				
26853	Number of Valid Data		60	Number of Detected Data	43
26854	Number of Distinct Detected Data		35	Number of Non-Detect Data	17
26855				Percent Non-Detects	28.33%
26856					
26857	**Raw Statistics**			**Log-transformed Statistics**	
26858	Minimum Detected		4.2	Minimum Detected	1.4350845
26859	Maximum Detected		480	Maximum Detected	6.1737861
26860	Mean of Detected		57.162791	Mean of Detected	3.3732351
26861	SD of Detected		82.901327	SD of Detected	1.17743
26862	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
26863	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
26864					
26865					
26866	**UCL Statistics**				
26867	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
26868	Shapiro Wilk Test Statistic		0.6166105	Shapiro Wilk Test Statistic	0.970232
26869	5% Shapiro Wilk Critical Value		0.943	5% Shapiro Wilk Critical Value	0.943
26870	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
26871					
26872	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
26873	DL/2 Substitution Method			DL/2 Substitution Method	
26874	Mean		41.434167	Mean	2.5593715
26875	SD		74.355476	SD	1.6403355
26876	95% DL/2 (t) UCL		57.475407	95% H-Stat (DL/2) UCL	102.20723
26877					
26878	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
26879	Mean		22.879182	Mean in Log Scale	2.5786644
26880	SD		92.517092	SD in Log Scale	1.6637963
26881	95% MLE (t) UCL		42.838558	Mean in Original Scale	41.592661
26882	95% MLE (Tiku) UCL		43.440984	SD in Original Scale	74.272768
26883				95% t UCL	57.616058
26884				95% Percentile Bootstrap UCL	58.512338
26885				95% BCA Bootstrap UCL	65.553818
26886					
26887	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
26888	k star (bias corrected)		0.827112	**Data appear Gamma Distributed at 5% Significance Level**	
26889	Theta Star		69.111306		

	A	B	C	D	E
26890	nu star		71.131632		
26891					
26892	A-D Test Statistic		0.7719789	**Nonparametric Statistics**	
26893	5% A-D Critical Value		0.7836565	Kaplan-Meier (KM) Method	
26894	K-S Test Statistic		0.7836565	Mean	42.156667
26895	5% K-S Critical Value		0.1395434	SD	73.35137
26896	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	9.5816915
26897				95% KM (t) UCL	58.168564
26898	**Assuming Gamma Distribution**			95% KM (z) UCL	57.917147
26899	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	57.990856
26900	Minimum		1E-12	95% KM (bootstrap t) UCL	67.895284
26901	Maximum		480	95% KM (BCA) UCL	58.855
26902	Mean		42.594023	95% KM (Percentile Bootstrap) UCL	59.398333
26903	Median		18.01603	95% KM (Chebyshev) UCL	83.922292
26904	SD		73.893137	97.5% KM (Chebyshev) UCL	101.99431
26905	k star		0.1415971	99% KM (Chebyshev) UCL	137.49329
26906	Theta star		300.81145		
26907	Nu star		16.991649	**Potential UCLs to Use**	
26908	AppChi2		8.6662591	95% KM (Chebyshev) UCL	83.922292
26909	95% Gamma Approximate UCL		83.512701		
26910	95% Adjusted Gamma UCL		84.951652		
26911	**Note: DL/2 is not a recommended method.**				
26912					
26913	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
26914	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
26915	**For additional insight, the user may want to consult a statistician.**				
26916					
26917					
26918	**OS|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_stillwater_2010)**				
26919					
26920	**General Statistics**				
26921	Number of Valid Observations		11	Number of Distinct Observations	10
26922					
26923	**Raw Statistics**			**Log-transformed Statistics**	
26924	Minimum		20.5	Minimum of Log Data	3.0204249
26925	Maximum		580	Maximum of Log Data	6.3630281
26926	Mean		165.22727	Mean of log Data	4.6584242
26927	Median		110	SD of log Data	1.0132285
26928	SD		170.48011		
26929	Coefficient of Variation		1.0317916		
26930	Skewness		1.7422417		
26931					
26932	**Relevant UCL Statistics**				
26933	**Normal Distribution Test**			**Lognormal Distribution Test**	
26934	Shapiro Wilk Test Statistic		0.7881794	Shapiro Wilk Test Statistic	0.9736488
26935	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
26936	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
26937					
26938	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
26939	95% Student's-t UCL		258.39083	95% H-UCL	464.2747
26940	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	398.98287
26941	95% Adjusted-CLT UCL (Chen-1995)		278.62712	97.5% Chebyshev (MVUE) UCL	500.05348
26942	95% Modified-t UCL (Johnson-1978)		262.8911	99% Chebyshev (MVUE) UCL	698.58712
26943					
26944	**Gamma Distribution Test**			**Data Distribution**	
26945	k star (bias corrected)		0.972819	**Data appear Gamma Distributed at 5% Significance Level**	
26946	Theta Star		169.8438		
26947	MLE of Mean		165.22727		
26948	MLE of Standard Deviation		167.51964		
26949	nu star		21.402017		
26950	Approximate Chi Square Value (.05)		11.891058	**Nonparametric Statistics**	
26951	Adjusted Level of Significance		0.02783	95% CLT UCL	249.77552
26952	Adjusted Chi Square Value		10.751767	95% Jackknife UCL	258.39083
26953				95% Standard Bootstrap UCL	246.11065
26954	Anderson-Darling Test Statistic		0.3326826	95% Bootstrap-t UCL	355.43361
26955	Anderson-Darling 5% Critical Value		0.7467947	95% Hall's Bootstrap UCL	616.69139
26956	Kolmogorov-Smirnov Test Statistic		0.2081887	95% Percentile Bootstrap UCL	252.90909
26957	Kolmogorov-Smirnov 5% Critical Value		0.2610221	95% BCA Bootstrap UCL	275.90909

	A	B	C	D	E
26958	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	389.28203
26959				97.5% Chebyshev(Mean, Sd) UCL	486.23071
26960	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	676.66761
26961	95% Approximate Gamma UCL		297.38288		
26962	95% Adjusted Gamma UCL		328.89448		
26963					
26964	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	297.38288
26965					
26966	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
26967	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
26968	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
26969					
26970					
26971	**OS|UG/KG|DIBENZOFURAN (gi_sd_ne_2005)**				
26972					
26973	**General Statistics**				
26974	Number of Valid Data		36	Number of Detected Data	6
26975	Number of Distinct Detected Data		5	Number of Non-Detect Data	30
26976				Percent Non-Detects	83.33%
26977					
26978	**Raw Statistics**			**Log-transformed Statistics**	
26979	Minimum Detected		43	Minimum Detected	3.7612001
26980	Maximum Detected		510	Maximum Detected	6.2344107
26981	Mean of Detected		185.66667	Mean of Detected	4.832065
26982	SD of Detected		183.94202	SD of Detected	0.9572391
26983	Minimum Non-Detect		320	Minimum Non-Detect	5.768321
26984	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
26985					
26986	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	35
26987	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	1
26988	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	97.22%
26989					
26990	**Warning: There are only 6 Detected Values in this data**				
26991	**Note: It should be noted that even though bootstrap may be performed on this data set**				
26992	**the resulting calculations may not be reliable enough to draw conclusions**				
26993					
26994	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
26995					
26996					
26997	**UCL Statistics**				
26998	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
26999	Shapiro Wilk Test Statistic		0.80274	Shapiro Wilk Test Statistic	0.9231159
27000	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788
27001	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
27002					
27003	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
27004	DL/2 Substitution Method			DL/2 Substitution Method	
27005	Mean		168.23611	Mean	5.0590199
27006	SD		69.977597	SD	0.376203
27007	95% DL/2 (t) UCL		187.94148	95% H-Stat (DL/2) UCL	189.79104
27008					
27009	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
27010	**MLE method failed to converge properly**			Mean in Log Scale	4.5673876
27011				SD in Log Scale	0.7364533
27012				Mean in Original Scale	125.86566
27013				SD in Original Scale	103.19231
27014				95% t UCL	154.92414
27015				95% Percentile Bootstrap UCL	153.3528
27016				95% BCA Bootstrap UCL	157.80739
27017					
27018	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	

	A	B	C	D	E
27019	k star (bias corrected)		0.820849	**Data appear Normal at 5% Significance Level**	
27020	Theta Star		226.18857		
27021	nu star		9.8501885		
27022					
27023	A-D Test Statistic		0.4313437	**Nonparametric Statistics**	
27024	5% A-D Critical Value		0.7089673	Kaplan-Meier (KM) Method	
27025	K-S Test Statistic		0.7089673	Mean	131.61111
27026	5% K-S Critical Value		0.3379976	SD	111.5383
27027	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	45.658415
27028				95% KM (t) UCL	208.75431
27029	**Assuming Gamma Distribution**			95% KM (z) UCL	206.71252
27030	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	217.41869
27031	Minimum		43	95% KM (bootstrap t) UCL	341.20639
27032	Maximum		510	95% KM (BCA) UCL	216.4375
27033	Mean		187.52907	95% KM (Percentile Bootstrap) UCL	211.8
27034	Median		179.21934	95% KM (Chebyshev) UCL	330.63153
27035	SD		106.65184	97.5% KM (Chebyshev) UCL	416.74782
27036	k star		2.8093233	99% KM (Chebyshev) UCL	585.90661
27037	Theta star		66.7524		
27038	Nu star		202.27128	**Potential UCLs to Use**	
27039	AppChi2		170.36335	95% KM (t) UCL	208.75431
27040	95% Gamma Approximate UCL		222.65202	95% KM (Percentile Bootstrap) UCL	211.8
27041	95% Adjusted Gamma UCL		224.40021		
27042	**Note: DL/2 is not a recommended method.**				
27043					
27044	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
27045	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
27046	**For additional insight, the user may want to consult a statistician.**				
27047					
27048					
27049	**OS|UG/KG|DIBENZOFURAN (gi_sd_ne_2009)**				
27050					
27051	**General Statistics**				
27052	Number of Valid Data		0	Number of Detected Data	0
27053	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
27054	Number of Missing Values		20	Percent Non-Detects	NaN%
27055					
27056	**Warning: This data set only has 0 observations!**				
27057	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27058	**The data set for variable OS|UG/KG|DIBENZOFURAN (gi_sd_ne_2009) was not processed!**				
27059					
27060	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27061	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27062					
27063					
27064					
27065	**OS|UG/KG|DIBENZOFURAN (gi_sd_ne_2010)**				
27066					
27067	**General Statistics**				
27068	Number of Valid Data		0	Number of Detected Data	0
27069	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
27070	Number of Missing Values		16	Percent Non-Detects	NaN%
27071					
27072	**Warning: This data set only has 0 observations!**				
27073	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27074	**The data set for variable OS|UG/KG|DIBENZOFURAN (gi_sd_ne_2010) was not processed!**				
27075					
27076	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
27077	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27078					
27079					
27080					
27081	**OS|UG/KG|DIBENZOFURAN (gi_sd_nw_2005)**				
27082					
27083	**General Statistics**				
27084	Number of Valid Data		18	Number of Detected Data	4
27085	Number of Distinct Detected Data		4	Number of Non-Detect Data	14
27086				Percent Non-Detects	77.78%
27087					
27088	**Raw Statistics**			**Log-transformed Statistics**	
27089	Minimum Detected		36	Minimum Detected	3.5835189
27090	Maximum Detected		350	Maximum Detected	5.8579332
27091	Mean of Detected		147.25	Mean of Detected	4.6315573
27092	SD of Detected		142.16745	SD of Detected	0.9894597
27093	Minimum Non-Detect		330	Minimum Non-Detect	5.7990927
27094	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
27095					
27096					
27097	**Warning: There are only 4 Distinct Detected Values in this data**				
27098	**Note: It should be noted that even though bootstrap may be performed on this data set**				
27099	**the resulting calculations may not be reliable enough to draw conclusions**				
27100					
27101	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
27102					
27103					
27104	**UCL Statistics**				
27105	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
27106	Shapiro Wilk Test Statistic		0.862555	Shapiro Wilk Test Statistic	0.9803665
27107	5% Shapiro Wilk Critical Value		0.748	5% Shapiro Wilk Critical Value	0.748
27108	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
27109					
27110	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
27111	DL/2 Substitution Method			DL/2 Substitution Method	
27112	Mean		161.05556	Mean	5.0005259
27113	SD		60.203061	SD	0.4625523
27114	95% DL/2 (t) UCL		185.74057	95% H-Stat (DL/2) UCL	206.49811
27115					
27116	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
27117	**MLE method failed to converge properly**			Mean in Log Scale	4.2807269
27118				SD in Log Scale	0.759721
27119				Mean in Original Scale	95.457197
27120				SD in Original Scale	80.864382
27121				95% t UCL	128.61396
27122				95% Percentile Bootstrap UCL	128.98499
27123				95% BCA Bootstrap UCL	137.85661
27124					
27125	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
27126	k star (bias corrected)		0.5496791	**Data appear Normal at 5% Significance Level**	
27127	Theta Star		267.88359		
27128	nu star		4.3974326		
27129					
27130	A-D Test Statistic		0.2655737	**Nonparametric Statistics**	
27131	5% A-D Critical Value		0.6622533	Kaplan-Meier (KM) Method	
27132	K-S Test Statistic		0.6622533	Mean	94.685185
27133	5% K-S Critical Value		0.3993881	SD	75.287062
27134	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	32.461222
27135				95% KM (t) UCL	151.15495
27136	**Assuming Gamma Distribution**			95% KM (z) UCL	148.07914
27137	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	160.78536
27138	Minimum		36	95% KM (bootstrap t) UCL	163.07267
27139	Maximum		350	95% KM (BCA) UCL	163.33333
27140	Mean		133.2253	95% KM (Percentile Bootstrap) UCL	163.33333
27141	Median		136.90686	95% KM (Chebyshev) UCL	236.18037
27142	SD		74.444287	97.5% KM (Chebyshev) UCL	297.40545

	A	B	C	D	E
27143	k star		2.8230711	99% KM (Chebyshev) UCL	417.67027
27144	Theta star		47.191622		
27145	Nu star		101.63056	**Potential UCLs to Use**	
27146	AppChi2		79.370729	95% KM (t) UCL	151.15495
27147	95% Gamma Approximate UCL		170.58886	95% KM (Percentile Bootstrap) UCL	163.33333
27148	95% Adjusted Gamma UCL		N/A		
27149	**Note: DL/2 is not a recommended method.**				
27150					
27151	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
27152	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
27153	**For additional insight, the user may want to consult a statistician.**				
27154					
27155					
27156	**OS|UG/KG|DIBENZOFURAN (gi_sd_nw_2009)**				
27157					
27158	**General Statistics**				
27159	Number of Valid Data		0	Number of Detected Data	0
27160	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
27161	Number of Missing Values		7	Percent Non-Detects	NaN%
27162					
27163	**Warning: This data set only has 0 observations!**				
27164	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27165	**The data set for variable OS|UG/KG|DIBENZOFURAN (gi_sd_nw_2009) was not processed!**				
27166					
27167	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27168	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27169					
27170					
27171					
27172	**OS|UG/KG|DIBENZOFURAN (gi_sd_nw_2010)**				
27173					
27174	**General Statistics**				
27175	Number of Valid Data		0	Number of Detected Data	0
27176	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
27177	Number of Missing Values		4	Percent Non-Detects	NaN%
27178					
27179	**Warning: This data set only has 0 observations!**				
27180	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27181	**The data set for variable OS|UG/KG|DIBENZOFURAN (gi_sd_nw_2010) was not processed!**				
27182					
27183	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27184	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27185					
27186					
27187					
27188	**OS|UG/KG|DIBENZOFURAN (gi_sd_ref_2009)**				
27189					
27190	**General Statistics**				
27191	Number of Valid Data		0	Number of Detected Data	0
27192	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
27193	Number of Missing Values		6	Percent Non-Detects	NaN%
27194					
27195	**Warning: This data set only has 0 observations!**				
27196	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
27197	**The data set for variable OS|UG/KG|DIBENZOFURAN (gi_sd_ref_2009) was not processed!**				
27198					
27199	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27200	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27201					
27202					
27203					
27204	**OS|UG/KG|DIBENZOFURAN (gi_sd_ref_2010)**				
27205					
27206	**General Statistics**				
27207	Number of Valid Data		0	Number of Detected Data	0
27208	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
27209	Number of Missing Values		3	Percent Non-Detects	NaN%
27210					
27211	**Warning: This data set only has 0 observations!**				
27212	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27213	**The data set for variable OS|UG/KG|DIBENZOFURAN (gi_sd_ref_2010) was not processed!**				
27214					
27215	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27216	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27217					
27218					
27219					
27220	**OS|UG/KG|DIBENZOFURAN (gi_sd_s_2005)**				
27221					
27222	**General Statistics**				
27223	Number of Valid Data		8	Number of Detected Data	4
27224	Number of Distinct Detected Data		4	Number of Non-Detect Data	4
27225				Percent Non-Detects	50.00%
27226					
27227	**Raw Statistics**			**Log-transformed Statistics**	
27228	Minimum Detected		37	Minimum Detected	3.6109179
27229	Maximum Detected		350	Maximum Detected	5.8579332
27230	Mean of Detected		133	Mean of Detected	4.448963
27231	SD of Detected		148.17782	SD of Detected	1.0567831
27232	Minimum Non-Detect		330	Minimum Non-Detect	5.7990927
27233	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
27234					
27235					
27236	**Warning: There are only 4 Distinct Detected Values in this data**				
27237	**Note: It should be noted that even though bootstrap may be performed on this data set**				
27238	**the resulting calculations may not be reliable enough to draw conclusions**				
27239					
27240	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
27241					
27242					
27243	**UCL Statistics**				
27244	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
27245	Shapiro Wilk Test Statistic		0.7776688	Shapiro Wilk Test Statistic	0.8746361
27246	5% Shapiro Wilk Critical Value		0.748	5% Shapiro Wilk Critical Value	0.748
27247	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
27248					
27249	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
27250	DL/2 Substitution Method			DL/2 Substitution Method	
27251	Mean		149	Mean	4.7774542
27252	SD		98.501632	SD	0.775852
27253	95% DL/2 (t) UCL		214.97981	95% H-Stat (DL/2) UCL	375.51145

	A	B	C	D	E
27254					
27255	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
27256	**MLE method failed to converge properly**			Mean in Log Scale	4.2222468
27257				SD in Log Scale	0.8481753
27258				Mean in Original Scale	98.117786
27259				SD in Original Scale	106.9485
27260				95% t UCL	169.7556
27261				95% Percentile Bootstrap UCL	163.3324
27262				95% BCA Bootstrap UCL	193.72428
27263					
27264	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
27265	k star (bias corrected)		0.4850809	**Data appear Normal at 5% Significance Level**	
27266	Theta Star		274.18108		
27267	nu star		3.880647		
27268					
27269	A-D Test Statistic		0.4481747	**Nonparametric Statistics**	
27270	5% A-D Critical Value		0.6642894	Kaplan-Meier (KM) Method	
27271	K-S Test Statistic		0.6642894	Mean	96.833333
27272	5% K-S Critical Value		0.40083	SD	100.27906
27273	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	43.311818
27274				95% KM (t) UCL	178.89098
27275	**Assuming Gamma Distribution**			95% KM (z) UCL	168.07493
27276	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	177.2978
27277	Minimum		37	95% KM (bootstrap t) UCL	241.04306
27278	Maximum		350	95% KM (BCA) UCL	169.16667
27279	Mean		125.78899	95% KM (Percentile Bootstrap) UCL	175.9375
27280	Median		106.48622	95% KM (Chebyshev) UCL	285.62517
27281	SD		103.3879	97.5% KM (Chebyshev) UCL	367.31555
27282	k star		1.3233896	99% KM (Chebyshev) UCL	527.78048
27283	Theta star		95.050604		
27284	Nu star		21.174234	**Potential UCLs to Use**	
27285	AppChi2		11.721264	95% KM (t) UCL	178.89098
27286	95% Gamma Approximate UCL		227.23534	95% KM (Percentile Bootstrap) UCL	175.9375
27287	95% Adjusted Gamma UCL		N/A		
27288	**Note: DL/2 is not a recommended method.**				
27289					
27290	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
27291	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
27292	**For additional insight, the user may want to consult a statistician.**				
27293					
27294					
27295	**OS|UG/KG|DIBENZOFURAN (gi_sd_s_2010)**				
27296					
27297	**General Statistics**				
27298	Number of Valid Data		0	Number of Detected Data	0
27299	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
27300	Number of Missing Values		2	Percent Non-Detects	NaN%
27301					
27302	**Warning: This data set only has 0 observations!**				
27303	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27304	**The data set for variable OS|UG/KG|DIBENZOFURAN (gi_sd_s_2010) was not processed!**				
27305					
27306	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27307	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27308					
27309					
27310					
27311	**OS|UG/KG|DIBENZOFURAN (gi_sd_stillwater_2005)**				
27312					
27313	**General Statistics**				
27314	Number of Valid Data		4	Number of Detected Data	3
27315	Number of Distinct Detected Data		3	Number of Non-Detect Data	1

	A	B	C	D	E
27316				Percent Non-Detects	25.00%
27317					
27318	**Warning: This data set only has 4 observations!**				
27319	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27320	**The data set for variable OS|UG/KG|DIBENZOFURAN (gi_sd_stillwater_2005) was not processed!**				
27321					
27322	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27323	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27324					
27325					
27326					
27327	**OS|UG/KG|DIBENZOFURAN (gi_sd_stillwater_2009)**				
27328					
27329	**General Statistics**				
27330	Number of Valid Data		0	Number of Detected Data	0
27331	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
27332	Number of Missing Values		60	Percent Non-Detects	NaN%
27333					
27334	**Warning: This data set only has 0 observations!**				
27335	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27336	**The data set for variable OS|UG/KG|DIBENZOFURAN (gi_sd_stillwater_2009) was not processed!**				
27337					
27338	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27339	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27340					
27341					
27342					
27343	**OS|UG/KG|DIBENZOFURAN (gi_sd_stillwater_2010)**				
27344					
27345	**General Statistics**				
27346	Number of Valid Data		0	Number of Detected Data	0
27347	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
27348	Number of Missing Values		11	Percent Non-Detects	NaN%
27349					
27350	**Warning: This data set only has 0 observations!**				
27351	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27352	**The data set for variable OS|UG/KG|DIBENZOFURAN (gi_sd_stillwater_2010) was not processed!**				
27353					
27354	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27355	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27356					
27357					
27358					
27359	**OS|UG/KG|FLUORANTHENE (gi_sd_ne_2005)**				
27360					
27361	**General Statistics**				
27362	Number of Valid Observations		36	Number of Distinct Observations	32
27363					
27364	**Raw Statistics**			**Log-transformed Statistics**	
27365	Minimum		34	Minimum of Log Data	3.5263605
27366	Maximum		3400	Maximum of Log Data	8.1315307
27367	Mean		434.02778	Mean of log Data	5.2652979
27368	Median		175	SD of log Data	1.2106578

	A	B	C	D	E
27369	SD		722.46995		
27370	Coefficient of Variation		1.6645708		
27371	Skewness		3.0677974		
27372					
27373	**Relevant UCL Statistics**				
27374	**Normal Distribution Test**			**Lognormal Distribution Test**	
27375	Shapiro Wilk Test Statistic		0.5691213	Shapiro Wilk Test Statistic	0.9468492
27376	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
27377	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
27378					
27379	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
27380	95% Student's-t UCL		637.472	95% H-UCL	690.1372
27381	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	805.52049
27382	95% Adjusted-CLT UCL (Chen-1995)		697.87195	97.5% Chebyshev (MVUE) UCL	985.56141
27383	95% Modified-t UCL (Johnson-1978)		647.73307	99% Chebyshev (MVUE) UCL	1339.2169
27384					
27385	**Gamma Distribution Test**			**Data Distribution**	
27386	k star (bias corrected)		0.6987968	**Data appear Lognormal at 5% Significance Level**	
27387	Theta Star		621.10727		
27388	MLE of Mean		434.02778		
27389	MLE of Standard Deviation		519.20883		
27390	nu star		50.31337		
27391	Approximate Chi Square Value (.05)		35.025978	**Nonparametric Statistics**	
27392	Adjusted Level of Significance		0.0428	95% CLT UCL	632.08733
27393	Adjusted Chi Square Value		34.445986	95% Jackknife UCL	637.472
27394				95% Standard Bootstrap UCL	630.81413
27395	Anderson-Darling Test Statistic		1.6885686	95% Bootstrap-t UCL	857.04962
27396	Anderson-Darling 5% Critical Value		0.7887346	95% Hall's Bootstrap UCL	1415.1425
27397	Kolmogorov-Smirnov Test Statistic		0.1643397	95% Percentile Bootstrap UCL	638.47222
27398	Kolmogorov-Smirnov 5% Critical Value		0.1527098	95% BCA Bootstrap UCL	692.86111
27399	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	958.89003
27400				97.5% Chebyshev(Mean, Sd) UCL	1185.9983
27401	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1632.1087
27402	95% Approximate Gamma UCL		623.46297		
27403	95% Adjusted Gamma UCL		633.96066		
27404					
27405	**Potential UCL to Use**			Use 95% H-UCL	690.1372
27406					
27407	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
27408	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
27409	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
27410	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
27411					
27412	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
27413	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
27414	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
27415					
27416					
27417	**OS|UG/KG|FLUORANTHENE (gi_sd_ne_2009)**				
27418					
27419	**General Statistics**				
27420	Number of Valid Data		20	Number of Detected Data	19
27421	Number of Distinct Detected Data		17	Number of Non-Detect Data	1
27422				Percent Non-Detects	5.00%
27423					
27424	**Raw Statistics**			**Log-transformed Statistics**	
27425	Minimum Detected		5.85	Minimum Detected	1.7664417
27426	Maximum Detected		1300	Maximum Detected	7.1701195
27427	Mean of Detected		282.56053	Mean of Detected	4.6499033
27428	SD of Detected		379.17993	SD of Detected	1.6292636
27429	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
27430	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
27431					

	A	B	C	D	E
27432					
27433	**UCL Statistics**				
27434	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
27435	Shapiro Wilk Test Statistic		0.7246346	Shapiro Wilk Test Statistic	0.954934
27436	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
27437	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
27438					
27439	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
27440	DL/2 Substitution Method			DL/2 Substitution Method	
27441	Mean		268.515	Mean	4.4424469
27442	SD		374.37377	SD	1.8372677
27443	95% DL/2 (t) UCL		413.26507	95% H-Stat (DL/2) UCL	2494.0752
27444					
27445	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
27446	Mean		257.29052	Mean in Log Scale	4.4493246
27447	SD		378.50641	SD in Log Scale	1.8219291
27448	95% MLE (t) UCL		403.63845	Mean in Original Scale	268.52717
27449	95% MLE (Tiku) UCL		393.30741	SD in Original Scale	374.36465
27450				95% t UCL	413.2737
27451				95% Percentile Bootstrap UCL	410.62717
27452				95% BCA Bootstrap UCL	437.59467
27453					
27454	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
27455	k star (bias corrected)		0.556185	**Data appear Gamma Distributed at 5% Significance Level**	
27456	Theta Star		508.03334		
27457	nu star		21.13503		
27458					
27459	A-D Test Statistic		0.4443336	**Nonparametric Statistics**	
27460	5% A-D Critical Value		0.7913854	Kaplan-Meier (KM) Method	
27461	K-S Test Statistic		0.7913854	Mean	268.725
27462	5% K-S Critical Value		0.2081367	SD	364.74195
27463	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	83.79368
27464				95% KM (t) UCL	413.6154
27465	**Assuming Gamma Distribution**			95% KM (z) UCL	406.55334
27466	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	413.34505
27467	Minimum		1E-12	95% KM (bootstrap t) UCL	486.02776
27468	Maximum		1300	95% KM (BCA) UCL	424.2
27469	Mean		268.4325	95% KM (Percentile Bootstrap) UCL	408.535
27470	Median		140	95% KM (Chebyshev) UCL	633.97318
27471	SD		374.43585	97.5% KM (Chebyshev) UCL	792.01636
27472	k star		0.2660264	99% KM (Chebyshev) UCL	1102.4616
27473	Theta star		1009.0446		
27474	Nu star		10.641056	**Potential UCLs to Use**	
27475	AppChi2		4.34629	95% KM (Chebyshev) UCL	633.97318
27476	95% Gamma Approximate UCL		657.20537		
27477	95% Adjusted Gamma UCL		708.39343		
27478	**Note: DL/2 is not a recommended method.**				
27479					
27480	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
27481	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
27482	**For additional insight, the user may want to consult a statistician.**				
27483					
27484					
27485	**OS|UG/KG|FLUORANTHENE (gi_sd_ne_2010)**				
27486					
27487	**General Statistics**				
27488	Number of Valid Observations		16	Number of Distinct Observations	13
27489					
27490	**Raw Statistics**			**Log-transformed Statistics**	
27491	Minimum		48	Minimum of Log Data	3.871201
27492	Maximum		2000	Maximum of Log Data	7.6009025
27493	Mean		520.21875	Mean of log Data	5.6378356
27494	Median		315	SD of log Data	1.2336782
27495	SD		545.83004		
27496	Coefficient of Variation		1.0492318		
27497	Skewness		1.4404348		
27498					
27499	**Relevant UCL Statistics**				

	A	B	C	D	E
27500	**Normal Distribution Test**			**Lognormal Distribution Test**	
27501	Shapiro Wilk Test Statistic		0.8193153	Shapiro Wilk Test Statistic	0.9130715
27502	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
27503	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
27504					
27505	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
27506	95% Student's-t UCL		759.43564	95% H-UCL	1604.0724
27507	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1403.9708
27508	95% Adjusted-CLT UCL (Chen-1995)		797.17769	97.5% Chebyshev (MVUE) UCL	1770.1162
27509	95% Modified-t UCL (Johnson-1978)		767.62556	99% Chebyshev (MVUE) UCL	2489.3381
27510					
27511	**Gamma Distribution Test**			**Data Distribution**	
27512	k star (bias corrected)		0.8078449	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
27513	Theta Star		643.95872		
27514	MLE of Mean		520.21875		
27515	MLE of Standard Deviation		578.79133		
27516	nu star		25.851036		
27517	Approximate Chi Square Value (.05)		15.264689	**Nonparametric Statistics**	
27518	Adjusted Level of Significance		0.03348	95% CLT UCL	744.67138
27519	Adjusted Chi Square Value		14.343484	95% Jackknife UCL	759.43564
27520				95% Standard Bootstrap UCL	734.04571
27521	Anderson-Darling Test Statistic		0.617719	95% Bootstrap-t UCL	849.06142
27522	Anderson-Darling 5% Critical Value		0.7658587	95% Hall's Bootstrap UCL	856.94211
27523	Kolmogorov-Smirnov Test Statistic		0.2365406	95% Percentile Bootstrap UCL	742.28125
27524	Kolmogorov-Smirnov 5% Critical Value		0.2216298	95% BCA Bootstrap UCL	773.53125
27525	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1115.0232
27526				97.5% Chebyshev(Mean, Sd) UCL	1372.3956
27527	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1877.9538
27528	95% Approximate Gamma UCL		881.00017		
27529	95% Adjusted Gamma UCL		937.58205		
27530					
27531	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	881.00017
27532					
27533	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
27534	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
27535	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
27536					
27537					
27538	**OS|UG/KG|FLUORANTHENE (gi_sd_nw_2005)**				
27539					
27540	**General Statistics**				
27541	Number of Valid Observations		18	Number of Distinct Observations	17
27542					
27543	**Raw Statistics**			**Log-transformed Statistics**	
27544	Minimum		140	Minimum of Log Data	4.9416424
27545	Maximum		3400	Maximum of Log Data	8.1315307
27546	Mean		764.16667	Mean of log Data	6.0168453
27547	Median		262.5	SD of log Data	1.0409741
27548	SD		1044.8505		
27549	Coefficient of Variation		1.367307		
27550	Skewness		1.9455023		
27551					
27552	**Relevant UCL Statistics**				
27553	**Normal Distribution Test**			**Lognormal Distribution Test**	
27554	Shapiro Wilk Test Statistic		0.6193762	Shapiro Wilk Test Statistic	0.8478912
27555	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
27556	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
27557					
27558	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
27559	95% Student's-t UCL		1192.5859	95% H-UCL	1393.8707
27560	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1482.085
27561	95% Adjusted-CLT UCL (Chen-1995)		1289.9192	97.5% Chebyshev (MVUE) UCL	1831.0513
27562	95% Modified-t UCL (Johnson-1978)		1211.4078	99% Chebyshev (MVUE) UCL	2516.528
27563					
27564	**Gamma Distribution Test**			**Data Distribution**	

	A	B	C	D	E
27565	k star (bias corrected)		0.8166311	**Data do not follow a Discernable Distribution (0.05)**	
27566	Theta Star		935.75505		
27567	MLE of Mean		764.16667		
27568	MLE of Standard Deviation		845.61978		
27569	nu star		29.398719		
27570	Approximate Chi Square Value (.05)		18.02078	**Nonparametric Statistics**	
27571	Adjusted Level of Significance		0.03574	95% CLT UCL	1169.2507
27572	Adjusted Chi Square Value		17.167734	95% Jackknife UCL	1192.5859
27573				95% Standard Bootstrap UCL	1166.5972
27574	Anderson-Darling Test Statistic		1.7266893	95% Bootstrap-t UCL	1484.3417
27575	Anderson-Darling 5% Critical Value		0.7695277	95% Hall's Bootstrap UCL	1142.5461
27576	Kolmogorov-Smirnov Test Statistic		0.2435894	95% Percentile Bootstrap UCL	1190.8333
27577	Kolmogorov-Smirnov 5% Critical Value		0.2099533	95% BCA Bootstrap UCL	1280.2778
27578	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1837.6485
27579				97.5% Chebyshev(Mean, Sd) UCL	2302.1449
27580	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	3214.5582
27581	95% Approximate Gamma UCL		1246.6453		
27582	95% Adjusted Gamma UCL		1308.5898		
27583					
27584	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	1837.6485
27585					
27586	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
27587	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
27588	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
27589					
27590					
27591	**OS|UG/KG|FLUORANTHENE (gi_sd_nw_2009)**				
27592					
27593	**General Statistics**				
27594	Number of Valid Observations		7	Number of Distinct Observations	7
27595					
27596	**Raw Statistics**			**Log-transformed Statistics**	
27597	Minimum		11	Minimum of Log Data	2.3978953
27598	Maximum		350	Maximum of Log Data	5.8579332
27599	Mean		187.14286	Mean of log Data	4.8256449
27600	Median		220	SD of log Data	1.2191591
27601	SD		127.70856		
27602	Coefficient of Variation		0.6824122		
27603	Skewness		-0.166189		
27604					
27605					
27606	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
27607					
27608	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
27609	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27610					
27611					
27612	**Warning: There are only 7 Values in this data**				
27613	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
27614	**the resulting calculations may not be reliable enough to draw conclusions**				
27615					
27616	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
27617					
27618	**Relevant UCL Statistics**				
27619	**Normal Distribution Test**			**Lognormal Distribution Test**	
27620	Shapiro Wilk Test Statistic		0.9346506	Shapiro Wilk Test Statistic	0.8261816
27621	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
27622	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
27623					

	A	B	C	D	E
27624	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
27625	95% Student's-t UCL		280.93881	95% H-UCL	2265.9701
27626	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	676.93253
27627	95% Adjusted-CLT UCL (Chen-1995)		263.29909	97.5% Chebyshev (MVUE) UCL	872.19385
27628	95% Modified-t UCL (Johnson-1978)		280.43348	99% Chebyshev (MVUE) UCL	1255.7469
27629					
27630	**Gamma Distribution Test**			**Data Distribution**	
27631	k star (bias corrected)		0.8801735	**Data appear Normal at 5% Significance Level**	
27632	Theta Star		212.62042		
27633	MLE of Mean		187.14286		
27634	MLE of Standard Deviation		199.4753		
27635	nu star		12.322429		
27636	Approximate Chi Square Value (.05)		5.4401343	**Nonparametric Statistics**	
27637	Adjusted Level of Significance		0.01584	95% CLT UCL	266.53879
27638	Adjusted Chi Square Value		4.1430655	95% Jackknife UCL	280.93881
27639				95% Standard Bootstrap UCL	259.32752
27640	Anderson-Darling Test Statistic		0.4376167	95% Bootstrap-t UCL	279.25996
27641	Anderson-Darling 5% Critical Value		0.7228221	95% Hall's Bootstrap UCL	250.39592
27642	Kolmogorov-Smirnov Test Statistic		0.2554055	95% Percentile Bootstrap UCL	259.57143
27643	Kolmogorov-Smirnov 5% Critical Value		0.3176646	95% BCA Bootstrap UCL	261.57143
27644	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	397.54385
27645				97.5% Chebyshev(Mean, Sd) UCL	488.58453
27646	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	667.41631
27647	95% Approximate Gamma UCL		423.89661		
27648	95% Adjusted Gamma UCL		556.60585		
27649					
27650	**Potential UCL to Use**			Use 95% Student's-t UCL	280.93881
27651					
27652	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
27653	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
27654	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
27655					
27656					
27657	**OS|UG/KG|FLUORANTHENE (gi_sd_nw_2010)**				
27658					
27659	**General Statistics**				
27660	Number of Valid Observations		4	Number of Distinct Observations	4
27661					
27662					
27663	**Warning: This data set only has 4 observations!**				
27664	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27665	**The data set for variable OS|UG/KG|FLUORANTHENE (gi_sd_nw_2010) was not processed!**				
27666					
27667	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27668	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27669					
27670					
27671					
27672	**OS|UG/KG|FLUORANTHENE (gi_sd_ref_2009)**				
27673					
27674	**General Statistics**				
27675	Number of Valid Data		0	Number of Detected Data	0
27676	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
27677	Number of Missing Values		6	Percent Non-Detects	NaN%
27678					
27679	**Warning: This data set only has 0 observations!**				
27680	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27681	**The data set for variable OS|UG/KG|FLUORANTHENE (gi_sd_ref_2009) was not processed!**				

	A	B	C	D	E
27682					
27683	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27684	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27685					
27686					
27687					
27688	**OS|UG/KG|FLUORANTHENE (gi_sd_ref_2010)**				
27689					
27690	**General Statistics**				
27691	Number of Valid Data		0	Number of Detected Data	0
27692	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
27693	Number of Missing Values		3	Percent Non-Detects	NaN%
27694					
27695	**Warning: This data set only has 0 observations!**				
27696	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27697	**The data set for variable OS|UG/KG|FLUORANTHENE (gi_sd_ref_2010) was not processed!**				
27698					
27699	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27700	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27701					
27702					
27703					
27704	**OS|UG/KG|FLUORANTHENE (gi_sd_s_2005)**				
27705					
27706	**General Statistics**				
27707	Number of Valid Observations		8	Number of Distinct Observations	7
27708					
27709	**Raw Statistics**			**Log-transformed Statistics**	
27710	Minimum		80	Minimum of Log Data	4.3820266
27711	Maximum		3100	Maximum of Log Data	8.0391574
27712	Mean		843.75	Mean of log Data	6.2277477
27713	Median		595	SD of log Data	1.1396701
27714	SD		961.14422		
27715	Coefficient of Variation		1.1391339		
27716	Skewness		2.2714205		
27717					
27718					
27719	**Warning: There are only 8 Values in this data**				
27720	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
27721	**the resulting calculations may not be reliable enough to draw conclusions**				
27722					
27723	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
27724					
27725	**Relevant UCL Statistics**				
27726	**Normal Distribution Test**			**Lognormal Distribution Test**	
27727	Shapiro Wilk Test Statistic		0.7159818	Shapiro Wilk Test Statistic	0.9465212
27728	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
27729	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
27730					
27731	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
27732	95% Student's-t UCL		1487.5577	95% H-UCL	4937.581
27733	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	2418.9762
27734	95% Adjusted-CLT UCL (Chen-1995)		1694.2899	97.5% Chebyshev (MVUE) UCL	3090.7778
27735	95% Modified-t UCL (Johnson-1978)		1533.0403	99% Chebyshev (MVUE) UCL	4410.402
27736					
27737	**Gamma Distribution Test**			**Data Distribution**	
27738	k star (bias corrected)		0.7816953	**Data appear Gamma Distributed at 5% Significance Level**	
27739	Theta Star		1079.3848		
27740	MLE of Mean		843.75		

	A	B	C	D	E
27741	MLE of Standard Deviation		954.32222		
27742	nu star		12.507125		
27743	Approximate Chi Square Value (.05)		5.5628776	**Nonparametric Statistics**	
27744	Adjusted Level of Significance		0.01946	95% CLT UCL	1402.6972
27745	Adjusted Chi Square Value		4.4481687	95% Jackknife UCL	1487.5577
27746				95% Standard Bootstrap UCL	1366.1574
27747	Anderson-Darling Test Statistic		0.3494902	95% Bootstrap-t UCL	2242.5552
27748	Anderson-Darling 5% Critical Value		0.7338379	95% Hall's Bootstrap UCL	3781.6074
27749	Kolmogorov-Smirnov Test Statistic		0.2288918	95% Percentile Bootstrap UCL	1477.5
27750	Kolmogorov-Smirnov 5% Critical Value		0.300859	95% BCA Bootstrap UCL	1625
27751	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	2324.9727
27752				97.5% Chebyshev(Mean, Sd) UCL	2965.899
27753	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4224.8745
27754	95% Approximate Gamma UCL		1897.0194		
27755	95% Adjusted Gamma UCL		2372.4115		
27756					
27757	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	1897.0194
27758					
27759	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
27760	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
27761	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
27762					
27763					
27764	**OS|UG/KG|FLUORANTHENE (gi_sd_s_2010)**				
27765					
27766	**General Statistics**				
27767	Number of Valid Observations		2	Number of Distinct Observations	2
27768					
27769					
27770	**Warning: This data set only has 2 observations!**				
27771	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27772	**The data set for variable OS|UG/KG|FLUORANTHENE (gi_sd_s_2010) was not processed!**				
27773					
27774	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27775	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27776					
27777					
27778					
27779	**OS|UG/KG|FLUORANTHENE (gi_sd_stillwater_2005)**				
27780					
27781	**General Statistics**				
27782	Number of Valid Observations		4	Number of Distinct Observations	4
27783					
27784					
27785	**Warning: This data set only has 4 observations!**				
27786	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
27787	**The data set for variable OS|UG/KG|FLUORANTHENE (gi_sd_stillwater_2005) was not processed!**				
27788					
27789	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
27790	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
27791					
27792					
27793					
27794	**OS|UG/KG|FLUORANTHENE (gi_sd_stillwater_2009)**				

	A	B	C	D	E
27795					
27796	**General Statistics**				
27797	Number of Valid Data		60	Number of Detected Data	53
27798	Number of Distinct Detected Data		46	Number of Non-Detect Data	7
27799				Percent Non-Detects	11.67%
27800					
27801	**Raw Statistics**			**Log-transformed Statistics**	
27802	Minimum Detected		2.92	Minimum Detected	1.0715836
27803	Maximum Detected		27000	Maximum Detected	10.203592
27804	Mean of Detected		1326.3343	Mean of Detected	5.115689
27805	SD of Detected		4134.4939	SD of Detected	2.2035645
27806	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
27807	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
27808					
27809					
27810	**UCL Statistics**				
27811	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
27812	Lilliefors Test Statistic		0.3744497	Lilliefors Test Statistic	0.0905207
27813	5% Lilliefors Critical Value		0.1217015	5% Lilliefors Critical Value	0.1217015
27814	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
27815					
27816	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
27817	DL/2 Substitution Method			DL/2 Substitution Method	
27818	Mean		1171.7878	Mean	4.5772824
27819	SD		3905.1042	SD	2.5517868
27820	95% DL/2 (t) UCL		2014.264	95% H-Stat (DL/2) UCL	13336.368
27821					
27822	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
27823	Mean		756.99603	Mean in Log Scale	4.5591813
27824	SD		4226.3192	SD in Log Scale	2.5970175
27825	95% MLE (t) UCL		1668.7702	Mean in Original Scale	1171.813
27826	95% MLE (Tiku) UCL		1610.0977	SD in Original Scale	3905.0966
27827				95% t UCL	2014.2875
27828				95% Percentile Bootstrap UCL	2114.1568
27829				95% BCA Bootstrap UCL	2517.8744
27830					
27831	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
27832	k star (bias corrected)		0.3216851	**Data appear Lognormal at 5% Significance Level**	
27833	Theta Star		4123.0827		
27834	nu star		34.098622		
27835					
27836	A-D Test Statistic		2.0760723	**Nonparametric Statistics**	
27837	5% A-D Critical Value		0.8560386	Kaplan-Meier (KM) Method	
27838	K-S Test Statistic		0.8560386	Mean	1171.936
27839	5% K-S Critical Value		0.1320946	SD	3872.3802
27840	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	504.70619
27841				95% KM (t) UCL	2015.347
27842	**Assuming Gamma Distribution**			95% KM (z) UCL	2002.1038
27843	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	2014.2738
27844	Minimum		1E-12	95% KM (bootstrap t) UCL	4709.3109
27845	Maximum		27000	95% KM (BCA) UCL	2094.9887
27846	Mean		1171.5953	95% KM (Percentile Bootstrap) UCL	2095.7717
27847	Median		155	95% KM (Chebyshev) UCL	3371.8993
27848	SD		3905.1629	97.5% KM (Chebyshev) UCL	4323.8251
27849	k star		0.1395314	99% KM (Chebyshev) UCL	6193.6992
27850	Theta star		8396.6406		
27851	Nu star		16.743772	**Potential UCLs to Use**	
27852	AppChi2		8.4894409	97.5% KM (Chebyshev) UCL	4323.8251
27853	95% Gamma Approximate UCL		2310.7441		
27854	95% Adjusted Gamma UCL		2350.9277		
27855	**Note: DL/2 is not a recommended method.**				
27856					
27857	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
27858	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
27859	**For additional insight, the user may want to consult a statistician.**				
27860					
27861					

	A	B	C	D	E
27862	**OS|UG/KG|FLUORANTHENE (gi_sd_stillwater_2010)**				
27863					
27864	**General Statistics**				
27865	Number of Valid Observations		11	Number of Distinct Observations	11
27866					
27867	**Raw Statistics**			**Log-transformed Statistics**	
27868	Minimum		260	Minimum of Log Data	5.5606816
27869	Maximum		12000	Maximum of Log Data	9.3926619
27870	Mean		3437.2727	Mean of log Data	7.4247581
27871	Median		1200	SD of log Data	1.2547557
27872	SD		4257.3051		
27873	Coefficient of Variation		1.2385706		
27874	Skewness		1.2910118		
27875					
27876	**Relevant UCL Statistics**				
27877	**Normal Distribution Test**			**Lognormal Distribution Test**	
27878	Shapiro Wilk Test Statistic		0.7145096	Shapiro Wilk Test Statistic	0.9070698
27879	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
27880	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
27881					
27882	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
27883	95% Student's-t UCL		5763.7946	95% H-UCL	14833.336
27884	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	9146.763
27885	95% Adjusted-CLT UCL (Chen-1995)		6082.5404	97.5% Chebyshev (MVUE) UCL	11675.213
27886	95% Modified-t UCL (Johnson-1978)		5847.0708	99% Chebyshev (MVUE) UCL	16641.863
27887					
27888	**Gamma Distribution Test**			**Data Distribution**	
27889	k star (bias corrected)		0.6597328	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
27890	Theta Star		5210.0986		
27891	MLE of Mean		3437.2727		
27892	MLE of Standard Deviation		4231.8471		
27893	nu star		14.514121		
27894	Approximate Chi Square Value (.05)		6.9248237	**Nonparametric Statistics**	
27895	Adjusted Level of Significance		0.02783	95% CLT UCL	5548.6493
27896	Adjusted Chi Square Value		6.089991	95% Jackknife UCL	5763.7946
27897				95% Standard Bootstrap UCL	5499.8151
27898	Anderson-Darling Test Statistic		0.8762876	95% Bootstrap-t UCL	6606.2428
27899	Anderson-Darling 5% Critical Value		0.7592817	95% Hall's Bootstrap UCL	4922.3311
27900	Kolmogorov-Smirnov Test Statistic		0.2439521	95% Percentile Bootstrap UCL	5574.5455
27901	Kolmogorov-Smirnov 5% Critical Value		0.2641843	95% BCA Bootstrap UCL	6088.1818
27902	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	9032.4678
27903				97.5% Chebyshev(Mean, Sd) UCL	11453.513
27904	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	16209.188
27905	95% Approximate Gamma UCL		7204.3699		
27906	95% Adjusted Gamma UCL		8191.9647		
27907					
27908	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	7204.3699
27909					
27910	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
27911	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
27912	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
27913					
27914					
27915	**OS|UG/KG|FLUORENE (gi_sd_ne_2005)**				
27916					
27917	**General Statistics**				
27918	Number of Valid Data		36	Number of Detected Data	32
27919	Number of Distinct Detected Data		29	Number of Non-Detect Data	4
27920				Percent Non-Detects	11.11%
27921					
27922	**Raw Statistics**			**Log-transformed Statistics**	
27923	Minimum Detected		3.7	Minimum Detected	1.3083328
27924	Maximum Detected		820	Maximum Detected	6.7093043
27925	Mean of Detected		60.76875	Mean of Detected	2.9758568
27926	SD of Detected		154.92062	SD of Detected	1.2753701
27927	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
27928	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225

	A	B	C	D	E
27929					
27930					
27931	**UCL Statistics**				
27932	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
27933	Shapiro Wilk Test Statistic		0.3840131	Shapiro Wilk Test Statistic	0.910259
27934	5% Shapiro Wilk Critical Value		0.93	5% Shapiro Wilk Critical Value	0.93
27935	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
27936					
27937	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
27938	DL/2 Substitution Method			DL/2 Substitution Method	
27939	Mean		54.2	Mean	2.7008478
27940	SD		147.01206	SD	1.4363154
27941	95% DL/2 (t) UCL		95.597922	95% H-Stat (DL/2) UCL	84.932081
27942					
27943	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
27944	Mean		42.006972	Mean in Log Scale	2.6524944
27945	SD		155.97629	SD in Log Scale	1.5227166
27946	95% MLE (t) UCL		85.929178	Mean in Original Scale	54.144179
27947	95% MLE (Tiku) UCL		82.705065	SD in Original Scale	147.03274
27948				95% t UCL	95.547922
27949				95% Percentile Bootstrap UCL	99.154316
27950				95% BCA Bootstrap UCL	120.79444
27951					
27952	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
27953	k star (bias corrected)		0.5219118	**Data do not follow a Discernable Distribution (0.05)**	
27954	Theta Star		116.43491		
27955	nu star		33.402354		
27956					
27957	A-D Test Statistic		2.9792793	**Nonparametric Statistics**	
27958	5% A-D Critical Value		0.8055941	Kaplan-Meier (KM) Method	
27959	K-S Test Statistic		0.8055941	Mean	54.427778
27960	5% K-S Critical Value		0.1637777	SD	144.87468
27961	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	24.532137
27962				95% KM (t) UCL	95.876601
27963	**Assuming Gamma Distribution**			95% KM (z) UCL	94.779553
27964	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	95.722791
27965	Minimum		1E-12	95% KM (bootstrap t) UCL	266.3993
27966	Maximum		820	95% KM (BCA) UCL	97.394444
27967	Mean		54.016667	95% KM (Percentile Bootstrap) UCL	96.463889
27968	Median		13	95% KM (Chebyshev) UCL	161.36088
27969	SD		147.08039	97.5% KM (Chebyshev) UCL	207.63093
27970	k star		0.1750861	99% KM (Chebyshev) UCL	298.51946
27971	Theta star		308.51485		
27972	Nu star		12.6062	**Potential UCLs to Use**	
27973	AppChi2		5.6289138	97.5% KM (Chebyshev) UCL	207.63093
27974	95% Gamma Approximate UCL		120.9727		
27975	95% Adjusted Gamma UCL		125.69645		
27976	**Note: DL/2 is not a recommended method.**				
27977					
27978	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
27979	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
27980	**For additional insight, the user may want to consult a statistician.**				
27981					
27982					
27983	**OS|UG/KG|FLUORENE (gi_sd_ne_2009)**				
27984					
27985	**General Statistics**				
27986	Number of Valid Data		20	Number of Detected Data	15
27987	Number of Distinct Detected Data		15	Number of Non-Detect Data	5
27988				Percent Non-Detects	25.00%
27989					
27990	**Raw Statistics**			**Log-transformed Statistics**	
27991	Minimum Detected		3.5	Minimum Detected	1.252763
27992	Maximum Detected		100	Maximum Detected	4.6051702
27993	Mean of Detected		34.213333	Mean of Detected	2.9989287
27994	SD of Detected		34.511445	SD of Detected	1.1160572
27995	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
27996	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225

	A	B	C	D	E
27997					
27998					
27999	**UCL Statistics**				
28000	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
28001	Shapiro Wilk Test Statistic		0.7910958	Shapiro Wilk Test Statistic	0.9325534
28002	5% Shapiro Wilk Critical Value		0.881	5% Shapiro Wilk Critical Value	0.881
28003	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
28004					
28005	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28006	DL/2 Substitution Method			DL/2 Substitution Method	
28007	Mean		26.0725	Mean	2.3743903
28008	SD		32.968045	SD	1.4661274
28009	95% DL/2 (t) UCL		38.819458	95% H-Stat (DL/2) UCL	97.735157
28010					
28011	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
28012	Mean		19.962055	Mean in Log Scale	2.3304646
28013	SD		39.397864	SD in Log Scale	1.5509839
28014	95% MLE (t) UCL		35.195075	Mean in Original Scale	26.054764
28015	95% MLE (Tiku) UCL		35.518032	SD in Original Scale	32.984092
28016				95% t UCL	38.807926
28017				95% Percentile Bootstrap UCL	38.170048
28018				95% BCA Bootstrap UCL	40.52453
28019					
28020	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
28021	k star (bias corrected)		0.9027279	**Data appear Gamma Distributed at 5% Significance Level**	
28022	Theta Star		37.89994		
28023	nu star		27.081837		
28024					
28025	A-D Test Statistic		0.6029899	**Nonparametric Statistics**	
28026	5% A-D Critical Value		0.7616837	Kaplan-Meier (KM) Method	
28027	K-S Test Statistic		0.7616837	Mean	26.535
28028	5% K-S Critical Value		0.2275688	SD	31.789908
28029	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	7.357934
28030				95% KM (t) UCL	39.257845
28031	**Assuming Gamma Distribution**			95% KM (z) UCL	38.637724
28032	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	38.94228
28033	Minimum		1E-12	95% KM (bootstrap t) UCL	42.950068
28034	Maximum		100	95% KM (BCA) UCL	38.785
28035	Mean		26.312068	95% KM (Percentile Bootstrap) UCL	38.75
28036	Median		13.5	95% KM (Chebyshev) UCL	58.607491
28037	SD		32.836439	97.5% KM (Chebyshev) UCL	72.485283
28038	k star		0.1638659	99% KM (Chebyshev) UCL	99.745519
28039	Theta star		160.57069		
28040	Nu star		6.5546378	**Potential UCLs to Use**	
28041	AppChi2		1.9295606	95% KM (Chebyshev) UCL	58.607491
28042	95% Gamma Approximate UCL		89.381011		
28043	95% Adjusted Gamma UCL		99.225121		
28044	**Note: DL/2 is not a recommended method.**				
28045					
28046	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
28047	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
28048	**For additional insight, the user may want to consult a statistician.**				
28049					
28050					
28051	**OS|UG/KG|FLUORENE (gi_sd_ne_2010)**				
28052					
28053	**General Statistics**				
28054	Number of Valid Data		16	Number of Detected Data	15
28055	Number of Distinct Detected Data		14	Number of Non-Detect Data	1
28056				Percent Non-Detects	6.25%
28057					
28058	**Raw Statistics**			**Log-transformed Statistics**	
28059	Minimum Detected		3.75	Minimum Detected	1.3217558
28060	Maximum Detected		200	Maximum Detected	5.2983174
28061	Mean of Detected		56.263333	Mean of Detected	3.3536308
28062	SD of Detected		60.452639	SD of Detected	1.3279916
28063	Minimum Non-Detect		9	Minimum Non-Detect	2.1972246
28064	Maximum Non-Detect		9	Maximum Non-Detect	2.1972246

	A	B	C	D	E
28065					
28066					
28067	**UCL Statistics**				
28068	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
28069	Shapiro Wilk Test Statistic		0.8085047	Shapiro Wilk Test Statistic	0.9188461
28070	5% Shapiro Wilk Critical Value		0.881	5% Shapiro Wilk Critical Value	0.881
28071	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
28072					
28073	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28074	DL/2 Substitution Method			DL/2 Substitution Method	
28075	Mean		53.028125	Mean	3.2380337
28076	SD		59.819328	SD	1.3637426
28077	95% DL/2 (t) UCL		79.244699	95% H-Stat (DL/2) UCL	206.65285
28078					
28079	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
28080	Mean		38.143947	Mean in Log Scale	3.2554432
28081	SD		76.017592	SD in Log Scale	1.3417316
28082	95% MLE (t) UCL		71.459614	Mean in Original Scale	53.118467
28083	95% MLE (Tiku) UCL		73.562946	SD in Original Scale	59.742194
28084				95% t UCL	79.301236
28085				95% Percentile Bootstrap UCL	76.849434
28086				95% BCA Bootstrap UCL	82.1125
28087					
28088	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
28089	k star (bias corrected)		0.7389965	**Data appear Gamma Distributed at 5% Significance Level**	
28090	Theta Star		76.134781		
28091	nu star		22.169894		
28092					
28093	A-D Test Statistic		0.5008983	**Nonparametric Statistics**	
28094	5% A-D Critical Value		0.7693991	Kaplan-Meier (KM) Method	
28095	K-S Test Statistic		0.7693991	Mean	53.100781
28096	5% K-S Critical Value		0.2291327	SD	57.860942
28097	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	14.973378
28098				95% KM (t) UCL	79.349867
28099	**Assuming Gamma Distribution**			95% KM (z) UCL	77.729796
28100	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	79.291997
28101	Minimum		1E-12	95% KM (bootstrap t) UCL	92.704339
28102	Maximum		200	95% KM (BCA) UCL	78.66875
28103	Mean		52.746875	95% KM (Percentile Bootstrap) UCL	78.210938
28104	Median		40	95% KM (Chebyshev) UCL	118.36822
28105	SD		60.072743	97.5% KM (Chebyshev) UCL	146.6095
28106	k star		0.264719	99% KM (Chebyshev) UCL	202.08401
28107	Theta star		199.25613		
28108	Nu star		8.4710067	**Potential UCLs to Use**	
28109	AppChi2		3.0107146	95% KM (Chebyshev) UCL	118.36822
28110	95% Gamma Approximate UCL		148.40966		
28111	95% Adjusted Gamma UCL		168.50169		
28112	**Note: DL/2 is not a recommended method.**				
28113					
28114	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
28115	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
28116	**For additional insight, the user may want to consult a statistician.**				
28117					
28118					
28119	**OS|UG/KG|FLUORENE (gi_sd_nw_2005)**				
28120					
28121	**General Statistics**				
28122	Number of Valid Observations		18	Number of Distinct Observations	17
28123					
28124	**Raw Statistics**			**Log-transformed Statistics**	
28125	Minimum		9.5	Minimum of Log Data	2.2512918
28126	Maximum		510	Maximum of Log Data	6.2344107
28127	Mean		71.722222	Mean of log Data	3.5275286
28128	Median		22	SD of log Data	1.1050631
28129	SD		122.89573		
28130	Coefficient of Variation		1.7134958		
28131	Skewness		3.1095698		
28132					

	A	B	C	D	E
28133	**Relevant UCL Statistics**				
28134	**Normal Distribution Test**			**Lognormal Distribution Test**	
28135	Shapiro Wilk Test Statistic		0.5396794	Shapiro Wilk Test Statistic	0.8885607
28136	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
28137	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
28138					
28139	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28140	95% Student's-t UCL		122.11306	95% H-UCL	132.55178
28141	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	135.81537
28142	95% Adjusted-CLT UCL (Chen-1995)		142.05369	97.5% Chebyshev (MVUE) UCL	168.7886
28143	95% Modified-t UCL (Johnson-1978)		125.65152	99% Chebyshev (MVUE) UCL	233.55812
28144					
28145	**Gamma Distribution Test**			**Data Distribution**	
28146	k star (bias corrected)		0.7010103	**Data do not follow a Discernable Distribution (0.05)**	
28147	Theta Star		102.31265		
28148	MLE of Mean		71.722222		
28149	MLE of Standard Deviation		85.662654		
28150	nu star		25.236372		
28151	Approximate Chi Square Value (.05)		14.792663	**Nonparametric Statistics**	
28152	Adjusted Level of Significance		0.03574	95% CLT UCL	119.36837
28153	Adjusted Chi Square Value		14.027603	95% Jackknife UCL	122.11306
28154				95% Standard Bootstrap UCL	117.90512
28155	Anderson-Darling Test Statistic		1.5152699	95% Bootstrap-t UCL	260.47817
28156	Anderson-Darling 5% Critical Value		0.7758267	95% Hall's Bootstrap UCL	303.44142
28157	Kolmogorov-Smirnov Test Statistic		0.2214805	95% Percentile Bootstrap UCL	122.02778
28158	Kolmogorov-Smirnov 5% Critical Value		0.2110577	95% BCA Bootstrap UCL	148.94444
28159	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	197.98558
28160				97.5% Chebyshev(Mean, Sd) UCL	252.61983
28161	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	359.93825
28162	95% Approximate Gamma UCL		122.35854		
28163	95% Adjusted Gamma UCL		129.03193		
28164					
28165	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	197.98558
28166					
28167	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
28168	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
28169	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
28170					
28171					
28172	**OS|UG/KG|FLUORENE (gi_sd_nw_2009)**				
28173					
28174	**General Statistics**				
28175	Number of Valid Data		7	Number of Detected Data	6
28176	Number of Distinct Detected Data		6	Number of Non-Detect Data	1
28177				Percent Non-Detects	14.29%
28178					
28179	**Raw Statistics**			**Log-transformed Statistics**	
28180	Minimum Detected		11	Minimum Detected	2.3978953
28181	Maximum Detected		75	Maximum Detected	4.3174881
28182	Mean of Detected		26.983333	Mean of Detected	3.0799195
28183	SD of Detected		23.764715	SD of Detected	0.6465819
28184	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
28185	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
28186					
28187					
28188	**Warning: There are only 6 Detected Values in this data**				
28189	**Note: It should be noted that even though bootstrap may be performed on this data set**				
28190	**the resulting calculations may not be reliable enough to draw conclusions**				
28191					
28192	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
28193					
28194					
28195	**UCL Statistics**				

	A	B	C	D	E
28196	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
28197	Shapiro Wilk Test Statistic		0.6281366	Shapiro Wilk Test Statistic	0.7887499
28198	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788
28199	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
28200					
28201	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28202	DL/2 Substitution Method			DL/2 Substitution Method	
28203	Mean		23.364286	Mean	2.7114704
28204	SD		23.71323	SD	1.1395937
28205	95% DL/2 (t) UCL		40.780541	95% H-Stat (DL/2) UCL	193.963
28206					
28207	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
28208	Mean		21.574265	Mean in Log Scale	2.8719257
28209	SD		24.469154	SD in Log Scale	0.8069821
28210	95% MLE (t) UCL		39.545711	Mean in Original Scale	23.853308
28211	95% MLE (Tiku) UCL		39.296681	SD in Original Scale	23.220985
28212				95% t UCL	40.908032
28213				95% Percentile Bootstrap UCL	40.567594
28214				95% BCA Bootstrap UCL	42.414286
28215					
28216	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
28217	k star (bias corrected)		1.3492467	**Data appear Lognormal at 5% Significance Level**	
28218	Theta Star		19.998814		
28219	nu star		16.19096		
28220					
28221	A-D Test Statistic		0.9402128	**Nonparametric Statistics**	
28222	5% A-D Critical Value		0.7028383	Kaplan-Meier (KM) Method	
28223	K-S Test Statistic		0.7028383	Mean	24.7
28224	5% K-S Critical Value		0.3352204	SD	20.849049
28225	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	8.6323265
28226				95% KM (t) UCL	41.474167
28227	**Assuming Gamma Distribution**			95% KM (z) UCL	38.898914
28228	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	40.867209
28229	Minimum		1.3828638	95% KM (bootstrap t) UCL	120.6967
28230	Maximum		75	95% KM (BCA) UCL	42.842857
28231	Mean		23.326123	95% KM (Percentile Bootstrap) UCL	40.714286
28232	Median		18	95% KM (Chebyshev) UCL	62.327439
28233	SD		23.754179	97.5% KM (Chebyshev) UCL	78.608862
28234	k star		0.7916991	99% KM (Chebyshev) UCL	110.59056
28235	Theta star		29.463369		
28236	Nu star		11.083788	**Potential UCLs to Use**	
28237	AppChi2		4.6299369	95% KM (Chebyshev) UCL	62.327439
28238	95% Gamma Approximate UCL		55.841322		
28239	95% Adjusted Gamma UCL		74.806564		
28240	**Note: DL/2 is not a recommended method.**				
28241					
28242	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
28243	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
28244	**For additional insight, the user may want to consult a statistician.**				
28245					
28246					
28247	**OS|UG/KG|FLUORENE (gi_sd_nw_2010)**				
28248					
28249	**General Statistics**				
28250	Number of Valid Observations		4	Number of Distinct Observations	4
28251					
28252					
28253	**Warning: This data set only has 4 observations!**				
28254	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
28255	**The data set for variable OS|UG/KG|FLUORENE (gi_sd_nw_2010) was not processed!**				
28256					
28257	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
28258	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
28259					
28260					
28261					
28262	**OS|UG/KG|FLUORENE (gi_sd_ref_2009)**				
28263					
28264	**General Statistics**				
28265	Number of Valid Data		0	Number of Detected Data	0
28266	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
28267	Number of Missing Values		6	Percent Non-Detects	NaN%
28268					
28269	**Warning: This data set only has 0 observations!**				
28270	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
28271	**The data set for variable OS|UG/KG|FLUORENE (gi_sd_ref_2009) was not processed!**				
28272					
28273	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
28274	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
28275					
28276					
28277					
28278	**OS|UG/KG|FLUORENE (gi_sd_ref_2010)**				
28279					
28280	**General Statistics**				
28281	Number of Valid Data		0	Number of Detected Data	0
28282	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
28283	Number of Missing Values		3	Percent Non-Detects	NaN%
28284					
28285	**Warning: This data set only has 0 observations!**				
28286	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
28287	**The data set for variable OS|UG/KG|FLUORENE (gi_sd_ref_2010) was not processed!**				
28288					
28289	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
28290	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
28291					
28292					
28293					
28294	**OS|UG/KG|FLUORENE (gi_sd_s_2005)**				
28295					
28296	**General Statistics**				
28297	Number of Valid Observations		8	Number of Distinct Observations	8
28298					
28299	**Raw Statistics**			**Log-transformed Statistics**	
28300	Minimum		5.4	Minimum of Log Data	1.686399
28301	Maximum		690	Maximum of Log Data	6.5366916
28302	Mean		121.3625	Mean of log Data	3.7409731
28303	Median		49.75	SD of log Data	1.4687625
28304	SD		231.36013		
28305	Coefficient of Variation		1.906356		
28306	Skewness		2.7511168		
28307					
28308					
28309	**Warning: There are only 8 Values in this data**				
28310	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
28311	**the resulting calculations may not be reliable enough to draw conclusions**				
28312					
28313	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				

	A	B	C	D	E
28314					
28315	**Relevant UCL Statistics**				
28316	**Normal Distribution Test**			**Lognormal Distribution Test**	
28317	Shapiro Wilk Test Statistic		0.5286797	Shapiro Wilk Test Statistic	0.9450751
28318	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
28319	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
28320					
28321	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28322	95% Student's-t UCL		276.33554	95% H-UCL	1642.3781
28323	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	327.68661
28324	95% Adjusted-CLT UCL (Chen-1995)		340.92201	97.5% Chebyshev (MVUE) UCL	426.27786
28325	95% Modified-t UCL (Johnson-1978)		289.59593	99% Chebyshev (MVUE) UCL	619.94128
28326					
28327	**Gamma Distribution Test**			**Data Distribution**	
28328	k star (bias corrected)		0.4496679	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
28329	Theta Star		269.89365		
28330	MLE of Mean		121.3625		
28331	MLE of Standard Deviation		180.98334		
28332	nu star		7.1946857		
28333	Approximate Chi Square Value (.05)		2.278017	**Nonparametric Statistics**	
28334	Adjusted Level of Significance		0.01946	95% CLT UCL	255.9085
28335	Adjusted Chi Square Value		1.6432882	95% Jackknife UCL	276.33554
28336				95% Standard Bootstrap UCL	248.76543
28337	Anderson-Darling Test Statistic		0.7113998	95% Bootstrap-t UCL	995.16521
28338	Anderson-Darling 5% Critical Value		0.7564301	95% Hall's Bootstrap UCL	973.63743
28339	Kolmogorov-Smirnov Test Statistic		0.3244571	95% Percentile Bootstrap UCL	281.8
28340	Kolmogorov-Smirnov 5% Critical Value		0.3072914	95% BCA Bootstrap UCL	359.3
28341	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	477.9124
28342				97.5% Chebyshev(Mean, Sd) UCL	632.19183
28343	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	935.24389
28344	95% Approximate Gamma UCL		383.30049		
28345	95% Adjusted Gamma UCL		531.35236		
28346					
28347	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	383.30049
28348					
28349	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
28350	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
28351	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
28352					
28353					
28354	**OS|UG/KG|FLUORENE (gi_sd_s_2010)**				
28355					
28356	**General Statistics**				
28357	Number of Valid Observations		2	Number of Distinct Observations	2
28358					
28359					
28360	**Warning: This data set only has 2 observations!**				
28361	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
28362	**The data set for variable OS|UG/KG|FLUORENE (gi_sd_s_2010) was not processed!**				
28363					
28364	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
28365	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
28366					
28367					
28368					
28369	**OS|UG/KG|FLUORENE (gi_sd_stillwater_2005)**				
28370					
28371	**General Statistics**				
28372	Number of Valid Observations		4	Number of Distinct Observations	4
28373					

	A	B	C	D	E
28374					
28375	**Warning: This data set only has 4 observations!**				
28376	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
28377	**The data set for variable OS|UG/KG|FLUORENE (gi_sd_stillwater_2005) was not processed!**				
28378					
28379	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
28380	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
28381					
28382					
28383					
28384	**OS|UG/KG|FLUORENE (gi_sd_stillwater_2009)**				
28385					
28386	**General Statistics**				
28387	Number of Valid Data		60	Number of Detected Data	41
28388	Number of Distinct Detected Data		37	Number of Non-Detect Data	19
28389				Percent Non-Detects	31.67%
28390					
28391	**Raw Statistics**			**Log-transformed Statistics**	
28392	Minimum Detected		3.3	Minimum Detected	1.1939225
28393	Maximum Detected		240	Maximum Detected	5.4806389
28394	Mean of Detected		47.919512	Mean of Detected	3.264559
28395	SD of Detected		56.926625	SD of Detected	1.1436241
28396	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
28397	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
28398					
28399					
28400	**UCL Statistics**				
28401	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
28402	Shapiro Wilk Test Statistic		0.7322683	Shapiro Wilk Test Statistic	0.9607048
28403	5% Shapiro Wilk Critical Value		0.941	5% Shapiro Wilk Critical Value	0.941
28404	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
28405					
28406	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28407	DL/2 Substitution Method			DL/2 Substitution Method	
28408	Mean		33.2675	Mean	2.3893608
28409	SD		51.6542	SD	1.6023724
28410	95% DL/2 (t) UCL		44.411231	95% H-Stat (DL/2) UCL	78.869649
28411					
28412	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
28413	Mean		18.529301	Mean in Log Scale	2.390403
28414	SD		66.880322	SD in Log Scale	1.6597719
28415	95% MLE (t) UCL		32.957873	Mean in Original Scale	33.412297
28416	95% MLE (Tiku) UCL		33.762348	SD in Original Scale	51.569368
28417				95% t UCL	44.537726
28418				95% Percentile Bootstrap UCL	44.850252
28419				95% BCA Bootstrap UCL	47.479731
28420					
28421	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
28422	k star (bias corrected)		0.9049953	**Data appear Gamma Distributed at 5% Significance Level**	
28423	Theta Star		52.950011		
28424	nu star		74.209616		
28425					
28426	A-D Test Statistic		0.7311173	**Nonparametric Statistics**	
28427	5% A-D Critical Value		0.7801438	Kaplan-Meier (KM) Method	
28428	K-S Test Statistic		0.7801438	Mean	33.79
28429	5% K-S Critical Value		0.1423085	SD	50.904184
28430	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	6.653341
28431				95% KM (t) UCL	44.908351
28432	**Assuming Gamma Distribution**			95% KM (z) UCL	44.733772
28433	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	44.432447
28434	Minimum		1E-12	95% KM (bootstrap t) UCL	49.124589
28435	Maximum		240	95% KM (BCA) UCL	45.683333
28436	Mean		36.014523	95% KM (Percentile Bootstrap) UCL	45.721667
28437	Median		18.5	95% KM (Chebyshev) UCL	62.791241
28438	SD		50.570192	97.5% KM (Chebyshev) UCL	75.340101

	A	B	C	D	E
28439	k star		0.1653693	99% KM (Chebyshev) UCL	99.989907
28440	Theta star		217.78243		
28441	Nu star		19.844313	**Potential UCLs to Use**	
28442	AppChi2		10.73645	95% KM (BCA) UCL	45.683333
28443	95% Gamma Approximate UCL		66.566089		
28444	95% Adjusted Gamma UCL		67.60766		
28445	**Note: DL/2 is not a recommended method.**				
28446					
28447	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
28448	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
28449	**For additional insight, the user may want to consult a statistician.**				
28450					
28451					
28452	**OS|UG/KG|FLUORENE (gi_sd_stillwater_2010)**				
28453					
28454	**General Statistics**				
28455	Number of Valid Observations		11	Number of Distinct Observations	11
28456					
28457	**Raw Statistics**			**Log-transformed Statistics**	
28458	Minimum		16	Minimum of Log Data	2.7725887
28459	Maximum		440	Maximum of Log Data	6.0867747
28460	Mean		121.22727	Mean of log Data	4.2170803
28461	Median		49	SD of log Data	1.1088922
28462	SD		143.13339		
28463	Coefficient of Variation		1.1807029		
28464	Skewness		1.5670737		
28465					
28466	**Relevant UCL Statistics**				
28467	**Normal Distribution Test**			**Lognormal Distribution Test**	
28468	Shapiro Wilk Test Statistic		0.7434909	Shapiro Wilk Test Statistic	0.9325645
28469	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
28470	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
28471					
28472	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28473	95% Student's-t UCL		199.44647	95% H-UCL	386.79361
28474	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	295.89628
28475	95% Adjusted-CLT UCL (Chen-1995)		214.00118	97.5% Chebyshev (MVUE) UCL	373.79623
28476	95% Modified-t UCL (Johnson-1978)		202.84496	99% Chebyshev (MVUE) UCL	526.8156
28477					
28478	**Gamma Distribution Test**			**Data Distribution**	
28479	k star (bias corrected)		0.7840988	**Data appear Gamma Distributed at 5% Significance Level**	
28480	Theta Star		154.60714		
28481	MLE of Mean		121.22727		
28482	MLE of Standard Deviation		136.90362		
28483	nu star		17.250174		
28484	Approximate Chi Square Value (.05)		8.8512345	**Nonparametric Statistics**	
28485	Adjusted Level of Significance		0.02783	95% CLT UCL	192.21314
28486	Adjusted Chi Square Value		7.8886698	95% Jackknife UCL	199.44647
28487				95% Standard Bootstrap UCL	188.65407
28488	Anderson-Darling Test Statistic		0.6223604	95% Bootstrap-t UCL	277.16946
28489	Anderson-Darling 5% Critical Value		0.7517781	95% Hall's Bootstrap UCL	215.25538
28490	Kolmogorov-Smirnov Test Statistic		0.2144819	95% Percentile Bootstrap UCL	195.63636
28491	Kolmogorov-Smirnov 5% Critical Value		0.2624332	95% BCA Bootstrap UCL	205.68182
28492	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	309.34141
28493				97.5% Chebyshev(Mean, Sd) UCL	390.73854
28494	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	550.62745
28495	95% Approximate Gamma UCL		236.25987		
28496	95% Adjusted Gamma UCL		265.08798		
28497					
28498	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	236.25987
28499					
28500	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
28501	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
28502	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				

	A	B	C	D	E
28503					
28504					
28505	**OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ne_2005)**				
28506					
28507	**General Statistics**				
28508	Number of Valid Observations		36	Number of Distinct Observations	36
28509					
28510	**Raw Statistics**			**Log-transformed Statistics**	
28511	Minimum		175	Minimum of Log Data	5.164786
28512	Maximum		12500	Maximum of Log Data	9.4334839
28513	Mean		1799.5556	Mean of log Data	6.807409
28514	Median		906	SD of log Data	1.1259735
28515	SD		2687.9311		
28516	Coefficient of Variation		1.4936639		
28517	Skewness		2.8622016		
28518					
28519	**Relevant UCL Statistics**				
28520	**Normal Distribution Test**			**Lognormal Distribution Test**	
28521	Shapiro Wilk Test Statistic		0.6084682	Shapiro Wilk Test Statistic	0.949391
28522	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
28523	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
28524					
28525	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28526	95% Student's-t UCL		2556.4646	95% H-UCL	2759.2639
28527	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3277.1439
28528	95% Adjusted-CLT UCL (Chen-1995)		2764.7786	97.5% Chebyshev (MVUE) UCL	3977.4007
28529	95% Modified-t UCL (Johnson-1978)		2592.0822	99% Chebyshev (MVUE) UCL	5352.9195
28530					
28531	**Gamma Distribution Test**			**Data Distribution**	
28532	k star (bias corrected)		0.8025703	**Data appear Lognormal at 5% Significance Level**	
28533	Theta Star		2242.2405		
28534	MLE of Mean		1799.5556		
28535	MLE of Standard Deviation		2008.74		
28536	nu star		57.78506		
28537	Approximate Chi Square Value (.05)		41.310032	**Nonparametric Statistics**	
28538	Adjusted Level of Significance		0.0428	95% CLT UCL	2536.4311
28539	Adjusted Chi Square Value		40.676838	95% Jackknife UCL	2556.4646
28540				95% Standard Bootstrap UCL	2542.2072
28541	Anderson-Darling Test Statistic		1.4779064	95% Bootstrap-t UCL	3083.1935
28542	Anderson-Darling 5% Critical Value		0.7830523	95% Hall's Bootstrap UCL	4959.3286
28543	Kolmogorov-Smirnov Test Statistic		0.1988139	95% Percentile Bootstrap UCL	2559.9167
28544	Kolmogorov-Smirnov 5% Critical Value		0.1520061	95% BCA Bootstrap UCL	2845.2778
28545	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3752.2922
28546				97.5% Chebyshev(Mean, Sd) UCL	4597.2429
28547	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	6256.985
28548	95% Approximate Gamma UCL		2517.2439		
28549	95% Adjusted Gamma UCL		2556.4284		
28550					
28551	**Potential UCL to Use**			Use 95% H-UCL	2759.2639
28552					
28553	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
28554	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
28555	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
28556	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
28557					
28558	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
28559	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
28560	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
28561					
28562					
28563	**OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ne_2009)**				

	A	B	C	D	E
28564					
28565	**General Statistics**				
28566	Number of Valid Data		20	Number of Detected Data	19
28567	Number of Distinct Detected Data		19	Number of Non-Detect Data	1
28568				Percent Non-Detects	5.00%
28569					
28570	**Raw Statistics**			**Log-transformed Statistics**	
28571	Minimum Detected		27.8	Minimum Detected	3.325036
28572	Maximum Detected		5250	Maximum Detected	8.5659834
28573	Mean of Detected		1161.1947	Mean of Detected	6.2173126
28574	SD of Detected		1496.8948	SD of Detected	1.4397482
28575	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
28576	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
28577					
28578					
28579	**UCL Statistics**				
28580	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
28581	Shapiro Wilk Test Statistic		0.7371468	Shapiro Wilk Test Statistic	0.9733881
28582	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
28583	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
28584					
28585	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28586	DL/2 Substitution Method			DL/2 Substitution Method	
28587	Mean		1103.2175	Mean	5.9314857
28588	SD		1479.8615	SD	1.8967646
28589	95% DL/2 (t) UCL		1675.3998	95% H-Stat (DL/2) UCL	13668.655
28590					
28591	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
28592	Mean		1059.198	Mean in Log Scale	6.0392103
28593	SD		1496.9516	SD in Log Scale	1.6118886
28594	95% MLE (t) UCL		1637.9881	Mean in Original Scale	1103.8464
28595	95% MLE (Tiku) UCL		1599.0394	SD in Original Scale	1479.3712
28596				95% t UCL	1675.8392
28597				95% Percentile Bootstrap UCL	1675.4
28598				95% BCA Bootstrap UCL	1743.7679
28599					
28600	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
28601	k star (bias corrected)		0.6389924	**Data appear Gamma Distributed at 5% Significance Level**	
28602	Theta Star		1817.2279		
28603	nu star		24.281709		
28604					
28605	A-D Test Statistic		0.4749977	**Nonparametric Statistics**	
28606	5% A-D Critical Value		0.7819375	Kaplan-Meier (KM) Method	
28607	K-S Test Statistic		0.7819375	Mean	1104.525
28608	5% K-S Critical Value		0.2066027	SD	1441.4029
28609	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	331.13946
28610				95% KM (t) UCL	1677.1091
28611	**Assuming Gamma Distribution**			95% KM (z) UCL	1649.2009
28612	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	1674.6378
28613	Minimum		1E-12	95% KM (bootstrap t) UCL	1994.239
28614	Maximum		5250	95% KM (BCA) UCL	1636.9
28615	Mean		1103.135	95% KM (Percentile Bootstrap) UCL	1676.17
28616	Median		474	95% KM (Chebyshev) UCL	2547.9285
28617	SD		1479.9261	97.5% KM (Chebyshev) UCL	3172.4903
28618	k star		0.2721224	99% KM (Chebyshev) UCL	4399.3211
28619	Theta star		4053.8198		
28620	Nu star		10.884894	**Potential UCLs to Use**	
28621	AppChi2		4.502098	95% KM (Chebyshev) UCL	2547.9285
28622	95% Gamma Approximate UCL		2667.0916		
28623	95% Adjusted Gamma UCL		2871.6165		
28624	**Note: DL/2 is not a recommended method.**				
28625					
28626	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
28627	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
28628	**For additional insight, the user may want to consult a statistician.**				
28629					
28630					

	A	B	C	D	E
28631	**OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ne_2010)**				
28632					
28633	**General Statistics**				
28634	Number of Valid Observations		16	Number of Distinct Observations	16
28635					
28636	**Raw Statistics**			**Log-transformed Statistics**	
28637	Minimum		271	Minimum of Log Data	5.6021188
28638	Maximum		8700	Maximum of Log Data	9.0710783
28639	Mean		2342.8125	Mean of log Data	7.2331069
28640	Median		1495	SD of log Data	1.1175009
28641	SD		2365.6916		
28642	Coefficient of Variation		1.0097657		
28643	Skewness		1.4625407		
28644					
28645	**Relevant UCL Statistics**				
28646	**Normal Distribution Test**			**Lognormal Distribution Test**	
28647	Shapiro Wilk Test Statistic		0.8304889	Shapiro Wilk Test Statistic	0.9434438
28648	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
28649	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
28650					
28651	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28652	95% Student's-t UCL		3379.6066	95% H-UCL	5949.7221
28653	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5751.7186
28654	95% Adjusted-CLT UCL (Chen-1995)		3546.6776	97.5% Chebyshev (MVUE) UCL	7184.6244
28655	95% Modified-t UCL (Johnson-1978)		3415.6475	99% Chebyshev (MVUE) UCL	9999.2905
28656					
28657	**Gamma Distribution Test**			**Data Distribution**	
28658	k star (bias corrected)		0.9248057	**Data appear Gamma Distributed at 5% Significance Level**	
28659	Theta Star		2533.3023		
28660	MLE of Mean		2342.8125		
28661	MLE of Standard Deviation		2436.1963		
28662	nu star		29.593783		
28663	Approximate Chi Square Value (.05)		18.173764	**Nonparametric Statistics**	
28664	Adjusted Level of Significance		0.03348	95% CLT UCL	3315.6166
28665	Adjusted Chi Square Value		17.159343	95% Jackknife UCL	3379.6066
28666				95% Standard Bootstrap UCL	3293.6427
28667	Anderson-Darling Test Statistic		0.3951659	95% Bootstrap-t UCL	3789.0304
28668	Anderson-Darling 5% Critical Value		0.7618029	95% Hall's Bootstrap UCL	3814.2168
28669	Kolmogorov-Smirnov Test Statistic		0.1637115	95% Percentile Bootstrap UCL	3334.5625
28670	Kolmogorov-Smirnov 5% Critical Value		0.220767	95% BCA Bootstrap UCL	3572.6875
28671	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	4920.7652
28672				97.5% Chebyshev(Mean, Sd) UCL	6036.2474
28673	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	8227.3962
28674	95% Approximate Gamma UCL		3814.9876		
28675	95% Adjusted Gamma UCL		4040.5211		
28676					
28677	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	3814.9876
28678					
28679	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
28680	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
28681	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
28682					
28683					
28684	**OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_nw_2005)**				
28685					
28686	**General Statistics**				
28687	Number of Valid Observations		18	Number of Distinct Observations	18
28688					
28689	**Raw Statistics**			**Log-transformed Statistics**	
28690	Minimum		620	Minimum of Log Data	6.4297195
28691	Maximum		12800	Maximum of Log Data	9.4572004
28692	Mean		3022.7778	Mean of log Data	7.4819862
28693	Median		1395	SD of log Data	0.98185
28694	SD		3760.7686		
28695	Coefficient of Variation		1.2441433		
28696	Skewness		1.9020438		
28697					

	A	B	C	D	E
28698	**Relevant UCL Statistics**				
28699	**Normal Distribution Test**			**Lognormal Distribution Test**	
28700	Shapiro Wilk Test Statistic		0.6551139	Shapiro Wilk Test Statistic	0.8738681
28701	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
28702	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
28703					
28704	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28705	95% Student's-t UCL		4564.8029	95% H-UCL	5355.7096
28706	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	5864.7747
28707	95% Adjusted-CLT UCL (Chen-1995)		4905.4362	97.5% Chebyshev (MVUE) UCL	7203.5279
28708	95% Modified-t UCL (Johnson-1978)		4631.0357	99% Chebyshev (MVUE) UCL	9833.2493
28709					
28710	**Gamma Distribution Test**			**Data Distribution**	
28711	k star (bias corrected)		0.9337128	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
28712	Theta Star		3237.3741		
28713	MLE of Mean		3022.7778		
28714	MLE of Standard Deviation		3128.2363		
28715	nu star		33.613662		
28716	Approximate Chi Square Value (.05)		21.355829	**Nonparametric Statistics**	
28717	Adjusted Level of Significance		0.03574	95% CLT UCL	4480.8117
28718	Adjusted Chi Square Value		20.419701	95% Jackknife UCL	4564.8029
28719				95% Standard Bootstrap UCL	4432.9878
28720	Anderson-Darling Test Statistic		1.38665	95% Bootstrap-t UCL	5464.4451
28721	Anderson-Darling 5% Critical Value		0.7650266	95% Hall's Bootstrap UCL	4403.437
28722	Kolmogorov-Smirnov Test Statistic		0.2063917	95% Percentile Bootstrap UCL	4574.2778
28723	Kolmogorov-Smirnov 5% Critical Value		0.209104	95% BCA Bootstrap UCL	4934.6111
28724	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	6886.6003
28725				97.5% Chebyshev(Mean, Sd) UCL	8558.4793
28726	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	11842.562
28727	95% Approximate Gamma UCL		4757.7938		
28728	95% Adjusted Gamma UCL		4975.9119		
28729					
28730	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	4757.7938
28731					
28732	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
28733	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
28734	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
28735					
28736					
28737	**OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_nw_2009)**				
28738					
28739	**General Statistics**				
28740	Number of Valid Observations		7	Number of Distinct Observations	7
28741					
28742	**Raw Statistics**			**Log-transformed Statistics**	
28743	Minimum		73.3	Minimum of Log Data	4.2945606
28744	Maximum		1530	Maximum of Log Data	7.333023
28745	Mean		885.47143	Mean of log Data	6.4620556
28746	Median		925	SD of log Data	1.0695066
28747	SD		555.77159		
28748	Coefficient of Variation		0.6276561		
28749	Skewness		-0.220684		
28750					
28751					
28752	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
28753					
28754	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
28755	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
28756					
28757					
28758	**Warning: There are only 7 Values in this data**				

	A	B	C	D	E
28759	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
28760	**the resulting calculations may not be reliable enough to draw conclusions**				
28761					
28762	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
28763					
28764	**Relevant UCL Statistics**				
28765	**Normal Distribution Test**			**Lognormal Distribution Test**	
28766	Shapiro Wilk Test Statistic		0.9270005	Shapiro Wilk Test Statistic	0.8132653
28767	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
28768	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
28769					
28770	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28771	95% Student's-t UCL		1293.6596	95% H-UCL	6216.2527
28772	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	2815.1696
28773	95% Adjusted-CLT UCL (Chen-1995)		1212.2707	97.5% Chebyshev (MVUE) UCL	3592.7934
28774	95% Modified-t UCL (Johnson-1978)		1290.7394	99% Chebyshev (MVUE) UCL	5120.2848
28775					
28776	**Gamma Distribution Test**			**Data Distribution**	
28777	k star (bias corrected)		1.0611691	**Data appear Normal at 5% Significance Level**	
28778	Theta Star		834.43006		
28779	MLE of Mean		885.47143		
28780	MLE of Standard Deviation		859.57197		
28781	nu star		14.856368		
28782	Approximate Chi Square Value (.05)		7.1617499	**Nonparametric Statistics**	
28783	Adjusted Level of Significance		0.01584	95% CLT UCL	1230.9925
28784	Adjusted Chi Square Value		5.6285353	95% Jackknife UCL	1293.6596
28785				95% Standard Bootstrap UCL	1203.1884
28786	Anderson-Darling Test Statistic		0.4437667	95% Bootstrap-t UCL	1280.2597
28787	Anderson-Darling 5% Critical Value		0.718826	95% Hall's Bootstrap UCL	1186.1323
28788	Kolmogorov-Smirnov Test Statistic		0.1951567	95% Percentile Bootstrap UCL	1202.7143
28789	Kolmogorov-Smirnov 5% Critical Value		0.3162866	95% BCA Bootstrap UCL	1160
28790	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1801.1101
28791				97.5% Chebyshev(Mean, Sd) UCL	2197.3077
28792	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	2975.5611
28793	95% Approximate Gamma UCL		1836.8261		
28794	95% Adjusted Gamma UCL		2337.1781		
28795					
28796	**Potential UCL to Use**			Use 95% Student's-t UCL	1293.6596
28797					
28798	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
28799	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
28800	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
28801					
28802					
28803	**OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_nw_2010)**				
28804					
28805	**General Statistics**				
28806	Number of Valid Observations		4	Number of Distinct Observations	4
28807					
28808					
28809	**Warning: This data set only has 4 observations!**				
28810	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
28811	**The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_nw_2010) was not processed!**				
28812					
28813	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
28814	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
28815					
28816					
28817					
28818	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ref_2009)				
28819					
28820	General Statistics				
28821	Number of Valid Data		0	Number of Detected Data	0
28822	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
28823	Number of Missing Values		6	Percent Non-Detects	NaN%
28824					
28825	Warning: This data set only has 0 observations!				
28826	Data set is too small to compute reliable and meaningful statistics and estimates!				
28827	The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ref_2009) was not processed!				
28828					
28829	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
28830	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
28831					
28832					
28833					
28834	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ref_2010)				
28835					
28836	General Statistics				
28837	Number of Valid Data		0	Number of Detected Data	0
28838	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
28839	Number of Missing Values		3	Percent Non-Detects	NaN%
28840					
28841	Warning: This data set only has 0 observations!				
28842	Data set is too small to compute reliable and meaningful statistics and estimates!				
28843	The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ref_2010) was not processed!				
28844					
28845	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
28846	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
28847					
28848					
28849					
28850	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_s_2005)				
28851					
28852	General Statistics				
28853	Number of Valid Observations		8	Number of Distinct Observations	8
28854					
28855	Raw Statistics			Log-transformed Statistics	
28856	Minimum		370	Minimum of Log Data	5.913503
28857	Maximum		14900	Maximum of Log Data	9.6091165
28858	Mean		3583.375	Mean of log Data	7.6318449
28859	Median		2090	SD of log Data	1.109537
28860	SD		4703.3599		
28861	Coefficient of Variation		1.3125503		
28862	Skewness		2.5235067		
28863					
28864					
28865	Warning: There are only 8 Values in this data				
28866	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
28867	the resulting calculations may not be reliable enough to draw conclusions				
28868					

	A	B	C	D	E
28869	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
28870					
28871	**Relevant UCL Statistics**				
28872	**Normal Distribution Test**			**Lognormal Distribution Test**	
28873	Shapiro Wilk Test Statistic		0.6412119	Shapiro Wilk Test Statistic	0.9547071
28874	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
28875	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
28876					
28877	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28878	95% Student's-t UCL		6733.8486	95% H-UCL	18022.258
28879	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	9430.5997
28880	95% Adjusted-CLT UCL (Chen-1995)		7903.8532	97.5% Chebyshev (MVUE) UCL	12024.806
28881	95% Modified-t UCL (Johnson-1978)		6981.1186	99% Chebyshev (MVUE) UCL	17120.622
28882					
28883	**Gamma Distribution Test**			**Data Distribution**	
28884	k star (bias corrected)		0.7336291	**Data appear Gamma Distributed at 5% Significance Level**	
28885	Theta Star		4884.4502		
28886	MLE of Mean		3583.375		
28887	MLE of Standard Deviation		4183.6368		
28888	nu star		11.738066		
28889	Approximate Chi Square Value (.05)		5.0549964	**Nonparametric Statistics**	
28890	Adjusted Level of Significance		0.01946	95% CLT UCL	6318.5837
28891	Adjusted Chi Square Value		4.0034017	95% Jackknife UCL	6733.8486
28892				95% Standard Bootstrap UCL	6100.365
28893	Anderson-Darling Test Statistic		0.4805238	95% Bootstrap-t UCL	13093.012
28894	Anderson-Darling 5% Critical Value		0.7349269	95% Hall's Bootstrap UCL	17596.461
28895	Kolmogorov-Smirnov Test Statistic		0.2574906	95% Percentile Bootstrap UCL	6668.375
28896	Kolmogorov-Smirnov 5% Critical Value		0.3012528	95% BCA Bootstrap UCL	7928
28897	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	10831.739
28898				97.5% Chebyshev(Mean, Sd) UCL	13968.112
28899	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	20128.91
28900	95% Approximate Gamma UCL		8320.8552		
28901	95% Adjusted Gamma UCL		10506.538		
28902					
28903	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	8320.8552
28904					
28905	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
28906	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
28907	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
28908					
28909					
28910	**OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_s_2010)**				
28911					
28912	**General Statistics**				
28913	Number of Valid Observations		2	Number of Distinct Observations	2
28914					
28915					
28916	**Warning: This data set only has 2 observations!**				
28917	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
28918	**The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_s_2010) was not processed!**				
28919					
28920	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
28921	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
28922					
28923					
28924					
28925	**OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2005)**				

	A	B	C	D	E
28926					
28927	**General Statistics**				
28928	Number of Valid Observations		4	Number of Distinct Observations	4
28929					
28930					
28931	**Warning: This data set only has 4 observations!**				
28932	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
28933	**The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2005) was not processed!**				
28934					
28935	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
28936	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
28937					
28938					
28939					
28940	**OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2009)**				
28941					
28942	**General Statistics**				
28943	Number of Valid Data		60	Number of Detected Data	56
28944	Number of Distinct Detected Data		55	Number of Non-Detect Data	4
28945				Percent Non-Detects	6.67%
28946					
28947	**Raw Statistics**			**Log-transformed Statistics**	
28948	Minimum Detected		4	Minimum Detected	1.3862944
28949	Maximum Detected		73700	Maximum Detected	11.207758
28950	Mean of Detected		4423.2964	Mean of Detected	6.6389333
28951	SD of Detected		10900.137	SD of Detected	2.2866365
28952	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
28953	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
28954					
28955					
28956	**UCL Statistics**				
28957	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
28958	Lilliefors Test Statistic		0.3425789	Lilliefors Test Statistic	0.1046354
28959	5% Lilliefors Critical Value		0.1183967	5% Lilliefors Critical Value	0.1183967
28960	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
28961					
28962	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
28963	DL/2 Substitution Method			DL/2 Substitution Method	
28964	Mean		4128.52	Mean	6.2297228
28965	SD		10582.769	SD	2.6941229
28966	95% DL/2 (t) UCL		6411.6166	95% H-Stat (DL/2) UCL	120534.86
28967					
28968	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
28969	Mean		3624.9481	Mean in Log Scale	6.2873721
28970	SD		10964.489	SD in Log Scale	2.5802521
28971	95% MLE (t) UCL		5990.396	Mean in Original Scale	4128.7157
28972	95% MLE (Tiku) UCL		5774.7149	SD in Original Scale	10582.691
28973				95% t UCL	6411.7956
28974				95% Percentile Bootstrap UCL	6606.765
28975				95% BCA Bootstrap UCL	8034.1231
28976					
28977	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
28978	k star (bias corrected)		0.3698511	**Data appear Gamma Distributed at 5% Significance Level**	
28979	Theta Star		11959.67		
28980	nu star		41.423318		
28981					
28982	A-D Test Statistic		0.7797065	**Nonparametric Statistics**	
28983	5% A-D Critical Value		0.8442948	Kaplan-Meier (KM) Method	
28984	K-S Test Statistic		0.8442948	Mean	4128.6767
28985	5% K-S Critical Value		0.1277965	SD	10494.147
28986	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	1367.0493
28987				95% KM (t) UCL	6413.1432
28988	**Assuming Gamma Distribution**			95% KM (z) UCL	6377.2727
28989	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	6411.7599

	A	B	C	D	E
28990	Minimum		1E-12	95% KM (bootstrap t) UCL	11001.582
28991	Maximum		73700	95% KM (BCA) UCL	7004.0833
28992	Mean		4128.41	95% KM (Percentile Bootstrap) UCL	6547.7867
28993	Median		1055	95% KM (Chebyshev) UCL	10087.506
28994	SD		10582.812	97.5% KM (Chebyshev) UCL	12665.897
28995	k star		0.1889631	99% KM (Chebyshev) UCL	17730.645
28996	Theta star		21847.703		
28997	Nu star		22.675574	**Potential UCLs to Use**	
28998	AppChi2		12.846025	95% KM (Chebyshev) UCL	10087.506
28999	95% Gamma Approximate UCL		7287.3958		
29000	95% Adjusted Gamma UCL		7392.4994		
29001	**Note: DL/2 is not a recommended method.**				
29002					
29003	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
29004	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
29005	**For additional insight, the user may want to consult a statistician.**				
29006					
29007					
29008	**OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2010)**				
29009					
29010	**General Statistics**				
29011	Number of Valid Observations		11	Number of Distinct Observations	11
29012					
29013	**Raw Statistics**			**Log-transformed Statistics**	
29014	Minimum		1570	Minimum of Log Data	7.3588309
29015	Maximum		48600	Maximum of Log Data	10.791379
29016	Mean		13244.545	Mean of log Data	8.9001307
29017	Median		5960	SD of log Data	1.131672
29018	SD		15538.633		
29019	Coefficient of Variation		1.17321		
29020	Skewness		1.5418569		
29021					
29022	**Relevant UCL Statistics**				
29023	**Normal Distribution Test**			**Lognormal Distribution Test**	
29024	Shapiro Wilk Test Statistic		0.7500556	Shapiro Wilk Test Statistic	0.9378101
29025	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
29026	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
29027					
29028	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
29029	95% Student's-t UCL		21736.06	95% H-UCL	44619.834
29030	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	33105.921
29031	95% Adjusted-CLT UCL (Chen-1995)		23278.065	97.5% Chebyshev (MVUE) UCL	41894.702
29032	95% Modified-t UCL (Johnson-1978)		22099.065	99% Chebyshev (MVUE) UCL	59158.559
29033					
29034	**Gamma Distribution Test**			**Data Distribution**	
29035	k star (bias corrected)		0.7724614	**Data appear Gamma Distributed at 5% Significance Level**	
29036	Theta Star		17145.899		
29037	MLE of Mean		13244.545		
29038	MLE of Standard Deviation		15069.494		
29039	nu star		16.994151		
29040	Approximate Chi Square Value (.05)		8.6680462	**Nonparametric Statistics**	
29041	Adjusted Level of Significance		0.02783	95% CLT UCL	20950.807
29042	Adjusted Chi Square Value		7.7170091	95% Jackknife UCL	21736.06
29043				95% Standard Bootstrap UCL	20534.382
29044	Anderson-Darling Test Statistic		0.6089538	95% Bootstrap-t UCL	27329.504
29045	Anderson-Darling 5% Critical Value		0.7524802	95% Hall's Bootstrap UCL	20482.997
29046	Kolmogorov-Smirnov Test Statistic		0.2349101	95% Percentile Bootstrap UCL	20904.545
29047	Kolmogorov-Smirnov 5% Critical Value		0.2625971	95% BCA Bootstrap UCL	23272.727
29048	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	33666.31
29049				97.5% Chebyshev(Mean, Sd) UCL	42502.824
29050	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	59860.444
29051	95% Approximate Gamma UCL		25966.613		
29052	95% Adjusted Gamma UCL		29166.715		
29053					
29054	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	25966.613
29055					
29056	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
29057	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
29058	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
29059					
29060					
29061	OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ne_2005)				
29062					
29063	General Statistics				
29064	Number of Valid Observations		36	Number of Distinct Observations	33
29065					
29066	Raw Statistics			Log-transformed Statistics	
29067	Minimum		6.4	Minimum of Log Data	1.856298
29068	Maximum		400	Maximum of Log Data	5.9914645
29069	Mean		78.061111	Mean of log Data	3.7732213
29070	Median		43	SD of log Data	1.0648486
29071	SD		99.220845		
29072	Coefficient of Variation		1.2710663		
29073	Skewness		2.2054687		
29074					
29075	Relevant UCL Statistics				
29076	Normal Distribution Test			Lognormal Distribution Test	
29077	Shapiro Wilk Test Statistic		0.6753221	Shapiro Wilk Test Statistic	0.9632864
29078	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
29079	Data not Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
29080					
29081	Assuming Normal Distribution			Assuming Lognormal Distribution	
29082	95% Student's-t UCL		106.00125	95% H-UCL	119.39787
29083	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	143.13115
29084	95% Adjusted-CLT UCL (Chen-1995)		111.75678	97.5% Chebyshev (MVUE) UCL	172.64338
29085	95% Modified-t UCL (Johnson-1978)		107.01434	99% Chebyshev (MVUE) UCL	230.61444
29086					
29087	Gamma Distribution Test			Data Distribution	
29088	k star (bias corrected)		0.9252756	Data appear Lognormal at 5% Significance Level	
29089	Theta Star		84.365258		
29090	MLE of Mean		78.061111		
29091	MLE of Standard Deviation		81.151992		
29092	nu star		66.619841		
29093	Approximate Chi Square Value (.05)		48.836413	Nonparametric Statistics	
29094	Adjusted Level of Significance		0.0428	95% CLT UCL	105.26174
29095	Adjusted Chi Square Value		48.144545	95% Jackknife UCL	106.00125
29096				95% Standard Bootstrap UCL	104.39735
29097	Anderson-Darling Test Statistic		1.2289879	95% Bootstrap-t UCL	116.78855
29098	Anderson-Darling 5% Critical Value		0.7768101	95% Hall's Bootstrap UCL	113.90785
29099	Kolmogorov-Smirnov Test Statistic		0.156809	95% Percentile Bootstrap UCL	107.31111
29100	Kolmogorov-Smirnov 5% Critical Value		0.1512158	95% BCA Bootstrap UCL	113.67778
29101	Data not Gamma Distributed at 5% Significance Level			95% Chebyshev(Mean, Sd) UCL	150.14338
29102				97.5% Chebyshev(Mean, Sd) UCL	181.33344
29103	Assuming Gamma Distribution			99% Chebyshev(Mean, Sd) UCL	242.60027
29104	95% Approximate Gamma UCL		106.4865		
29105	95% Adjusted Gamma UCL		108.01678		
29106					
29107	Potential UCL to Use			Use 95% H-UCL	119.39787
29108					
29109	ProUCL computes and outputs H-statistic based UCLs for historical reasons only.				
29110	H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.				
29111	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.				
29112	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.				
29113					
29114	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
29115	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				

	A	B	C	D	E
29116	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
29117					
29118					
29119	**OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ne_2009)**				
29120					
29121	**General Statistics**				
29122	Number of Valid Data		20	Number of Detected Data	18
29123	Number of Distinct Detected Data		18	Number of Non-Detect Data	2
29124				Percent Non-Detects	10.00%
29125					
29126	**Raw Statistics**			**Log-transformed Statistics**	
29127	Minimum Detected		4.3	Minimum Detected	1.458615
29128	Maximum Detected		250	Maximum Detected	5.5214609
29129	Mean of Detected		57.505556	Mean of Detected	3.3628117
29130	SD of Detected		68.987445	SD of Detected	1.2559886
29131	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
29132	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
29133					
29134					
29135	**UCL Statistics**				
29136	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
29137	Shapiro Wilk Test Statistic		0.7591141	Shapiro Wilk Test Statistic	0.9497483
29138	5% Shapiro Wilk Critical Value		0.897	5% Shapiro Wilk Critical Value	0.897
29139	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
29140					
29141	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
29142	DL/2 Substitution Method			DL/2 Substitution Method	
29143	Mean		51.92	Mean	3.0766081
29144	SD		67.482266	SD	1.4790089
29145	95% DL/2 (t) UCL		78.011738	95% H-Stat (DL/2) UCL	204.55258
29146					
29147	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
29148	Mean		47.775416	Mean in Log Scale	3.064746
29149	SD		70.868128	SD in Log Scale	1.5035865
29150	95% MLE (t) UCL		75.176283	Mean in Original Scale	51.906899
29151	95% MLE (Tiku) UCL		73.823464	SD in Original Scale	67.492675
29152				95% t UCL	78.002661
29153				95% Percentile Bootstrap UCL	76.676899
29154				95% BCA Bootstrap UCL	84.3
29155					
29156	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
29157	k star (bias corrected)		0.7487253	**Data appear Gamma Distributed at 5% Significance Level**	
29158	Theta Star		76.804611		
29159	nu star		26.954111		
29160					
29161	A-D Test Statistic		0.555796	**Nonparametric Statistics**	
29162	5% A-D Critical Value		0.7732272	Kaplan-Meier (KM) Method	
29163	K-S Test Statistic		0.7732272	Mean	52.185
29164	5% K-S Critical Value		0.210602	SD	65.575546
29165	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	15.088244
29166				95% KM (t) UCL	78.274579
29167	**Assuming Gamma Distribution**			95% KM (z) UCL	77.002954
29168	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	78.127707
29169	Minimum		1E-12	95% KM (bootstrap t) UCL	93.598097
29170	Maximum		250	95% KM (BCA) UCL	78.27
29171	Mean		51.755	95% KM (Percentile Bootstrap) UCL	77.98
29172	Median		23	95% KM (Chebyshev) UCL	117.95313
29173	SD		67.613433	97.5% KM (Chebyshev) UCL	146.41106
29174	k star		0.2031939	99% KM (Chebyshev) UCL	202.31114
29175	Theta star		254.70739		
29176	Nu star		8.1277578	**Potential UCLs to Use**	
29177	AppChi2		2.809222	95% KM (Chebyshev) UCL	117.95313
29178	95% Gamma Approximate UCL		149.73972		
29179	95% Adjusted Gamma UCL		163.83584		
29180	**Note: DL/2 is not a recommended method.**				
29181					
29182	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
29183	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
29184	**For additional insight, the user may want to consult a statistician.**				
29185					
29186					
29187	**OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ne_2010)**				
29188					
29189	**General Statistics**				
29190	Number of Valid Observations		16	Number of Distinct Observations	15
29191					
29192	**Raw Statistics**			**Log-transformed Statistics**	
29193	Minimum		16	Minimum of Log Data	2.7725887
29194	Maximum		470	Maximum of Log Data	6.1527327
29195	Mean		134.375	Mean of log Data	4.4117348
29196	Median		91.5	SD of log Data	1.0773959
29197	SD		130.68888		
29198	Coefficient of Variation		0.9725684		
29199	Skewness		1.3639573		
29200					
29201	**Relevant UCL Statistics**				
29202	**Normal Distribution Test**			**Lognormal Distribution Test**	
29203	Shapiro Wilk Test Statistic		0.8412973	Shapiro Wilk Test Statistic	0.9483728
29204	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
29205	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
29206					
29207	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
29208	95% Student's-t UCL		191.65105	95% H-UCL	323.09157
29209	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	321.6819
29210	95% Adjusted-CLT UCL (Chen-1995)		200.02021	97.5% Chebyshev (MVUE) UCL	400.41657
29211	95% Modified-t UCL (Johnson-1978)		193.50786	99% Chebyshev (MVUE) UCL	555.07559
29212					
29213	**Gamma Distribution Test**			**Data Distribution**	
29214	k star (bias corrected)		0.984991	**Data appear Gamma Distributed at 5% Significance Level**	
29215	Theta Star		136.42256		
29216	MLE of Mean		134.375		
29217	MLE of Standard Deviation		135.39491		
29218	nu star		31.519713		
29219	Approximate Chi Square Value (.05)		19.691548	**Nonparametric Statistics**	
29220	Adjusted Level of Significance		0.03348	95% CLT UCL	188.11602
29221	Adjusted Chi Square Value		18.631405	95% Jackknife UCL	191.65105
29222				95% Standard Bootstrap UCL	185.95259
29223	Anderson-Darling Test Statistic		0.3469201	95% Bootstrap-t UCL	212.17752
29224	Anderson-Darling 5% Critical Value		0.7605273	95% Hall's Bootstrap UCL	205.45323
29225	Kolmogorov-Smirnov Test Statistic		0.1665245	95% Percentile Bootstrap UCL	188.8125
29226	Kolmogorov-Smirnov 5% Critical Value		0.2204322	95% BCA Bootstrap UCL	199.8125
29227	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	276.78991
29228				97.5% Chebyshev(Mean, Sd) UCL	338.41295
29229	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	459.45948
29230	95% Approximate Gamma UCL		215.09033		
29231	95% Adjusted Gamma UCL		227.32915		
29232					
29233	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	215.09033
29234					
29235	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
29236	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
29237	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
29238					
29239					
29240	**OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_nw_2005)**				
29241					
29242	**General Statistics**				
29243	Number of Valid Observations		18	Number of Distinct Observations	13
29244					
29245	**Raw Statistics**			**Log-transformed Statistics**	
29246	Minimum		36	Minimum of Log Data	3.5835189

	A	B	C	D	E
29247	Maximum		320	Maximum of Log Data	5.768321
29248	Mean		106.66667	Mean of log Data	4.4066902
29249	Median		76	SD of log Data	0.728149
29250	SD		85.190444		
29251	Coefficient of Variation		0.7986604		
29252	Skewness		1.4338746		
29253					
29254	**Relevant UCL Statistics**				
29255	**Normal Distribution Test**			**Lognormal Distribution Test**	
29256	Shapiro Wilk Test Statistic		0.7999514	Shapiro Wilk Test Statistic	0.899568
29257	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
29258	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
29259					
29260	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
29261	95% Student's-t UCL		141.59724	95% H-UCL	159.65445
29262	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	188.7827
29263	95% Adjusted-CLT UCL (Chen-1995)		146.94584	97.5% Chebyshev (MVUE) UCL	225.0399
29264	95% Modified-t UCL (Johnson-1978)		142.72828	99% Chebyshev (MVUE) UCL	296.26016
29265					
29266	**Gamma Distribution Test**			**Data Distribution**	
29267	k star (bias corrected)		1.747101	**Data appear Lognormal at 5% Significance Level**	
29268	Theta Star		61.053521		
29269	MLE of Mean		106.66667		
29270	MLE of Standard Deviation		80.699291		
29271	nu star		62.895636		
29272	Approximate Chi Square Value (.05)		45.652396	**Nonparametric Statistics**	
29273	Adjusted Level of Significance		0.03574	95% CLT UCL	139.69464
29274	Adjusted Chi Square Value		44.243177	95% Jackknife UCL	141.59724
29275				95% Standard Bootstrap UCL	138.32426
29276	Anderson-Darling Test Statistic		0.8142134	95% Bootstrap-t UCL	153.65951
29277	Anderson-Darling 5% Critical Value		0.7522728	95% Hall's Bootstrap UCL	160.44111
29278	Kolmogorov-Smirnov Test Statistic		0.215106	95% Percentile Bootstrap UCL	140.22222
29279	Kolmogorov-Smirnov 5% Critical Value		0.2062523	95% BCA Bootstrap UCL	146.33333
29280	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	194.19153
29281				97.5% Chebyshev(Mean, Sd) UCL	232.06361
29282	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	306.45597
29283	95% Approximate Gamma UCL		146.95544		
29284	95% Adjusted Gamma UCL		151.63621		
29285					
29286	**Potential UCL to Use**			Use 95% H-UCL	159.65445
29287					
29288	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
29289	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
29290	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
29291	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
29292					
29293	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
29294	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
29295	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
29296					
29297					
29298	**OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_nw_2009)**				
29299					
29300	**General Statistics**				
29301	Number of Valid Observations		7	Number of Distinct Observations	7
29302					
29303	**Raw Statistics**			**Log-transformed Statistics**	
29304	Minimum		4.7	Minimum of Log Data	1.5475625
29305	Maximum		75	Maximum of Log Data	4.3174881
29306	Mean		43.314286	Mean of log Data	3.4881903
29307	Median		41	SD of log Data	0.9684359
29308	SD		26.332643		

	A	B	C	D	E
29309	Coefficient of Variation		0.6079436		
29310	Skewness		-0.188523		
29311					
29312					
29313	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
29314					
29315	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
29316	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
29317					
29318					
29319	**Warning: There are only 7 Values in this data**				
29320	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
29321	**the resulting calculations may not be reliable enough to draw conclusions**				
29322					
29323	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
29324					
29325	**Relevant UCL Statistics**				
29326	**Normal Distribution Test**			**Lognormal Distribution Test**	
29327	Shapiro Wilk Test Statistic		0.9343861	Shapiro Wilk Test Statistic	0.8357606
29328	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
29329	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
29330					
29331	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
29332	95% Student's-t UCL		62.654377	95% H-UCL	217.8761
29333	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	125.01814
29334	95% Adjusted-CLT UCL (Chen-1995)		58.927414	97.5% Chebyshev (MVUE) UCL	158.33039
29335	95% Modified-t UCL (Johnson-1978)		62.536179	99% Chebyshev (MVUE) UCL	223.76584
29336					
29337	**Gamma Distribution Test**			**Data Distribution**	
29338	k star (bias corrected)		1.2003224	**Data appear Normal at 5% Significance Level**	
29339	Theta Star		36.085542		
29340	MLE of Mean		43.314286		
29341	MLE of Standard Deviation		39.535041		
29342	nu star		16.804514		
29343	Approximate Chi Square Value (.05)		8.5327203	**Nonparametric Statistics**	
29344	Adjusted Level of Significance		0.01584	95% CLT UCL	59.685191
29345	Adjusted Chi Square Value		6.8302064	95% Jackknife UCL	62.654377
29346				95% Standard Bootstrap UCL	58.368561
29347	Anderson-Darling Test Statistic		0.3944152	95% Bootstrap-t UCL	62.271143
29348	Anderson-Darling 5% Critical Value		0.7157382	95% Hall's Bootstrap UCL	56.968662
29349	Kolmogorov-Smirnov Test Statistic		0.2209449	95% Percentile Bootstrap UCL	58.357143
29350	Kolmogorov-Smirnov 5% Critical Value		0.3153612	95% BCA Bootstrap UCL	57.457143
29351	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	86.697551
29352				97.5% Chebyshev(Mean, Sd) UCL	105.46952
29353	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	142.34343
29354	95% Approximate Gamma UCL		85.304041		
29355	95% Adjusted Gamma UCL		106.56713		
29356					
29357	**Potential UCL to Use**			Use 95% Student's-t UCL	62.654377
29358					
29359	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
29360	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
29361	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
29362					
29363					
29364	**OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_nw_2010)**				
29365					
29366	**General Statistics**				

	A	B	C	D	E
29367	Number of Valid Observations		4	Number of Distinct Observations	4
29368					
29369					
29370	**Warning: This data set only has 4 observations!**				
29371	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
29372	**The data set for variable OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_nw_2010) was not processed!**				
29373					
29374	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
29375	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
29376					
29377					
29378					
29379	**OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ref_2009)**				
29380					
29381	**General Statistics**				
29382	Number of Valid Data		0	Number of Detected Data	0
29383	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
29384	Number of Missing Values		6	Percent Non-Detects	NaN%
29385					
29386	**Warning: This data set only has 0 observations!**				
29387	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
29388	**The data set for variable OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ref_2009) was not processed!**				
29389					
29390	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
29391	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
29392					
29393					
29394					
29395	**OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ref_2010)**				
29396					
29397	**General Statistics**				
29398	Number of Valid Data		0	Number of Detected Data	0
29399	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
29400	Number of Missing Values		3	Percent Non-Detects	NaN%
29401					
29402	**Warning: This data set only has 0 observations!**				
29403	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
29404	**The data set for variable OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ref_2010) was not processed!**				
29405					
29406	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
29407	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
29408					
29409					
29410					
29411	**OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_s_2005)**				
29412					
29413	**General Statistics**				
29414	Number of Valid Observations		8	Number of Distinct Observations	8
29415					
29416	**Raw Statistics**			**Log-transformed Statistics**	
29417	Minimum		20	Minimum of Log Data	2.9957323
29418	Maximum		850	Maximum of Log Data	6.7452363

	A	B	C	D	E
29419	Mean		176.125	Mean of log Data	4.4820577
29420	Median		86.5	SD of log Data	1.1547225
29421	SD		276.46671		
29422	Coefficient of Variation		1.5697187		
29423	Skewness		2.6621042		
29424					
29425					
29426	**Warning: There are only 8 Values in this data**				
29427	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
29428	**the resulting calculations may not be reliable enough to draw conclusions**				
29429					
29430	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
29431					
29432	**Relevant UCL Statistics**				
29433	**Normal Distribution Test**			**Lognormal Distribution Test**	
29434	Shapiro Wilk Test Statistic		0.580911	Shapiro Wilk Test Statistic	0.9418843
29435	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
29436	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
29437					
29438	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
29439	95% Student's-t UCL		361.31199	95% H-UCL	911.14104
29440	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	431.47398
29441	95% Adjusted-CLT UCL (Chen-1995)		435.20352	97.5% Chebyshev (MVUE) UCL	551.85577
29442	95% Modified-t UCL (Johnson-1978)		376.64497	99% Chebyshev (MVUE) UCL	788.32248
29443					
29444	**Gamma Distribution Test**			**Data Distribution**	
29445	k star (bias corrected)		0.6170539	**Data appear Gamma Distributed at 5% Significance Level**	
29446	Theta Star		285.42889		
29447	MLE of Mean		176.125		
29448	MLE of Standard Deviation		224.21232		
29449	nu star		9.872862		
29450	Approximate Chi Square Value (.05)		3.8624546	**Nonparametric Statistics**	
29451	Adjusted Level of Significance		0.01946	95% CLT UCL	336.90244
29452	Adjusted Chi Square Value		2.9719676	95% Jackknife UCL	361.31199
29453				95% Standard Bootstrap UCL	322.76514
29454	Anderson-Darling Test Statistic		0.6374587	95% Bootstrap-t UCL	939.75198
29455	Anderson-Darling 5% Critical Value		0.7411257	95% Hall's Bootstrap UCL	1006.3713
29456	Kolmogorov-Smirnov Test Statistic		0.2861515	95% Percentile Bootstrap UCL	358.125
29457	Kolmogorov-Smirnov 5% Critical Value		0.3029789	95% BCA Bootstrap UCL	397.25
29458	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	602.18881
29459				97.5% Chebyshev(Mean, Sd) UCL	786.54696
29460	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1148.6828
29461	95% Approximate Gamma UCL		450.19502		
29462	95% Adjusted Gamma UCL		585.08639		
29463					
29464	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	450.19502
29465					
29466	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
29467	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
29468	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
29469					
29470					
29471	**OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_s_2010)**				
29472					
29473	**General Statistics**				
29474	Number of Valid Observations		2	Number of Distinct Observations	2
29475					
29476					
29477	**Warning: This data set only has 2 observations!**				
29478	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
29479	**The data set for variable OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_s_2010) was not processed!**				
29480					
29481	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
29482	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
29483					
29484					
29485					
29486	**OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_stillwater_2005)**				
29487					
29488	**General Statistics**				
29489	Number of Valid Observations		4	Number of Distinct Observations	4
29490					
29491					
29492	**Warning: This data set only has 4 observations!**				
29493	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
29494	**The data set for variable OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_stillwater_2005) was not processed!**				
29495					
29496	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
29497	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
29498					
29499					
29500					
29501	**OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_stillwater_2009)**				
29502					
29503	**General Statistics**				
29504	Number of Valid Data		60	Number of Detected Data	47
29505	Number of Distinct Detected Data		39	Number of Non-Detect Data	13
29506				Percent Non-Detects	21.67%
29507					
29508	**Raw Statistics**			**Log-transformed Statistics**	
29509	Minimum Detected		3.8	Minimum Detected	1.3350011
29510	Maximum Detected		1100	Maximum Detected	7.0030655
29511	Mean of Detected		139.67234	Mean of Detected	4.1194443
29512	SD of Detected		198.22568	SD of Detected	1.3791477
29513	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
29514	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
29515					
29516					
29517	**UCL Statistics**				
29518	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
29519	Shapiro Wilk Test Statistic		0.6698685	Shapiro Wilk Test Statistic	0.9724155
29520	5% Shapiro Wilk Critical Value		0.946	5% Shapiro Wilk Critical Value	0.946
29521	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
29522					
29523	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
29524	DL/2 Substitution Method			DL/2 Substitution Method	
29525	Mean		109.7675	Mean	3.3353994
29526	SD		184.18357	SD	1.9347079
29527	95% DL/2 (t) UCL		149.50274	95% H-Stat (DL/2) UCL	474.93952
29528					
29529	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
29530	Mean		78.009755	Mean in Log Scale	3.4311343
29531	SD		216.48663	SD in Log Scale	1.827845
29532	95% MLE (t) UCL		124.71397	Mean in Original Scale	110.10127
29533	95% MLE (Tiku) UCL		124.39057	SD in Original Scale	183.9873
29534				95% t UCL	149.79417
29535				95% Percentile Bootstrap UCL	152.24219
29536				95% BCA Bootstrap UCL	165.34309
29537					

	A	B	C	D	E
29538	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
29539	k star (bias corrected)		0.6999489	**Data appear Gamma Distributed at 5% Significance Level**	
29540	Theta Star		199.54648		
29541	nu star		65.795197		
29542					
29543	A-D Test Statistic		0.64396	**Nonparametric Statistics**	
29544	5% A-D Critical Value		0.7927401	Kaplan-Meier (KM) Method	
29545	K-S Test Statistic		0.7927401	Mean	110.23333
29546	5% K-S Critical Value		0.1345221	SD	182.36844
29547	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	23.798198
29548				95% KM (t) UCL	150.00234
29549	**Assuming Gamma Distribution**			95% KM (z) UCL	149.37789
29550	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	149.75873
29551	Minimum		1E-12	95% KM (bootstrap t) UCL	164.81143
29552	Maximum		1100	95% KM (BCA) UCL	157.48833
29553	Mean		109.41	95% KM (Percentile Bootstrap) UCL	150.15167
29554	Median		43	95% KM (Chebyshev) UCL	213.96727
29555	SD		184.39813	97.5% KM (Chebyshev) UCL	258.85303
29556	k star		0.1136022	99% KM (Chebyshev) UCL	347.02241
29557	Theta star		963.09783		
29558	Nu star		13.63226	**Potential UCLs to Use**	
29559	AppChi2		6.3203586	95% KM (Chebyshev) UCL	213.96727
29560	95% Gamma Approximate UCL		235.98433		
29561	95% Adjusted Gamma UCL		240.66138		
29562	**Note: DL/2 is not a recommended method.**				
29563					
29564	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
29565	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
29566	**For additional insight, the user may want to consult a statistician.**				
29567					
29568					
29569	**OS|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_stillwater_2010)**				
29570					
29571	**General Statistics**				
29572	Number of Valid Observations		11	Number of Distinct Observations	10
29573					
29574	**Raw Statistics**			**Log-transformed Statistics**	
29575	Minimum		56.5	Minimum of Log Data	4.0342406
29576	Maximum		1600	Maximum of Log Data	7.3777589
29577	Mean		452.04545	Mean of log Data	5.6666788
29578	Median		320	SD of log Data	1.0068049
29579	SD		469.29758		
29580	Coefficient of Variation		1.0381646		
29581	Skewness		1.7700217		
29582					
29583	**Relevant UCL Statistics**				
29584	**Normal Distribution Test**			**Lognormal Distribution Test**	
29585	Shapiro Wilk Test Statistic		0.7815761	Shapiro Wilk Test Statistic	0.9729642
29586	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
29587	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
29588					
29589	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
29590	95% Student's-t UCL		708.50607	95% H-UCL	1251.5859
29591	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1083.2601
29592	95% Adjusted-CLT UCL (Chen-1995)		765.47891	97.5% Chebyshev (MVUE) UCL	1356.9036
29593	95% Modified-t UCL (Johnson-1978)		721.09193	99% Chebyshev (MVUE) UCL	1894.4233
29594					
29595	**Gamma Distribution Test**			**Data Distribution**	
29596	k star (bias corrected)		0.9761398	**Data appear Gamma Distributed at 5% Significance Level**	
29597	Theta Star		463.09497		
29598	MLE of Mean		452.04545		
29599	MLE of Standard Deviation		457.53686		
29600	nu star		21.475077		
29601	Approximate Chi Square Value (.05)		11.945584	**Nonparametric Statistics**	
29602	Adjusted Level of Significance		0.02783	95% CLT UCL	684.78985
29603	Adjusted Chi Square Value		10.803338	95% Jackknife UCL	708.50607
29604				95% Standard Bootstrap UCL	678.48349

	A	B	C	D	E
29605	Anderson-Darling Test Statistic		0.3560165	95% Bootstrap-t UCL	1020.6366
29606	Anderson-Darling 5% Critical Value		0.7467093	95% Hall's Bootstrap UCL	1523.418
29607	Kolmogorov-Smirnov Test Statistic		0.2386512	95% Percentile Bootstrap UCL	693.18182
29608	Kolmogorov-Smirnov 5% Critical Value		0.2609977	95% BCA Bootstrap UCL	764.22727
29609	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1068.8233
29610				97.5% Chebyshev(Mean, Sd) UCL	1335.7036
29611	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1859.9382
29612	95% Approximate Gamma UCL		812.66105		
29613	95% Adjusted Gamma UCL		898.58436		
29614					
29615	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	812.66105
29616					
29617	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
29618	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
29619	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
29620					
29621					
29622	**OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ne_2005)**				
29623					
29624	**General Statistics**				
29625	Number of Valid Observations		36	Number of Distinct Observations	36
29626					
29627	**Raw Statistics**			**Log-transformed Statistics**	
29628	Minimum		26.6	Minimum of Log Data	3.2809112
29629	Maximum		7680	Maximum of Log Data	8.9463748
29630	Mean		623.85833	Mean of log Data	5.3206391
29631	Median		202.5	SD of log Data	1.3674801
29632	SD		1442.9052		
29633	Coefficient of Variation		2.3128731		
29634	Skewness		4.1159906		
29635					
29636	**Relevant UCL Statistics**				
29637	**Normal Distribution Test**			**Lognormal Distribution Test**	
29638	Shapiro Wilk Test Statistic		0.4291214	Shapiro Wilk Test Statistic	0.9523235
29639	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
29640	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
29641					
29642	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
29643	95% Student's-t UCL		1030.1738	95% H-UCL	1002.4552
29644	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1116.7094
29645	95% Adjusted-CLT UCL (Chen-1995)		1195.6944	97.5% Chebyshev (MVUE) UCL	1384.8525
29646	95% Modified-t UCL (Johnson-1978)		1057.6691	99% Chebyshev (MVUE) UCL	1911.5677
29647					
29648	**Gamma Distribution Test**			**Data Distribution**	
29649	k star (bias corrected)		0.5316424	**Data appear Lognormal at 5% Significance Level**	
29650	Theta Star		1173.4548		
29651	MLE of Mean		623.85833		
29652	MLE of Standard Deviation		855.61063		
29653	nu star		38.278253		
29654	Approximate Chi Square Value (.05)		25.109537	**Nonparametric Statistics**	
29655	Adjusted Level of Significance		0.0428	95% CLT UCL	1019.4196
29656	Adjusted Chi Square Value		24.624279	95% Jackknife UCL	1030.1738
29657				95% Standard Bootstrap UCL	1007.16
29658	Anderson-Darling Test Statistic		2.2818854	95% Bootstrap-t UCL	2123.8515
29659	Anderson-Darling 5% Critical Value		0.8065699	95% Hall's Bootstrap UCL	2692.1856
29660	Kolmogorov-Smirnov Test Statistic		0.2281045	95% Percentile Bootstrap UCL	1061.4972
29661	Kolmogorov-Smirnov 5% Critical Value		0.1546033	95% BCA Bootstrap UCL	1232.3556
29662	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1672.1046
29663				97.5% Chebyshev(Mean, Sd) UCL	2125.6817
29664	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	3016.6459
29665	95% Approximate Gamma UCL		951.04131		
29666	95% Adjusted Gamma UCL		969.783		
29667					
29668	**Potential UCL to Use**			Use 95% H-UCL	1002.4552
29669					
29670	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				

	A	B	C	D	E
29671	H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.				
29672	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.				
29673	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.				
29674					
29675	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
29676	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
29677	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
29678					
29679					
29680	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ne_2009)				
29681					
29682	General Statistics				
29683	Number of Valid Data		20	Number of Detected Data	19
29684	Number of Distinct Detected Data		19	Number of Non-Detect Data	1
29685				Percent Non-Detects	5.00%
29686					
29687	Raw Statistics			Log-transformed Statistics	
29688	Minimum Detected		3.4	Minimum Detected	1.2237754
29689	Maximum Detected		1290	Maximum Detected	7.1623975
29690	Mean of Detected		337.07789	Mean of Detected	4.9205996
29691	SD of Detected		410.78841	SD of Detected	1.6291439
29692	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
29693	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
29694					
29695					
29696	UCL Statistics				
29697	Normal Distribution Test with Detected Values Only			Lognormal Distribution Test with Detected Values Only	
29698	Shapiro Wilk Test Statistic		0.7602787	Shapiro Wilk Test Statistic	0.9536711
29699	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
29700	Data not Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
29701					
29702	Assuming Normal Distribution			Assuming Lognormal Distribution	
29703	DL/2 Substitution Method			DL/2 Substitution Method	
29704	Mean		320.3065	Mean	4.6996084
29705	SD		406.8062	SD	1.8684652
29706	95% DL/2 (t) UCL		477.59643	95% H-Stat (DL/2) UCL	3601.9308
29707					
29708	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
29709	Mean		308.43598	Mean in Log Scale	4.7229274
29710	SD		411.61356	SD in Log Scale	1.8154629
29711	95% MLE (t) UCL		467.58466	Mean in Original Scale	320.35552
29712	95% MLE (Tiku) UCL		457.42723	SD in Original Scale	406.76583
29713				95% t UCL	477.62984
29714				95% Percentile Bootstrap UCL	485.983
29715				95% BCA Bootstrap UCL	497.27305
29716					
29717	Gamma Distribution Test with Detected Values Only			Data Distribution Test with Detected Values Only	
29718	k star (bias corrected)		0.6036186	Data appear Gamma Distributed at 5% Significance Level	
29719	Theta Star		558.42857		
29720	nu star		22.937508		
29721					
29722	A-D Test Statistic		0.2599277	Nonparametric Statistics	
29723	5% A-D Critical Value		0.7859735	Kaplan-Meier (KM) Method	
29724	K-S Test Statistic		0.7859735	Mean	320.394
29725	5% K-S Critical Value		0.207258	SD	396.43549
29726	Data appear Gamma Distributed at 5% Significance Level			SE of Mean	91.074769
29727				95% KM (t) UCL	477.87437
29728	Assuming Gamma Distribution			95% KM (z) UCL	470.19866
29729	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	477.4697
29730	Minimum		1E-12	95% KM (bootstrap t) UCL	533.10108
29731	Maximum		1290	95% KM (BCA) UCL	489.94

	A	B	C	D	E
29732	Mean		320.224	95% KM (Percentile Bootstrap) UCL	468.51
29733	Median		172.5	95% KM (Chebyshev) UCL	717.37971
29734	SD		406.87438	97.5% KM (Chebyshev) UCL	889.15575
29735	k star		0.2725381	99% KM (Chebyshev) UCL	1226.5765
29736	Theta star		1174.9696		
29737	Nu star		10.901524	**Potential UCLs to Use**	
29738	AppChi2		4.5127615	95% KM (Chebyshev) UCL	717.37971
29739	95% Gamma Approximate UCL		773.56841		
29740	95% Adjusted Gamma UCL		832.82713		
29741	**Note: DL/2 is not a recommended method.**				
29742					
29743	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
29744	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
29745	**For additional insight, the user may want to consult a statistician.**				
29746					
29747					
29748	**OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ne_2010)**				
29749					
29750	**General Statistics**				
29751	Number of Valid Observations		16	Number of Distinct Observations	16
29752					
29753	**Raw Statistics**			**Log-transformed Statistics**	
29754	Minimum		37.2	Minimum of Log Data	3.6163088
29755	Maximum		2470	Maximum of Log Data	7.8119734
29756	Mean		656.8375	Mean of log Data	5.7528192
29757	Median		452	SD of log Data	1.3897128
29758	SD		723.47983		
29759	Coefficient of Variation		1.1014594		
29760	Skewness		1.3824569		
29761					
29762	**Relevant UCL Statistics**				
29763	**Normal Distribution Test**			**Lognormal Distribution Test**	
29764	Shapiro Wilk Test Statistic		0.8207073	Shapiro Wilk Test Statistic	0.9285647
29765	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
29766	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
29767					
29768	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
29769	95% Student's-t UCL		973.91164	95% H-UCL	2751.6372
29770	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	2040.0239
29771	95% Adjusted-CLT UCL (Chen-1995)		1021.1363	97.5% Chebyshev (MVUE) UCL	2599.8032
29772	95% Modified-t UCL (Johnson-1978)		984.33018	99% Chebyshev (MVUE) UCL	3699.3814
29773					
29774	**Gamma Distribution Test**			**Data Distribution**	
29775	k star (bias corrected)		0.6973312	**Data appear Gamma Distributed at 5% Significance Level**	
29776	Theta Star		941.93052		
29777	MLE of Mean		656.8375		
29778	MLE of Standard Deviation		786.57186		
29779	nu star		22.314597		
29780	Approximate Chi Square Value (.05)		12.574404	**Nonparametric Statistics**	
29781	Adjusted Level of Significance		0.03348	95% CLT UCL	954.34211
29782	Adjusted Chi Square Value		11.747525	95% Jackknife UCL	973.91164
29783				95% Standard Bootstrap UCL	944.45079
29784	Anderson-Darling Test Statistic		0.4546012	95% Bootstrap-t UCL	1123.6108
29785	Anderson-Darling 5% Critical Value		0.7719631	95% Hall's Bootstrap UCL	1155.0966
29786	Kolmogorov-Smirnov Test Statistic		0.1658369	95% Percentile Bootstrap UCL	974.0125
29787	Kolmogorov-Smirnov 5% Critical Value		0.2227506	95% BCA Bootstrap UCL	1036.15
29788	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1445.2314
29789				97.5% Chebyshev(Mean, Sd) UCL	1786.37
29790	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	2456.4709
29791	95% Approximate Gamma UCL		1165.627		
29792	95% Adjusted Gamma UCL		1247.6725		
29793					
29794	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	1165.627
29795					
29796	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
29797	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
29798	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
29799					
29800					
29801	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_nw_2005)				
29802					
29803	General Statistics				
29804	Number of Valid Observations		18	Number of Distinct Observations	18
29805					
29806	Raw Statistics			Log-transformed Statistics	
29807	Minimum		133	Minimum of Log Data	4.8903491
29808	Maximum		4920	Maximum of Log Data	8.5010638
29809	Mean		831.27778	Mean of log Data	6.1258248
29810	Median		319	SD of log Data	1.0116785
29811	SD		1207.3315		
29812	Coefficient of Variation		1.4523803		
29813	Skewness		2.7437116		
29814					
29815	Relevant UCL Statistics				
29816	Normal Distribution Test			Lognormal Distribution Test	
29817	Shapiro Wilk Test Statistic		0.6024196	Shapiro Wilk Test Statistic	0.9043135
29818	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
29819	Data not Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
29820					
29821	Assuming Normal Distribution			Assuming Lognormal Distribution	
29822	95% Student's-t UCL		1326.319	95% H-UCL	1464.1409
29823	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	1580.5407
29824	95% Adjusted-CLT UCL (Chen-1995)		1495.9955	97.5% Chebyshev (MVUE) UCL	1947.1454
29825	95% Modified-t UCL (Johnson-1978)		1356.9909	99% Chebyshev (MVUE) UCL	2667.2693
29826					
29827	Gamma Distribution Test			Data Distribution	
29828	k star (bias corrected)		0.8454638	Data appear Lognormal at 5% Significance Level	
29829	Theta Star		983.22103		
29830	MLE of Mean		831.27778		
29831	MLE of Standard Deviation		904.06294		
29832	nu star		30.436696		
29833	Approximate Chi Square Value (.05)		18.836439	Nonparametric Statistics	
29834	Adjusted Level of Significance		0.03574	95% CLT UCL	1299.355
29835	Adjusted Chi Square Value		17.962418	95% Jackknife UCL	1326.319
29836				95% Standard Bootstrap UCL	1301.984
29837	Anderson-Darling Test Statistic		1.2966107	95% Bootstrap-t UCL	2201.8862
29838	Anderson-Darling 5% Critical Value		0.7679569	95% Hall's Bootstrap UCL	3122.3211
29839	Kolmogorov-Smirnov Test Statistic		0.2256284	95% Percentile Bootstrap UCL	1322.4444
29840	Kolmogorov-Smirnov 5% Critical Value		0.2096779	95% BCA Bootstrap UCL	1559.8333
29841	Data not Gamma Distributed at 5% Significance Level			95% Chebyshev(Mean, Sd) UCL	2071.6929
29842				97.5% Chebyshev(Mean, Sd) UCL	2608.4216
29843	Assuming Gamma Distribution			99% Chebyshev(Mean, Sd) UCL	3662.721
29844	95% Approximate Gamma UCL		1343.213		
29845	95% Adjusted Gamma UCL		1408.5714		
29846					
29847	Potential UCL to Use			Use 95% Chebyshev (Mean, Sd) UCL	2071.6929
29848					
29849	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
29850	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
29851	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
29852					
29853					
29854	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_nw_2009)				
29855					
29856	General Statistics				
29857	Number of Valid Observations		7	Number of Distinct Observations	7
29858					
29859	Raw Statistics			Log-transformed Statistics	

	A	B	C	D	E
29860	Minimum		10.9	Minimum of Log Data	2.3887628
29861	Maximum		787	Maximum of Log Data	6.6682282
29862	Mean		290.7	Mean of log Data	5.2071555
29863	Median		287	SD of log Data	1.3408438
29864	SD		242.13267		
29865	Coefficient of Variation		0.8329297		
29866	Skewness		1.5973253		
29867					
29868					
29869	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
29870					
29871	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
29872	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
29873					
29874					
29875	**Warning: There are only 7 Values in this data**				
29876	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
29877	**the resulting calculations may not be reliable enough to draw conclusions**				
29878					
29879	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
29880					
29881	**Relevant UCL Statistics**				
29882	**Normal Distribution Test**			**Lognormal Distribution Test**	
29883	Shapiro Wilk Test Statistic		0.8354828	Shapiro Wilk Test Statistic	0.7912193
29884	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
29885	**Data appear Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
29886					
29887	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
29888	95% Student's-t UCL		468.53509	95% H-UCL	5870.77
29889	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1180.4026
29890	95% Adjusted-CLT UCL (Chen-1995)		500.27063	97.5% Chebyshev (MVUE) UCL	1530.7159
29891	95% Modified-t UCL (Johnson-1978)		477.74377	99% Chebyshev (MVUE) UCL	2218.8386
29892					
29893	**Gamma Distribution Test**			**Data Distribution**	
29894	k star (bias corrected)		0.7892554	**Data appear Normal at 5% Significance Level**	
29895	Theta Star		368.32182		
29896	MLE of Mean		290.7		
29897	MLE of Standard Deviation		327.21729		
29898	nu star		11.049576		
29899	Approximate Chi Square Value (.05)		4.6079003	**Nonparametric Statistics**	
29900	Adjusted Level of Significance		0.01584	95% CLT UCL	441.23297
29901	Adjusted Chi Square Value		3.4375888	95% Jackknife UCL	468.53509
29902				95% Standard Bootstrap UCL	429.20863
29903	Anderson-Darling Test Statistic		0.5184238	95% Bootstrap-t UCL	560.35642
29904	Anderson-Darling 5% Critical Value		0.7248141	95% Hall's Bootstrap UCL	1202.8269
29905	Kolmogorov-Smirnov Test Statistic		0.2528748	95% Percentile Bootstrap UCL	435.14286
29906	Kolmogorov-Smirnov 5% Critical Value		0.3184887	95% BCA Bootstrap UCL	473
29907	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	689.61574
29908				97.5% Chebyshev(Mean, Sd) UCL	862.2269
29909	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1201.2881
29910	95% Approximate Gamma UCL		697.08794		
29911	95% Adjusted Gamma UCL		934.40837		
29912					
29913	**Potential UCL to Use**			Use 95% Student's-t UCL	468.53509
29914					
29915	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
29916	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
29917	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
29918					

	A	B	C	D	E
29919					
29920	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_nw_2010)				
29921					
29922	General Statistics				
29923	Number of Valid Observations		4	Number of Distinct Observations	4
29924					
29925					
29926	Warning: This data set only has 4 observations!				
29927	Data set is too small to compute reliable and meaningful statistics and estimates!				
29928	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_nw_2010) was not processed!				
29929					
29930	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
29931	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
29932					
29933					
29934					
29935	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ref_2009)				
29936					
29937	General Statistics				
29938	Number of Valid Data		0	Number of Detected Data	0
29939	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
29940	Number of Missing Values		6	Percent Non-Detects	NaN%
29941					
29942	Warning: This data set only has 0 observations!				
29943	Data set is too small to compute reliable and meaningful statistics and estimates!				
29944	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ref_2009) was not processed!				
29945					
29946	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
29947	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
29948					
29949					
29950					
29951	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ref_2010)				
29952					
29953	General Statistics				
29954	Number of Valid Data		0	Number of Detected Data	0
29955	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
29956	Number of Missing Values		3	Percent Non-Detects	NaN%
29957					
29958	Warning: This data set only has 0 observations!				
29959	Data set is too small to compute reliable and meaningful statistics and estimates!				
29960	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ref_2010) was not processed!				
29961					
29962	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
29963	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
29964					
29965					
29966					
29967	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_s_2005)				
29968					
29969	General Statistics				

	A	B	C	D	E
29970	Number of Valid Observations		8	Number of Distinct Observations	8
29971					
29972	**Raw Statistics**			**Log-transformed Statistics**	
29973	Minimum		72.3	Minimum of Log Data	4.2808241
29974	Maximum		6380	Maximum of Log Data	8.7609234
29975	Mean		1272.1625	Mean of log Data	6.3166461
29976	Median		602	SD of log Data	1.3451521
29977	SD		2095.175		
29978	Coefficient of Variation		1.6469398		
29979	Skewness		2.6635561		
29980					
29981					
29982	**Warning: There are only 8 Values in this data**				
29983	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
29984	**the resulting calculations may not be reliable enough to draw conclusions**				
29985					
29986	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
29987					
29988	**Relevant UCL Statistics**				
29989	**Normal Distribution Test**			**Lognormal Distribution Test**	
29990	Shapiro Wilk Test Statistic		0.5821593	Shapiro Wilk Test Statistic	0.9732369
29991	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
29992	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
29993					
29994	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
29995	95% Student's-t UCL		2675.5834	95% H-UCL	12307.797
29996	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3575.5094
29997	95% Adjusted-CLT UCL (Chen-1995)		3235.9692	97.5% Chebyshev (MVUE) UCL	4624.0541
29998	95% Modified-t UCL (Johnson-1978)		2791.8462	99% Chebyshev (MVUE) UCL	6683.7172
29999					
30000	**Gamma Distribution Test**			**Data Distribution**	
30001	k star (bias corrected)		0.5353602	**Data appear Gamma Distributed at 5% Significance Level**	
30002	Theta Star		2376.2738		
30003	MLE of Mean		1272.1625		
30004	MLE of Standard Deviation		1738.6795		
30005	nu star		8.5657639		
30006	Approximate Chi Square Value (.05)		3.0668657	**Nonparametric Statistics**	
30007	Adjusted Level of Significance		0.01946	95% CLT UCL	2490.5981
30008	Adjusted Chi Square Value		2.2971429	95% Jackknife UCL	2675.5834
30009				95% Standard Bootstrap UCL	2362.6398
30010	Anderson-Darling Test Statistic		0.5093009	95% Bootstrap-t UCL	7037.7556
30011	Anderson-Darling 5% Critical Value		0.7469752	95% Hall's Bootstrap UCL	7711.956
30012	Kolmogorov-Smirnov Test Statistic		0.2760383	95% Percentile Bootstrap UCL	2646.4125
30013	Kolmogorov-Smirnov 5% Critical Value		0.3045876	95% BCA Bootstrap UCL	3374.75
30014	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	4501.0441
30015				97.5% Chebyshev(Mean, Sd) UCL	5898.1837
30016	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	8642.594
30017	95% Approximate Gamma UCL		3553.1532		
30018	95% Adjusted Gamma UCL		4743.7378		
30019					
30020	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	3553.1532
30021					
30022	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
30023	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
30024	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
30025					
30026					
30027	**OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_s_2010)**				
30028					
30029	**General Statistics**				
30030	Number of Valid Observations		2	Number of Distinct Observations	2
30031					
30032					

	A	B	C	D	E
30033	**Warning: This data set only has 2 observations!**				
30034	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
30035	**The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_s_2010) was not processed!**				
30036					
30037	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
30038	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
30039					
30040					
30041					
30042	**OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2005)**				
30043					
30044	**General Statistics**				
30045	Number of Valid Observations		4	Number of Distinct Observations	4
30046					
30047					
30048	**Warning: This data set only has 4 observations!**				
30049	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
30050	**The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2005) was not processed!**				
30051					
30052	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
30053	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
30054					
30055					
30056					
30057	**OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2009)**				
30058					
30059	**General Statistics**				
30060	Number of Valid Data		60	Number of Detected Data	49
30061	Number of Distinct Detected Data		49	Number of Non-Detect Data	11
30062				Percent Non-Detects	18.33%
30063					
30064	**Raw Statistics**			**Log-transformed Statistics**	
30065	Minimum Detected		3.02	Minimum Detected	1.1052568
30066	Maximum Detected		6620	Maximum Detected	8.7978506
30067	Mean of Detected		623.52694	Mean of Detected	5.3506986
30068	SD of Detected		1061.996	SD of Detected	1.691872
30069	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
30070	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
30071					
30072					
30073	**UCL Statistics**				
30074	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
30075	Shapiro Wilk Test Statistic		0.576577	Shapiro Wilk Test Statistic	0.9741772
30076	5% Shapiro Wilk Critical Value		0.947	5% Shapiro Wilk Critical Value	0.947
30077	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
30078					
30079	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30080	DL/2 Substitution Method			DL/2 Substitution Method	
30081	Mean		509.51617	Mean	4.461546
30082	SD		988.15215	SD	2.4310856
30083	95% DL/2 (t) UCL		722.69732	95% H-Stat (DL/2) UCL	7488.7325
30084					
30085	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
30086	Mean		350.92444	Mean in Log Scale	4.6858652
30087	SD		1140.3645	SD in Log Scale	2.1094951
30088	95% MLE (t) UCL		596.94347	Mean in Original Scale	510.54646
30089	95% MLE (Tiku) UCL		592.01141	SD in Original Scale	987.61783
30090				95% t UCL	723.61234

	A	B	C	D	E
30091				95% Percentile Bootstrap UCL	738.87516
30092				95% BCA Bootstrap UCL	809.01798
30093					
30094	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
30095	k star (bias corrected)		0.5519673	**Data appear Gamma Distributed at 5% Significance Level**	
30096	Theta Star		1129.6448		
30097	nu star		54.092792		
30098					
30099	A-D Test Statistic		0.4215578	**Nonparametric Statistics**	
30100	5% A-D Critical Value		0.8077873	Kaplan-Meier (KM) Method	
30101	K-S Test Statistic		0.8077873	Mean	509.76733
30102	5% K-S Critical Value		0.1331731	SD	979.7529
30103	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	127.79632
30104				95% KM (t) UCL	723.32687
30105	**Assuming Gamma Distribution**			95% KM (z) UCL	719.97358
30106	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	722.03516
30107	Minimum		1E-12	95% KM (bootstrap t) UCL	865.29985
30108	Maximum		6620	95% KM (BCA) UCL	743.91833
30109	Mean		509.21367	95% KM (Percentile Bootstrap) UCL	739.90767
30110	Median		131.5	95% KM (Chebyshev) UCL	1066.8186
30111	SD		988.31045	97.5% KM (Chebyshev) UCL	1307.8551
30112	k star		0.1204512	99% KM (Chebyshev) UCL	1781.3247
30113	Theta star		4227.5517		
30114	Nu star		14.454144	**Potential UCLs to Use**	
30115	AppChi2		6.8834344	95% KM (Chebyshev) UCL	1066.8186
30116	95% Gamma Approximate UCL		1069.2697		
30117	95% Adjusted Gamma UCL		1089.6801		
30118	**Note: DL/2 is not a recommended method.**				
30119					
30120	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
30121	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
30122	**For additional insight, the user may want to consult a statistician.**				
30123					
30124					
30125	**OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2010)**				
30126					
30127	**General Statistics**				
30128	Number of Valid Observations		11	Number of Distinct Observations	11
30129					
30130	**Raw Statistics**			**Log-transformed Statistics**	
30131	Minimum		233	Minimum of Log Data	5.4510385
30132	Maximum		7750	Maximum of Log Data	8.9554481
30133	Mean		2424.6364	Mean of log Data	7.0930448
30134	Median		944	SD of log Data	1.232573
30135	SD		2958.6265		
30136	Coefficient of Variation		1.2202352		
30137	Skewness		1.1892408		
30138					
30139	**Relevant UCL Statistics**				
30140	**Normal Distribution Test**			**Lognormal Distribution Test**	
30141	Shapiro Wilk Test Statistic		0.6928795	Shapiro Wilk Test Statistic	0.888207
30142	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
30143	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
30144					
30145	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30146	95% Student's-t UCL		4041.4595	95% H-UCL	9923.4312
30147	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	6342.2219
30148	95% Adjusted-CLT UCL (Chen-1995)		4233.7244	97.5% Chebyshev (MVUE) UCL	8083.6101
30149	95% Modified-t UCL (Johnson-1978)		4094.7704	99% Chebyshev (MVUE) UCL	11504.23
30150					
30151	**Gamma Distribution Test**			**Data Distribution**	
30152	k star (bias corrected)		0.6728071	**Data appear Lognormal at 5% Significance Level**	
30153	Theta Star		3603.7615		
30154	MLE of Mean		2424.6364		
30155	MLE of Standard Deviation		2955.9789		
30156	nu star		14.801756		
30157	Approximate Chi Square Value (.05)		7.1238602	**Nonparametric Statistics**	

	A	B	C	D	E
30158	Adjusted Level of Significance		0.02783	95% CLT UCL	3891.9436
30159	Adjusted Chi Square Value		6.2750974	95% Jackknife UCL	4041.4595
30160				95% Standard Bootstrap UCL	3852.3351
30161	Anderson-Darling Test Statistic		0.9596691	95% Bootstrap-t UCL	4408.3511
30162	Anderson-Darling 5% Critical Value		0.7584928	95% Hall's Bootstrap UCL	3386.424
30163	Kolmogorov-Smirnov Test Statistic		0.2954102	95% Percentile Bootstrap UCL	3740.0909
30164	Kolmogorov-Smirnov 5% Critical Value		0.2640002	95% BCA Bootstrap UCL	4146.7273
30165	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	6313.0334
30166				97.5% Chebyshev(Mean, Sd) UCL	7995.546
30167	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	11300.516
30168	95% Approximate Gamma UCL		5037.8413		
30169	95% Adjusted Gamma UCL		5719.2541		
30170					
30171	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	6313.0334
30172					
30173	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
30174	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
30175	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
30176					
30177					
30178	**OS|UG/KG|NAPHTHALENE (gi_sd_ne_2005)**				
30179					
30180	**General Statistics**				
30181	Number of Valid Data		36	Number of Detected Data	27
30182	Number of Distinct Detected Data		26	Number of Non-Detect Data	9
30183				Percent Non-Detects	25.00%
30184					
30185	**Raw Statistics**			**Log-transformed Statistics**	
30186	Minimum Detected		3.7	Minimum Detected	1.3083328
30187	Maximum Detected		730	Maximum Detected	6.5930445
30188	Mean of Detected		47.485185	Mean of Detected	2.4451795
30189	SD of Detected		146.81294	SD of Detected	1.2184899
30190	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
30191	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
30192					
30193					
30194	**UCL Statistics**				
30195	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
30196	Shapiro Wilk Test Statistic		0.321679	Shapiro Wilk Test Statistic	0.7395962
30197	5% Shapiro Wilk Critical Value		0.923	5% Shapiro Wilk Critical Value	0.923
30198	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
30199					
30200	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30201	DL/2 Substitution Method			DL/2 Substitution Method	
30202	Mean		36.026389	Mean	1.9590784
30203	SD		128.12782	SD	1.3535396
30204	95% DL/2 (t) UCL		72.106594	95% H-Stat (DL/2) UCL	33.746229
30205					
30206	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
30207	Mean		6.7982542	Mean in Log Scale	1.7890208
30208	SD		150.17823	SD in Log Scale	1.5889244
30209	95% MLE (t) UCL		49.087754	Mean in Original Scale	35.858439
30210	95% MLE (Tiku) UCL		49.298814	SD in Original Scale	128.17474
30211				95% t UCL	71.951857
30212				95% Percentile Bootstrap UCL	74.95672
30213				95% BCA Bootstrap UCL	95.257063
30214					
30215	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
30216	k star (bias corrected)		0.4295166	**Data do not follow a Discernable Distribution (0.05)**	
30217	Theta Star		110.55494		
30218	nu star		23.193898		
30219					
30220	A-D Test Statistic		5.2297151	**Nonparametric Statistics**	
30221	5% A-D Critical Value		0.8175701	Kaplan-Meier (KM) Method	
30222	K-S Test Statistic		0.8175701	Mean	36.538889
30223	5% K-S Critical Value		0.1789619	SD	126.19932

	A	B	C	D	E
30224	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	21.433889
30225				95% KM (t) UCL	72.752998
30226	**Assuming Gamma Distribution**			95% KM (z) UCL	71.7945
30227	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	72.533952
30228	Minimum		1E-12	95% KM (bootstrap t) UCL	592.8688
30229	Maximum		730	95% KM (BCA) UCL	73.183333
30230	Mean		35.613889	95% KM (Percentile Bootstrap) UCL	75.601389
30231	Median		6.35	95% KM (Chebyshev) UCL	129.96705
30232	SD		128.24365	97.5% KM (Chebyshev) UCL	170.39349
30233	k star		0.1052141	99% KM (Chebyshev) UCL	249.8034
30234	Theta star		338.4896		
30235	Nu star		7.5754173	**Potential UCLs to Use**	
30236	AppChi2		2.491678	97.5% KM (Chebyshev) UCL	170.39349
30237	95% Gamma Approximate UCL		108.27646		
30238	95% Adjusted Gamma UCL		114.26568		
30239	**Note: DL/2 is not a recommended method.**				
30240					
30241	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
30242	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
30243	**For additional insight, the user may want to consult a statistician.**				
30244					
30245					
30246	**OS|UG/KG|NAPHTHALENE (gi_sd_ne_2009)**				
30247					
30248	**General Statistics**				
30249	Number of Valid Data		20	Number of Detected Data	15
30250	Number of Distinct Detected Data		15	Number of Non-Detect Data	5
30251				Percent Non-Detects	25.00%
30252					
30253	**Raw Statistics**			**Log-transformed Statistics**	
30254	Minimum Detected		3.5	Minimum Detected	1.252763
30255	Maximum Detected		110	Maximum Detected	4.7004804
30256	Mean of Detected		25.132	Mean of Detected	2.5650093
30257	SD of Detected		31.973077	SD of Detected	1.1467648
30258	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
30259	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
30260					
30261					
30262	**UCL Statistics**				
30263	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
30264	Shapiro Wilk Test Statistic		0.7157205	Shapiro Wilk Test Statistic	0.8822663
30265	5% Shapiro Wilk Critical Value		0.881	5% Shapiro Wilk Critical Value	0.881
30266	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
30267					
30268	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30269	DL/2 Substitution Method			DL/2 Substitution Method	
30270	Mean		19.2615	Mean	2.0489508
30271	SD		29.361318	SD	1.3453615
30272	95% DL/2 (t) UCL		30.613932	95% H-Stat (DL/2) UCL	50.993939
30273					
30274	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
30275	Mean		13.604575	Mean in Log Scale	1.8762739
30276	SD		34.724524	SD in Log Scale	1.5963558
30277	95% MLE (t) UCL		27.030668	Mean in Original Scale	19.086671
30278	95% MLE (Tiku) UCL		27.185977	SD in Original Scale	29.474075
30279				95% t UCL	30.4827
30280				95% Percentile Bootstrap UCL	30.570942
30281				95% BCA Bootstrap UCL	34.89664
30282					
30283	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
30284	k star (bias corrected)		0.7551458	**Data appear Lognormal at 5% Significance Level**	
30285	Theta Star		33.280989		
30286	nu star		22.654375		
30287					
30288	A-D Test Statistic		1.0717195	**Nonparametric Statistics**	
30289	5% A-D Critical Value		0.7684236	Kaplan-Meier (KM) Method	
30290	K-S Test Statistic		0.7684236	Mean	19.724
30291	5% K-S Critical Value		0.2289469	SD	28.343143

	A	B	C	D	E
30292	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	6.5601628
30293				95% KM (t) UCL	31.067393
30294	**Assuming Gamma Distribution**			95% KM (z) UCL	30.514508
30295	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	30.836173
30296	Minimum		1E-12	95% KM (bootstrap t) UCL	39.130474
30297	Maximum		110	95% KM (BCA) UCL	32.564
30298	Mean		18.978912	95% KM (Percentile Bootstrap) UCL	31
30299	Median		5.55	95% KM (Chebyshev) UCL	48.319087
30300	SD		29.548281	97.5% KM (Chebyshev) UCL	60.692204
30301	k star		0.1368593	99% KM (Chebyshev) UCL	84.996796
30302	Theta star		138.67458		
30303	Nu star		5.4743736	**Potential UCLs to Use**	
30304	AppChi2		1.3774201	97.5% KM (Chebyshev) UCL	60.692204
30305	95% Gamma Approximate UCL		75.42917		
30306	95% Adjusted Gamma UCL		84.930424		
30307	**Note: DL/2 is not a recommended method.**				
30308					
30309	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
30310	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
30311	**For additional insight, the user may want to consult a statistician.**				
30312					
30313					
30314	**OS|UG/KG|NAPHTHALENE (gi_sd_ne_2010)**				
30315					
30316	**General Statistics**				
30317	Number of Valid Data		16	Number of Detected Data	6
30318	Number of Distinct Detected Data		6	Number of Non-Detect Data	10
30319				Percent Non-Detects	62.50%
30320					
30321	**Raw Statistics**			**Log-transformed Statistics**	
30322	Minimum Detected		2.7	Minimum Detected	0.9932518
30323	Maximum Detected		130	Maximum Detected	4.8675345
30324	Mean of Detected		42.283333	Mean of Detected	3.1537045
30325	SD of Detected		46.503781	SD of Detected	1.3320054
30326	Minimum Non-Detect		8.8	Minimum Non-Detect	2.1747517
30327	Maximum Non-Detect		117	Maximum Non-Detect	4.7621739
30328					
30329	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	15
30330	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	1
30331	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	93.75%
30332					
30333	**Warning: There are only 6 Detected Values in this data**				
30334	**Note: It should be noted that even though bootstrap may be performed on this data set**				
30335	**the resulting calculations may not be reliable enough to draw conclusions**				
30336					
30337	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
30338					
30339					
30340	**UCL Statistics**				
30341	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
30342	Shapiro Wilk Test Statistic		0.8278798	Shapiro Wilk Test Statistic	0.9803682
30343	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788
30344	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
30345					
30346	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30347	DL/2 Substitution Method			DL/2 Substitution Method	
30348	Mean		26.584375	Mean	2.6289398
30349	SD		33.260355	SD	1.192324
30350	95% DL/2 (t) UCL		41.161144	95% H-Stat (DL/2) UCL	71.303765
30351					
30352	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
30353	**MLE method failed to converge properly**			Mean in Log Scale	2.0014287
30354				SD in Log Scale	1.2422731
30355				Mean in Original Scale	18.344968

	A	B	C	D	E
30356				SD in Original Scale	32.999529
30357				95% t UCL	32.807427
30358				95% Percentile Bootstrap UCL	32.462016
30359				95% BCA Bootstrap UCL	39.621208
30360					
30361	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
30362	k star (bias corrected)		0.6008981	**Data appear Normal at 5% Significance Level**	
30363	Theta Star		70.366892		
30364	nu star		7.2107775		
30365					
30366	A-D Test Statistic		0.1530587	**Nonparametric Statistics**	
30367	5% A-D Critical Value		0.7155812	Kaplan-Meier (KM) Method	
30368	K-S Test Statistic		0.7155812	Mean	19.452885
30369	5% K-S Critical Value		0.3410624	SD	32.266489
30370	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	9.0686216
30371				95% KM (t) UCL	35.350635
30372	**Assuming Gamma Distribution**			95% KM (z) UCL	34.36944
30373	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	33.009624
30374	Minimum		1E-12	95% KM (bootstrap t) UCL	45.274939
30375	Maximum		130	95% KM (BCA) UCL	50.541667
30376	Mean		30.16625	95% KM (Percentile Bootstrap) UCL	42.2
30377	Median		23.37	95% KM (Chebyshev) UCL	58.98209
30378	SD		41.895519	97.5% KM (Chebyshev) UCL	76.086408
30379	k star		0.1106824	99% KM (Chebyshev) UCL	109.68453
30380	Theta star		272.54793		
30381	Nu star		3.5418357	**Potential UCLs to Use**	
30382	AppChi2		0.5495498	95% KM (t) UCL	35.350635
30383	95% Gamma Approximate UCL		194.42079	95% KM (Percentile Bootstrap) UCL	42.2
30384	95% Adjusted Gamma UCL		244.60417		
30385	**Note: DL/2 is not a recommended method.**				
30386					
30387	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
30388	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
30389	**For additional insight, the user may want to consult a statistician.**				
30390					
30391					
30392	**OS|UG/KG|NAPHTHALENE (gi_sd_nw_2005)**				
30393					
30394	**General Statistics**				
30395	Number of Valid Observations		18	Number of Distinct Observations	16
30396					
30397	**Raw Statistics**			**Log-transformed Statistics**	
30398	Minimum		4.4	Minimum of Log Data	1.4816045
30399	Maximum		220	Maximum of Log Data	5.3936275
30400	Mean		26.863889	Mean of log Data	2.4370937
30401	Median		7.15	SD of log Data	1.0805335
30402	SD		53.985864		
30403	Coefficient of Variation		2.0096072		
30404	Skewness		3.2267586		
30405					
30406	**Relevant UCL Statistics**				
30407	**Normal Distribution Test**			**Lognormal Distribution Test**	
30408	Shapiro Wilk Test Statistic		0.4570519	Shapiro Wilk Test Statistic	0.7641565
30409	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
30410	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
30411					
30412	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30413	95% Student's-t UCL		48.999672	95% H-UCL	42.2411
30414	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	43.927502
30415	95% Adjusted-CLT UCL (Chen-1995)		58.134784	97.5% Chebyshev (MVUE) UCL	54.471515
30416	95% Modified-t UCL (Johnson-1978)		50.612629	99% Chebyshev (MVUE) UCL	75.183187
30417					
30418	**Gamma Distribution Test**			**Data Distribution**	
30419	k star (bias corrected)		0.6261598	**Data do not follow a Discernable Distribution (0.05)**	
30420	Theta Star		42.902609		
30421	MLE of Mean		26.863889		
30422	MLE of Standard Deviation		33.948946		
30423	nu star		22.541753		

	A	B	C	D	E
30424	Approximate Chi Square Value (.05)		12.745244	**Nonparametric Statistics**	
30425	Adjusted Level of Significance		0.03574	95% CLT UCL	47.793977
30426	Adjusted Chi Square Value		12.040967	95% Jackknife UCL	48.999672
30427				95% Standard Bootstrap UCL	47.638033
30428	Anderson-Darling Test Statistic		2.7330167	95% Bootstrap-t UCL	200.1562
30429	Anderson-Darling 5% Critical Value		0.7817696	95% Hall's Bootstrap UCL	151.07716
30430	Kolmogorov-Smirnov Test Statistic		0.3158562	95% Percentile Bootstrap UCL	49.322222
30431	Kolmogorov-Smirnov 5% Critical Value		0.212062	95% BCA Bootstrap UCL	62.127778
30432	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	82.329091
30433				97.5% Chebyshev(Mean, Sd) UCL	106.32893
30434	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	153.47196
30435	95% Approximate Gamma UCL		47.512556		
30436	95% Adjusted Gamma UCL		50.291569		
30437					
30438	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	82.329091
30439					
30440	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
30441	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
30442	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
30443					
30444					
30445	**OS|UG/KG|NAPHTHALENE (gi_sd_nw_2009)**				
30446					
30447	**General Statistics**				
30448	Number of Valid Data		7	Number of Detected Data	6
30449	Number of Distinct Detected Data		5	Number of Non-Detect Data	1
30450				Percent Non-Detects	14.29%
30451					
30452	**Raw Statistics**			**Log-transformed Statistics**	
30453	Minimum Detected		4.4	Minimum Detected	1.4816045
30454	Maximum Detected		55	Maximum Detected	4.0073332
30455	Mean of Detected		17.9	Mean of Detected	2.4975291
30456	SD of Detected		19.283361	SD of Detected	0.9105746
30457	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
30458	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
30459					
30460					
30461	**Warning: There are only 6 Detected Values in this data**				
30462	**Note: It should be noted that even though bootstrap may be performed on this data set**				
30463	**the resulting calculations may not be reliable enough to draw conclusions**				
30464					
30465	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
30466					
30467					
30468	**UCL Statistics**				
30469	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
30470	Shapiro Wilk Test Statistic		0.7234213	Shapiro Wilk Test Statistic	0.881203
30471	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788
30472	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
30473					
30474	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30475	DL/2 Substitution Method			DL/2 Substitution Method	
30476	Mean		15.578571	Mean	2.2122786
30477	SD		18.643941	SD	1.1227333
30478	95% DL/2 (t) UCL		29.271672	95% H-Stat (DL/2) UCL	109.79906
30479					
30480	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
30481	Mean		14.111401	Mean in Log Scale	2.181447
30482	SD		19.109864	SD in Log Scale	1.1791142
30483	95% MLE (t) UCL		28.146699	Mean in Original Scale	15.532814
30484	95% MLE (Tiku) UCL		27.698337	SD in Original Scale	18.684173
30485				95% t UCL	29.255463
30486				95% Percentile Bootstrap UCL	27.771429
30487				95% BCA Bootstrap UCL	30.414286

	A	B	C	D	E
30488					
30489	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
30490	k star (bias corrected)		0.828583	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
30491	Theta Star		21.603145		
30492	nu star		9.9429965		
30493					
30494	A-D Test Statistic		0.6273711	**Nonparametric Statistics**	
30495	5% A-D Critical Value		0.7087411	Kaplan-Meier (KM) Method	
30496	K-S Test Statistic		0.7087411	Mean	15.971429
30497	5% K-S Critical Value		0.3378924	SD	16.968266
30498	**Data follow Appr. Gamma Distribution at 5% Significance Level**			SE of Mean	7.0255295
30499				95% KM (t) UCL	29.623299
30500	**Assuming Gamma Distribution**			95% KM (z) UCL	27.527396
30501	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	29.215845
30502	Minimum		1E-12	95% KM (bootstrap t) UCL	100.00264
30503	Maximum		55	95% KM (BCA) UCL	28.328571
30504	Mean		15.342857	95% KM (Percentile Bootstrap) UCL	27.4
30505	Median		8.3	95% KM (Chebyshev) UCL	46.595001
30506	SD		18.858584	97.5% KM (Chebyshev) UCL	59.845846
30507	k star		0.190534	99% KM (Chebyshev) UCL	85.874564
30508	Theta star		80.525544		
30509	Nu star		2.6674766	**Potential UCLs to Use**	
30510	AppChi2		0.2811304	95% KM (Chebyshev) UCL	46.595001
30511	95% Gamma Approximate UCL		145.57913		
30512	95% Adjusted Gamma UCL		280.20589		
30513	**Note: DL/2 is not a recommended method.**				
30514					
30515	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
30516	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
30517	**For additional insight, the user may want to consult a statistician.**				
30518					
30519					
30520	**OS|UG/KG|NAPHTHALENE (gi_sd_nw_2010)**				
30521					
30522	**General Statistics**				
30523	Number of Valid Data		4	Number of Detected Data	1
30524	Number of Distinct Detected Data		1	Number of Non-Detect Data	3
30525				Percent Non-Detects	75.00%
30526					
30527	**Warning: This data set only has 4 observations!**				
30528	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
30529	**The data set for variable OS|UG/KG|NAPHTHALENE (gi_sd_nw_2010) was not processed!**				
30530					
30531	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
30532	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
30533					
30534					
30535					
30536	**OS|UG/KG|NAPHTHALENE (gi_sd_ref_2009)**				
30537					
30538	**General Statistics**				
30539	Number of Valid Data		0	Number of Detected Data	0
30540	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
30541	Number of Missing Values		6	Percent Non-Detects	NaN%
30542					
30543	**Warning: This data set only has 0 observations!**				
30544	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
30545	**The data set for variable OS|UG/KG|NAPHTHALENE (gi_sd_ref_2009) was not processed!**				

	A	B	C	D	E
30546					
30547	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
30548	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
30549					
30550					
30551					
30552	**OS|UG/KG|NAPHTHALENE (gi_sd_ref_2010)**				
30553					
30554	**General Statistics**				
30555	Number of Valid Data		0	Number of Detected Data	0
30556	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
30557	Number of Missing Values		3	Percent Non-Detects	NaN%
30558					
30559	**Warning: This data set only has 0 observations!**				
30560	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
30561	**The data set for variable OS|UG/KG|NAPHTHALENE (gi_sd_ref_2010) was not processed!**				
30562					
30563	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
30564	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
30565					
30566					
30567					
30568	**OS|UG/KG|NAPHTHALENE (gi_sd_s_2005)**				
30569					
30570	**General Statistics**				
30571	Number of Valid Data		8	Number of Detected Data	6
30572	Number of Distinct Detected Data		6	Number of Non-Detect Data	2
30573				Percent Non-Detects	25.00%
30574					
30575	**Raw Statistics**			**Log-transformed Statistics**	
30576	Minimum Detected		3.6	Minimum Detected	1.2809338
30577	Maximum Detected		350	Maximum Detected	5.8579332
30578	Mean of Detected		70.216667	Mean of Detected	3.0639071
30579	SD of Detected		137.19473	SD of Detected	1.5094243
30580	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
30581	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
30582					
30583					
30584	**Warning: There are only 6 Detected Values in this data**				
30585	**Note: It should be noted that even though bootstrap may be performed on this data set**				
30586	**the resulting calculations may not be reliable enough to draw conclusions**				
30587					
30588	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
30589					
30590					
30591	**UCL Statistics**				
30592	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
30593	Shapiro Wilk Test Statistic		0.5381186	Shapiro Wilk Test Statistic	0.8372201
30594	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788
30595	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
30596					
30597	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30598	DL/2 Substitution Method			DL/2 Substitution Method	
30599	Mean		53.075	Mean	2.4231241
30600	SD		120.2165	SD	1.7421775
30601	95% DL/2 (t) UCL		133.60018	95% H-Stat (DL/2) UCL	1813.7795
30602					
30603	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
30604	Mean		28.545499	Mean in Log Scale	2.1723497

	A	B	C	D	E
30605	SD		135.91844	SD in Log Scale	2.1019922
30606	95% MLE (t) UCL		119.58839	Mean in Original Scale	52.831506
30607	95% MLE (Tiku) UCL		120.13827	SD in Original Scale	120.33643
30608				95% t UCL	133.43702
30609				95% Percentile Bootstrap UCL	137.30616
30610				95% BCA Bootstrap UCL	179.20933
30611					
30612	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
30613	k star (bias corrected)		0.3761243	**Data appear Lognormal at 5% Significance Level**	
30614	Theta Star		186.68473		
30615	nu star		4.5134918		
30616					
30617	A-D Test Statistic		0.9958269	**Nonparametric Statistics**	
30618	5% A-D Critical Value		0.7340652	Kaplan-Meier (KM) Method	
30619	K-S Test Statistic		0.7340652	Mean	53.5625
30620	5% K-S Critical Value		0.3479903	SD	112.23226
30621	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	43.467367
30622				95% KM (t) UCL	135.91484
30623	**Assuming Gamma Distribution**			95% KM (z) UCL	125.05996
30624	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	132.59444
30625	Minimum		1E-12	95% KM (bootstrap t) UCL	1505.1764
30626	Maximum		350	95% KM (BCA) UCL	142.5
30627	Mean		52.6625	95% KM (Percentile Bootstrap) UCL	138.4
30628	Median		14.85	95% KM (Chebyshev) UCL	243.03236
30629	SD		120.42042	97.5% KM (Chebyshev) UCL	325.01612
30630	k star		0.1428911	99% KM (Chebyshev) UCL	486.05734
30631	Theta star		368.54985		
30632	Nu star		2.2862579	**Potential UCLs to Use**	
30633	AppChi2		0.1967507	99% KM (Chebyshev) UCL	486.05734
30634	95% Gamma Approximate UCL		611.94223		
30635	95% Adjusted Gamma UCL		994.5415		
30636	**Warning: Recommended UCL exceeds the maximum observation**				
30637	**Note: DL/2 is not a recommended method.**				
30638					
30639	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
30640	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
30641	**For additional insight, the user may want to consult a statistician.**				
30642					
30643					
30644	**OS|UG/KG|NAPHTHALENE (gi_sd_s_2010)**				
30645					
30646	**General Statistics**				
30647	Number of Valid Data		2	Number of Detected Data	1
30648	Number of Distinct Detected Data		1	Number of Non-Detect Data	1
30649				Percent Non-Detects	50.00%
30650					
30651	**Warning: This data set only has 2 observations!**				
30652	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
30653	**The data set for variable OS|UG/KG|NAPHTHALENE (gi_sd_s_2010) was not processed!**				
30654					
30655	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
30656	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
30657					
30658					
30659					
30660	**OS|UG/KG|NAPHTHALENE (gi_sd_stillwater_2005)**				
30661					
30662	**General Statistics**				
30663	Number of Valid Observations		4	Number of Distinct Observations	4
30664					
30665					

	A	B	C	D	E
30666	**Warning: This data set only has 4 observations!**				
30667	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
30668	**The data set for variable OS|UG/KG|NAPHTHALENE (gi_sd_stillwater_2005) was not processed!**				
30669					
30670	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
30671	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
30672					
30673					
30674					
30675	**OS|UG/KG|NAPHTHALENE (gi_sd_stillwater_2009)**				
30676					
30677	**General Statistics**				
30678	Number of Valid Data		60	Number of Detected Data	33
30679	Number of Distinct Detected Data		26	Number of Non-Detect Data	27
30680				Percent Non-Detects	45.00%
30681					
30682	**Raw Statistics**			**Log-transformed Statistics**	
30683	Minimum Detected		3.8	Minimum Detected	1.3350011
30684	Maximum Detected		190	Maximum Detected	5.2470241
30685	Mean of Detected		27.854545	Mean of Detected	2.8332947
30686	SD of Detected		39.598744	SD of Detected	0.9058739
30687	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
30688	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
30689					
30690					
30691	**UCL Statistics**				
30692	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
30693	Shapiro Wilk Test Statistic		0.5469096	Shapiro Wilk Test Statistic	0.9424619
30694	5% Shapiro Wilk Critical Value		0.931	5% Shapiro Wilk Critical Value	0.931
30695	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
30696					
30697	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30698	DL/2 Substitution Method			DL/2 Substitution Method	
30699	Mean		16.0625	Mean	1.783661
30700	SD		31.989169	SD	1.3470184
30701	95% DL/2 (t) UCL		22.963753	95% H-Stat (DL/2) UCL	24.971033
30702					
30703	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
30704	**MLE yields a negative mean**			Mean in Log Scale	1.7615089
30705				SD in Log Scale	1.4700985
30706				Mean in Original Scale	16.233064
30707				SD in Original Scale	31.922767
30708				95% t UCL	23.119992
30709				95% Percentile Bootstrap UCL	23.851407
30710				95% BCA Bootstrap UCL	25.91267
30711					
30712	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
30713	k star (bias corrected)		1.0663966	**Data appear Lognormal at 5% Significance Level**	
30714	Theta Star		26.120249		
30715	nu star		70.382177		
30716					
30717	A-D Test Statistic		1.7955704	**Nonparametric Statistics**	
30718	5% A-D Critical Value		0.7724576	Kaplan-Meier (KM) Method	
30719	K-S Test Statistic		0.7724576	Mean	17.03
30720	5% K-S Critical Value		0.1572116	SD	31.297087
30721	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	4.1030828
30722				95% KM (t) UCL	23.886633
30723	**Assuming Gamma Distribution**			95% KM (z) UCL	23.778971
30724	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	23.573065
30725	Minimum		1E-12	95% KM (bootstrap t) UCL	32.355464
30726	Maximum		190	95% KM (BCA) UCL	25.08
30727	Mean		25.006678	95% KM (Percentile Bootstrap) UCL	24.431667
30728	Median		16	95% KM (Chebyshev) UCL	34.914923
30729	SD		31.804792	97.5% KM (Chebyshev) UCL	42.653744

	A	B	C	D	E
30730	k star		0.2162094	99% KM (Chebyshev) UCL	57.855158
30731	Theta star		115.65952		
30732	Nu star		25.945131	**Potential UCLs to Use**	
30733	AppChi2		15.337102	95% KM (t) UCL	23.886633
30734	95% Gamma Approximate UCL		42.302749	95% KM (% Bootstrap) UCL	24.431667
30735	95% Adjusted Gamma UCL		42.865312		
30736	**Note: DL/2 is not a recommended method.**				
30737					
30738	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
30739	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
30740	**For additional insight, the user may want to consult a statistician.**				
30741					
30742					
30743	**OS|UG/KG|NAPHTHALENE (gi_sd_stillwater_2010)**				
30744					
30745	**General Statistics**				
30746	Number of Valid Data		11	Number of Detected Data	2
30747	Number of Distinct Detected Data		2	Number of Non-Detect Data	9
30748				Percent Non-Detects	81.82%
30749					
30750	**Raw Statistics**			**Log-transformed Statistics**	
30751	Minimum Detected		7	Minimum Detected	1.9459101
30752	Maximum Detected		67	Maximum Detected	4.2046926
30753	Mean of Detected		37	Mean of Detected	3.0753014
30754	SD of Detected		42.426407	SD of Detected	1.5972004
30755	Minimum Non-Detect		18	Minimum Non-Detect	2.8903718
30756	Maximum Non-Detect		520	Maximum Non-Detect	6.2538288
30757					
30758	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	11
30759	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
30760	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
30761					
30762	**Warning: Data set has only 2 Distinct Detected Values.**				
30763	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
30764	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
30765					
30766	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
30767					
30768	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
30769	**Those methods will return a 'N/A' value on your output display!**				
30770					
30771	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
30772	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
30773	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
30774					
30775					
30776	**UCL Statistics**				
30777	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
30778	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
30779	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
30780	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
30781					
30782	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30783	DL/2 Substitution Method			DL/2 Substitution Method	
30784	Mean		75.136364	Mean	3.7234067

	A	B	C	D	E
30785	SD		80.426159	SD	1.2288035
30786	95% DL/2 (t) UCL		119.08746	95% H-Stat (DL/2) UCL	337.37452
30787					
30788	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
30789	**MLE method failed to converge properly**			Mean in Log Scale	N/A
30790				SD in Log Scale	N/A
30791				Mean in Original Scale	N/A
30792				SD in Original Scale	N/A
30793				95% t UCL	N/A
30794				95% Percentile Bootstrap UCL	N/A
30795				95% BCA Bootstrap UCL	N/A
30796					
30797	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
30798	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
30799	Theta Star		N/A		
30800	nu star		N/A		
30801					
30802	A-D Test Statistic		N/A	**Nonparametric Statistics**	
30803	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
30804	K-S Test Statistic		N/A	Mean	19
30805	5% K-S Critical Value		N/A	SD	24
30806	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	15.178933
30807				95% KM (t) UCL	46.511226
30808	**Assuming Gamma Distribution**			95% KM (z) UCL	43.967123
30809	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	60.804388
30810	Minimum		N/A	95% KM (bootstrap t) UCL	N/A
30811	Maximum		N/A	95% KM (BCA) UCL	67
30812	Mean		N/A	95% KM (Percentile Bootstrap) UCL	67
30813	Median		N/A	95% KM (Chebyshev) UCL	85.163434
30814	SD		N/A	97.5% KM (Chebyshev) UCL	113.7924
30815	k star		N/A	99% KM (Chebyshev) UCL	170.02847
30816	Theta star		N/A		
30817	Nu star		N/A	**Potential UCLs to Use**	
30818	AppChi2		N/A	97.5% KM (Chebyshev) UCL	113.7924
30819	95% Gamma Approximate UCL		N/A		
30820	95% Adjusted Gamma UCL		N/A		
30821	**Warning: Recommended UCL exceeds the maximum observation**				
30822	**Note: DL/2 is not a recommended method.**				
30823					
30824	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
30825	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
30826	**For additional insight, the user may want to consult a statistician.**				
30827					
30828					
30829	**OS|UG/KG|PHENANTHRENE (gi_sd_ne_2005)**				
30830					
30831	**General Statistics**				
30832	Number of Valid Observations		36	Number of Distinct Observations	32
30833					
30834	**Raw Statistics**			**Log-transformed Statistics**	
30835	Minimum		16	Minimum of Log Data	2.7725887
30836	Maximum		3300	Maximum of Log Data	8.1016777
30837	Mean		319.66667	Mean of log Data	4.6894477
30838	Median		110	SD of log Data	1.3756571
30839	SD		666.46552		
30840	Coefficient of Variation		2.0848765		
30841	Skewness		3.615602		
30842					
30843	**Relevant UCL Statistics**				
30844	**Normal Distribution Test**			**Lognormal Distribution Test**	
30845	Shapiro Wilk Test Statistic		0.4789655	Shapiro Wilk Test Statistic	0.9386642
30846	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
30847	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
30848					
30849	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30850	95% Student's-t UCL		507.3403	95% H-UCL	542.73541
30851	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	602.79922
30852	95% Adjusted-CLT UCL (Chen-1995)		573.89447	97.5% Chebyshev (MVUE) UCL	748.03205

	A	B	C	D	E
30853	95% Modified-t UCL (Johnson-1978)		518.4962	99% Chebyshev (MVUE) UCL	1033.3138
30854					
30855	**Gamma Distribution Test**			**Data Distribution**	
30856	k star (bias corrected)		0.547112	**Data appear Lognormal at 5% Significance Level**	
30857	Theta Star		584.28017		
30858	MLE of Mean		319.66667		
30859	MLE of Standard Deviation		432.17461		
30860	nu star		39.392061		
30861	Approximate Chi Square Value (.05)		26.014288	**Nonparametric Statistics**	
30862	Adjusted Level of Significance		0.0428	95% CLT UCL	502.37304
30863	Adjusted Chi Square Value		25.519695	95% Jackknife UCL	507.3403
30864				95% Standard Bootstrap UCL	497.59368
30865	Anderson-Darling Test Statistic		2.1357978	95% Bootstrap-t UCL	872.13009
30866	Anderson-Darling 5% Critical Value		0.8049193	95% Hall's Bootstrap UCL	1287.9473
30867	Kolmogorov-Smirnov Test Statistic		0.2133046	95% Percentile Bootstrap UCL	506.75
30868	Kolmogorov-Smirnov 5% Critical Value		0.1544281	95% BCA Bootstrap UCL	596.30556
30869	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	803.84264
30870				97.5% Chebyshev(Mean, Sd) UCL	1013.346
30871	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1424.8747
30872	95% Approximate Gamma UCL		484.05433		
30873	95% Adjusted Gamma UCL		493.43571		
30874					
30875	**Potential UCL to Use**			Use 95% H-UCL	542.73541
30876					
30877	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
30878	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
30879	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
30880	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
30881					
30882	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
30883	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
30884	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
30885					
30886					
30887	**OS|UG/KG|PHENANTHRENE (gi_sd_ne_2009)**				
30888					
30889	**General Statistics**				
30890	Number of Valid Data		20	Number of Detected Data	19
30891	Number of Distinct Detected Data		17	Number of Non-Detect Data	1
30892				Percent Non-Detects	5.00%
30893					
30894	**Raw Statistics**			**Log-transformed Statistics**	
30895	Minimum Detected		3.4	Minimum Detected	1.2237754
30896	Maximum Detected		790	Maximum Detected	6.6720329
30897	Mean of Detected		194.91158	Mean of Detected	4.3485573
30898	SD of Detected		244.34798	SD of Detected	1.6162023
30899	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
30900	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
30901					
30902					
30903	**UCL Statistics**				
30904	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
30905	Shapiro Wilk Test Statistic		0.745809	Shapiro Wilk Test Statistic	0.9514683
30906	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
30907	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
30908					
30909	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30910	DL/2 Substitution Method			DL/2 Substitution Method	
30911	Mean		185.2485	Mean	4.1561682
30912	SD		241.72509	SD	1.7930147
30913	95% DL/2 (t) UCL		278.7105	95% H-Stat (DL/2) UCL	1606.8236
30914					

	A	B	C	D	E
30915	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
30916	Mean		178.15653	Mean in Log Scale	4.1509161
30917	SD		244.48717	SD in Log Scale	1.8044032
30918	95% MLE (t) UCL		272.68648	Mean in Original Scale	185.24027
30919	95% MLE (Tiku) UCL		266.41485	SD in Original Scale	241.73167
30920				95% t UCL	278.70482
30921				95% Percentile Bootstrap UCL	273.31282
30922				95% BCA Bootstrap UCL	294.762
30923					
30924	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
30925	k star (bias corrected)		0.5905202	**Data appear Gamma Distributed at 5% Significance Level**	
30926	Theta Star		330.06761		
30927	nu star		22.439766		
30928					
30929	A-D Test Statistic		0.3358858	**Nonparametric Statistics**	
30930	5% A-D Critical Value		0.7874679	Kaplan-Meier (KM) Method	
30931	K-S Test Statistic		0.7874679	Mean	185.336
30932	5% K-S Critical Value		0.2075006	SD	235.53659
30933	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	54.110796
30934				95% KM (t) UCL	278.90075
30935	**Assuming Gamma Distribution**			95% KM (z) UCL	274.34034
30936	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	278.71845
30937	Minimum		1E-12	95% KM (bootstrap t) UCL	319.16238
30938	Maximum		790	95% KM (BCA) UCL	287.51
30939	Mean		185.166	95% KM (Percentile Bootstrap) UCL	278.74
30940	Median		107.5	95% KM (Chebyshev) UCL	421.19949
30941	SD		241.79132	97.5% KM (Chebyshev) UCL	523.25782
30942	k star		0.2728983	99% KM (Chebyshev) UCL	723.73163
30943	Theta star		678.51657		
30944	Nu star		10.915931	**Potential UCLs to Use**	
30945	AppChi2		4.522003	95% KM (Chebyshev) UCL	421.19949
30946	95% Gamma Approximate UCL		446.98318		
30947	95% Adjusted Gamma UCL		481.19305		
30948	**Note: DL/2 is not a recommended method.**				
30949					
30950	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
30951	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
30952	**For additional insight, the user may want to consult a statistician.**				
30953					
30954					
30955	**OS|UG/KG|PHENANTHRENE (gi_sd_ne_2010)**				
30956					
30957	**General Statistics**				
30958	Number of Valid Observations		16	Number of Distinct Observations	14
30959					
30960	**Raw Statistics**			**Log-transformed Statistics**	
30961	Minimum		25	Minimum of Log Data	3.2188758
30962	Maximum		1500	Maximum of Log Data	7.3132204
30963	Mean		387.125	Mean of log Data	5.2353371
30964	Median		255	SD of log Data	1.3709713
30965	SD		422.24951		
30966	Coefficient of Variation		1.0907317		
30967	Skewness		1.4091807		
30968					
30969	**Relevant UCL Statistics**				
30970	**Normal Distribution Test**			**Lognormal Distribution Test**	
30971	Shapiro Wilk Test Statistic		0.8215375	Shapiro Wilk Test Statistic	0.9131996
30972	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
30973	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
30974					
30975	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
30976	95% Student's-t UCL		572.18116	95% H-UCL	1554.3863
30977	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1178.0074
30978	95% Adjusted-CLT UCL (Chen-1995)		600.49677	97.5% Chebyshev (MVUE) UCL	1499.4602
30979	95% Modified-t UCL (Johnson-1978)		578.37935	99% Chebyshev (MVUE) UCL	2130.8919
30980					
30981	**Gamma Distribution Test**			**Data Distribution**	
30982	k star (bias corrected)		0.706306	**Data appear Gamma Distributed at 5% Significance Level**	

	A	B	C	D	E
30983	Theta Star		548.09817		
30984	MLE of Mean		387.125		
30985	MLE of Standard Deviation		460.63272		
30986	nu star		22.601791		
30987	Approximate Chi Square Value (.05)		12.790446	**Nonparametric Statistics**	
30988	Adjusted Level of Significance		0.03348	95% CLT UCL	560.75966
30989	Adjusted Chi Square Value		11.955649	95% Jackknife UCL	572.18116
30990				95% Standard Bootstrap UCL	555.39048
30991	Anderson-Darling Test Statistic		0.5972933	95% Bootstrap-t UCL	634.45486
30992	Anderson-Darling 5% Critical Value		0.7714674	95% Hall's Bootstrap UCL	679.89207
30993	Kolmogorov-Smirnov Test Statistic		0.2077058	95% Percentile Bootstrap UCL	555.9375
30994	Kolmogorov-Smirnov 5% Critical Value		0.2226595	95% BCA Bootstrap UCL	592
30995	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	847.26074
30996				97.5% Chebyshev(Mean, Sd) UCL	1046.3618
30997	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1437.4574
30998	95% Approximate Gamma UCL		684.08231		
30999	95% Adjusted Gamma UCL		731.848		
31000					
31001	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	684.08231
31002					
31003	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
31004	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
31005	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
31006					
31007					
31008	**OS|UG/KG|PHENANTHRENE (gi_sd_nw_2005)**				
31009					
31010	**General Statistics**				
31011	Number of Valid Observations		18	Number of Distinct Observations	17
31012					
31013	**Raw Statistics**			**Log-transformed Statistics**	
31014	Minimum		81	Minimum of Log Data	4.3944492
31015	Maximum		2400	Maximum of Log Data	7.783224
31016	Mean		468.66667	Mean of log Data	5.5982513
31017	Median		195	SD of log Data	0.9982664
31018	SD		613.49117		
31019	Coefficient of Variation		1.3090139		
31020	Skewness		2.3393833		
31021					
31022	**Relevant UCL Statistics**				
31023	**Normal Distribution Test**			**Lognormal Distribution Test**	
31024	Shapiro Wilk Test Statistic		0.6576421	Shapiro Wilk Test Statistic	0.9126128
31025	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
31026	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
31027					
31028	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
31029	95% Student's-t UCL		720.21598	95% H-UCL	841.01242
31030	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	913.85036
31031	95% Adjusted-CLT UCL (Chen-1995)		791.71025	97.5% Chebyshev (MVUE) UCL	1124.3178
31032	95% Modified-t UCL (Johnson-1978)		733.50479	99% Chebyshev (MVUE) UCL	1537.7403
31033					
31034	**Gamma Distribution Test**			**Data Distribution**	
31035	k star (bias corrected)		0.9049089	**Data appear Lognormal at 5% Significance Level**	
31036	Theta Star		517.91585		
31037	MLE of Mean		468.66667		
31038	MLE of Standard Deviation		492.67626		
31039	nu star		32.576721		
31040	Approximate Chi Square Value (.05)		20.529915	**Nonparametric Statistics**	
31041	Adjusted Level of Significance		0.03574	95% CLT UCL	706.51457
31042	Adjusted Chi Square Value		19.613729	95% Jackknife UCL	720.21598
31043				95% Standard Bootstrap UCL	700.49259
31044	Anderson-Darling Test Statistic		1.1333752	95% Bootstrap-t UCL	984.5745
31045	Anderson-Darling 5% Critical Value		0.7657421	95% Hall's Bootstrap UCL	1101.9553
31046	Kolmogorov-Smirnov Test Statistic		0.2163877	95% Percentile Bootstrap UCL	722
31047	Kolmogorov-Smirnov 5% Critical Value		0.2092568	95% BCA Bootstrap UCL	800.55556
31048	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1098.9689
31049				97.5% Chebyshev(Mean, Sd) UCL	1371.7012
31050	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1907.431

	A	B	C	D	E
31051	95% Approximate Gamma UCL		743.67689		
31052	95% Adjusted Gamma UCL		778.41513		
31053					
31054	**Potential UCL to Use**			Use 95% H-UCL	841.01242
31055					
31056	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
31057	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
31058	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
31059	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
31060					
31061	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
31062	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
31063	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
31064					
31065					
31066	**OS|UG/KG|PHENANTHRENE (gi_sd_nw_2009)**				
31067					
31068	**General Statistics**				
31069	Number of Valid Observations		7	Number of Distinct Observations	7
31070					
31071	**Raw Statistics**			**Log-transformed Statistics**	
31072	Minimum		7.3	Minimum of Log Data	1.9878743
31073	Maximum		420	Maximum of Log Data	6.0402547
31074	Mean		167.32857	Mean of log Data	4.6838319
31075	Median		170	SD of log Data	1.2928169
31076	SD		129.37499		
31077	Coefficient of Variation		0.7731793		
31078	Skewness		1.2134139		
31079					
31080					
31081	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
31082					
31083	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
31084	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
31085					
31086					
31087	**Warning: There are only 7 Values in this data**				
31088	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
31089	**the resulting calculations may not be reliable enough to draw conclusions**				
31090					
31091	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
31092					
31093	**Relevant UCL Statistics**				
31094	**Normal Distribution Test**			**Lognormal Distribution Test**	
31095	Shapiro Wilk Test Statistic		0.9009654	Shapiro Wilk Test Statistic	0.8136723
31096	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
31097	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
31098					
31099	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
31100	95% Student's-t UCL		262.34844	95% H-UCL	2759.8014
31101	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	652.69536
31102	95% Adjusted-CLT UCL (Chen-1995)		271.72355	97.5% Chebyshev (MVUE) UCL	844.35466
31103	95% Modified-t UCL (Johnson-1978)		266.08619	99% Chebyshev (MVUE) UCL	1220.8323
31104					
31105	**Gamma Distribution Test**			**Data Distribution**	

	A	B	C	D	E
31106	k star (bias corrected)		0.8310112	**Data appear Normal at 5% Significance Level**	
31107	Theta Star		201.35537		
31108	MLE of Mean		167.32857		
31109	MLE of Standard Deviation		183.55518		
31110	nu star		11.634157		
31111	Approximate Chi Square Value (.05)		4.9870431	**Nonparametric Statistics**	
31112	Adjusted Level of Significance		0.01584	95% CLT UCL	247.76052
31113	Adjusted Chi Square Value		3.7577657	95% Jackknife UCL	262.34844
31114				95% Standard Bootstrap UCL	240.20393
31115	Anderson-Darling Test Statistic		0.4202216	95% Bootstrap-t UCL	295.46769
31116	Anderson-Darling 5% Critical Value		0.7238992	95% Hall's Bootstrap UCL	679.69633
31117	Kolmogorov-Smirnov Test Statistic		0.1949776	95% Percentile Bootstrap UCL	246.75714
31118	Kolmogorov-Smirnov 5% Critical Value		0.3181102	95% BCA Bootstrap UCL	258.9
31119	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	380.47503
31120				97.5% Chebyshev(Mean, Sd) UCL	472.70367
31121	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	653.86898
31122	95% Approximate Gamma UCL		390.35695		
31123	95% Adjusted Gamma UCL		518.05437		
31124					
31125	**Potential UCL to Use**			Use 95% Student's-t UCL	262.34844
31126					
31127	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
31128	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
31129	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
31130					
31131					
31132	**OS|UG/KG|PHENANTHRENE (gi_sd_nw_2010)**				
31133					
31134	**General Statistics**				
31135	Number of Valid Observations		4	Number of Distinct Observations	4
31136					
31137					
31138	**Warning: This data set only has 4 observations!**				
31139	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
31140	**The data set for variable OS|UG/KG|PHENANTHRENE (gi_sd_nw_2010) was not processed!**				
31141					
31142	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
31143	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
31144					
31145					
31146					
31147	**OS|UG/KG|PHENANTHRENE (gi_sd_ref_2009)**				
31148					
31149	**General Statistics**				
31150	Number of Valid Data		0	Number of Detected Data	0
31151	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
31152	Number of Missing Values		6	Percent Non-Detects	NaN%
31153					
31154	**Warning: This data set only has 0 observations!**				
31155	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
31156	**The data set for variable OS|UG/KG|PHENANTHRENE (gi_sd_ref_2009) was not processed!**				
31157					
31158	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
31159	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
31160					

	A	B	C	D	E
31161					
31162					
31163	**OS|UG/KG|PHENANTHRENE (gi_sd_ref_2010)**				
31164					
31165	**General Statistics**				
31166	Number of Valid Data		0	Number of Detected Data	0
31167	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
31168	Number of Missing Values		3	Percent Non-Detects	NaN%
31169					
31170	**Warning: This data set only has 0 observations!**				
31171	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
31172	**The data set for variable OS|UG/KG|PHENANTHRENE (gi_sd_ref_2010) was not processed!**				
31173					
31174	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
31175	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
31176					
31177					
31178					
31179	**OS|UG/KG|PHENANTHRENE (gi_sd_s_2005)**				
31180					
31181	**General Statistics**				
31182	Number of Valid Observations		8	Number of Distinct Observations	8
31183					
31184	**Raw Statistics**			**Log-transformed Statistics**	
31185	Minimum		43	Minimum of Log Data	3.7612001
31186	Maximum		3000	Maximum of Log Data	8.0063676
31187	Mean		677.875	Mean of log Data	5.8203107
31188	Median		360	SD of log Data	1.2830231
31189	SD		967.28876		
31190	Coefficient of Variation		1.4269427		
31191	Skewness		2.5058493		
31192					
31193					
31194	**Warning: There are only 8 Values in this data**				
31195	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
31196	**the resulting calculations may not be reliable enough to draw conclusions**				
31197					
31198	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
31199					
31200	**Relevant UCL Statistics**				
31201	**Normal Distribution Test**			**Lognormal Distribution Test**	
31202	Shapiro Wilk Test Statistic		0.6464368	Shapiro Wilk Test Statistic	0.9851061
31203	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
31204	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
31205					
31206	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
31207	95% Student's-t UCL		1325.7986	95% H-UCL	5758.0684
31208	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1984.8405
31209	95% Adjusted-CLT UCL (Chen-1995)		1564.1394	97.5% Chebyshev (MVUE) UCL	2558.4066
31210	95% Modified-t UCL (Johnson-1978)		1376.2961	99% Chebyshev (MVUE) UCL	3685.0662
31211					
31212	**Gamma Distribution Test**			**Data Distribution**	
31213	k star (bias corrected)		0.6106044	**Data appear Gamma Distributed at 5% Significance Level**	
31214	Theta Star		1110.1705		
31215	MLE of Mean		677.875		
31216	MLE of Standard Deviation		867.50031		
31217	nu star		9.7696709		
31218	Approximate Chi Square Value (.05)		3.7983201	**Nonparametric Statistics**	
31219	Adjusted Level of Significance		0.01946	95% CLT UCL	1240.3956
31220	Adjusted Chi Square Value		2.9171135	95% Jackknife UCL	1325.7986
31221				95% Standard Bootstrap UCL	1201.2157
31222	Anderson-Darling Test Statistic		0.349975	95% Bootstrap-t UCL	2677.0511
31223	Anderson-Darling 5% Critical Value		0.7415232	95% Hall's Bootstrap UCL	3379.2805

	A	B	C	D	E
31224	Kolmogorov-Smirnov Test Statistic		0.2257311	95% Percentile Bootstrap UCL	1292.875
31225	Kolmogorov-Smirnov 5% Critical Value		0.3030862	95% BCA Bootstrap UCL	1567.5
31226	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	2168.5671
31227				97.5% Chebyshev(Mean, Sd) UCL	2813.5908
31228	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4080.6148
31229	95% Approximate Gamma UCL		1743.5644		
31230	95% Adjusted Gamma UCL		2270.2633		
31231					
31232	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	1743.5644
31233					
31234	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
31235	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
31236	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
31237					
31238					
31239	**OS|UG/KG|PHENANTHRENE (gi_sd_s_2010)**				
31240					
31241	**General Statistics**				
31242	Number of Valid Observations		2	Number of Distinct Observations	2
31243					
31244					
31245	**Warning: This data set only has 2 observations!**				
31246	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
31247	**The data set for variable OS|UG/KG|PHENANTHRENE (gi_sd_s_2010) was not processed!**				
31248					
31249	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
31250	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
31251					
31252					
31253					
31254	**OS|UG/KG|PHENANTHRENE (gi_sd_stillwater_2005)**				
31255					
31256	**General Statistics**				
31257	Number of Valid Observations		4	Number of Distinct Observations	4
31258					
31259					
31260	**Warning: This data set only has 4 observations!**				
31261	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
31262	**The data set for variable OS|UG/KG|PHENANTHRENE (gi_sd_stillwater_2005) was not processed!**				
31263					
31264	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
31265	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
31266					
31267					
31268					
31269	**OS|UG/KG|PHENANTHRENE (gi_sd_stillwater_2009)**				
31270					
31271	**General Statistics**				
31272	Number of Valid Data		60	Number of Detected Data	49
31273	Number of Distinct Detected Data		45	Number of Non-Detect Data	11
31274				Percent Non-Detects	18.33%
31275					
31276	**Raw Statistics**			**Log-transformed Statistics**	
31277	Minimum Detected		3.02	Minimum Detected	1.1052568

	A	B	C	D	E
31278	Maximum Detected		2200	Maximum Detected	7.6962126
31279	Mean of Detected		267.08816	Mean of Detected	4.5014173
31280	SD of Detected		427.14735	SD of Detected	1.6240077
31281	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
31282	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
31283					
31284					
31285	**UCL Statistics**				
31286	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
31287	Shapiro Wilk Test Statistic		0.6357949	Shapiro Wilk Test Statistic	0.9702509
31288	5% Shapiro Wilk Critical Value		0.947	5% Shapiro Wilk Critical Value	0.947
31289	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
31290					
31291	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
31292	DL/2 Substitution Method			DL/2 Substitution Method	
31293	Mean		218.4245	Mean	3.7679662
31294	SD		398.95575	SD	2.1407061
31295	95% DL/2 (t) UCL		304.49409	95% H-Stat (DL/2) UCL	1356.0262
31296					
31297	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
31298	Mean		155.16333	Mean in Log Scale	3.8545057
31299	SD		461.07863	SD in Log Scale	2.0381545
31300	95% MLE (t) UCL		254.63513	Mean in Original Scale	218.74289
31301	95% MLE (Tiku) UCL		252.8022	SD in Original Scale	398.78133
31302				95% t UCL	304.77485
31303				95% Percentile Bootstrap UCL	305.62543
31304				95% BCA Bootstrap UCL	331.31307
31305					
31306	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
31307	k star (bias corrected)		0.5513343	**Data appear Gamma Distributed at 5% Significance Level**	
31308	Theta Star		484.43963		
31309	nu star		54.030757		
31310					
31311	A-D Test Statistic		0.7884382	**Nonparametric Statistics**	
31312	5% A-D Critical Value		0.8078452	Kaplan-Meier (KM) Method	
31313	K-S Test Statistic		0.8078452	Mean	218.67567
31314	5% K-S Critical Value		0.1331786	SD	395.47985
31315	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	51.585324
31316				95% KM (t) UCL	304.87954
31317	**Assuming Gamma Distribution**			95% KM (z) UCL	303.52597
31318	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	304.19122
31319	Minimum		1E-12	95% KM (bootstrap t) UCL	351.92197
31320	Maximum		2200	95% KM (BCA) UCL	307.41133
31321	Mean		218.122	95% KM (Percentile Bootstrap) UCL	308.615
31322	Median		66.5	95% KM (Chebyshev) UCL	443.53088
31323	SD		399.12338	97.5% KM (Chebyshev) UCL	540.82591
31324	k star		0.1226444	99% KM (Chebyshev) UCL	731.94316
31325	Theta star		1778.4909		
31326	Nu star		14.717331	**Potential UCLs to Use**	
31327	AppChi2		7.0653479	95% KM (Chebyshev) UCL	443.53088
31328	95% Gamma Approximate UCL		454.35465		
31329	95% Adjusted Gamma UCL		462.92804		
31330	**Note: DL/2 is not a recommended method.**				
31331					
31332	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
31333	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
31334	**For additional insight, the user may want to consult a statistician.**				
31335					
31336					
31337	**OS|UG/KG|PHENANTHRENE (gi_sd_stillwater_2010)**				
31338					
31339	**General Statistics**				
31340	Number of Valid Observations		11	Number of Distinct Observations	11
31341					
31342	**Raw Statistics**			**Log-transformed Statistics**	
31343	Minimum		130	Minimum of Log Data	4.8675345
31344	Maximum		4700	Maximum of Log Data	8.4553178

	A	B	C	D	E
31345	Mean		1197.7273	Mean of log Data	6.4527217
31346	Median		540	SD of log Data	1.1473986
31347	SD		1533.071		
31348	Coefficient of Variation		1.2799834		
31349	Skewness		1.7707624		
31350					
31351	**Relevant UCL Statistics**				
31352	**Normal Distribution Test**			**Lognormal Distribution Test**	
31353	Shapiro Wilk Test Statistic		0.7016663	Shapiro Wilk Test Statistic	0.9407848
31354	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
31355	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
31356					
31357	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
31358	95% Student's-t UCL		2035.5162	95% H-UCL	4040.6497
31359	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	2933.4103
31360	95% Adjusted-CLT UCL (Chen-1995)		2221.7417	97.5% Chebyshev (MVUE) UCL	3716.5251
31361	95% Modified-t UCL (Johnson-1978)		2076.6481	99% Chebyshev (MVUE) UCL	5254.8024
31362					
31363	**Gamma Distribution Test**			**Data Distribution**	
31364	k star (bias corrected)		0.7280678	**Data appear Gamma Distributed at 5% Significance Level**	
31365	Theta Star		1645.0765		
31366	MLE of Mean		1197.7273		
31367	MLE of Standard Deviation		1403.6926		
31368	nu star		16.017492		
31369	Approximate Chi Square Value (.05)		7.9745171	**Nonparametric Statistics**	
31370	Adjusted Level of Significance		0.02783	95% CLT UCL	1958.0416
31371	Adjusted Chi Square Value		7.0682256	95% Jackknife UCL	2035.5162
31372				95% Standard Bootstrap UCL	1927.0527
31373	Anderson-Darling Test Statistic		0.6694928	95% Bootstrap-t UCL	3827.9473
31374	Anderson-Darling 5% Critical Value		0.7551587	95% Hall's Bootstrap UCL	5124.9794
31375	Kolmogorov-Smirnov Test Statistic		0.2401536	95% Percentile Bootstrap UCL	1949.5455
31376	Kolmogorov-Smirnov 5% Critical Value		0.2632221	95% BCA Bootstrap UCL	2143.6364
31377	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3212.5774
31378				97.5% Chebyshev(Mean, Sd) UCL	4084.4046
31379	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	5796.9404
31380	95% Approximate Gamma UCL		2405.7366		
31381	95% Adjusted Gamma UCL		2714.2013		
31382					
31383	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	2405.7366
31384					
31385	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
31386	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
31387	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
31388					
31389					
31390	**OS|UG/KG|PHENOL (gi_sd_ne_2005)**				
31391					
31392	**General Statistics**				
31393	Number of Valid Data		36	Number of Detected Data	13
31394	Number of Distinct Detected Data		12	Number of Non-Detect Data	23
31395				Percent Non-Detects	63.89%
31396					
31397	**Raw Statistics**			**Log-transformed Statistics**	
31398	Minimum Detected		36	Minimum Detected	3.5835189
31399	Maximum Detected		820	Maximum Detected	6.7093043
31400	Mean of Detected		219.84615	Mean of Detected	4.8926648
31401	SD of Detected		230.10753	SD of Detected	1.0608061
31402	Minimum Non-Detect		330	Minimum Non-Detect	5.7990927
31403	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
31404					
31405					
31406	**UCL Statistics**				
31407	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
31408	Shapiro Wilk Test Statistic		0.7986514	Shapiro Wilk Test Statistic	0.9216289
31409	5% Shapiro Wilk Critical Value		0.866	5% Shapiro Wilk Critical Value	0.866
31410	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
31411					

	A	B	C	D	E
31412	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
31413	DL/2 Substitution Method			DL/2 Substitution Method	
31414	Mean		184.80556	Mean	5.0289275
31415	SD		137.36059	SD	0.6297737
31416	95% DL/2 (t) UCL		223.48567	95% H-Stat (DL/2) UCL	230.79207
31417					
31418	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
31419	Mean		627.81093	Mean in Log Scale	4.6113158
31420	SD		192.93062	SD in Log Scale	0.9001961
31421	95% MLE (t) UCL		682.1393	Mean in Original Scale	150.69151
31422	95% MLE (Tiku) UCL		811.05121	SD in Original Scale	157.93707
31423				95% t UCL	195.16586
31424				95% Percentile Bootstrap UCL	195.1684
31425				95% BCA Bootstrap UCL	207.81069
31426					
31427	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
31428	k star (bias corrected)		0.9260396	**Data appear Gamma Distributed at 5% Significance Level**	
31429	Theta Star		237.4047		
31430	nu star		24.07703		
31431					
31432	A-D Test Statistic		0.5124852	**Nonparametric Statistics**	
31433	5% A-D Critical Value		0.7554602	Kaplan-Meier (KM) Method	
31434	K-S Test Statistic		0.7554602	Mean	155.92778
31435	5% K-S Critical Value		0.2424538	SD	160.33916
31436	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	36.668871
31437				95% KM (t) UCL	217.88249
31438	**Assuming Gamma Distribution**			95% KM (z) UCL	216.2427
31439	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	219.18572
31440	Minimum		36	95% KM (bootstrap t) UCL	233.14029
31441	Maximum		820	95% KM (BCA) UCL	216.60606
31442	Mean		210.69285	95% KM (Percentile Bootstrap) UCL	215.38889
31443	Median		203.46973	95% KM (Chebyshev) UCL	315.76368
31444	SD		139.15795	97.5% KM (Chebyshev) UCL	384.9248
31445	k star		2.5084621	99% KM (Chebyshev) UCL	520.77844
31446	Theta star		83.992839		
31447	Nu star		180.60927	**Potential UCLs to Use**	
31448	AppChi2		150.5252	95% KM (t) UCL	217.88249
31449	95% Gamma Approximate UCL		252.80206		
31450	95% Adjusted Gamma UCL		254.91055		
31451	**Note: DL/2 is not a recommended method.**				
31452					
31453	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
31454	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
31455	**For additional insight, the user may want to consult a statistician.**				
31456					
31457					
31458	**OS|UG/KG|PHENOL (gi_sd_ne_2009)**				
31459					
31460	**General Statistics**				
31461	Number of Valid Data		0	Number of Detected Data	0
31462	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
31463	Number of Missing Values		20	Percent Non-Detects	NaN%
31464					
31465	**Warning: This data set only has 0 observations!**				
31466	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
31467	**The data set for variable OS|UG/KG|PHENOL (gi_sd_ne_2009) was not processed!**				
31468					
31469	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
31470	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
31471					
31472					
31473					
31474	**OS|UG/KG|PHENOL (gi_sd_ne_2010)**				

	A	B	C	D	E
31475					
31476	**General Statistics**				
31477	Number of Valid Data		0	Number of Detected Data	0
31478	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
31479	Number of Missing Values		16	Percent Non-Detects	NaN%
31480					
31481	**Warning: This data set only has 0 observations!**				
31482	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
31483	**The data set for variable OS|UG/KG|PHENOL (gi_sd_ne_2010) was not processed!**				
31484					
31485	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
31486	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
31487					
31488					
31489					
31490	**OS|UG/KG|PHENOL (gi_sd_nw_2005)**				
31491					
31492	**General Statistics**				
31493	Number of Valid Data		18	Number of Detected Data	6
31494	Number of Distinct Detected Data		5	Number of Non-Detect Data	12
31495				Percent Non-Detects	66.67%
31496					
31497	**Raw Statistics**			**Log-transformed Statistics**	
31498	Minimum Detected		39	Minimum Detected	3.6635616
31499	Maximum Detected		1400	Maximum Detected	7.2442275
31500	Mean of Detected		326.33333	Mean of Detected	4.8662986
31501	SD of Detected		533.1944	SD of Detected	1.4138093
31502	Minimum Non-Detect		330	Minimum Non-Detect	5.7990927
31503	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
31504					
31505					
31506	**Warning: There are only 6 Detected Values in this data**				
31507	**Note: It should be noted that even though bootstrap may be performed on this data set**				
31508	**the resulting calculations may not be reliable enough to draw conclusions**				
31509					
31510	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
31511					
31512					
31513	**UCL Statistics**				
31514	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
31515	Shapiro Wilk Test Statistic		0.6293538	Shapiro Wilk Test Statistic	0.8625817
31516	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788
31517	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
31518					
31519	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
31520	DL/2 Substitution Method			DL/2 Substitution Method	
31521	Mean		218.77778	Mean	5.0260632
31522	SD		299.56784	SD	0.7755077
31523	95% DL/2 (t) UCL		341.60935	95% H-Stat (DL/2) UCL	318.98606
31524					
31525	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
31526	**MLE method failed to converge properly**			Mean in Log Scale	4.5612881
31527				SD in Log Scale	1.1571374
31528				Mean in Original Scale	194.42018
31529				SD in Original Scale	320.45935
31530				95% t UCL	325.81789
31531				95% Percentile Bootstrap UCL	325.5053
31532				95% BCA Bootstrap UCL	408.50755
31533					
31534	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
31535	k star (bias corrected)		0.4416405	**Data appear Gamma Distributed at 5% Significance Level**	
31536	Theta Star		738.91167		

	A	B	C	D	E
31537	nu star		5.2996862		
31538					
31539	A-D Test Statistic		0.6213257	**Nonparametric Statistics**	
31540	5% A-D Critical Value		0.7262767	Kaplan-Meier (KM) Method	
31541	K-S Test Statistic		0.7262767	Mean	183.17778
31542	5% K-S Critical Value		0.3452857	SD	307.09472
31543	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	86.259507
31544				95% KM (t) UCL	333.2354
31545	**Assuming Gamma Distribution**			95% KM (z) UCL	325.06204
31546	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	329.95723
31547	Minimum		1E-12	95% KM (bootstrap t) UCL	507.39868
31548	Maximum		1400	95% KM (BCA) UCL	341.44444
31549	Mean		303.53045	95% KM (Percentile Bootstrap) UCL	318.51852
31550	Median		258.17618	95% KM (Chebyshev) UCL	559.17425
31551	SD		316.0299	97.5% KM (Chebyshev) UCL	721.86823
31552	k star		0.2981424	99% KM (Chebyshev) UCL	1041.449
31553	Theta star		1018.0722		
31554	Nu star		10.733125	**Potential UCLs to Use**	
31555	AppChi2		4.4049993	95% KM (t) UCL	333.2354
31556	95% Gamma Approximate UCL		739.57564		
31557	95% Adjusted Gamma UCL		809.96977		
31558	**Note: DL/2 is not a recommended method.**				
31559					
31560	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
31561	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
31562	**For additional insight, the user may want to consult a statistician.**				
31563					
31564					
31565	**OS|UG/KG|PHENOL (gi_sd_nw_2009)**				
31566					
31567	**General Statistics**				
31568	Number of Valid Data		0	Number of Detected Data	0
31569	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
31570	Number of Missing Values		7	Percent Non-Detects	NaN%
31571					
31572	**Warning: This data set only has 0 observations!**				
31573	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
31574	**The data set for variable OS|UG/KG|PHENOL (gi_sd_nw_2009) was not processed!**				
31575					
31576	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
31577	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
31578					
31579					
31580					
31581	**OS|UG/KG|PHENOL (gi_sd_nw_2010)**				
31582					
31583	**General Statistics**				
31584	Number of Valid Data		0	Number of Detected Data	0
31585	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
31586	Number of Missing Values		4	Percent Non-Detects	NaN%
31587					
31588	**Warning: This data set only has 0 observations!**				
31589	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
31590	**The data set for variable OS|UG/KG|PHENOL (gi_sd_nw_2010) was not processed!**				
31591					
31592	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
31593	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
31594					
31595					

	A	B	C	D	E
31596					
31597	OS|UG/KG|PHENOL (gi_sd_ref_2009)				
31598					
31599	General Statistics				
31600	Number of Valid Data		0	Number of Detected Data	0
31601	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
31602	Number of Missing Values		6	Percent Non-Detects	NaN%
31603					
31604	Warning: This data set only has 0 observations!				
31605	Data set is too small to compute reliable and meaningful statistics and estimates!				
31606	The data set for variable OS|UG/KG|PHENOL (gi_sd_ref_2009) was not processed!				
31607					
31608	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
31609	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
31610					
31611					
31612					
31613	OS|UG/KG|PHENOL (gi_sd_ref_2010)				
31614					
31615	General Statistics				
31616	Number of Valid Data		0	Number of Detected Data	0
31617	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
31618	Number of Missing Values		3	Percent Non-Detects	NaN%
31619					
31620	Warning: This data set only has 0 observations!				
31621	Data set is too small to compute reliable and meaningful statistics and estimates!				
31622	The data set for variable OS|UG/KG|PHENOL (gi_sd_ref_2010) was not processed!				
31623					
31624	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
31625	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
31626					
31627					
31628					
31629	OS|UG/KG|PHENOL (gi_sd_s_2005)				
31630					
31631	General Statistics				
31632	Number of Valid Data		8	Number of Detected Data	3
31633	Number of Distinct Detected Data		3	Number of Non-Detect Data	5
31634				Percent Non-Detects	62.50%
31635					
31636	Raw Statistics			Log-transformed Statistics	
31637	Minimum Detected		38	Minimum Detected	3.6375862
31638	Maximum Detected		110	Maximum Detected	4.7004804
31639	Mean of Detected		77	Mean of Detected	4.2523024
31640	SD of Detected		36.373067	SD of Detected	0.5506698
31641	Minimum Non-Detect		330	Minimum Non-Detect	5.7990927
31642	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
31643					
31644					
31645	Warning: There are only 3 Distinct Detected Values in this data set				
31646	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.				
31647	Those methods will return a 'N/A' value on your output display!				
31648					
31649	It is necessary to have 4 or more Distinct Values for bootstrap methods.				
31650	However, results obtained using 4 to 9 distinct values may not be reliable.				
31651	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.				
31652					

	A	B	C	D	E
31653					
31654	**UCL Statistics**				
31655	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
31656	Shapiro Wilk Test Statistic		0.979573	Shapiro Wilk Test Statistic	0.9313849
31657	5% Shapiro Wilk Critical Value		0.767	5% Shapiro Wilk Critical Value	0.767
31658	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
31659					
31660	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
31661	DL/2 Substitution Method			DL/2 Substitution Method	
31662	Mean		132	Mean	4.7858293
31663	SD		49.520559	SD	0.5308752
31664	95% DL/2 (t) UCL		165.17059	95% H-Stat (DL/2) UCL	223.58237
31665					
31666	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
31667	**MLE method failed to converge properly**			Mean in Log Scale	4.2523024
31668				SD in Log Scale	0.5343754
31669				Mean in Original Scale	79.168663
31670				SD in Original Scale	40.035012
31671				95% t UCL	105.9855
31672				95% Percentile Bootstrap UCL	102.51677
31673				95% BCA Bootstrap UCL	103.434
31674					
31675	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
31676	k star (bias corrected)		N/A	**Data appear Normal at 5% Significance Level**	
31677	Theta Star		N/A		
31678	nu star		N/A		
31679					
31680	A-D Test Statistic		N/A	**Nonparametric Statistics**	
31681	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
31682	K-S Test Statistic		N/A	Mean	77
31683	5% K-S Critical Value		N/A	SD	29.698485
31684	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	21
31685				95% KM (t) UCL	116.78615
31686	**Assuming Gamma Distribution**			95% KM (z) UCL	111.54193
31687	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	122.58076
31688	Minimum		N/A	95% KM (bootstrap t) UCL	128.8
31689	Maximum		N/A	95% KM (BCA) UCL	110
31690	Mean		N/A	95% KM (Percentile Bootstrap) UCL	110
31691	Median		N/A	95% KM (Chebyshev) UCL	168.53688
31692	SD		N/A	97.5% KM (Chebyshev) UCL	208.14496
31693	k star		N/A	99% KM (Chebyshev) UCL	285.94736
31694	Theta star		N/A		
31695	Nu star		N/A	**Potential UCLs to Use**	
31696	AppChi2		N/A	95% KM (t) UCL	116.78615
31697	95% Gamma Approximate UCL		N/A	95% KM (Percentile Bootstrap) UCL	110
31698	95% Adjusted Gamma UCL		N/A		
31699	**Warning: Recommended UCL exceeds the maximum observation**				
31700	**Note: DL/2 is not a recommended method.**				
31701					
31702	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
31703	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
31704	**For additional insight, the user may want to consult a statistician.**				
31705					
31706					
31707	**OS|UG/KG|PHENOL (gi_sd_s_2010)**				
31708					
31709	**General Statistics**				
31710	Number of Valid Data		0	Number of Detected Data	0
31711	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
31712	Number of Missing Values		2	Percent Non-Detects	NaN%
31713					
31714	**Warning: This data set only has 0 observations!**				
31715	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
31716	**The data set for variable OS|UG/KG|PHENOL (gi_sd_s_2010) was not processed!**				

	A	B	C	D	E
31717					
31718	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
31719	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
31720					
31721					
31722					
31723	OS|UG/KG|PHENOL (gi_sd_stillwater_2005)				
31724					
31725	General Statistics				
31726	Number of Valid Data		4	Number of Detected Data	1
31727	Number of Distinct Detected Data		1	Number of Non-Detect Data	3
31728				Percent Non-Detects	75.00%
31729					
31730	Warning: This data set only has 4 observations!				
31731	Data set is too small to compute reliable and meaningful statistics and estimates!				
31732	The data set for variable OS|UG/KG|PHENOL (gi_sd_stillwater_2005) was not processed!				
31733					
31734	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
31735	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
31736					
31737					
31738					
31739	OS|UG/KG|PHENOL (gi_sd_stillwater_2009)				
31740					
31741	General Statistics				
31742	Number of Valid Data		0	Number of Detected Data	0
31743	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
31744	Number of Missing Values		60	Percent Non-Detects	NaN%
31745					
31746	Warning: This data set only has 0 observations!				
31747	Data set is too small to compute reliable and meaningful statistics and estimates!				
31748	The data set for variable OS|UG/KG|PHENOL (gi_sd_stillwater_2009) was not processed!				
31749					
31750	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
31751	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
31752					
31753					
31754					
31755	OS|UG/KG|PHENOL (gi_sd_stillwater_2010)				
31756					
31757	General Statistics				
31758	Number of Valid Data		0	Number of Detected Data	0
31759	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
31760	Number of Missing Values		11	Percent Non-Detects	NaN%
31761					
31762	Warning: This data set only has 0 observations!				
31763	Data set is too small to compute reliable and meaningful statistics and estimates!				
31764	The data set for variable OS|UG/KG|PHENOL (gi_sd_stillwater_2010) was not processed!				
31765					
31766	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
31767	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
31768					
31769					
31770					

	A	B	C	D	E
31771	**OS|UG/KG|PYRENE (gi_sd_ne_2005)**				
31772					
31773	**General Statistics**				
31774	Number of Valid Observations		36	Number of Distinct Observations	34
31775					
31776	**Raw Statistics**			**Log-transformed Statistics**	
31777	Minimum		29	Minimum of Log Data	3.3672958
31778	Maximum		2600	Maximum of Log Data	7.8632667
31779	Mean		364.22222	Mean of log Data	5.1413859
31780	Median		170	SD of log Data	1.2030525
31781	SD		559.30657		
31782	Coefficient of Variation		1.535619		
31783	Skewness		2.8801254		
31784					
31785	**Relevant UCL Statistics**				
31786	**Normal Distribution Test**			**Lognormal Distribution Test**	
31787	Shapiro Wilk Test Statistic		0.6090403	Shapiro Wilk Test Statistic	0.9561226
31788	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
31789	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
31790					
31791	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
31792	95% Student's-t UCL		521.72038	95% H-UCL	600.94079
31793	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	702.66571
31794	95% Adjusted-CLT UCL (Chen-1995)		565.36405	97.5% Chebyshev (MVUE) UCL	859.11517
31795	95% Modified-t UCL (Johnson-1978)		529.17813	99% Chebyshev (MVUE) UCL	1166.4298
31796					
31797	**Gamma Distribution Test**			**Data Distribution**	
31798	k star (bias corrected)		0.7394102	**Data appear Lognormal at 5% Significance Level**	
31799	Theta Star		492.58481		
31800	MLE of Mean		364.22222		
31801	MLE of Standard Deviation		423.56857		
31802	nu star		53.237533		
31803	Approximate Chi Square Value (.05)		37.475403	**Nonparametric Statistics**	
31804	Adjusted Level of Significance		0.0428	95% CLT UCL	517.55179
31805	Adjusted Chi Square Value		36.874152	95% Jackknife UCL	521.72038
31806				95% Standard Bootstrap UCL	513.6679
31807	Anderson-Darling Test Statistic		1.2979749	95% Bootstrap-t UCL	665.37965
31808	Anderson-Darling 5% Critical Value		0.7862653	95% Hall's Bootstrap UCL	1050.2766
31809	Kolmogorov-Smirnov Test Statistic		0.174916	95% Percentile Bootstrap UCL	525.36111
31810	Kolmogorov-Smirnov 5% Critical Value		0.1524129	95% BCA Bootstrap UCL	573.61111
31811	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	770.54902
31812				97.5% Chebyshev(Mean, Sd) UCL	946.36695
31813	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1291.7272
31814	95% Approximate Gamma UCL		517.41385		
31815	95% Adjusted Gamma UCL		525.85054		
31816					
31817	**Potential UCL to Use**			Use 95% H-UCL	600.94079
31818					
31819	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
31820	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
31821	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
31822	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
31823					
31824	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
31825	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
31826	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
31827					
31828					
31829	**OS|UG/KG|PYRENE (gi_sd_ne_2009)**				
31830					
31831	**General Statistics**				
31832	Number of Valid Data		20	Number of Detected Data	19
31833	Number of Distinct Detected Data		19	Number of Non-Detect Data	1

	A	B	C	D	E
31834				Percent Non-Detects	5.00%
31835					
31836	**Raw Statistics**			**Log-transformed Statistics**	
31837	Minimum Detected		4.95	Minimum Detected	1.5993876
31838	Maximum Detected		1000	Maximum Detected	6.9077553
31839	Mean of Detected		228.27105	Mean of Detected	4.478049
31840	SD of Detected		296.13791	SD of Detected	1.5960084
31841	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
31842	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
31843					
31844					
31845	**UCL Statistics**				
31846	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
31847	Shapiro Wilk Test Statistic		0.7415711	Shapiro Wilk Test Statistic	0.9569861
31848	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
31849	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
31850					
31851	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
31852	DL/2 Substitution Method			DL/2 Substitution Method	
31853	Mean		216.94	Mean	4.2791853
31854	SD		292.65996	SD	1.7900036
31855	95% DL/2 (t) UCL		330.09576	95% H-Stat (DL/2) UCL	1798.542
31856					
31857	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
31858	Mean		208.25841	Mean in Log Scale	4.2813008
31859	SD		295.94638	SD in Log Scale	1.7853219
31860	95% MLE (t) UCL		322.68485	Mean in Original Scale	216.94357
31861	95% MLE (Tiku) UCL		314.84355	SD in Original Scale	292.6572
31862				95% t UCL	330.09826
31863				95% Percentile Bootstrap UCL	327.85
31864				95% BCA Bootstrap UCL	351.58607
31865					
31866	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
31867	k star (bias corrected)		0.5759605	**Data appear Gamma Distributed at 5% Significance Level**	
31868	Theta Star		396.3311		
31869	nu star		21.886498		
31870					
31871	A-D Test Statistic		0.3957439	**Nonparametric Statistics**	
31872	5% A-D Critical Value		0.7891291	Kaplan-Meier (KM) Method	
31873	K-S Test Statistic		0.7891291	Mean	217.105
31874	5% K-S Critical Value		0.2077703	SD	285.12599
31875	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	65.503176
31876				95% KM (t) UCL	330.36869
31877	**Assuming Gamma Distribution**			95% KM (z) UCL	324.84814
31878	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	330.09751
31879	Minimum		1E-12	95% KM (bootstrap t) UCL	384.24815
31880	Maximum		1000	95% KM (BCA) UCL	340.03
31881	Mean		216.8575	95% KM (Percentile Bootstrap) UCL	325.245
31882	Median		115	95% KM (Chebyshev) UCL	502.62673
31883	SD		292.72407	97.5% KM (Chebyshev) UCL	626.1722
31884	k star		0.270021	99% KM (Chebyshev) UCL	868.85337
31885	Theta star		803.11345		
31886	Nu star		10.80084	**Potential UCLs to Use**	
31887	AppChi2		4.4482731	95% KM (Chebyshev) UCL	502.62673
31888	95% Gamma Approximate UCL		526.55112		
31889	95% Adjusted Gamma UCL		567.14482		
31890	**Note: DL/2 is not a recommended method.**				
31891					
31892	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
31893	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
31894	**For additional insight, the user may want to consult a statistician.**				
31895					
31896					
31897	**OS|UG/KG|PYRENE (gi_sd_ne_2010)**				
31898					
31899	**General Statistics**				
31900	Number of Valid Observations		16	Number of Distinct Observations	15
31901					

	A	B	C	D	E
31902	**Raw Statistics**			**Log-transformed Statistics**	
31903	Minimum		43	Minimum of Log Data	3.7612001
31904	Maximum		1500	Maximum of Log Data	7.3132204
31905	Mean		409.78125	Mean of log Data	5.4493735
31906	Median		250	SD of log Data	1.1723135
31907	SD		416.93265		
31908	Coefficient of Variation		1.0174517		
31909	Skewness		1.3458743		
31910					
31911	**Relevant UCL Statistics**				
31912	**Normal Distribution Test**			**Lognormal Distribution Test**	
31913	Shapiro Wilk Test Statistic		0.831502	Shapiro Wilk Test Statistic	0.9223626
31914	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
31915	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
31916					
31917	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
31918	95% Student's-t UCL		592.50723	95% H-UCL	1139.2357
31919	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1053.6443
31920	95% Adjusted-CLT UCL (Chen-1995)		618.70361	97.5% Chebyshev (MVUE) UCL	1322.1202
31921	95% Modified-t UCL (Johnson-1978)		598.35243	99% Chebyshev (MVUE) UCL	1849.489
31922					
31923	**Gamma Distribution Test**			**Data Distribution**	
31924	k star (bias corrected)		0.868242	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
31925	Theta Star		471.96661		
31926	MLE of Mean		409.78125		
31927	MLE of Standard Deviation		439.77616		
31928	nu star		27.783745		
31929	Approximate Chi Square Value (.05)		16.759774	**Nonparametric Statistics**	
31930	Adjusted Level of Significance		0.03348	95% CLT UCL	581.22954
31931	Adjusted Chi Square Value		15.789667	95% Jackknife UCL	592.50723
31932				95% Standard Bootstrap UCL	572.3527
31933	Anderson-Darling Test Statistic		0.5412513	95% Bootstrap-t UCL	652.83644
31934	Anderson-Darling 5% Critical Value		0.7630017	95% Hall's Bootstrap UCL	642.19644
31935	Kolmogorov-Smirnov Test Statistic		0.2318926	95% Percentile Bootstrap UCL	592.28125
31936	Kolmogorov-Smirnov 5% Critical Value		0.2210817	95% BCA Bootstrap UCL	614.875
31937	**Data follow Appr. Gamma Distribution at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	864.12307
31938				97.5% Chebyshev(Mean, Sd) UCL	1060.7171
31939	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1446.8881
31940	95% Approximate Gamma UCL		679.3205		
31941	95% Adjusted Gamma UCL		721.0575		
31942					
31943	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	679.3205
31944					
31945	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
31946	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
31947	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
31948					
31949					
31950	**OS|UG/KG|PYRENE (gi_sd_nw_2005)**				
31951					
31952	**General Statistics**				
31953	Number of Valid Observations		18	Number of Distinct Observations	16
31954					
31955	**Raw Statistics**			**Log-transformed Statistics**	
31956	Minimum		93	Minimum of Log Data	4.5325995
31957	Maximum		2800	Maximum of Log Data	7.9373747
31958	Mean		637.38889	Mean of log Data	5.8226435
31959	Median		265	SD of log Data	1.0692434
31960	SD		862.65276		
31961	Coefficient of Variation		1.3534167		
31962	Skewness		1.8843789		
31963					
31964	**Relevant UCL Statistics**				
31965	**Normal Distribution Test**			**Lognormal Distribution Test**	
31966	Shapiro Wilk Test Statistic		0.6300049	Shapiro Wilk Test Statistic	0.8790486
31967	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
31968	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	

	A	B	C	D	E
31969					
31970	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
31971	95% Student's-t UCL		991.10174	95% H-UCL	1217.8801
31972	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1274.8274
31973	95% Adjusted-CLT UCL (Chen-1995)		1068.3323	97.5% Chebyshev (MVUE) UCL	1579.1857
31974	95% Modified-t UCL (Johnson-1978)		1006.1533	99% Chebyshev (MVUE) UCL	2177.0385
31975					
31976	**Gamma Distribution Test**			**Data Distribution**	
31977	k star (bias corrected)		0.8026125	**Data do not follow a Discernable Distribution (0.05)**	
31978	Theta Star		794.14271		
31979	MLE of Mean		637.38889		
31980	MLE of Standard Deviation		711.46169		
31981	nu star		28.894051		
31982	Approximate Chi Square Value (.05)		17.625641	**Nonparametric Statistics**	
31983	Adjusted Level of Significance		0.03574	95% CLT UCL	971.83567
31984	Adjusted Chi Square Value		16.782924	95% Jackknife UCL	991.10174
31985				95% Standard Bootstrap UCL	956.26922
31986	Anderson-Darling Test Statistic		1.5248467	95% Bootstrap-t UCL	1144.5507
31987	Anderson-Darling 5% Critical Value		0.7702914	95% Hall's Bootstrap UCL	909.15509
31988	Kolmogorov-Smirnov Test Statistic		0.2526758	95% Percentile Bootstrap UCL	981.11111
31989	Kolmogorov-Smirnov 5% Critical Value		0.2100872	95% BCA Bootstrap UCL	1081.6667
31990	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1523.6803
31991				97.5% Chebyshev(Mean, Sd) UCL	1907.1794
31992	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	2660.4889
31993	95% Approximate Gamma UCL		1044.8838		
31994	95% Adjusted Gamma UCL		1097.3503		
31995					
31996	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	1523.6803
31997					
31998	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
31999	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
32000	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
32001					
32002					
32003	**OS|UG/KG|PYRENE (gi_sd_nw_2009)**				
32004					
32005	**General Statistics**				
32006	Number of Valid Observations		7	Number of Distinct Observations	7
32007					
32008	**Raw Statistics**			**Log-transformed Statistics**	
32009	Minimum		10	Minimum of Log Data	2.3025851
32010	Maximum		290	Maximum of Log Data	5.6698809
32011	Mean		161.71429	Mean of log Data	4.7070378
32012	Median		180	SD of log Data	1.1841427
32013	SD		105.83905		
32014	Coefficient of Variation		0.6544818		
32015	Skewness		-0.230386		
32016					
32017					
32018	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
32019					
32020	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
32021	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
32022					
32023					
32024	**Warning: There are only 7 Values in this data**				
32025	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
32026	**the resulting calculations may not be reliable enough to draw conclusions**				
32027					
32028	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				

	A	B	C	D	E
32029					
32030	**Relevant UCL Statistics**				
32031	**Normal Distribution Test**			**Lognormal Distribution Test**	
32032	Shapiro Wilk Test Statistic		0.9333921	Shapiro Wilk Test Statistic	0.8093564
32033	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
32034	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
32035					
32036	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
32037	95% Student's-t UCL		239.44811	95% H-UCL	1724.772
32038	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	572.03583
32039	95% Adjusted-CLT UCL (Chen-1995)		223.79196	97.5% Chebyshev (MVUE) UCL	735.5251
32040	95% Modified-t UCL (Johnson-1978)		238.86754	99% Chebyshev (MVUE) UCL	1056.6681
32041					
32042	**Gamma Distribution Test**			**Data Distribution**	
32043	k star (bias corrected)		0.9319921	**Data appear Normal at 5% Significance Level**	
32044	Theta Star		173.51465		
32045	MLE of Mean		161.71429		
32046	MLE of Standard Deviation		167.51059		
32047	nu star		13.04789		
32048	Approximate Chi Square Value (.05)		5.9249087	**Nonparametric Statistics**	
32049	Adjusted Level of Significance		0.01584	95% CLT UCL	227.51403
32050	Adjusted Chi Square Value		4.5581721	95% Jackknife UCL	239.44811
32051				95% Standard Bootstrap UCL	221.32625
32052	Anderson-Darling Test Statistic		0.4549809	95% Bootstrap-t UCL	234.91148
32053	Anderson-Darling 5% Critical Value		0.7216867	95% Hall's Bootstrap UCL	213.93417
32054	Kolmogorov-Smirnov Test Statistic		0.2298497	95% Percentile Bootstrap UCL	219.42857
32055	Kolmogorov-Smirnov 5% Critical Value		0.3171948	95% BCA Bootstrap UCL	219.42857
32056	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	336.08507
32057				97.5% Chebyshev(Mean, Sd) UCL	411.53545
32058	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	559.7431
32059	95% Approximate Gamma UCL		356.12872		
32060	95% Adjusted Gamma UCL		462.91147		
32061					
32062	**Potential UCL to Use**			Use 95% Student's-t UCL	239.44811
32063					
32064	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
32065	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
32066	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
32067					
32068					
32069	**OS|UG/KG|PYRENE (gi_sd_nw_2010)**				
32070					
32071	**General Statistics**				
32072	Number of Valid Observations		4	Number of Distinct Observations	4
32073					
32074					
32075	**Warning: This data set only has 4 observations!**				
32076	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
32077	**The data set for variable OS|UG/KG|PYRENE (gi_sd_nw_2010) was not processed!**				
32078					
32079	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
32080	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
32081					
32082					
32083					
32084	**OS|UG/KG|PYRENE (gi_sd_ref_2009)**				
32085					
32086	**General Statistics**				
32087	Number of Valid Data		0	Number of Detected Data	0
32088	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
32089	Number of Missing Values		6	Percent Non-Detects	NaN%
32090					

	A	B	C	D	E
32091	Warning: This data set only has 0 observations!				
32092	Data set is too small to compute reliable and meaningful statistics and estimates!				
32093	The data set for variable OS|UG/KG|PYRENE (gi_sd_ref_2009) was not processed!				
32094					
32095	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
32096	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
32097					
32098					
32099					
32100	OS|UG/KG|PYRENE (gi_sd_ref_2010)				
32101					
32102	General Statistics				
32103	Number of Valid Data		0	Number of Detected Data	0
32104	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
32105	Number of Missing Values		3	Percent Non-Detects	NaN%
32106					
32107	Warning: This data set only has 0 observations!				
32108	Data set is too small to compute reliable and meaningful statistics and estimates!				
32109	The data set for variable OS|UG/KG|PYRENE (gi_sd_ref_2010) was not processed!				
32110					
32111	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
32112	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
32113					
32114					
32115					
32116	OS|UG/KG|PYRENE (gi_sd_s_2005)				
32117					
32118	General Statistics				
32119	Number of Valid Observations		8	Number of Distinct Observations	8
32120					
32121	Raw Statistics			Log-transformed Statistics	
32122	Minimum		68	Minimum of Log Data	4.2195077
32123	Maximum		2800	Maximum of Log Data	7.9373747
32124	Mean		708.5	Mean of log Data	6.0322321
32125	Median		465	SD of log Data	1.1192371
32126	SD		876.79986		
32127	Coefficient of Variation		1.2375439		
32128	Skewness		2.4335766		
32129					
32130					
32131	Warning: There are only 8 Values in this data				
32132	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
32133	the resulting calculations may not be reliable enough to draw conclusions				
32134					
32135	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
32136					
32137	Relevant UCL Statistics				
32138	Normal Distribution Test			Lognormal Distribution Test	
32139	Shapiro Wilk Test Statistic		0.6743852	Shapiro Wilk Test Statistic	0.9664299
32140	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
32141	Data not Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
32142					
32143	Assuming Normal Distribution			Assuming Lognormal Distribution	
32144	95% Student's-t UCL		1295.811	95% H-UCL	3769.2395
32145	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	1931.5474
32146	95% Adjusted-CLT UCL (Chen-1995)		1503.3915	97.5% Chebyshev (MVUE) UCL	2464.5467
32147	95% Modified-t UCL (Johnson-1978)		1340.2643	99% Chebyshev (MVUE) UCL	3511.5205
32148					

	A	B	C	D	E
32149	**Gamma Distribution Test**			**Data Distribution**	
32150	k star (bias corrected)		0.7570099	**Data appear Gamma Distributed at 5% Significance Level**	
32151	Theta Star		935.91906		
32152	MLE of Mean		708.5		
32153	MLE of Standard Deviation		814.3087		
32154	nu star		12.112158		
32155	Approximate Chi Square Value (.05)		5.3009794	**Nonparametric Statistics**	
32156	Adjusted Level of Significance		0.01946	95% CLT UCL	1218.3973
32157	Adjusted Chi Square Value		4.2184614	95% Jackknife UCL	1295.811
32158				95% Standard Bootstrap UCL	1182.9422
32159	Anderson-Darling Test Statistic		0.3742664	95% Bootstrap-t UCL	2301.321
32160	Anderson-Darling 5% Critical Value		0.7343972	95% Hall's Bootstrap UCL	3335.0184
32161	Kolmogorov-Smirnov Test Statistic		0.2467812	95% Percentile Bootstrap UCL	1289.75
32162	Kolmogorov-Smirnov 5% Critical Value		0.3010612	95% BCA Bootstrap UCL	1598.75
32163	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	2059.7393
32164				97.5% Chebyshev(Mean, Sd) UCL	2644.4217
32165	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	3792.9169
32166	95% Approximate Gamma UCL		1618.8451		
32167	95% Adjusted Gamma UCL		2034.264		
32168					
32169	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	1618.8451
32170					
32171	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
32172	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
32173	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
32174					
32175					
32176	**OS|UG/KG|PYRENE (gi_sd_s_2010)**				
32177					
32178	**General Statistics**				
32179	Number of Valid Observations		2	Number of Distinct Observations	2
32180					
32181					
32182	**Warning: This data set only has 2 observations!**				
32183	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
32184	**The data set for variable OS|UG/KG|PYRENE (gi_sd_s_2010) was not processed!**				
32185					
32186	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
32187	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
32188					
32189					
32190					
32191	**OS|UG/KG|PYRENE (gi_sd_stillwater_2005)**				
32192					
32193	**General Statistics**				
32194	Number of Valid Observations		4	Number of Distinct Observations	4
32195					
32196					
32197	**Warning: This data set only has 4 observations!**				
32198	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
32199	**The data set for variable OS|UG/KG|PYRENE (gi_sd_stillwater_2005) was not processed!**				
32200					
32201	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
32202	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
32203					
32204					
32205					

	A	B	C	D	E
32206	**OS|UG/KG|PYRENE (gi_sd_stillwater_2009)**				
32207					
32208	**General Statistics**				
32209	Number of Valid Data		60	Number of Detected Data	55
32210	Number of Distinct Detected Data		49	Number of Non-Detect Data	5
32211				Percent Non-Detects	8.33%
32212					
32213	**Raw Statistics**			**Log-transformed Statistics**	
32214	Minimum Detected		4	Minimum Detected	1.3862944
32215	Maximum Detected		21000	Maximum Detected	9.9522777
32216	Mean of Detected		1291.0367	Mean of Detected	5.3545163
32217	SD of Detected		3227.8714	SD of Detected	2.2279342
32218	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
32219	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
32220					
32221					
32222	**UCL Statistics**				
32223	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
32224	Lilliefors Test Statistic		0.3450475	Lilliefors Test Statistic	0.0997193
32225	5% Lilliefors Critical Value		0.1194682	5% Lilliefors Critical Value	0.1194682
32226	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
32227					
32228	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
32229	DL/2 Substitution Method			DL/2 Substitution Method	
32230	Mean		1183.5878	Mean	4.9500379
32231	SD		3108.9106	SD	2.5245142
32232	95% DL/2 (t) UCL		1854.2954	95% H-Stat (DL/2) UCL	17471.081
32233					
32234	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
32235	Mean		994.5536	Mean in Log Scale	4.9280177
32236	SD		3257.5308	SD in Log Scale	2.5721195
32237	95% MLE (t) UCL		1697.3241	Mean in Original Scale	1183.5785
32238	95% MLE (Tiku) UCL		1637.8967	SD in Original Scale	3108.9142
32239				95% t UCL	1854.2869
32240				95% Percentile Bootstrap UCL	1908.2899
32241				95% BCA Bootstrap UCL	2285.4798
32242					
32243	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
32244	k star (bias corrected)		0.3606685	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
32245	Theta Star		3579.5661		
32246	nu star		39.673534		
32247					
32248	A-D Test Statistic		1.1648454	**Nonparametric Statistics**	
32249	5% A-D Critical Value		0.8464539	Kaplan-Meier (KM) Method	
32250	K-S Test Statistic		0.8464539	Mean	1183.7837
32251	5% K-S Critical Value		0.1290964	SD	3082.8191
32252	**Data follow Appr. Gamma Distribution at 5% Significance Level**			SE of Mean	401.65843
32253				95% KM (t) UCL	1854.9923
32254	**Assuming Gamma Distribution**			95% KM (z) UCL	1844.453
32255	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	1854.4352
32256	Minimum		1E-12	95% KM (bootstrap t) UCL	3312.9135
32257	Maximum		21000	95% KM (BCA) UCL	1891.084
32258	Mean		1183.4503	95% KM (Percentile Bootstrap) UCL	1938.5253
32259	Median		230	95% KM (Chebyshev) UCL	2934.5722
32260	SD		3108.9638	97.5% KM (Chebyshev) UCL	3692.1398
32261	k star		0.1715952	99% KM (Chebyshev) UCL	5180.2346
32262	Theta star		6896.755		
32263	Nu star		20.591429	**Potential UCLs to Use**	
32264	AppChi2		11.288293	95% KM (Chebyshev) UCL	2934.5722
32265	95% Gamma Approximate UCL		2158.7794		
32266	95% Adjusted Gamma UCL		2191.8		
32267	**Note: DL/2 is not a recommended method.**				
32268					
32269	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
32270	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
32271	**For additional insight, the user may want to consult a statistician.**				
32272					

	A	B	C	D	E
32273					
32274	**OS|UG/KG|PYRENE (gi_sd_stillwater_2010)**				
32275					
32276	**General Statistics**				
32277	Number of Valid Observations		11	Number of Distinct Observations	11
32278					
32279	**Raw Statistics**			**Log-transformed Statistics**	
32280	Minimum		230	Minimum of Log Data	5.4380793
32281	Maximum		8900	Maximum of Log Data	9.0938066
32282	Mean		2549.5455	Mean of log Data	7.2101025
32283	Median		1000	SD of log Data	1.1789405
32284	SD		3015.2897		
32285	Coefficient of Variation		1.1826774		
32286	Skewness		1.351531		
32287					
32288	**Relevant UCL Statistics**				
32289	**Normal Distribution Test**			**Lognormal Distribution Test**	
32290	Shapiro Wilk Test Statistic		0.737529	Shapiro Wilk Test Statistic	0.9232587
32291	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
32292	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
32293					
32294	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
32295	95% Student's-t UCL		4197.3337	95% H-UCL	9461.3599
32296	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	6564.4516
32297	95% Adjusted-CLT UCL (Chen-1995)		4440.8155	97.5% Chebyshev (MVUE) UCL	8335.9966
32298	95% Modified-t UCL (Johnson-1978)		4259.0801	99% Chebyshev (MVUE) UCL	11815.854
32299					
32300	**Gamma Distribution Test**			**Data Distribution**	
32301	k star (bias corrected)		0.7298421	**Data appear Gamma Distributed at 5% Significance Level**	
32302	Theta Star		3493.2836		
32303	MLE of Mean		2549.5455		
32304	MLE of Standard Deviation		2984.34		
32305	nu star		16.056526		
32306	Approximate Chi Square Value (.05)		8.0020685	**Nonparametric Statistics**	
32307	Adjusted Level of Significance		0.02783	95% CLT UCL	4044.9544
32308	Adjusted Chi Square Value		7.0939645	95% Jackknife UCL	4197.3337
32309				95% Standard Bootstrap UCL	3968.0615
32310	Anderson-Darling Test Statistic		0.7545639	95% Bootstrap-t UCL	4923.0691
32311	Anderson-Darling 5% Critical Value		0.7550516	95% Hall's Bootstrap UCL	3707.9357
32312	Kolmogorov-Smirnov Test Statistic		0.2449196	95% Percentile Bootstrap UCL	4125.9091
32313	Kolmogorov-Smirnov 5% Critical Value		0.2631972	95% BCA Bootstrap UCL	4317.7273
32314	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	6512.4126
32315				97.5% Chebyshev(Mean, Sd) UCL	8227.1483
32316	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	11595.415
32317	95% Approximate Gamma UCL		5115.7827		
32318	95% Adjusted Gamma UCL		5770.6581		
32319					
32320	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	5115.7827
32321					
32322	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
32323	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
32324	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
32325					
32326					
32327	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ne_2005)**				
32328					
32329	**General Statistics**				
32330	Number of Valid Observations		36	Number of Distinct Observations	36
32331					
32332	**Raw Statistics**			**Log-transformed Statistics**	
32333	Minimum		94.6	Minimum of Log Data	4.5496575
32334	Maximum		6080	Maximum of Log Data	8.71276
32335	Mean		914.25556	Mean of log Data	6.1805994
32336	Median		457	SD of log Data	1.0838809
32337	SD		1305.5001		
32338	Coefficient of Variation		1.4279378		
32339	Skewness		2.7932619		
32340					

	A	B	C	D	E
32341	**Relevant UCL Statistics**				
32342	**Normal Distribution Test**			**Lognormal Distribution Test**	
32343	Shapiro Wilk Test Statistic		0.6235436	Shapiro Wilk Test Statistic	0.9515511
32344	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
32345	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
32346					
32347	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
32348	95% Student's-t UCL		1281.8784	95% H-UCL	1369.5886
32349	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1637.5515
32350	95% Adjusted-CLT UCL (Chen-1995)		1380.383	97.5% Chebyshev (MVUE) UCL	1979.076
32351	95% Modified-t UCL (Johnson-1978)		1298.7608	99% Chebyshev (MVUE) UCL	2649.9346
32352					
32353	**Gamma Distribution Test**			**Data Distribution**	
32354	k star (bias corrected)		0.8573877	**Data appear Lognormal at 5% Significance Level**	
32355	Theta Star		1066.3269		
32356	MLE of Mean		914.25556		
32357	MLE of Standard Deviation		987.36787		
32358	nu star		61.731912		
32359	Approximate Chi Square Value (.05)		44.660752	**Nonparametric Statistics**	
32360	Adjusted Level of Significance		0.0428	95% CLT UCL	1272.1483
32361	Adjusted Chi Square Value		44.000832	95% Jackknife UCL	1281.8784
32362				95% Standard Bootstrap UCL	1264.3338
32363	Anderson-Darling Test Statistic		1.4297687	95% Bootstrap-t UCL	1533.4586
32364	Anderson-Darling 5% Critical Value		0.7802637	95% Hall's Bootstrap UCL	1761.1978
32365	Kolmogorov-Smirnov Test Statistic		0.1629298	95% Percentile Bootstrap UCL	1280
32366	Kolmogorov-Smirnov 5% Critical Value		0.1516531	95% BCA Bootstrap UCL	1409.6111
32367	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1862.6794
32368				97.5% Chebyshev(Mean, Sd) UCL	2273.0631
32369	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	3079.1825
32370	95% Approximate Gamma UCL		1263.7213		
32371	95% Adjusted Gamma UCL		1282.6745		
32372					
32373	**Potential UCL to Use**			Use 95% H-UCL	1369.5886
32374					
32375	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
32376	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
32377	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
32378	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
32379					
32380	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
32381	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
32382	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
32383					
32384					
32385	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ne_2009)**				
32386					
32387	**General Statistics**				
32388	Number of Valid Data		20	Number of Detected Data	19
32389	Number of Distinct Detected Data		19	Number of Non-Detect Data	1
32390				Percent Non-Detects	5.00%
32391					
32392	**Raw Statistics**			**Log-transformed Statistics**	
32393	Minimum Detected		22	Minimum Detected	3.0910425
32394	Maximum Detected		2660	Maximum Detected	7.8860814
32395	Mean of Detected		591.53684	Mean of Detected	5.5991
32396	SD of Detected		747.97091	SD of Detected	1.3567858
32397	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
32398	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
32399					
32400					
32401	**UCL Statistics**				

	A	B	C	D	E
32402	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
32403	Shapiro Wilk Test Statistic		0.7429201	Shapiro Wilk Test Statistic	0.964768
32404	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
32405	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
32406					
32407	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
32408	DL/2 Substitution Method			DL/2 Substitution Method	
32409	Mean		562.0425	Mean	5.3441837
32410	SD		739.87399	SD	1.744599
32411	95% DL/2 (t) UCL		848.11171	95% H-Stat (DL/2) UCL	4476.0522
32412					
32413	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
32414	Mean		540.17927	Mean in Log Scale	5.4311831
32415	SD		748.4822	SD in Log Scale	1.5191778
32416	95% MLE (t) UCL		829.57681	Mean in Original Scale	562.43003
32417	95% MLE (Tiku) UCL		810.43506	SD in Original Scale	739.56699
32418				95% t UCL	848.38053
32419				95% Percentile Bootstrap UCL	851.02
32420				95% BCA Bootstrap UCL	874.45005
32421					
32422	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
32423	k star (bias corrected)		0.6769897	**Data appear Gamma Distributed at 5% Significance Level**	
32424	Theta Star		873.77521		
32425	nu star		25.72561		
32426					
32427	A-D Test Statistic		0.5774041	**Nonparametric Statistics**	
32428	5% A-D Critical Value		0.7783117	Kaplan-Meier (KM) Method	
32429	K-S Test Statistic		0.7783117	Mean	563.06
32430	5% K-S Critical Value		0.2060032	SD	720.36249
32431	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	165.49186
32432				95% KM (t) UCL	849.21741
32433	**Assuming Gamma Distribution**			95% KM (z) UCL	835.26989
32434	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	847.90981
32435	Minimum		1E-12	95% KM (bootstrap t) UCL	1009.7707
32436	Maximum		2660	95% KM (BCA) UCL	853.48
32437	Mean		561.96	95% KM (Percentile Bootstrap) UCL	858.64
32438	Median		233.5	95% KM (Chebyshev) UCL	1284.4223
32439	SD		739.93985	97.5% KM (Chebyshev) UCL	1596.5563
32440	k star		0.2795817	99% KM (Chebyshev) UCL	2209.6832
32441	Theta star		2010.0026		
32442	Nu star		11.183269	**Potential UCLs to Use**	
32443	AppChi2		4.6941252	95% KM (Chebyshev) UCL	1284.4223
32444	95% Gamma Approximate UCL		1338.8117		
32445	95% Adjusted Gamma UCL		1439.5957		
32446	**Note: DL/2 is not a recommended method.**				
32447					
32448	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
32449	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
32450	**For additional insight, the user may want to consult a statistician.**				
32451					
32452					
32453	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ne_2010)**				
32454					
32455	**General Statistics**				
32456	Number of Valid Observations		16	Number of Distinct Observations	16
32457					
32458	**Raw Statistics**			**Log-transformed Statistics**	
32459	Minimum		158	Minimum of Log Data	5.062595
32460	Maximum		4710	Maximum of Log Data	8.4574432
32461	Mean		1274.875	Mean of log Data	6.6514254
32462	Median		838	SD of log Data	1.080952
32463	SD		1276.0651		
32464	Coefficient of Variation		1.0009335		
32465	Skewness		1.5031255		
32466					
32467	**Relevant UCL Statistics**				
32468	**Normal Distribution Test**			**Lognormal Distribution Test**	

	A	B	C	D	E
32469	Shapiro Wilk Test Statistic		0.8303116	Shapiro Wilk Test Statistic	0.9533086
32470	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
32471	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
32472					
32473	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
32474	95% Student's-t UCL		1834.1266	95% H-UCL	3058.361
32475	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3037.3667
32476	95% Adjusted-CLT UCL (Chen-1995)		1927.704	97.5% Chebyshev (MVUE) UCL	3781.9896
32477	95% Modified-t UCL (Johnson-1978)		1854.1067	99% Chebyshev (MVUE) UCL	5244.657
32478					
32479	**Gamma Distribution Test**			**Data Distribution**	
32480	k star (bias corrected)		0.967441	**Data appear Gamma Distributed at 5% Significance Level**	
32481	Theta Star		1317.7806		
32482	MLE of Mean		1274.875		
32483	MLE of Standard Deviation		1296.1503		
32484	nu star		30.958112		
32485	Approximate Chi Square Value (.05)		19.247624	**Nonparametric Statistics**	
32486	Adjusted Level of Significance		0.03348	95% CLT UCL	1799.6101
32487	Adjusted Chi Square Value		18.200669	95% Jackknife UCL	1834.1266
32488				95% Standard Bootstrap UCL	1776.8848
32489	Anderson-Darling Test Statistic		0.328295	95% Bootstrap-t UCL	2078.1872
32490	Anderson-Darling 5% Critical Value		0.7608993	95% Hall's Bootstrap UCL	2072.5027
32491	Kolmogorov-Smirnov Test Statistic		0.1533448	95% Percentile Bootstrap UCL	1800.25
32492	Kolmogorov-Smirnov 5% Critical Value		0.2205298	95% BCA Bootstrap UCL	1948.8125
32493	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	2665.4348
32494				97.5% Chebyshev(Mean, Sd) UCL	3267.1311
32495	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4449.047
32496	95% Approximate Gamma UCL		2050.5243		
32497	95% Adjusted Gamma UCL		2168.4764		
32498					
32499	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	2050.5243
32500					
32501	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
32502	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
32503	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
32504					
32505					
32506	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_nw_2005)**				
32507					
32508	**General Statistics**				
32509	Number of Valid Observations		18	Number of Distinct Observations	18
32510					
32511	**Raw Statistics**			**Log-transformed Statistics**	
32512	Minimum		330	Minimum of Log Data	5.7990927
32513	Maximum		6350	Maximum of Log Data	8.7562101
32514	Mean		1509.3333	Mean of log Data	6.8216171
32515	Median		751.5	SD of log Data	0.9541208
32516	SD		1835.9085		
32517	Coefficient of Variation		1.2163704		
32518	Skewness		2.0459084		
32519					
32520	**Relevant UCL Statistics**				
32521	**Normal Distribution Test**			**Lognormal Distribution Test**	
32522	Shapiro Wilk Test Statistic		0.6579863	Shapiro Wilk Test Statistic	0.884627
32523	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
32524	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
32525					
32526	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
32527	95% Student's-t UCL		2262.1095	95% H-UCL	2622.6478
32528	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	2907.4095
32529	95% Adjusted-CLT UCL (Chen-1995)		2444.0765	97.5% Chebyshev (MVUE) UCL	3560.8501
32530	95% Modified-t UCL (Johnson-1978)		2296.8882	99% Chebyshev (MVUE) UCL	4844.4075
32531					
32532	**Gamma Distribution Test**			**Data Distribution**	
32533	k star (bias corrected)		0.9889095	**Data do not follow a Discernable Distribution (0.05)**	

	A	B	C	D	E
32534	Theta Star		1526.2603		
32535	MLE of Mean		1509.3333		
32536	MLE of Standard Deviation		1517.7732		
32537	nu star		35.600742		
32538	Approximate Chi Square Value (.05)		22.94753	**Nonparametric Statistics**	
32539	Adjusted Level of Significance		0.03574	95% CLT UCL	2221.1072
32540	Adjusted Chi Square Value		21.974013	95% Jackknife UCL	2262.1095
32541				95% Standard Bootstrap UCL	2202.377
32542	Anderson-Darling Test Statistic		1.2111771	95% Bootstrap-t UCL	3047.02
32543	Anderson-Darling 5% Critical Value		0.7636555	95% Hall's Bootstrap UCL	2737.2242
32544	Kolmogorov-Smirnov Test Statistic		0.2091603	95% Percentile Bootstrap UCL	2284.3333
32545	Kolmogorov-Smirnov 5% Critical Value		0.2088113	95% BCA Bootstrap UCL	2479.3889
32546	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3395.55
32547				97.5% Chebyshev(Mean, Sd) UCL	4211.7174
32548	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	5814.9203
32549	95% Approximate Gamma UCL		2341.5761		
32550	95% Adjusted Gamma UCL		2445.3151		
32551					
32552	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	3395.55
32553					
32554	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
32555	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
32556	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
32557					
32558					
32559	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_nw_2009)**				
32560					
32561	**General Statistics**				
32562	Number of Valid Observations		7	Number of Distinct Observations	7
32563					
32564	**Raw Statistics**			**Log-transformed Statistics**	
32565	Minimum		48.8	Minimum of Log Data	3.8877303
32566	Maximum		894	Maximum of Log Data	6.7957058
32567	Mean		489.68571	Mean of log Data	5.9052567
32568	Median		475	SD of log Data	0.9931747
32569	SD		299.55961		
32570	Coefficient of Variation		0.6117385		
32571	Skewness		-0.096759		
32572					
32573					
32574	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
32575					
32576	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
32577	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
32578					
32579					
32580	**Warning: There are only 7 Values in this data**				
32581	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
32582	**the resulting calculations may not be reliable enough to draw conclusions**				
32583					
32584	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
32585					
32586	**Relevant UCL Statistics**				
32587	**Normal Distribution Test**			**Lognormal Distribution Test**	
32588	Shapiro Wilk Test Statistic		0.9608689	Shapiro Wilk Test Statistic	0.829904
32589	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
32590	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
32591					
32592	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	

	A	B	C	D	E
32593	95% Student's-t UCL		709.6982	95% H-UCL	2670.4221
32594	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1450.6123
32595	95% Adjusted-CLT UCL (Chen-1995)		671.49639	97.5% Chebyshev (MVUE) UCL	1840.7941
32596	95% Modified-t UCL (Johnson-1978)		709.00808	99% Chebyshev (MVUE) UCL	2607.2305
32597					
32598	**Gamma Distribution Test**			**Data Distribution**	
32599	k star (bias corrected)		1.1710206	**Data appear Normal at 5% Significance Level**	
32600	Theta Star		418.17003		
32601	MLE of Mean		489.68571		
32602	MLE of Standard Deviation		452.51728		
32603	nu star		16.394288		
32604	Approximate Chi Square Value (.05)		8.2410629	**Nonparametric Statistics**	
32605	Adjusted Level of Significance		0.01584	95% CLT UCL	675.92079
32606	Adjusted Chi Square Value		6.5734147	95% Jackknife UCL	709.6982
32607				95% Standard Bootstrap UCL	662.7501
32608	Anderson-Darling Test Statistic		0.387589	95% Bootstrap-t UCL	705.70779
32609	Anderson-Darling 5% Critical Value		0.7163884	95% Hall's Bootstrap UCL	658.18541
32610	Kolmogorov-Smirnov Test Statistic		0.200519	95% Percentile Bootstrap UCL	659.14286
32611	Kolmogorov-Smirnov 5% Critical Value		0.315556	95% BCA Bootstrap UCL	661.68571
32612	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	983.21285
32613				97.5% Chebyshev(Mean, Sd) UCL	1196.7624
32614	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1616.2392
32615	95% Approximate Gamma UCL		974.15209		
32616	95% Adjusted Gamma UCL		1221.2905		
32617					
32618	**Potential UCL to Use**			Use 95% Student's-t UCL	709.6982
32619					
32620	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
32621	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
32622	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
32623					
32624					
32625	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_nw_2010)**				
32626					
32627	**General Statistics**				
32628	Number of Valid Observations		4	Number of Distinct Observations	4
32629					
32630					
32631	**Warning: This data set only has 4 observations!**				
32632	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
32633	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_nw_2010) was not processed!**				
32634					
32635	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
32636	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
32637					
32638					
32639					
32640	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ref_2009)**				
32641					
32642	**General Statistics**				
32643	Number of Valid Data		0	Number of Detected Data	0
32644	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
32645	Number of Missing Values		6	Percent Non-Detects	NaN%
32646					
32647	**Warning: This data set only has 0 observations!**				
32648	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
32649	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ref_2009) was not processed!**				

	A	B	C	D	E
32650					
32651	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
32652	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
32653					
32654					
32655					
32656	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ref_2010)**				
32657					
32658	**General Statistics**				
32659	Number of Valid Data		0	Number of Detected Data	0
32660	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
32661	Number of Missing Values		3	Percent Non-Detects	NaN%
32662					
32663	**Warning: This data set only has 0 observations!**				
32664	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
32665	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ref_2010) was not processed!**				
32666					
32667	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
32668	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
32669					
32670					
32671					
32672	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_s_2005)**				
32673					
32674	**General Statistics**				
32675	Number of Valid Observations		8	Number of Distinct Observations	7
32676					
32677	**Raw Statistics**			**Log-transformed Statistics**	
32678	Minimum		198	Minimum of Log Data	5.288267
32679	Maximum		8140	Maximum of Log Data	9.0045455
32680	Mean		1849.625	Mean of log Data	6.9354312
32681	Median		957.5	SD of log Data	1.1087236
32682	SD		2596.9684		
32683	Coefficient of Variation		1.4040513		
32684	Skewness		2.5947585		
32685					
32686					
32687	**Warning: There are only 8 Values in this data**				
32688	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
32689	**the resulting calculations may not be reliable enough to draw conclusions**				
32690					
32691	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
32692					
32693	**Relevant UCL Statistics**				
32694	**Normal Distribution Test**			**Lognormal Distribution Test**	
32695	Shapiro Wilk Test Statistic		0.6141344	Shapiro Wilk Test Statistic	0.9546176
32696	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
32697	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
32698					
32699	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
32700	95% Student's-t UCL		3589.1645	95% H-UCL	8955.6393
32701	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	4694.4232
32702	95% Adjusted-CLT UCL (Chen-1995)		4259.8992	97.5% Chebyshev (MVUE) UCL	5985.4426
32703	95% Modified-t UCL (Johnson-1978)		3729.55	99% Chebyshev (MVUE) UCL	8521.4003
32704					
32705	**Gamma Distribution Test**			**Data Distribution**	
32706	k star (bias corrected)		0.6987177	**Data appear Gamma Distributed at 5% Significance Level**	

	A	B	C	D	E
32707	Theta Star		2647.1708		
32708	MLE of Mean		1849.625		
32709	MLE of Standard Deviation		2212.7524		
32710	nu star		11.179483		
32711	Approximate Chi Square Value (.05)		4.6916793	**Nonparametric Statistics**	
32712	Adjusted Level of Significance		0.01946	95% CLT UCL	3359.8753
32713	Adjusted Chi Square Value		3.6870813	95% Jackknife UCL	3589.1645
32714				95% Standard Bootstrap UCL	3281.0189
32715	Anderson-Darling Test Statistic		0.5463356	95% Bootstrap-t UCL	7960.5895
32716	Anderson-Darling 5% Critical Value		0.7360926	95% Hall's Bootstrap UCL	9469.8085
32717	Kolmogorov-Smirnov Test Statistic		0.268355	95% Percentile Bootstrap UCL	3556
32718	Kolmogorov-Smirnov 5% Critical Value		0.30162	95% BCA Bootstrap UCL	4469.5
32719	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	5851.8221
32720				97.5% Chebyshev(Mean, Sd) UCL	7583.576
32721	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	10985.271
32722	95% Approximate Gamma UCL		4407.3454		
32723	95% Adjusted Gamma UCL		5608.1896		
32724					
32725	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	4407.3454
32726					
32727	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
32728	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
32729	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
32730					
32731					
32732	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_s_2010)**				
32733					
32734	**General Statistics**				
32735	Number of Valid Observations		2	Number of Distinct Observations	2
32736					
32737					
32738	**Warning: This data set only has 2 observations!**				
32739	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
32740	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_s_2010) was not processed!**				
32741					
32742	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
32743	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
32744					
32745					
32746					
32747	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_stillwater_2005)**				
32748					
32749	**General Statistics**				
32750	Number of Valid Observations		4	Number of Distinct Observations	4
32751					
32752					
32753	**Warning: This data set only has 4 observations!**				
32754	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
32755	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_stillwater_2005) was not processed!**				
32756					
32757	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
32758	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
32759					
32760					

	A	B	C	D	E
32761					
32762	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_stillwater_2009)**				
32763					
32764	**General Statistics**				
32765	Number of Valid Data		60	Number of Detected Data	54
32766	Number of Distinct Detected Data		50	Number of Non-Detect Data	6
32767				Percent Non-Detects	10.00%
32768					
32769	**Raw Statistics**			**Log-transformed Statistics**	
32770	Minimum Detected		12.8	Minimum Detected	2.5494452
32771	Maximum Detected		24600	Maximum Detected	10.110502
32772	Mean of Detected		1847.2278	Mean of Detected	6.1990363
32773	SD of Detected		3674.0203	SD of Detected	1.8981132
32774	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
32775	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
32776					
32777					
32778	**UCL Statistics**				
32779	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
32780	Lilliefors Test Statistic		0.308785	Lilliefors Test Statistic	0.1316413
32781	5% Lilliefors Critical Value		0.1205693	5% Lilliefors Critical Value	0.1205693
32782	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
32783					
32784	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
32785	DL/2 Substitution Method			DL/2 Substitution Method	
32786	Mean		1662.67	Mean	5.6292102
32787	SD		3526.6775	SD	2.4916441
32788	95% DL/2 (t) UCL		2423.5054	95% H-Stat (DL/2) UCL	30422.196
32789					
32790	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
32791	Mean		1409.4238	Mean in Log Scale	5.7682375
32792	SD		3749.0977	SD in Log Scale	2.2306266
32793	95% MLE (t) UCL		2218.2436	Mean in Original Scale	1663.2932
32794	95% MLE (Tiku) UCL		2160.4748	SD in Original Scale	3526.3797
32795				95% t UCL	2424.0644
32796				95% Percentile Bootstrap UCL	2501.0281
32797				95% BCA Bootstrap UCL	2840.7075
32798					
32799	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
32800	k star (bias corrected)		0.4684444	**Data appear Gamma Distributed at 5% Significance Level**	
32801	Theta Star		3943.3232		
32802	nu star		50.591999		
32803					
32804	A-D Test Statistic		0.6315945	**Nonparametric Statistics**	
32805	5% A-D Critical Value		0.8190333	Kaplan-Meier (KM) Method	
32806	K-S Test Statistic		0.8190333	Mean	1663.785
32807	5% K-S Critical Value		0.128277	SD	3496.637
32808	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	455.65262
32809				95% KM (t) UCL	2425.2229
32810	**Assuming Gamma Distribution**			95% KM (z) UCL	2413.2669
32811	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	2424.4069
32812	Minimum		1E-12	95% KM (bootstrap t) UCL	3251.7001
32813	Maximum		24600	95% KM (BCA) UCL	2504.4483
32814	Mean		1662.505	95% KM (Percentile Bootstrap) UCL	2462.35
32815	Median		655	95% KM (Chebyshev) UCL	3649.9287
32816	SD		3526.7566	97.5% KM (Chebyshev) UCL	4509.3347
32817	k star		0.1676557	99% KM (Chebyshev) UCL	6197.4713
32818	Theta star		9916.1851		
32819	Nu star		20.118685	**Potential UCLs to Use**	
32820	AppChi2		10.938681	95% KM (Chebyshev) UCL	3649.9287
32821	95% Gamma Approximate UCL		3057.7192		
32822	95% Adjusted Gamma UCL		3105.1615		
32823	**Note: DL/2 is not a recommended method.**				
32824					
32825	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
32826	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
32827	**For additional insight, the user may want to consult a statistician.**				

	A	B	C	D	E
32828					
32829					
32830	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_stillwater_2010)**				
32831					
32832	**General Statistics**				
32833	Number of Valid Observations		11	Number of Distinct Observations	11
32834					
32835	**Raw Statistics**			**Log-transformed Statistics**	
32836	Minimum		920	Minimum of Log Data	6.8243737
32837	Maximum		26100	Maximum of Log Data	10.169691
32838	Mean		6795.8182	Mean of log Data	8.2677698
32839	Median		3520	SD of log Data	1.1017501
32840	SD		7925.108		
32841	Coefficient of Variation		1.1661742		
32842	Skewness		1.78516		
32843					
32844	**Relevant UCL Statistics**				
32845	**Normal Distribution Test**			**Lognormal Distribution Test**	
32846	Shapiro Wilk Test Statistic		0.7508729	Shapiro Wilk Test Statistic	0.943756
32847	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
32848	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
32849					
32850	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
32851	95% Student's-t UCL		11126.712	95% H-UCL	21774.032
32852	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	16813.693
32853	95% Adjusted-CLT UCL (Chen-1995)		12100.476	97.5% Chebyshev (MVUE) UCL	21228.357
32854	95% Modified-t UCL (Johnson-1978)		11341.069	99% Chebyshev (MVUE) UCL	29900.107
32855					
32856	**Gamma Distribution Test**			**Data Distribution**	
32857	k star (bias corrected)		0.8123371	**Data appear Gamma Distributed at 5% Significance Level**	
32858	Theta Star		8365.7612		
32859	MLE of Mean		6795.8182		
32860	MLE of Standard Deviation		7540.0393		
32861	nu star		17.871416		
32862	Approximate Chi Square Value (.05)		9.2980057	**Nonparametric Statistics**	
32863	Adjusted Level of Significance		0.02783	95% CLT UCL	10726.212
32864	Adjusted Chi Square Value		8.3078008	95% Jackknife UCL	11126.712
32865				95% Standard Bootstrap UCL	10588.394
32866	Anderson-Darling Test Statistic		0.4935505	95% Bootstrap-t UCL	15410.629
32867	Anderson-Darling 5% Critical Value		0.7509211	95% Hall's Bootstrap UCL	13604.121
32868	Kolmogorov-Smirnov Test Statistic		0.2348608	95% Percentile Bootstrap UCL	10581.091
32869	Kolmogorov-Smirnov 5% Critical Value		0.2622004	95% BCA Bootstrap UCL	12122.727
32870	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	17211.451
32871				97.5% Chebyshev(Mean, Sd) UCL	21718.303
32872	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	30571.142
32873	95% Approximate Gamma UCL		13062.037		
32874	95% Adjusted Gamma UCL		14618.898		
32875					
32876	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	13062.037
32877					
32878	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
32879	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
32880	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
32881					
32882					
32883	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ne_2005)**				
32884					
32885	**General Statistics**				
32886	Number of Valid Observations		36	Number of Distinct Observations	36
32887					
32888	**Raw Statistics**			**Log-transformed Statistics**	
32889	Minimum		93	Minimum of Log Data	4.5325995
32890	Maximum		6080	Maximum of Log Data	8.71276
32891	Mean		914.16667	Mean of log Data	6.1796664
32892	Median		457	SD of log Data	1.0853173
32893	SD		1305.5574		
32894	Coefficient of Variation		1.4281394		

	A	B	C	D	E
32895	Skewness		2.7930226		
32896					
32897	**Relevant UCL Statistics**				
32898	**Normal Distribution Test**			**Lognormal Distribution Test**	
32899	Shapiro Wilk Test Statistic		0.6237139	Shapiro Wilk Test Statistic	0.9525538
32900	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
32901	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
32902					
32903	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
32904	95% Student's-t UCL		1281.8056	95% H-UCL	1371.6944
32905	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1639.7295
32906	95% Adjusted-CLT UCL (Chen-1995)		1380.3053	97.5% Chebyshev (MVUE) UCL	1981.9991
32907	95% Modified-t UCL (Johnson-1978)		1298.6874	99% Chebyshev (MVUE) UCL	2654.3214
32908					
32909	**Gamma Distribution Test**			**Data Distribution**	
32910	k star (bias corrected)		0.8564098	**Data appear Lognormal at 5% Significance Level**	
32911	Theta Star		1067.4407		
32912	MLE of Mean		914.16667		
32913	MLE of Standard Deviation		987.83536		
32914	nu star		61.661505		
32915	Approximate Chi Square Value (.05)		44.600809	**Nonparametric Statistics**	
32916	Adjusted Level of Significance		0.0428	95% CLT UCL	1272.0751
32917	Adjusted Chi Square Value		43.941357	95% Jackknife UCL	1281.8056
32918				95% Standard Bootstrap UCL	1261.656
32919	Anderson-Darling Test Statistic		1.4214542	95% Bootstrap-t UCL	1590.2534
32920	Anderson-Darling 5% Critical Value		0.7803134	95% Hall's Bootstrap UCL	1726.5942
32921	Kolmogorov-Smirnov Test Statistic		0.1627026	95% Percentile Bootstrap UCL	1281.0833
32922	Kolmogorov-Smirnov 5% Critical Value		0.1516594	95% BCA Bootstrap UCL	1391.4167
32923	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	1862.6321
32924				97.5% Chebyshev(Mean, Sd) UCL	2273.0339
32925	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	3079.1887
32926	95% Approximate Gamma UCL		1263.8536		
32927	95% Adjusted Gamma UCL		1282.8209		
32928					
32929	**Potential UCL to Use**			Use 95% H-UCL	1371.6944
32930					
32931	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
32932	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
32933	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
32934	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
32935					
32936	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
32937	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
32938	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
32939					
32940					
32941	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ne_2009)**				
32942					
32943	**General Statistics**				
32944	Number of Valid Data		20	Number of Detected Data	19
32945	Number of Distinct Detected Data		19	Number of Non-Detect Data	1
32946				Percent Non-Detects	5.00%
32947					
32948	**Raw Statistics**			**Log-transformed Statistics**	
32949	Minimum Detected		17	Minimum Detected	2.8332133
32950	Maximum Detected		2660	Maximum Detected	7.8860814
32951	Mean of Detected		590.95789	Mean of Detected	5.5807904
32952	SD of Detected		748.41386	SD of Detected	1.389426
32953	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
32954	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
32955					
32956					

	A	B	C	D	E
32957	**UCL Statistics**				
32958	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
32959	Shapiro Wilk Test Statistic		0.7441105	Shapiro Wilk Test Statistic	0.9684453
32960	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
32961	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
32962					
32963	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
32964	DL/2 Substitution Method			DL/2 Substitution Method	
32965	Mean		561.4925	Mean	5.3267897
32966	SD		740.27516	SD	1.7661333
32967	95% DL/2 (t) UCL		847.71682	95% H-Stat (DL/2) UCL	4728.185
32968					
32969	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
32970	Mean		539.60756	Mean in Log Scale	5.4091116
32971	SD		748.87887	SD in Log Scale	1.5551115
32972	95% MLE (t) UCL		829.15846	Mean in Original Scale	561.83805
32973	95% MLE (Tiku) UCL		809.97462	SD in Original Scale	740.00165
32974				95% t UCL	847.95662
32975				95% Percentile Bootstrap UCL	848.81
32976				95% BCA Bootstrap UCL	903.085
32977					
32978	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
32979	k star (bias corrected)		0.6647392	**Data appear Gamma Distributed at 5% Significance Level**	
32980	Theta Star		889.00719		
32981	nu star		25.260088		
32982					
32983	A-D Test Statistic		0.5353408	**Nonparametric Statistics**	
32984	5% A-D Critical Value		0.7789999	Kaplan-Meier (KM) Method	
32985	K-S Test Statistic		0.7789999	Mean	562.26
32986	5% K-S Critical Value		0.2061257	SD	720.94298
32987	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	165.62522
32988				95% KM (t) UCL	848.648
32989	**Assuming Gamma Distribution**			95% KM (z) UCL	834.68924
32990	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	847.22962
32991	Minimum		1E-12	95% KM (bootstrap t) UCL	968.0218
32992	Maximum		2660	95% KM (BCA) UCL	864.985
32993	Mean		561.41	95% KM (Percentile Bootstrap) UCL	861.89
32994	Median		233.5	95% KM (Chebyshev) UCL	1284.2036
32995	SD		740.34093	97.5% KM (Chebyshev) UCL	1596.5892
32996	k star		0.278139	99% KM (Chebyshev) UCL	2210.2101
32997	Theta star		2018.4513		
32998	Nu star		11.125559	**Potential UCLs to Use**	
32999	AppChi2		4.6568695	95% KM (Chebyshev) UCL	1284.2036
33000	95% Gamma Approximate UCL		1341.2444		
33001	95% Adjusted Gamma UCL		1442.569		
33002	**Note: DL/2 is not a recommended method.**				
33003					
33004	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33005	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
33006	**For additional insight, the user may want to consult a statistician.**				
33007					
33008					
33009	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ne_2010)**				
33010					
33011	**General Statistics**				
33012	Number of Valid Observations		16	Number of Distinct Observations	16
33013					
33014	**Raw Statistics**			**Log-transformed Statistics**	
33015	Minimum		158	Minimum of Log Data	5.062595
33016	Maximum		4710	Maximum of Log Data	8.4574432
33017	Mean		1274.875	Mean of log Data	6.6514254
33018	Median		838	SD of log Data	1.080952
33019	SD		1276.0651		
33020	Coefficient of Variation		1.0009335		
33021	Skewness		1.5031255		
33022					
33023	**Relevant UCL Statistics**				

	A	B	C	D	E
33024	**Normal Distribution Test**			**Lognormal Distribution Test**	
33025	Shapiro Wilk Test Statistic		0.8303116	Shapiro Wilk Test Statistic	0.9533086
33026	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
33027	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
33028					
33029	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
33030	95% Student's-t UCL		1834.1266	95% H-UCL	3058.361
33031	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3037.3667
33032	95% Adjusted-CLT UCL (Chen-1995)		1927.704	97.5% Chebyshev (MVUE) UCL	3781.9896
33033	95% Modified-t UCL (Johnson-1978)		1854.1067	99% Chebyshev (MVUE) UCL	5244.657
33034					
33035	**Gamma Distribution Test**			**Data Distribution**	
33036	k star (bias corrected)		0.967441	**Data appear Gamma Distributed at 5% Significance Level**	
33037	Theta Star		1317.7806		
33038	MLE of Mean		1274.875		
33039	MLE of Standard Deviation		1296.1503		
33040	nu star		30.958112		
33041	Approximate Chi Square Value (.05)		19.247624	**Nonparametric Statistics**	
33042	Adjusted Level of Significance		0.03348	95% CLT UCL	1799.6101
33043	Adjusted Chi Square Value		18.200669	95% Jackknife UCL	1834.1266
33044				95% Standard Bootstrap UCL	1783.1291
33045	Anderson-Darling Test Statistic		0.328295	95% Bootstrap-t UCL	2150.7082
33046	Anderson-Darling 5% Critical Value		0.7608993	95% Hall's Bootstrap UCL	2043.0605
33047	Kolmogorov-Smirnov Test Statistic		0.1533448	95% Percentile Bootstrap UCL	1804
33048	Kolmogorov-Smirnov 5% Critical Value		0.2205298	95% BCA Bootstrap UCL	1955.9375
33049	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	2665.4348
33050				97.5% Chebyshev(Mean, Sd) UCL	3267.1311
33051	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4449.047
33052	95% Approximate Gamma UCL		2050.5243		
33053	95% Adjusted Gamma UCL		2168.4764		
33054					
33055	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	2050.5243
33056					
33057	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33058	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
33059	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
33060					
33061					
33062	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_nw_2005)**				
33063					
33064	**General Statistics**				
33065	Number of Valid Observations		18	Number of Distinct Observations	18
33066					
33067	**Raw Statistics**			**Log-transformed Statistics**	
33068	Minimum		330	Minimum of Log Data	5.7990927
33069	Maximum		6350	Maximum of Log Data	8.7562101
33070	Mean		1509.3333	Mean of log Data	6.8216171
33071	Median		751.5	SD of log Data	0.9541208
33072	SD		1835.9085		
33073	Coefficient of Variation		1.2163704		
33074	Skewness		2.0459084		
33075					
33076	**Relevant UCL Statistics**				
33077	**Normal Distribution Test**			**Lognormal Distribution Test**	
33078	Shapiro Wilk Test Statistic		0.6579863	Shapiro Wilk Test Statistic	0.884627
33079	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
33080	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
33081					
33082	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
33083	95% Student's-t UCL		2262.1095	95% H-UCL	2622.6478
33084	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	2907.4095
33085	95% Adjusted-CLT UCL (Chen-1995)		2444.0765	97.5% Chebyshev (MVUE) UCL	3560.8501
33086	95% Modified-t UCL (Johnson-1978)		2296.8882	99% Chebyshev (MVUE) UCL	4844.4075
33087					
33088	**Gamma Distribution Test**			**Data Distribution**	

	A	B	C	D	E
33089	k star (bias corrected)		0.9889095	**Data do not follow a Discernable Distribution (0.05)**	
33090	Theta Star		1526.2603		
33091	MLE of Mean		1509.3333		
33092	MLE of Standard Deviation		1517.7732		
33093	nu star		35.600742		
33094	Approximate Chi Square Value (.05)		22.94753	**Nonparametric Statistics**	
33095	Adjusted Level of Significance		0.03574	95% CLT UCL	2221.1072
33096	Adjusted Chi Square Value		21.974013	95% Jackknife UCL	2262.1095
33097				95% Standard Bootstrap UCL	2169.6932
33098	Anderson-Darling Test Statistic		1.2111771	95% Bootstrap-t UCL	3096.6802
33099	Anderson-Darling 5% Critical Value		0.7636555	95% Hall's Bootstrap UCL	2711.5473
33100	Kolmogorov-Smirnov Test Statistic		0.2091603	95% Percentile Bootstrap UCL	2267.5
33101	Kolmogorov-Smirnov 5% Critical Value		0.2088113	95% BCA Bootstrap UCL	2448
33102	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	3395.55
33103				97.5% Chebyshev(Mean, Sd) UCL	4211.7174
33104	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	5814.9203
33105	95% Approximate Gamma UCL		2341.5761		
33106	95% Adjusted Gamma UCL		2445.3151		
33107					
33108	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	3395.55
33109					
33110	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33111	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
33112	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
33113					
33114					
33115	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_nw_2009)**				
33116					
33117	**General Statistics**				
33118	Number of Valid Observations		7	Number of Distinct Observations	7
33119					
33120	**Raw Statistics**			**Log-transformed Statistics**	
33121	Minimum		47.2	Minimum of Log Data	3.8543939
33122	Maximum		894	Maximum of Log Data	6.7957058
33123	Mean		489.45714	Mean of log Data	5.9004944
33124	Median		475	SD of log Data	1.0044769
33125	SD		299.95243		
33126	Coefficient of Variation		0.6128268		
33127	Skewness		-0.101275		
33128					
33129					
33130	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
33131					
33132	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
33133	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
33134					
33135					
33136	**Warning: There are only 7 Values in this data**				
33137	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
33138	**the resulting calculations may not be reliable enough to draw conclusions**				
33139					
33140	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
33141					
33142	**Relevant UCL Statistics**				
33143	**Normal Distribution Test**			**Lognormal Distribution Test**	
33144	Shapiro Wilk Test Statistic		0.9610132	Shapiro Wilk Test Statistic	0.8266181
33145	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
33146	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
33147					

	A	B	C	D	E
33148	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
33149	95% Student's-t UCL		709.75814	95% H-UCL	2770.0435
33150	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	1466.517
33151	95% Adjusted-CLT UCL (Chen-1995)		671.29946	97.5% Chebyshev (MVUE) UCL	1862.6219
33152	95% Modified-t UCL (Johnson-1978)		709.03486	99% Chebyshev (MVUE) UCL	2640.6934
33153					
33154	**Gamma Distribution Test**			**Data Distribution**	
33155	k star (bias corrected)		1.1563477	**Data appear Normal at 5% Significance Level**	
33156	Theta Star		423.2785		
33157	MLE of Mean		489.45714		
33158	MLE of Standard Deviation		455.16666		
33159	nu star		16.188868		
33160	Approximate Chi Square Value (.05)		8.0955861	**Nonparametric Statistics**	
33161	Adjusted Level of Significance		0.01584	95% CLT UCL	675.93644
33162	Adjusted Chi Square Value		6.4455481	95% Jackknife UCL	709.75814
33163				95% Standard Bootstrap UCL	662.85464
33164	Anderson-Darling Test Statistic		0.3928224	95% Bootstrap-t UCL	706.00811
33165	Anderson-Darling 5% Critical Value		0.716714	95% Hall's Bootstrap UCL	672.10284
33166	Kolmogorov-Smirnov Test Statistic		0.2030184	95% Percentile Bootstrap UCL	665.42857
33167	Kolmogorov-Smirnov 5% Critical Value		0.3156536	95% BCA Bootstrap UCL	654.57143
33168	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	983.63146
33169				97.5% Chebyshev(Mean, Sd) UCL	1197.4611
33170	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1617.488
33171	95% Approximate Gamma UCL		978.775		
33172	95% Adjusted Gamma UCL		1229.338		
33173					
33174	**Potential UCL to Use**			Use 95% Student's-t UCL	709.75814
33175					
33176	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33177	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
33178	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
33179					
33180					
33181	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_nw_2010)**				
33182					
33183	**General Statistics**				
33184	Number of Valid Observations		4	Number of Distinct Observations	4
33185					
33186					
33187	**Warning: This data set only has 4 observations!**				
33188	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
33189	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_nw_2010) was not processed!**				
33190					
33191	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
33192	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
33193					
33194					
33195					
33196	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ref_2009)**				
33197					
33198	**General Statistics**				
33199	Number of Valid Data		0	Number of Detected Data	0
33200	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
33201	Number of Missing Values		6	Percent Non-Detects	NaN%
33202					
33203	**Warning: This data set only has 0 observations!**				
33204	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
33205	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ref_2009) was not processed!**				
33206					
33207	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
33208	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
33209					
33210					
33211					
33212	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ref_2010)**				
33213					
33214	**General Statistics**				
33215	Number of Valid Data		0	Number of Detected Data	0
33216	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
33217	Number of Missing Values		3	Percent Non-Detects	NaN%
33218					
33219	**Warning: This data set only has 0 observations!**				
33220	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
33221	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ref_2010) was not processed!**				
33222					
33223	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
33224	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
33225					
33226					
33227					
33228	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_s_2005)**				
33229					
33230	**General Statistics**				
33231	Number of Valid Observations		8	Number of Distinct Observations	7
33232					
33233	**Raw Statistics**			**Log-transformed Statistics**	
33234	Minimum		198	Minimum of Log Data	5.288267
33235	Maximum		8140	Maximum of Log Data	9.0045455
33236	Mean		1849.625	Mean of log Data	6.9354312
33237	Median		957.5	SD of log Data	1.1087236
33238	SD		2596.9684		
33239	Coefficient of Variation		1.4040513		
33240	Skewness		2.5947585		
33241					
33242					
33243	**Warning: There are only 8 Values in this data**				
33244	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
33245	**the resulting calculations may not be reliable enough to draw conclusions**				
33246					
33247	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
33248					
33249	**Relevant UCL Statistics**				
33250	**Normal Distribution Test**			**Lognormal Distribution Test**	
33251	Shapiro Wilk Test Statistic		0.6141344	Shapiro Wilk Test Statistic	0.9546176
33252	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
33253	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
33254					
33255	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
33256	95% Student's-t UCL		3589.1645	95% H-UCL	8955.6393
33257	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	4694.4232
33258	95% Adjusted-CLT UCL (Chen-1995)		4259.8992	97.5% Chebyshev (MVUE) UCL	5985.4426
33259	95% Modified-t UCL (Johnson-1978)		3729.55	99% Chebyshev (MVUE) UCL	8521.4003
33260					

	A	B	C	D	E
33261	**Gamma Distribution Test**			**Data Distribution**	
33262	k star (bias corrected)		0.6987177	**Data appear Gamma Distributed at 5% Significance Level**	
33263	Theta Star		2647.1708		
33264	MLE of Mean		1849.625		
33265	MLE of Standard Deviation		2212.7524		
33266	nu star		11.179483		
33267	Approximate Chi Square Value (.05)		4.6916793	**Nonparametric Statistics**	
33268	Adjusted Level of Significance		0.01946	95% CLT UCL	3359.8753
33269	Adjusted Chi Square Value		3.6870813	95% Jackknife UCL	3589.1645
33270				95% Standard Bootstrap UCL	3246.2663
33271	Anderson-Darling Test Statistic		0.5463356	95% Bootstrap-t UCL	7884.3631
33272	Anderson-Darling 5% Critical Value		0.7360926	95% Hall's Bootstrap UCL	9506.9274
33273	Kolmogorov-Smirnov Test Statistic		0.268355	95% Percentile Bootstrap UCL	3623.5
33274	Kolmogorov-Smirnov 5% Critical Value		0.30162	95% BCA Bootstrap UCL	4545.875
33275	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	5851.8221
33276				97.5% Chebyshev(Mean, Sd) UCL	7583.576
33277	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	10985.271
33278	95% Approximate Gamma UCL		4407.3454		
33279	95% Adjusted Gamma UCL		5608.1896		
33280					
33281	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	4407.3454
33282					
33283	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33284	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
33285	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
33286					
33287					
33288	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_s_2010)**				
33289					
33290	**General Statistics**				
33291	Number of Valid Observations		2	Number of Distinct Observations	2
33292					
33293					
33294	**Warning: This data set only has 2 observations!**				
33295	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
33296	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_s_2010) was not processed!**				
33297					
33298	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
33299	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
33300					
33301					
33302					
33303	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_stillwater_2005)**				
33304					
33305	**General Statistics**				
33306	Number of Valid Observations		4	Number of Distinct Observations	4
33307					
33308					
33309	**Warning: This data set only has 4 observations!**				
33310	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
33311	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_stillwater_2005) was not processed!**				
33312					
33313	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
33314	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
33315					
33316					
33317					
33318	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_stillwater_2009)**				
33319					
33320	**General Statistics**				
33321	Number of Valid Data		60	Number of Detected Data	54
33322	Number of Distinct Detected Data		50	Number of Non-Detect Data	6
33323				Percent Non-Detects	10.00%
33324					
33325	**Raw Statistics**			**Log-transformed Statistics**	
33326	Minimum Detected		4	Minimum Detected	1.3862944
33327	Maximum Detected		24600	Maximum Detected	10.110502
33328	Mean of Detected		1846.3556	Mean of Detected	6.1384937
33329	SD of Detected		3674.4616	SD of Detected	2.0140128
33330	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
33331	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
33332					
33333					
33334	**UCL Statistics**				
33335	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
33336	Lilliefors Test Statistic		0.3080467	Lilliefors Test Statistic	0.1402048
33337	5% Lilliefors Critical Value		0.1205693	5% Lilliefors Critical Value	0.1205693
33338	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
33339					
33340	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
33341	DL/2 Substitution Method			DL/2 Substitution Method	
33342	Mean		1661.885	Mean	5.5747218
33343	SD		3527.0487	SD	2.5598398
33344	95% DL/2 (t) UCL		2422.8005	95% H-Stat (DL/2) UCL	37278.483
33345					
33346	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
33347	Mean		1408.5859	Mean in Log Scale	5.6856616
33348	SD		3749.4628	SD in Log Scale	2.3591222
33349	95% MLE (t) UCL		2217.4844	Mean in Original Scale	1662.3252
33350	95% MLE (Tiku) UCL		2159.6947	SD in Original Scale	3526.8384
33351				95% t UCL	2423.1953
33352				95% Percentile Bootstrap UCL	2460.4529
33353				95% BCA Bootstrap UCL	2803.7357
33354					
33355	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
33356	k star (bias corrected)		0.4512627	**Data appear Gamma Distributed at 5% Significance Level**	
33357	Theta Star		4091.5314		
33358	nu star		48.736373		
33359					
33360	A-D Test Statistic		0.4696003	**Nonparametric Statistics**	
33361	5% A-D Critical Value		0.8233804	Kaplan-Meier (KM) Method	
33362	K-S Test Statistic		0.8233804	Mean	1662.12
33363	5% K-S Critical Value		0.1285891	SD	3497.4216
33364	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	455.75486
33365				95% KM (t) UCL	2423.7288
33366	**Assuming Gamma Distribution**			95% KM (z) UCL	2411.77
33367	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	2422.6797
33368	Minimum		1E-12	95% KM (bootstrap t) UCL	3181.7389
33369	Maximum		24600	95% KM (BCA) UCL	2474.3867
33370	Mean		1661.72	95% KM (Percentile Bootstrap) UCL	2455.4417
33371	Median		655	95% KM (Chebyshev) UCL	3648.7094
33372	SD		3527.1277	97.5% KM (Chebyshev) UCL	4508.3082
33373	k star		0.1660732	99% KM (Chebyshev) UCL	6196.8236
33374	Theta star		10005.948		
33375	Nu star		19.928786	**Potential UCLs to Use**	
33376	AppChi2		10.798658	95% KM (Chebyshev) UCL	3648.7094
33377	95% Gamma Approximate UCL		3066.6831		
33378	95% Adjusted Gamma UCL		3114.5427		
33379	**Note: DL/2 is not a recommended method.**				
33380					
33381	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
33382	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
33383	**For additional insight, the user may want to consult a statistician.**				
33384					
33385					
33386	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_stillwater_2010)**				
33387					
33388	**General Statistics**				
33389	Number of Valid Observations		11	Number of Distinct Observations	11
33390					
33391	**Raw Statistics**			**Log-transformed Statistics**	
33392	Minimum		920	Minimum of Log Data	6.8243737
33393	Maximum		26100	Maximum of Log Data	10.169691
33394	Mean		6795.8182	Mean of log Data	8.2677698
33395	Median		3520	SD of log Data	1.1017501
33396	SD		7925.108		
33397	Coefficient of Variation		1.1661742		
33398	Skewness		1.78516		
33399					
33400	**Relevant UCL Statistics**				
33401	**Normal Distribution Test**			**Lognormal Distribution Test**	
33402	Shapiro Wilk Test Statistic		0.7508729	Shapiro Wilk Test Statistic	0.943756
33403	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
33404	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
33405					
33406	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
33407	95% Student's-t UCL		11126.712	95% H-UCL	21774.032
33408	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	16813.693
33409	95% Adjusted-CLT UCL (Chen-1995)		12100.476	97.5% Chebyshev (MVUE) UCL	21228.357
33410	95% Modified-t UCL (Johnson-1978)		11341.069	99% Chebyshev (MVUE) UCL	29900.107
33411					
33412	**Gamma Distribution Test**			**Data Distribution**	
33413	k star (bias corrected)		0.8123371	**Data appear Gamma Distributed at 5% Significance Level**	
33414	Theta Star		8365.7612		
33415	MLE of Mean		6795.8182		
33416	MLE of Standard Deviation		7540.0393		
33417	nu star		17.871416		
33418	Approximate Chi Square Value (.05)		9.2980057	**Nonparametric Statistics**	
33419	Adjusted Level of Significance		0.02783	95% CLT UCL	10726.212
33420	Adjusted Chi Square Value		8.3078008	95% Jackknife UCL	11126.712
33421				95% Standard Bootstrap UCL	10461.438
33422	Anderson-Darling Test Statistic		0.4935505	95% Bootstrap-t UCL	15684.039
33423	Anderson-Darling 5% Critical Value		0.7509211	95% Hall's Bootstrap UCL	13384.607
33424	Kolmogorov-Smirnov Test Statistic		0.2348608	95% Percentile Bootstrap UCL	10781.273
33425	Kolmogorov-Smirnov 5% Critical Value		0.2622004	95% BCA Bootstrap UCL	11647.636
33426	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	17211.451
33427				97.5% Chebyshev(Mean, Sd) UCL	21718.303
33428	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	30571.142
33429	95% Approximate Gamma UCL		13062.037		
33430	95% Adjusted Gamma UCL		14618.898		
33431					
33432	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	13062.037
33433					
33434	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33435	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
33436	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
33437					
33438					
33439	**OS|UG/KG|TOTAL PAHS (gi_sd_ne_2005)**				
33440					
33441	**General Statistics**				
33442	Number of Valid Observations		36	Number of Distinct Observations	35
33443					
33444	**Raw Statistics**			**Log-transformed Statistics**	
33445	Minimum		202	Minimum of Log Data	5.3082677
33446	Maximum		20200	Maximum of Log Data	9.9134379

	A	B	C	D	E
33447	Mean		2423.0278	Mean of log Data	7.0239305
33448	Median		1150	SD of log Data	1.1699797
33449	SD		4084.9155		
33450	Coefficient of Variation		1.6858723		
33451	Skewness		3.3063746		
33452					
33453	**Relevant UCL Statistics**				
33454	**Normal Distribution Test**			**Lognormal Distribution Test**	
33455	Shapiro Wilk Test Statistic		0.5521936	Shapiro Wilk Test Statistic	0.9514037
33456	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
33457	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
33458					
33459	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
33460	95% Student's-t UCL		3573.3212	95% H-UCL	3711.1295
33461	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	4370.9178
33462	95% Adjusted-CLT UCL (Chen-1995)		3943.7546	97.5% Chebyshev (MVUE) UCL	5327.5579
33463	95% Modified-t UCL (Johnson-1978)		3635.8502	99% Chebyshev (MVUE) UCL	7206.6922
33464					
33465	**Gamma Distribution Test**			**Data Distribution**	
33466	k star (bias corrected)		0.7290869	**Data appear Lognormal at 5% Significance Level**	
33467	Theta Star		3323.373		
33468	MLE of Mean		2423.0278		
33469	MLE of Standard Deviation		2837.7148		
33470	nu star		52.494258		
33471	Approximate Chi Square Value (.05)		36.851526	**Nonparametric Statistics**	
33472	Adjusted Level of Significance		0.0428	95% CLT UCL	3542.8758
33473	Adjusted Chi Square Value		36.255623	95% Jackknife UCL	3573.3212
33474				95% Standard Bootstrap UCL	3506.2282
33475	Anderson-Darling Test Statistic		1.6471274	95% Bootstrap-t UCL	5158.4049
33476	Anderson-Darling 5% Critical Value		0.7867905	95% Hall's Bootstrap UCL	8574.3146
33477	Kolmogorov-Smirnov Test Statistic		0.1937635	95% Percentile Bootstrap UCL	3590.6944
33478	Kolmogorov-Smirnov 5% Critical Value		0.1524794	95% BCA Bootstrap UCL	4114.1944
33479	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	5390.6501
33480				97.5% Chebyshev(Mean, Sd) UCL	6674.7426
33481	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	9197.0938
33482	95% Approximate Gamma UCL		3451.5543		
33483	95% Adjusted Gamma UCL		3508.2846		
33484					
33485	**Potential UCL to Use**			Use 95% H-UCL	3711.1295
33486					
33487	**ProUCL computes and outputs H-statistic based UCLs for historical reasons only.**				
33488	**H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.**				
33489	**It is therefore recommended to avoid the use of H-statistic based 95% UCLs.**				
33490	**Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.**				
33491					
33492	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33493	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
33494	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
33495					
33496					
33497	**OS|UG/KG|TOTAL PAHS (gi_sd_ne_2009)**				
33498					
33499	**General Statistics**				
33500	Number of Valid Data		20	Number of Detected Data	19
33501	Number of Distinct Detected Data		18	Number of Non-Detect Data	1
33502				Percent Non-Detects	5.00%
33503					
33504	**Raw Statistics**			**Log-transformed Statistics**	
33505	Minimum Detected		35.8	Minimum Detected	3.5779479
33506	Maximum Detected		6480	Maximum Detected	8.7764758
33507	Mean of Detected		1498.4632	Mean of Detected	6.4956272
33508	SD of Detected		1887.4824	SD of Detected	1.4320205
33509	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225

	A	B	C	D	E
33510	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
33511					
33512					
33513	**UCL Statistics**				
33514	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
33515	Shapiro Wilk Test Statistic		0.7404861	Shapiro Wilk Test Statistic	0.965596
33516	5% Shapiro Wilk Critical Value		0.901	5% Shapiro Wilk Critical Value	0.901
33517	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
33518					
33519	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
33520	DL/2 Substitution Method			DL/2 Substitution Method	
33521	Mean		1423.6225	Mean	6.1958846
33522	SD		1867.3798	SD	1.9338212
33523	95% DL/2 (t) UCL		2145.6372	95% H-Stat (DL/2) UCL	20390.934
33524					
33525	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
33526	Mean		1368.4266	Mean in Log Scale	6.3193169
33527	SD		1889.3149	SD in Log Scale	1.6013927
33528	95% MLE (t) UCL		2098.9223	Mean in Original Scale	1424.514
33529	95% MLE (Tiku) UCL		2050.9757	SD in Original Scale	1866.6693
33530				95% t UCL	2146.254
33531				95% Percentile Bootstrap UCL	2127.4481
33532				95% BCA Bootstrap UCL	2235.414
33533					
33534	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
33535	k star (bias corrected)		0.6541311	**Data appear Gamma Distributed at 5% Significance Level**	
33536	Theta Star		2290.7687		
33537	nu star		24.856984		
33538					
33539	A-D Test Statistic		0.4820356	**Nonparametric Statistics**	
33540	5% A-D Critical Value		0.7802102	Kaplan-Meier (KM) Method	
33541	K-S Test Statistic		0.7802102	Mean	1425.33
33542	5% K-S Critical Value		0.2063222	SD	1818.7774
33543	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	417.83528
33544				95% KM (t) UCL	2147.8227
33545	**Assuming Gamma Distribution**			95% KM (z) UCL	2112.6079
33546	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	2144.0248
33547	Minimum		1E-12	95% KM (bootstrap t) UCL	2611.5306
33548	Maximum		6480	95% KM (BCA) UCL	2206.12
33549	Mean		1423.54	95% KM (Percentile Bootstrap) UCL	2152.53
33550	Median		786	95% KM (Chebyshev) UCL	3246.6318
33551	SD		1867.446	97.5% KM (Chebyshev) UCL	4034.7105
33552	k star		0.2729039	99% KM (Chebyshev) UCL	5582.7386
33553	Theta star		5216.269		
33554	Nu star		10.916155	**Potential UCLs to Use**	
33555	AppChi2		4.5221466	95% KM (Chebyshev) UCL	3246.6318
33556	95% Gamma Approximate UCL		3436.3289		
33557	95% Adjusted Gamma UCL		3699.3248		
33558	**Note: DL/2 is not a recommended method.**				
33559					
33560	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33561	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
33562	**For additional insight, the user may want to consult a statistician.**				
33563					
33564					
33565	**OS|UG/KG|TOTAL PAHS (gi_sd_ne_2010)**				
33566					
33567	**General Statistics**				
33568	Number of Valid Observations		16	Number of Distinct Observations	16
33569					
33570	**Raw Statistics**			**Log-transformed Statistics**	
33571	Minimum		321	Minimum of Log Data	5.7714411
33572	Maximum		11200	Maximum of Log Data	9.3236691
33573	Mean		3001.375	Mean of log Data	7.448298
33574	Median		1980	SD of log Data	1.1639865
33575	SD		3056.8038		
33576	Coefficient of Variation		1.0184678		
33577	Skewness		1.4241097		

	A	B	C	D	E
33578					
33579	**Relevant UCL Statistics**				
33580	**Normal Distribution Test**			**Lognormal Distribution Test**	
33581	Shapiro Wilk Test Statistic		0.8290819	Shapiro Wilk Test Statistic	0.9321943
33582	Shapiro Wilk Critical Value		0.887	Shapiro Wilk Critical Value	0.887
33583	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
33584					
33585	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
33586	95% Student's-t UCL		4341.0578	95% H-UCL	8240.1833
33587	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	7674.8091
33588	95% Adjusted-CLT UCL (Chen-1995)		4549.0914	97.5% Chebyshev (MVUE) UCL	9623.9402
33589	95% Modified-t UCL (Johnson-1978)		4386.4038	99% Chebyshev (MVUE) UCL	13452.631
33590					
33591	**Gamma Distribution Test**			**Data Distribution**	
33592	k star (bias corrected)		0.8784773	**Data appear Gamma Distributed at 5% Significance Level**	
33593	Theta Star		3416.5654		
33594	MLE of Mean		3001.375		
33595	MLE of Standard Deviation		3202.2483		
33596	nu star		28.111272		
33597	Approximate Chi Square Value (.05)		17.014687	**Nonparametric Statistics**	
33598	Adjusted Level of Significance		0.03348	95% CLT UCL	4258.3737
33599	Adjusted Chi Square Value		16.036459	95% Jackknife UCL	4341.0578
33600				95% Standard Bootstrap UCL	4228.4882
33601	Anderson-Darling Test Statistic		0.4545245	95% Bootstrap-t UCL	4816.5744
33602	Anderson-Darling 5% Critical Value		0.7627848	95% Hall's Bootstrap UCL	4760.7762
33603	Kolmogorov-Smirnov Test Statistic		0.1631662	95% Percentile Bootstrap UCL	4297.4375
33604	Kolmogorov-Smirnov 5% Critical Value		0.2210248	95% BCA Bootstrap UCL	4519.5
33605	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	6332.4498
33606				97.5% Chebyshev(Mean, Sd) UCL	7773.8085
33607	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	10605.079
33608	95% Approximate Gamma UCL		4958.8023		
33609	95% Adjusted Gamma UCL		5261.2904		
33610					
33611	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	4958.8023
33612					
33613	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33614	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
33615	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
33616					
33617					
33618	**OS|UG/KG|TOTAL PAHS (gi_sd_nw_2005)**				
33619					
33620	**General Statistics**				
33621	Number of Valid Observations		18	Number of Distinct Observations	18
33622					
33623	**Raw Statistics**			**Log-transformed Statistics**	
33624	Minimum		788	Minimum of Log Data	6.6694981
33625	Maximum		15700	Maximum of Log Data	9.661416
33626	Mean		3855.6667	Mean of log Data	7.7184262
33627	Median		1800	SD of log Data	0.9852904
33628	SD		4861.9244		
33629	Coefficient of Variation		1.2609815		
33630	Skewness		1.937577		
33631					
33632	**Relevant UCL Statistics**				
33633	**Normal Distribution Test**			**Lognormal Distribution Test**	
33634	Shapiro Wilk Test Statistic		0.6397864	Shapiro Wilk Test Statistic	0.8695224
33635	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
33636	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
33637					
33638	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
33639	95% Student's-t UCL		5849.1979	95% H-UCL	6830.2115
33640	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	7467.525
33641	95% Adjusted-CLT UCL (Chen-1995)		6299.8241	97.5% Chebyshev (MVUE) UCL	9175.3489
33642	95% Modified-t UCL (Johnson-1978)		5936.4233	99% Chebyshev (MVUE) UCL	12530.038
33643					
33644	**Gamma Distribution Test**			**Data Distribution**	

	A	B	C	D	E
33645	k star (bias corrected)		0.9233467	**Data do not follow a Discernable Distribution (0.05)**	
33646	Theta Star		4175.7518		
33647	MLE of Mean		3855.6667		
33648	MLE of Standard Deviation		4012.5188		
33649	nu star		33.240482		
33650	Approximate Chi Square Value (.05)		21.058209	**Nonparametric Statistics**	
33651	Adjusted Level of Significance		0.03574	95% CLT UCL	5740.614
33652	Adjusted Chi Square Value		20.129223	95% Jackknife UCL	5849.1979
33653				95% Standard Bootstrap UCL	5694.7936
33654	Anderson-Darling Test Statistic		1.4222087	95% Bootstrap-t UCL	7335.3739
33655	Anderson-Darling 5% Critical Value		0.7652841	95% Hall's Bootstrap UCL	5856.0004
33656	Kolmogorov-Smirnov Test Statistic		0.221343	95% Percentile Bootstrap UCL	5762
33657	Kolmogorov-Smirnov 5% Critical Value		0.209159	95% BCA Bootstrap UCL	6464.3333
33658	**Data not Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	8850.8192
33659				97.5% Chebyshev(Mean, Sd) UCL	11012.226
33660	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	15257.89
33661	95% Approximate Gamma UCL		6086.1878		
33662	95% Adjusted Gamma UCL		6367.0723		
33663					
33664	**Potential UCL to Use**			Use 95% Chebyshev (Mean, Sd) UCL	8850.8192
33665					
33666	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33667	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
33668	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
33669					
33670					
33671	**OS|UG/KG|TOTAL PAHS (gi_sd_nw_2009)**				
33672					
33673	**General Statistics**				
33674	Number of Valid Observations		7	Number of Distinct Observations	7
33675					
33676	**Raw Statistics**			**Log-transformed Statistics**	
33677	Minimum		84.2	Minimum of Log Data	4.4331949
33678	Maximum		2320	Maximum of Log Data	7.7493225
33679	Mean		1176.4571	Mean of log Data	6.7253693
33680	Median		1210	SD of log Data	1.1172203
33681	SD		765.12251		
33682	Coefficient of Variation		0.6503616		
33683	Skewness		0.0882982		
33684					
33685					
33686	**Warning: A sample size of 'n' = 7 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
33687					
33688	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
33689	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
33690					
33691					
33692	**Warning: There are only 7 Values in this data**				
33693	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
33694	**the resulting calculations may not be reliable enough to draw conclusions**				
33695					
33696	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
33697					
33698	**Relevant UCL Statistics**				
33699	**Normal Distribution Test**			**Lognormal Distribution Test**	
33700	Shapiro Wilk Test Statistic		0.9798537	Shapiro Wilk Test Statistic	0.8271863
33701	Shapiro Wilk Critical Value		0.803	Shapiro Wilk Critical Value	0.803
33702	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
33703					

	A	B	C	D	E
33704	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
33705	95% Student's-t UCL		1738.4038	95% H-UCL	9790.2408
33706	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	3916.725
33707	95% Adjusted-CLT UCL (Chen-1995)		1662.4435	97.5% Chebyshev (MVUE) UCL	5014.9373
33708	95% Modified-t UCL (Johnson-1978)		1740.0123	99% Chebyshev (MVUE) UCL	7172.1626
33709					
33710	**Gamma Distribution Test**			**Data Distribution**	
33711	k star (bias corrected)		1.0072355	**Data appear Normal at 5% Significance Level**	
33712	Theta Star		1168.0061		
33713	MLE of Mean		1176.4571		
33714	MLE of Standard Deviation		1172.224		
33715	nu star		14.101296		
33716	Approximate Chi Square Value (.05)		6.6407476	**Nonparametric Statistics**	
33717	Adjusted Level of Significance		0.01584	95% CLT UCL	1652.1309
33718	Adjusted Chi Square Value		5.1758605	95% Jackknife UCL	1738.4038
33719				95% Standard Bootstrap UCL	1627.3287
33720	Anderson-Darling Test Statistic		0.3635296	95% Bootstrap-t UCL	1745.417
33721	Anderson-Darling 5% Critical Value		0.7200228	95% Hall's Bootstrap UCL	1628.3935
33722	Kolmogorov-Smirnov Test Statistic		0.1933596	95% Percentile Bootstrap UCL	1601.8857
33723	Kolmogorov-Smirnov 5% Critical Value		0.3166452	95% BCA Bootstrap UCL	1616.2857
33724	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	2437.0033
33725				97.5% Chebyshev(Mean, Sd) UCL	2982.4427
33726	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	4053.8526
33727	95% Approximate Gamma UCL		2498.1481		
33728	95% Adjusted Gamma UCL		3205.1812		
33729					
33730	**Potential UCL to Use**			Use 95% Student's-t UCL	1738.4038
33731					
33732	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33733	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
33734	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
33735					
33736					
33737	**OS|UG/KG|TOTAL PAHS (gi_sd_nw_2010)**				
33738					
33739	**General Statistics**				
33740	Number of Valid Observations		4	Number of Distinct Observations	4
33741					
33742					
33743	**Warning: This data set only has 4 observations!**				
33744	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
33745	**The data set for variable OS|UG/KG|TOTAL PAHS (gi_sd_nw_2010) was not processed!**				
33746					
33747	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
33748	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
33749					
33750					
33751					
33752	**OS|UG/KG|TOTAL PAHS (gi_sd_ref_2009)**				
33753					
33754	**General Statistics**				
33755	Number of Valid Data		0	Number of Detected Data	0
33756	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
33757	Number of Missing Values		6	Percent Non-Detects	NaN%
33758					
33759	**Warning: This data set only has 0 observations!**				
33760	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
33761	**The data set for variable OS|UG/KG|TOTAL PAHS (gi_sd_ref_2009) was not processed!**				
33762					

	A	B	C	D	E
33763	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
33764	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
33765					
33766					
33767					
33768	OS|UG/KG|TOTAL PAHS (gi_sd_ref_2010)				
33769					
33770	General Statistics				
33771	Number of Valid Data		0	Number of Detected Data	0
33772	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
33773	Number of Missing Values		3	Percent Non-Detects	NaN%
33774					
33775	Warning: This data set only has 0 observations!				
33776	Data set is too small to compute reliable and meaningful statistics and estimates!				
33777	The data set for variable OS|UG/KG|TOTAL PAHS (gi_sd_ref_2010) was not processed!				
33778					
33779	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
33780	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
33781					
33782					
33783					
33784	OS|UG/KG|TOTAL PAHS (gi_sd_s_2005)				
33785					
33786	General Statistics				
33787	Number of Valid Observations		8	Number of Distinct Observations	8
33788					
33789	Raw Statistics			Log-transformed Statistics	
33790	Minimum		442	Minimum of Log Data	6.0913099
33791	Maximum		21300	Maximum of Log Data	9.9664624
33792	Mean		4856.625	Mean of log Data	7.877358
33793	Median		2590	SD of log Data	1.1584875
33794	SD		6799.3228		
33795	Coefficient of Variation		1.4000098		
33796	Skewness		2.5774003		
33797					
33798					
33799	Warning: There are only 8 Values in this data				
33800	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
33801	the resulting calculations may not be reliable enough to draw conclusions				
33802					
33803	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
33804					
33805	Relevant UCL Statistics				
33806	Normal Distribution Test			Lognormal Distribution Test	
33807	Shapiro Wilk Test Statistic		0.6203963	Shapiro Wilk Test Statistic	0.9552304
33808	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
33809	Data not Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
33810					
33811	Assuming Normal Distribution			Assuming Lognormal Distribution	
33812	95% Student's-t UCL		9411.0472	95% H-UCL	27558.383
33813	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	12938.565
33814	95% Adjusted-CLT UCL (Chen-1995)		11151.385	97.5% Chebyshev (MVUE) UCL	16552.533
33815	95% Modified-t UCL (Johnson-1978)		9776.1426	99% Chebyshev (MVUE) UCL	23651.474
33816					
33817	Gamma Distribution Test			Data Distribution	
33818	k star (bias corrected)		0.6775824	Data appear Gamma Distributed at 5% Significance Level	
33819	Theta Star		7167.5787		
33820	MLE of Mean		4856.625		
33821	MLE of Standard Deviation		5900.0205		
33822	nu star		10.841318		

	A	B	C	D	E
33823	Approximate Chi Square Value (.05)		4.4741785	**Nonparametric Statistics**	
33824	Adjusted Level of Significance		0.01946	95% CLT UCL	8810.7275
33825	Adjusted Chi Square Value		3.4985333	95% Jackknife UCL	9411.0472
33826				95% Standard Bootstrap UCL	8542.0899
33827	Anderson-Darling Test Statistic		0.5105475	95% Bootstrap-t UCL	20177.501
33828	Anderson-Darling 5% Critical Value		0.7373952	95% Hall's Bootstrap UCL	24845.125
33829	Kolmogorov-Smirnov Test Statistic		0.2708284	95% Percentile Bootstrap UCL	9465.25
33830	Kolmogorov-Smirnov 5% Critical Value		0.3019717	95% BCA Bootstrap UCL	10093.75
33831	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	15335.085
33832				97.5% Chebyshev(Mean, Sd) UCL	19869.123
33833	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	28775.363
33834	95% Approximate Gamma UCL		11768.019		
33835	95% Adjusted Gamma UCL		15049.797		
33836					
33837	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	11768.019
33838					
33839	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33840	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
33841	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
33842					
33843					
33844	**OS|UG/KG|TOTAL PAHS (gi_sd_s_2010)**				
33845					
33846	**General Statistics**				
33847	Number of Valid Observations		2	Number of Distinct Observations	2
33848					
33849					
33850	**Warning: This data set only has 2 observations!**				
33851	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
33852	**The data set for variable OS|UG/KG|TOTAL PAHS (gi_sd_s_2010) was not processed!**				
33853					
33854	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
33855	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
33856					
33857					
33858					
33859	**OS|UG/KG|TOTAL PAHS (gi_sd_stillwater_2005)**				
33860					
33861	**General Statistics**				
33862	Number of Valid Observations		4	Number of Distinct Observations	4
33863					
33864					
33865	**Warning: This data set only has 4 observations!**				
33866	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
33867	**The data set for variable OS|UG/KG|TOTAL PAHS (gi_sd_stillwater_2005) was not processed!**				
33868					
33869	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
33870	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
33871					
33872					
33873					
33874	**OS|UG/KG|TOTAL PAHS (gi_sd_stillwater_2009)**				
33875					
33876	**General Statistics**				
33877	Number of Valid Data		60	Number of Detected Data	57

	A	B	C	D	E
33878	Number of Distinct Detected Data		55	Number of Non-Detect Data	3
33879				Percent Non-Detects	5.00%
33880					
33881	**Raw Statistics**			**Log-transformed Statistics**	
33882	Minimum Detected		3.02	Minimum Detected	1.1052568
33883	Maximum Detected		80300	Maximum Detected	11.293525
33884	Mean of Detected		4880.8389	Mean of Detected	6.6941087
33885	SD of Detected		11726.099	SD of Detected	2.3888052
33886	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
33887	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
33888					
33889					
33890	**UCL Statistics**				
33891	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
33892	Lilliefors Test Statistic		0.3387124	Lilliefors Test Statistic	0.1093755
33893	5% Lilliefors Critical Value		0.1173536	5% Lilliefors Critical Value	0.1173536
33894	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
33895					
33896	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
33897	DL/2 Substitution Method			DL/2 Substitution Method	
33898	Mean		4636.8795	Mean	6.384442
33899	SD		11474.31	SD	2.6961252
33900	95% DL/2 (t) UCL		7112.3147	95% H-Stat (DL/2) UCL	141816.38
33901					
33902	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
33903	Mean		4093.9151	Mean in Log Scale	6.4343194
33904	SD		11891.517	SD in Log Scale	2.5950637
33905	95% MLE (t) UCL		6659.3574	Mean in Original Scale	4637.0513
33906	95% MLE (Tiku) UCL		6427.7196	SD in Original Scale	11474.239
33907				95% t UCL	7112.4712
33908				95% Percentile Bootstrap UCL	7402.8211
33909				95% BCA Bootstrap UCL	8198.7493
33910					
33911	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
33912	k star (bias corrected)		0.3625718	**Data appear Gamma Distributed at 5% Significance Level**	
33913	Theta Star		13461.717		
33914	nu star		41.333185		
33915					
33916	A-D Test Statistic		0.629069	**Nonparametric Statistics**	
33917	5% A-D Critical Value		0.846277	Kaplan-Meier (KM) Method	
33918	K-S Test Statistic		0.846277	Mean	4636.948
33919	5% K-S Critical Value		0.1267856	SD	11378.261
33920	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	1481.9845
33921				95% KM (t) UCL	7113.482
33922	**Assuming Gamma Distribution**			95% KM (z) UCL	7074.5956
33923	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	7112.3324
33924	Minimum		1E-12	95% KM (bootstrap t) UCL	11240.786
33925	Maximum		80300	95% KM (BCA) UCL	7400.3073
33926	Mean		4636.797	95% KM (Percentile Bootstrap) UCL	7180.0917
33927	Median		1170	95% KM (Chebyshev) UCL	11096.769
33928	SD		11474.344	97.5% KM (Chebyshev) UCL	13891.938
33929	k star		0.2112961	99% KM (Chebyshev) UCL	19382.508
33930	Theta star		21944.545		
33931	Nu star		25.355533	**Potential UCLs to Use**	
33932	AppChi2		14.884035	95% KM (Chebyshev) UCL	11096.769
33933	95% Gamma Approximate UCL		7898.9642		
33934	95% Adjusted Gamma UCL		8005.4651		
33935	**Note: DL/2 is not a recommended method.**				
33936					
33937	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33938	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
33939	**For additional insight, the user may want to consult a statistician.**				
33940					
33941					
33942	**OS|UG/KG|TOTAL PAHS (gi_sd_stillwater_2010)**				
33943					
33944	**General Statistics**				

	A	B	C	D	E
33945	Number of Valid Observations		11	Number of Distinct Observations	11
33946					
33947	**Raw Statistics**			**Log-transformed Statistics**	
33948	Minimum		1800	Minimum of Log Data	7.4955419
33949	Maximum		55100	Maximum of Log Data	10.916905
33950	Mean		15664.545	Mean of log Data	9.0563898
33951	Median		7200	SD of log Data	1.145325
33952	SD		18271.667		
33953	Coefficient of Variation		1.1664346		
33954	Skewness		1.4062602		
33955					
33956	**Relevant UCL Statistics**				
33957	**Normal Distribution Test**			**Lognormal Distribution Test**	
33958	Shapiro Wilk Test Statistic		0.7448946	Shapiro Wilk Test Statistic	0.9267034
33959	Shapiro Wilk Critical Value		0.85	Shapiro Wilk Critical Value	0.85
33960	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
33961					
33962	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
33963	95% Student's-t UCL		25649.602	95% H-UCL	54272.641
33964	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	39515.079
33965	95% Adjusted-CLT UCL (Chen-1995)		27222.159	97.5% Chebyshev (MVUE) UCL	50056.481
33966	95% Modified-t UCL (Johnson-1978)		26038.916	99% Chebyshev (MVUE) UCL	70763.026
33967					
33968	**Gamma Distribution Test**			**Data Distribution**	
33969	k star (bias corrected)		0.7602573	**Data appear Gamma Distributed at 5% Significance Level**	
33970	Theta Star		20604.268		
33971	MLE of Mean		15664.545		
33972	MLE of Standard Deviation		17965.425		
33973	nu star		16.725661		
33974	Approximate Chi Square Value (.05)		8.4765423	**Nonparametric Statistics**	
33975	Adjusted Level of Significance		0.02783	95% CLT UCL	24726.233
33976	Adjusted Chi Square Value		7.5376825	95% Jackknife UCL	25649.602
33977				95% Standard Bootstrap UCL	24477.892
33978	Anderson-Darling Test Statistic		0.6830731	95% Bootstrap-t UCL	30496.655
33979	Anderson-Darling 5% Critical Value		0.7532165	95% Hall's Bootstrap UCL	22868.16
33980	Kolmogorov-Smirnov Test Statistic		0.2548711	95% Percentile Bootstrap UCL	24881.818
33981	Kolmogorov-Smirnov 5% Critical Value		0.2627689	95% BCA Bootstrap UCL	26505.455
33982	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	39678.221
33983				97.5% Chebyshev(Mean, Sd) UCL	50068.958
33984	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	70479.547
33985	95% Approximate Gamma UCL		30908.814		
33986	95% Adjusted Gamma UCL		34758.677		
33987					
33988	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	30908.814
33989					
33990	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
33991	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
33992	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
33993					
33994					
33995	**PAH|UG/KG|ACENAPHTHENE (gi_sd_ne_2005)**				
33996					
33997	**General Statistics**				
33998	Number of Valid Data		0	Number of Detected Data	0
33999	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34000	Number of Missing Values		36	Percent Non-Detects	NaN%
34001					
34002	**Warning: This data set only has 0 observations!**				
34003	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34004	**The data set for variable PAH|UG/KG|ACENAPHTHENE (gi_sd_ne_2005) was not processed!**				
34005					
34006	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
34007	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34008					
34009					
34010					
34011	PAH|UG/KG|ACENAPHTHENE (gi_sd_ne_2009)				
34012					
34013	General Statistics				
34014	Number of Valid Data		0	Number of Detected Data	0
34015	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34016	Number of Missing Values		20	Percent Non-Detects	NaN%
34017					
34018	Warning: This data set only has 0 observations!				
34019	Data set is too small to compute reliable and meaningful statistics and estimates!				
34020	The data set for variable PAH|UG/KG|ACENAPHTHENE (gi_sd_ne_2009) was not processed!				
34021					
34022	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34023	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34024					
34025					
34026					
34027	PAH|UG/KG|ACENAPHTHENE (gi_sd_ne_2010)				
34028					
34029	General Statistics				
34030	Number of Valid Data		0	Number of Detected Data	0
34031	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34032	Number of Missing Values		16	Percent Non-Detects	NaN%
34033					
34034	Warning: This data set only has 0 observations!				
34035	Data set is too small to compute reliable and meaningful statistics and estimates!				
34036	The data set for variable PAH|UG/KG|ACENAPHTHENE (gi_sd_ne_2010) was not processed!				
34037					
34038	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34039	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34040					
34041					
34042					
34043	PAH|UG/KG|ACENAPHTHENE (gi_sd_nw_2005)				
34044					
34045	General Statistics				
34046	Number of Valid Data		0	Number of Detected Data	0
34047	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34048	Number of Missing Values		18	Percent Non-Detects	NaN%
34049					
34050	Warning: This data set only has 0 observations!				
34051	Data set is too small to compute reliable and meaningful statistics and estimates!				
34052	The data set for variable PAH|UG/KG|ACENAPHTHENE (gi_sd_nw_2005) was not processed!				
34053					
34054	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34055	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34056					
34057					
34058					
34059	PAH|UG/KG|ACENAPHTHENE (gi_sd_nw_2009)				

	A	B	C	D	E
34060					
34061	**General Statistics**				
34062	Number of Valid Data		0	Number of Detected Data	0
34063	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34064	Number of Missing Values		7	Percent Non-Detects	NaN%
34065					
34066	**Warning: This data set only has 0 observations!**				
34067	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34068	**The data set for variable PAH|UG/KG|ACENAPHTHENE (gi_sd_nw_2009) was not processed!**				
34069					
34070	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34071	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34072					
34073					
34074					
34075	**PAH|UG/KG|ACENAPHTHENE (gi_sd_nw_2010)**				
34076					
34077	**General Statistics**				
34078	Number of Valid Data		0	Number of Detected Data	0
34079	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34080	Number of Missing Values		4	Percent Non-Detects	NaN%
34081					
34082	**Warning: This data set only has 0 observations!**				
34083	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34084	**The data set for variable PAH|UG/KG|ACENAPHTHENE (gi_sd_nw_2010) was not processed!**				
34085					
34086	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34087	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34088					
34089					
34090					
34091	**PAH|UG/KG|ACENAPHTHENE (gi_sd_ref_2009)**				
34092					
34093	**General Statistics**				
34094	Number of Valid Data		6	Number of Detected Data	0
34095	Number of Distinct Detected Data		0	Number of Non-Detect Data	6
34096				Percent Non-Detects	100.00%
34097					
34098	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
34099	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
34100	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
34101					
34102	**The data set for variable PAH|UG/KG|ACENAPHTHENE (gi_sd_ref_2009) was not processed!**				
34103					
34104					
34105					
34106	**PAH|UG/KG|ACENAPHTHENE (gi_sd_ref_2010)**				
34107					
34108	**General Statistics**				
34109	Number of Valid Data		3	Number of Detected Data	1
34110	Number of Distinct Detected Data		1	Number of Non-Detect Data	2
34111				Percent Non-Detects	66.67%
34112					
34113	**Warning: This data set only has 3 observations!**				

	A	B	C	D	E
34114	Data set is too small to compute reliable and meaningful statistics and estimates!				
34115	The data set for variable PAH|UG/KG|ACENAPHTHENE (gi_sd_ref_2010) was not processed!				
34116					
34117	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34118	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34119					
34120					
34121					
34122	PAH|UG/KG|ACENAPHTHENE (gi_sd_s_2005)				
34123					
34124	General Statistics				
34125	Number of Valid Data		0	Number of Detected Data	0
34126	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34127	Number of Missing Values		8	Percent Non-Detects	NaN%
34128					
34129	Warning: This data set only has 0 observations!				
34130	Data set is too small to compute reliable and meaningful statistics and estimates!				
34131	The data set for variable PAH|UG/KG|ACENAPHTHENE (gi_sd_s_2005) was not processed!				
34132					
34133	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34134	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34135					
34136					
34137					
34138	PAH|UG/KG|ACENAPHTHENE (gi_sd_s_2010)				
34139					
34140	General Statistics				
34141	Number of Valid Data		0	Number of Detected Data	0
34142	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34143	Number of Missing Values		2	Percent Non-Detects	NaN%
34144					
34145	Warning: This data set only has 0 observations!				
34146	Data set is too small to compute reliable and meaningful statistics and estimates!				
34147	The data set for variable PAH|UG/KG|ACENAPHTHENE (gi_sd_s_2010) was not processed!				
34148					
34149	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34150	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34151					
34152					
34153					
34154	PAH|UG/KG|ACENAPHTHENE (gi_sd_stillwater_2005)				
34155					
34156	General Statistics				
34157	Number of Valid Data		0	Number of Detected Data	0
34158	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34159	Number of Missing Values		4	Percent Non-Detects	NaN%
34160					
34161	Warning: This data set only has 0 observations!				
34162	Data set is too small to compute reliable and meaningful statistics and estimates!				
34163	The data set for variable PAH|UG/KG|ACENAPHTHENE (gi_sd_stillwater_2005) was not processed!				
34164					

	A	B	C	D	E
34165	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34166	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34167					
34168					
34169					
34170	PAH|UG/KG|ACENAPHTHENE (gi_sd_stillwater_2009)				
34171					
34172	General Statistics				
34173	Number of Valid Data		0	Number of Detected Data	0
34174	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34175	Number of Missing Values		60	Percent Non-Detects	NaN%
34176					
34177	Warning: This data set only has 0 observations!				
34178	Data set is too small to compute reliable and meaningful statistics and estimates!				
34179	The data set for variable PAH|UG/KG|ACENAPHTHENE (gi_sd_stillwater_2009) was not processed!				
34180					
34181	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34182	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34183					
34184					
34185					
34186	PAH|UG/KG|ACENAPHTHENE (gi_sd_stillwater_2010)				
34187					
34188	General Statistics				
34189	Number of Valid Data		0	Number of Detected Data	0
34190	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34191	Number of Missing Values		11	Percent Non-Detects	NaN%
34192					
34193	Warning: This data set only has 0 observations!				
34194	Data set is too small to compute reliable and meaningful statistics and estimates!				
34195	The data set for variable PAH|UG/KG|ACENAPHTHENE (gi_sd_stillwater_2010) was not processed!				
34196					
34197	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34198	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34199					
34200					
34201					
34202	PAH|UG/KG|ACENAPHTHYLENE (gi_sd_ne_2005)				
34203					
34204	General Statistics				
34205	Number of Valid Data		0	Number of Detected Data	0
34206	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34207	Number of Missing Values		36	Percent Non-Detects	NaN%
34208					
34209	Warning: This data set only has 0 observations!				
34210	Data set is too small to compute reliable and meaningful statistics and estimates!				
34211	The data set for variable PAH|UG/KG|ACENAPHTHYLENE (gi_sd_ne_2005) was not processed!				
34212					
34213	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
34214	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34215					
34216					
34217					
34218	PAH|UG/KG|ACENAPHTHYLENE (gi_sd_ne_2009)				
34219					
34220	General Statistics				
34221	Number of Valid Data		0	Number of Detected Data	0
34222	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34223	Number of Missing Values		20	Percent Non-Detects	NaN%
34224					
34225	Warning: This data set only has 0 observations!				
34226	Data set is too small to compute reliable and meaningful statistics and estimates!				
34227	The data set for variable PAH|UG/KG|ACENAPHTHYLENE (gi_sd_ne_2009) was not processed!				
34228					
34229	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34230	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34231					
34232					
34233					
34234	PAH|UG/KG|ACENAPHTHYLENE (gi_sd_ne_2010)				
34235					
34236	General Statistics				
34237	Number of Valid Data		0	Number of Detected Data	0
34238	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34239	Number of Missing Values		16	Percent Non-Detects	NaN%
34240					
34241	Warning: This data set only has 0 observations!				
34242	Data set is too small to compute reliable and meaningful statistics and estimates!				
34243	The data set for variable PAH|UG/KG|ACENAPHTHYLENE (gi_sd_ne_2010) was not processed!				
34244					
34245	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34246	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34247					
34248					
34249					
34250	PAH|UG/KG|ACENAPHTHYLENE (gi_sd_nw_2005)				
34251					
34252	General Statistics				
34253	Number of Valid Data		0	Number of Detected Data	0
34254	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34255	Number of Missing Values		18	Percent Non-Detects	NaN%
34256					
34257	Warning: This data set only has 0 observations!				
34258	Data set is too small to compute reliable and meaningful statistics and estimates!				
34259	The data set for variable PAH|UG/KG|ACENAPHTHYLENE (gi_sd_nw_2005) was not processed!				
34260					
34261	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34262	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34263					

	A	B	C	D	E
34264					
34265					
34266	**PAH|UG/KG|ACENAPHTHYLENE (gi_sd_nw_2009)**				
34267					
34268	**General Statistics**				
34269	Number of Valid Data		0	Number of Detected Data	0
34270	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34271	Number of Missing Values		7	Percent Non-Detects	NaN%
34272					
34273	**Warning: This data set only has 0 observations!**				
34274	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34275	**The data set for variable PAH|UG/KG|ACENAPHTHYLENE (gi_sd_nw_2009) was not processed!**				
34276					
34277	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34278	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34279					
34280					
34281					
34282	**PAH|UG/KG|ACENAPHTHYLENE (gi_sd_nw_2010)**				
34283					
34284	**General Statistics**				
34285	Number of Valid Data		0	Number of Detected Data	0
34286	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34287	Number of Missing Values		4	Percent Non-Detects	NaN%
34288					
34289	**Warning: This data set only has 0 observations!**				
34290	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34291	**The data set for variable PAH|UG/KG|ACENAPHTHYLENE (gi_sd_nw_2010) was not processed!**				
34292					
34293	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34294	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34295					
34296					
34297					
34298	**PAH|UG/KG|ACENAPHTHYLENE (gi_sd_ref_2009)**				
34299					
34300	**General Statistics**				
34301	Number of Valid Data		6	Number of Detected Data	5
34302	Number of Distinct Detected Data		5	Number of Non-Detect Data	1
34303				Percent Non-Detects	16.67%
34304					
34305	**Raw Statistics**			**Log-transformed Statistics**	
34306	Minimum Detected		3.6	Minimum Detected	1.2809338
34307	Maximum Detected		15	Maximum Detected	2.7080502
34308	Mean of Detected		7.85	Mean of Detected	1.9265325
34309	SD of Detected		4.6575208	SD of Detected	0.5717318
34310	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
34311	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
34312					
34313					
34314	**Warning: There are only 5 Detected Values in this data**				
34315	**Note: It should be noted that even though bootstrap may be performed on this data set**				
34316	**the resulting calculations may not be reliable enough to draw conclusions**				
34317					
34318	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				

	A	B	C	D	E
34319					
34320					
34321	**UCL Statistics**				
34322	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
34323	Shapiro Wilk Test Statistic		0.8890173	Shapiro Wilk Test Statistic	0.9520596
34324	5% Shapiro Wilk Critical Value		0.762	5% Shapiro Wilk Critical Value	0.762
34325	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
34326					
34327	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
34328	DL/2 Substitution Method			DL/2 Substitution Method	
34329	Mean		6.8166667	Mean	1.6889063
34330	SD		4.8744914	SD	0.7747897
34331	95% DL/2 (t) UCL		10.826619	95% H-Stat (DL/2) UCL	23.7211
34332					
34333	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
34334	Mean		6.6187286	Mean in Log Scale	1.6795227
34335	SD		4.7912717	SD in Log Scale	0.7922025
34336	95% MLE (t) UCL		10.560221	Mean in Original Scale	6.8016115
34337	95% MLE (Tiku) UCL		10.538748	SD in Original Scale	4.893742
34338				95% t UCL	10.8274
34339				95% Percentile Bootstrap UCL	10.026612
34340				95% BCA Bootstrap UCL	10.259945
34341					
34342	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
34343	k star (bias corrected)		1.6896172	**Data appear Normal at 5% Significance Level**	
34344	Theta Star		4.6460227		
34345	nu star		16.896172		
34346					
34347	A-D Test Statistic		0.3077093	**Nonparametric Statistics**	
34348	5% A-D Critical Value		0.6813919	Kaplan-Meier (KM) Method	
34349	K-S Test Statistic		0.6813919	Mean	7.1416667
34350	5% K-S Critical Value		0.358556	SD	4.1195081
34351	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	1.8802896
34352				95% KM (t) UCL	10.930541
34353	**Assuming Gamma Distribution**			95% KM (z) UCL	10.234468
34354	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	10.825553
34355	Minimum		1.7775378	95% KM (bootstrap t) UCL	18.98639
34356	Maximum		15	95% KM (BCA) UCL	10.6
34357	Mean		6.837923	95% KM (Percentile Bootstrap) UCL	10.108333
34358	Median		5.325	95% KM (Chebyshev) UCL	15.337659
34359	SD		4.8476592	97.5% KM (Chebyshev) UCL	18.884071
34360	k star		1.3182575	99% KM (Chebyshev) UCL	25.850312
34361	Theta star		5.1870922		
34362	Nu star		15.81909	**Potential UCLs to Use**	
34363	AppChi2		7.8347	95% KM (t) UCL	10.930541
34364	95% Gamma Approximate UCL		13.806491	95% KM (Percentile Bootstrap) UCL	10.108333
34365	95% Adjusted Gamma UCL		18.266929		
34366	**Note: DL/2 is not a recommended method.**				
34367					
34368	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
34369	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
34370	**For additional insight, the user may want to consult a statistician.**				
34371					
34372					
34373	**PAH|UG/KG|ACENAPHTHYLENE (gi_sd_ref_2010)**				
34374					
34375	**General Statistics**				
34376	Number of Valid Observations		3	Number of Distinct Observations	3
34377					
34378					
34379	**Warning: This data set only has 3 observations!**				
34380	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34381	**The data set for variable PAH|UG/KG|ACENAPHTHYLENE (gi_sd_ref_2010) was not processed!**				

	A	B	C	D	E
34382					
34383	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34384	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34385					
34386					
34387					
34388	PAH|UG/KG|ACENAPHTHYLENE (gi_sd_s_2005)				
34389					
34390	General Statistics				
34391	Number of Valid Data		0	Number of Detected Data	0
34392	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34393	Number of Missing Values		8	Percent Non-Detects	NaN%
34394					
34395	Warning: This data set only has 0 observations!				
34396	Data set is too small to compute reliable and meaningful statistics and estimates!				
34397	The data set for variable PAH|UG/KG|ACENAPHTHYLENE (gi_sd_s_2005) was not processed!				
34398					
34399	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34400	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34401					
34402					
34403					
34404	PAH|UG/KG|ACENAPHTHYLENE (gi_sd_s_2010)				
34405					
34406	General Statistics				
34407	Number of Valid Data		0	Number of Detected Data	0
34408	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34409	Number of Missing Values		2	Percent Non-Detects	NaN%
34410					
34411	Warning: This data set only has 0 observations!				
34412	Data set is too small to compute reliable and meaningful statistics and estimates!				
34413	The data set for variable PAH|UG/KG|ACENAPHTHYLENE (gi_sd_s_2010) was not processed!				
34414					
34415	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34416	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34417					
34418					
34419					
34420	PAH|UG/KG|ACENAPHTHYLENE (gi_sd_stillwater_2005)				
34421					
34422	General Statistics				
34423	Number of Valid Data		0	Number of Detected Data	0
34424	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34425	Number of Missing Values		4	Percent Non-Detects	NaN%
34426					
34427	Warning: This data set only has 0 observations!				
34428	Data set is too small to compute reliable and meaningful statistics and estimates!				
34429	The data set for variable PAH|UG/KG|ACENAPHTHYLENE (gi_sd_stillwater_2005) was not processed!				
34430					
34431	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
34432	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34433					
34434					
34435					
34436	PAH|UG/KG|ACENAPHTHYLENE (gi_sd_stillwater_2009)				
34437					
34438	General Statistics				
34439	Number of Valid Data		0	Number of Detected Data	0
34440	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34441	Number of Missing Values		60	Percent Non-Detects	NaN%
34442					
34443	Warning: This data set only has 0 observations!				
34444	Data set is too small to compute reliable and meaningful statistics and estimates!				
34445	The data set for variable PAH|UG/KG|ACENAPHTHYLENE (gi_sd_stillwater_2009) was not processed!				
34446					
34447	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34448	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34449					
34450					
34451					
34452	PAH|UG/KG|ACENAPHTHYLENE (gi_sd_stillwater_2010)				
34453					
34454	General Statistics				
34455	Number of Valid Data		0	Number of Detected Data	0
34456	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34457	Number of Missing Values		11	Percent Non-Detects	NaN%
34458					
34459	Warning: This data set only has 0 observations!				
34460	Data set is too small to compute reliable and meaningful statistics and estimates!				
34461	The data set for variable PAH|UG/KG|ACENAPHTHYLENE (gi_sd_stillwater_2010) was not processed!				
34462					
34463	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34464	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34465					
34466					
34467					
34468	PAH|UG/KG|ANTHRACENE (gi_sd_ne_2005)				
34469					
34470	General Statistics				
34471	Number of Valid Data		0	Number of Detected Data	0
34472	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34473	Number of Missing Values		36	Percent Non-Detects	NaN%
34474					
34475	Warning: This data set only has 0 observations!				
34476	Data set is too small to compute reliable and meaningful statistics and estimates!				
34477	The data set for variable PAH|UG/KG|ANTHRACENE (gi_sd_ne_2005) was not processed!				
34478					
34479	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34480	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34481					
34482					

	A	B	C	D	E
34483					
34484	PAH|UG/KG|ANTHRACENE (gi_sd_ne_2009)				
34485					
34486	General Statistics				
34487	Number of Valid Data		0	Number of Detected Data	0
34488	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34489	Number of Missing Values		20	Percent Non-Detects	NaN%
34490					
34491	Warning: This data set only has 0 observations!				
34492	Data set is too small to compute reliable and meaningful statistics and estimates!				
34493	The data set for variable PAH|UG/KG|ANTHRACENE (gi_sd_ne_2009) was not processed!				
34494					
34495	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34496	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34497					
34498					
34499					
34500	PAH|UG/KG|ANTHRACENE (gi_sd_ne_2010)				
34501					
34502	General Statistics				
34503	Number of Valid Data		0	Number of Detected Data	0
34504	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34505	Number of Missing Values		16	Percent Non-Detects	NaN%
34506					
34507	Warning: This data set only has 0 observations!				
34508	Data set is too small to compute reliable and meaningful statistics and estimates!				
34509	The data set for variable PAH|UG/KG|ANTHRACENE (gi_sd_ne_2010) was not processed!				
34510					
34511	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34512	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34513					
34514					
34515					
34516	PAH|UG/KG|ANTHRACENE (gi_sd_nw_2005)				
34517					
34518	General Statistics				
34519	Number of Valid Data		0	Number of Detected Data	0
34520	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34521	Number of Missing Values		18	Percent Non-Detects	NaN%
34522					
34523	Warning: This data set only has 0 observations!				
34524	Data set is too small to compute reliable and meaningful statistics and estimates!				
34525	The data set for variable PAH|UG/KG|ANTHRACENE (gi_sd_nw_2005) was not processed!				
34526					
34527	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34528	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34529					
34530					
34531					
34532	PAH|UG/KG|ANTHRACENE (gi_sd_nw_2009)				
34533					
34534	General Statistics				
34535	Number of Valid Data		0	Number of Detected Data	0
34536	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34537	Number of Missing Values		7	Percent Non-Detects	NaN%

	A	B	C	D	E
34538					
34539	**Warning: This data set only has 0 observations!**				
34540	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34541	**The data set for variable PAH|UG/KG|ANTHRACENE (gi_sd_nw_2009) was not processed!**				
34542					
34543	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34544	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34545					
34546					
34547					
34548	**PAH|UG/KG|ANTHRACENE (gi_sd_nw_2010)**				
34549					
34550	**General Statistics**				
34551	Number of Valid Data		0	Number of Detected Data	0
34552	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34553	Number of Missing Values		4	Percent Non-Detects	NaN%
34554					
34555	**Warning: This data set only has 0 observations!**				
34556	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34557	**The data set for variable PAH|UG/KG|ANTHRACENE (gi_sd_nw_2010) was not processed!**				
34558					
34559	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34560	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34561					
34562					
34563					
34564	**PAH|UG/KG|ANTHRACENE (gi_sd_ref_2009)**				
34565					
34566	**General Statistics**				
34567	Number of Valid Data		6	Number of Detected Data	5
34568	Number of Distinct Detected Data		5	Number of Non-Detect Data	1
34569				Percent Non-Detects	16.67%
34570					
34571	**Raw Statistics**			**Log-transformed Statistics**	
34572	Minimum Detected		4.4	Minimum Detected	1.4816045
34573	Maximum Detected		18	Maximum Detected	2.8903718
34574	Mean of Detected		9.54	Mean of Detected	2.1386065
34575	SD of Detected		5.3073534	SD of Detected	0.5359288
34576	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
34577	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
34578					
34579					
34580	**Warning: There are only 5 Detected Values in this data**				
34581	**Note: It should be noted that even though bootstrap may be performed on this data set**				
34582	**the resulting calculations may not be reliable enough to draw conclusions**				
34583					
34584	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
34585					
34586					
34587	**UCL Statistics**				
34588	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
34589	Shapiro Wilk Test Statistic		0.9140946	Shapiro Wilk Test Statistic	0.9908716
34590	5% Shapiro Wilk Critical Value		0.762	5% Shapiro Wilk Critical Value	0.762
34591	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
34592					

	A	B	C	D	E
34593	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
34594	DL/2 Substitution Method			DL/2 Substitution Method	
34595	Mean		8.225	Mean	1.8656346
34596	SD		5.736702	SD	0.8227135
34597	95% DL/2 (t) UCL		12.944241	95% H-Stat (DL/2) UCL	33.387229
34598					
34599	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
34600	Mean		7.9664069	Mean in Log Scale	1.9046869
34601	SD		5.6880244	SD in Log Scale	0.7470515
34602	95% MLE (t) UCL		12.645604	Mean in Original Scale	8.2976113
34603	95% MLE (Tiku) UCL		12.681628	SD in Original Scale	5.6387568
34604				95% t UCL	12.936278
34605				95% Percentile Bootstrap UCL	11.8
34606				95% BCA Bootstrap UCL	12.7
34607					
34608	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
34609	k star (bias corrected)		1.9083334	**Data appear Normal at 5% Significance Level**	
34610	Theta Star		4.9991265		
34611	nu star		19.083334		
34612					
34613	A-D Test Statistic		0.2111787	**Nonparametric Statistics**	
34614	5% A-D Critical Value		0.6810081	Kaplan-Meier (KM) Method	
34615	K-S Test Statistic		0.6810081	Mean	8.6833333
34616	5% K-S Critical Value		0.3583887	SD	4.7379379
34617	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	2.1625629
34618				95% KM (t) UCL	13.041002
34619	**Assuming Gamma Distribution**			95% KM (z) UCL	12.240433
34620	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	12.932556
34621	Minimum		2.5121614	95% KM (bootstrap t) UCL	17.368386
34622	Maximum		18	95% KM (BCA) UCL	12.966667
34623	Mean		8.3686936	95% KM (Percentile Bootstrap) UCL	12.3
34624	Median		7.15	95% KM (Chebyshev) UCL	18.109726
34625	SD		5.5467245	97.5% KM (Chebyshev) UCL	22.188534
34626	k star		1.5130145	99% KM (Chebyshev) UCL	30.200562
34627	Theta star		5.5311392		
34628	Nu star		18.156174	**Potential UCLs to Use**	
34629	AppChi2		9.5038268	95% KM (t) UCL	13.041002
34630	95% Gamma Approximate UCL		15.987608	95% KM (Percentile Bootstrap) UCL	12.3
34631	95% Adjusted Gamma UCL		20.658056		
34632	**Note: DL/2 is not a recommended method.**				
34633					
34634	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
34635	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
34636	**For additional insight, the user may want to consult a statistician.**				
34637					
34638					
34639	**PAH|UG/KG|ANTHRACENE (gi_sd_ref_2010)**				
34640					
34641	**General Statistics**				
34642	Number of Valid Observations		3	Number of Distinct Observations	3
34643					
34644					
34645	**Warning: This data set only has 3 observations!**				
34646	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34647	**The data set for variable PAH|UG/KG|ANTHRACENE (gi_sd_ref_2010) was not processed!**				
34648					
34649	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34650	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34651					
34652					
34653					
34654	**PAH|UG/KG|ANTHRACENE (gi_sd_s_2005)**				

	A	B	C	D	E
34655					
34656	**General Statistics**				
34657	Number of Valid Data		0	Number of Detected Data	0
34658	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34659	Number of Missing Values		8	Percent Non-Detects	NaN%
34660					
34661	**Warning: This data set only has 0 observations!**				
34662	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34663	**The data set for variable PAH|UG/KG|ANTHRACENE (gi_sd_s_2005) was not processed!**				
34664					
34665	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34666	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34667					
34668					
34669					
34670	**PAH|UG/KG|ANTHRACENE (gi_sd_s_2010)**				
34671					
34672	**General Statistics**				
34673	Number of Valid Data		0	Number of Detected Data	0
34674	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34675	Number of Missing Values		2	Percent Non-Detects	NaN%
34676					
34677	**Warning: This data set only has 0 observations!**				
34678	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34679	**The data set for variable PAH|UG/KG|ANTHRACENE (gi_sd_s_2010) was not processed!**				
34680					
34681	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34682	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34683					
34684					
34685					
34686	**PAH|UG/KG|ANTHRACENE (gi_sd_stillwater_2005)**				
34687					
34688	**General Statistics**				
34689	Number of Valid Data		0	Number of Detected Data	0
34690	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34691	Number of Missing Values		4	Percent Non-Detects	NaN%
34692					
34693	**Warning: This data set only has 0 observations!**				
34694	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34695	**The data set for variable PAH|UG/KG|ANTHRACENE (gi_sd_stillwater_2005) was not processed!**				
34696					
34697	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34698	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34699					
34700					
34701					
34702	**PAH|UG/KG|ANTHRACENE (gi_sd_stillwater_2009)**				
34703					
34704	**General Statistics**				
34705	Number of Valid Data		0	Number of Detected Data	0
34706	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34707	Number of Missing Values		60	Percent Non-Detects	NaN%

	A	B	C	D	E
34708					
34709	**Warning: This data set only has 0 observations!**				
34710	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34711	**The data set for variable PAH|UG/KG|ANTHRACENE (gi_sd_stillwater_2009) was not processed!**				
34712					
34713	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34714	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34715					
34716					
34717					
34718	**PAH|UG/KG|ANTHRACENE (gi_sd_stillwater_2010)**				
34719					
34720	**General Statistics**				
34721	Number of Valid Data		0	Number of Detected Data	0
34722	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34723	Number of Missing Values		11	Percent Non-Detects	NaN%
34724					
34725	**Warning: This data set only has 0 observations!**				
34726	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34727	**The data set for variable PAH|UG/KG|ANTHRACENE (gi_sd_stillwater_2010) was not processed!**				
34728					
34729	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34730	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34731					
34732					
34733					
34734	**PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ne_2005)**				
34735					
34736	**General Statistics**				
34737	Number of Valid Data		0	Number of Detected Data	0
34738	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34739	Number of Missing Values		36	Percent Non-Detects	NaN%
34740					
34741	**Warning: This data set only has 0 observations!**				
34742	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34743	**The data set for variable PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ne_2005) was not processed!**				
34744					
34745	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34746	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34747					
34748					
34749					
34750	**PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ne_2009)**				
34751					
34752	**General Statistics**				
34753	Number of Valid Data		0	Number of Detected Data	0
34754	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34755	Number of Missing Values		20	Percent Non-Detects	NaN%
34756					
34757	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
34758	Data set is too small to compute reliable and meaningful statistics and estimates!				
34759	The data set for variable PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ne_2009) was not processed!				
34760					
34761	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34762	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34763					
34764					
34765					
34766	PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ne_2010)				
34767					
34768	General Statistics				
34769	Number of Valid Data		0	Number of Detected Data	0
34770	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34771	Number of Missing Values		16	Percent Non-Detects	NaN%
34772					
34773	Warning: This data set only has 0 observations!				
34774	Data set is too small to compute reliable and meaningful statistics and estimates!				
34775	The data set for variable PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ne_2010) was not processed!				
34776					
34777	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34778	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34779					
34780					
34781					
34782	PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_nw_2005)				
34783					
34784	General Statistics				
34785	Number of Valid Data		0	Number of Detected Data	0
34786	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34787	Number of Missing Values		18	Percent Non-Detects	NaN%
34788					
34789	Warning: This data set only has 0 observations!				
34790	Data set is too small to compute reliable and meaningful statistics and estimates!				
34791	The data set for variable PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_nw_2005) was not processed!				
34792					
34793	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34794	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34795					
34796					
34797					
34798	PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_nw_2009)				
34799					
34800	General Statistics				
34801	Number of Valid Data		0	Number of Detected Data	0
34802	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34803	Number of Missing Values		7	Percent Non-Detects	NaN%
34804					
34805	Warning: This data set only has 0 observations!				
34806	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
34807	The data set for variable PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_nw_2009) was not processed!				
34808					
34809	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34810	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34811					
34812					
34813					
34814	PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_nw_2010)				
34815					
34816	General Statistics				
34817	Number of Valid Data		0	Number of Detected Data	0
34818	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34819	Number of Missing Values		4	Percent Non-Detects	NaN%
34820					
34821	Warning: This data set only has 0 observations!				
34822	Data set is too small to compute reliable and meaningful statistics and estimates!				
34823	The data set for variable PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_nw_2010) was not processed!				
34824					
34825	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34826	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34827					
34828					
34829					
34830	PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ref_2009)				
34831					
34832	General Statistics				
34833	Number of Valid Observations		6	Number of Distinct Observations	6
34834					
34835	Raw Statistics			Log-transformed Statistics	
34836	Minimum		9.8	Minimum of Log Data	2.2823824
34837	Maximum		55	Maximum of Log Data	4.0073332
34838	Mean		24.45	Mean of log Data	3.0031549
34839	Median		19.5	SD of log Data	0.6752433
34840	SD		17.217636		
34841	Coefficient of Variation		0.7041978		
34842	Skewness		1.3320382		
34843					
34844					
34845	Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!				
34846					
34847	It is suggested to collect at least 8 to 10 observations using these statistical methods!				
34848	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34849					
34850					
34851	Warning: There are only 6 Values in this data				
34852	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
34853	the resulting calculations may not be reliable enough to draw conclusions				
34854					
34855	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
34856					
34857	Relevant UCL Statistics				
34858	Normal Distribution Test			Lognormal Distribution Test	
34859	Shapiro Wilk Test Statistic		0.8568344	Shapiro Wilk Test Statistic	0.924329

	A	B	C	D	E
34860	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
34861	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
34862					
34863	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
34864	95% Student's-t UCL		38.613917	95% H-UCL	64.543651
34865	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	53.258607
34866	95% Adjusted-CLT UCL (Chen-1995)		40.096108	97.5% Chebyshev (MVUE) UCL	65.812391
34867	95% Modified-t UCL (Johnson-1978)		39.250988	99% Chebyshev (MVUE) UCL	90.471869
34868					
34869	**Gamma Distribution Test**			**Data Distribution**	
34870	k star (bias corrected)		1.4808877	**Data appear Normal at 5% Significance Level**	
34871	Theta Star		16.510367		
34872	MLE of Mean		24.45		
34873	MLE of Standard Deviation		20.091751		
34874	nu star		17.770653		
34875	Approximate Chi Square Value (.05)		9.2253282	**Nonparametric Statistics**	
34876	Adjusted Level of Significance		0.01222	95% CLT UCL	36.011792
34877	Adjusted Chi Square Value		7.1145221	95% Jackknife UCL	38.613917
34878				95% Standard Bootstrap UCL	35.07688
34879	Anderson-Darling Test Statistic		0.3311727	95% Bootstrap-t UCL	55.386996
34880	Anderson-Darling 5% Critical Value		0.7020801	95% Hall's Bootstrap UCL	107.51957
34881	Kolmogorov-Smirnov Test Statistic		0.2127726	95% Percentile Bootstrap UCL	35.666667
34882	Kolmogorov-Smirnov 5% Critical Value		0.3348834	95% BCA Bootstrap UCL	39.5
34883	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	55.089008
34884				97.5% Chebyshev(Mean, Sd) UCL	68.346532
34885	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	94.388369
34886	95% Approximate Gamma UCL		47.097779		
34887	95% Adjusted Gamma UCL		61.071209		
34888					
34889	**Potential UCL to Use**			Use 95% Student's-t UCL	38.613917
34890					
34891	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
34892	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
34893	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
34894					
34895					
34896	**PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ref_2010)**				
34897					
34898	**General Statistics**				
34899	Number of Valid Observations		3	Number of Distinct Observations	3
34900					
34901					
34902	**Warning: This data set only has 3 observations!**				
34903	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34904	**The data set for variable PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_ref_2010) was not processed!**				
34905					
34906	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34907	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34908					
34909					
34910					
34911	**PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_s_2005)**				
34912					
34913	**General Statistics**				
34914	Number of Valid Data		0	Number of Detected Data	0
34915	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34916	Number of Missing Values		8	Percent Non-Detects	NaN%
34917					

	A	B	C	D	E
34918	Warning: This data set only has 0 observations!				
34919	Data set is too small to compute reliable and meaningful statistics and estimates!				
34920	The data set for variable PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_s_2005) was not processed!				
34921					
34922	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34923	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34924					
34925					
34926					
34927	PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_s_2010)				
34928					
34929	General Statistics				
34930	Number of Valid Data		0	Number of Detected Data	0
34931	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34932	Number of Missing Values		2	Percent Non-Detects	NaN%
34933					
34934	Warning: This data set only has 0 observations!				
34935	Data set is too small to compute reliable and meaningful statistics and estimates!				
34936	The data set for variable PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_s_2010) was not processed!				
34937					
34938	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34939	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34940					
34941					
34942					
34943	PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_stillwater_2005)				
34944					
34945	General Statistics				
34946	Number of Valid Data		0	Number of Detected Data	0
34947	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34948	Number of Missing Values		4	Percent Non-Detects	NaN%
34949					
34950	Warning: This data set only has 0 observations!				
34951	Data set is too small to compute reliable and meaningful statistics and estimates!				
34952	The data set for variable PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_stillwater_2005) was not processed!				
34953					
34954	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
34955	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
34956					
34957					
34958					
34959	PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_stillwater_2009)				
34960					
34961	General Statistics				
34962	Number of Valid Data		0	Number of Detected Data	0
34963	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34964	Number of Missing Values		60	Percent Non-Detects	NaN%
34965					
34966	Warning: This data set only has 0 observations!				
34967	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
34968	**The data set for variable PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_stillwater_2009) was not processed!**				
34969					
34970	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34971	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34972					
34973					
34974					
34975	**PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_stillwater_2010)**				
34976					
34977	**General Statistics**				
34978	Number of Valid Data		0	Number of Detected Data	0
34979	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34980	Number of Missing Values		11	Percent Non-Detects	NaN%
34981					
34982	**Warning: This data set only has 0 observations!**				
34983	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
34984	**The data set for variable PAH|UG/KG|BENZO(A)ANTHRACENE (gi_sd_stillwater_2010) was not processed!**				
34985					
34986	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
34987	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
34988					
34989					
34990					
34991	**PAH|UG/KG|BENZO(A)PYRENE (gi_sd_ne_2005)**				
34992					
34993	**General Statistics**				
34994	Number of Valid Data		0	Number of Detected Data	0
34995	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
34996	Number of Missing Values		36	Percent Non-Detects	NaN%
34997					
34998	**Warning: This data set only has 0 observations!**				
34999	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35000	**The data set for variable PAH|UG/KG|BENZO(A)PYRENE (gi_sd_ne_2005) was not processed!**				
35001					
35002	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35003	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35004					
35005					
35006					
35007	**PAH|UG/KG|BENZO(A)PYRENE (gi_sd_ne_2009)**				
35008					
35009	**General Statistics**				
35010	Number of Valid Data		0	Number of Detected Data	0
35011	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35012	Number of Missing Values		20	Percent Non-Detects	NaN%
35013					
35014	**Warning: This data set only has 0 observations!**				
35015	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35016	**The data set for variable PAH|UG/KG|BENZO(A)PYRENE (gi_sd_ne_2009) was not processed!**				
35017					

	A	B	C	D	E
35018	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35019	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35020					
35021					
35022					
35023	PAH|UG/KG|BENZO(A)PYRENE (gi_sd_ne_2010)				
35024					
35025	General Statistics				
35026	Number of Valid Data		0	Number of Detected Data	0
35027	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35028	Number of Missing Values		16	Percent Non-Detects	NaN%
35029					
35030	Warning: This data set only has 0 observations!				
35031	Data set is too small to compute reliable and meaningful statistics and estimates!				
35032	The data set for variable PAH|UG/KG|BENZO(A)PYRENE (gi_sd_ne_2010) was not processed!				
35033					
35034	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35035	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35036					
35037					
35038					
35039	PAH|UG/KG|BENZO(A)PYRENE (gi_sd_nw_2005)				
35040					
35041	General Statistics				
35042	Number of Valid Data		0	Number of Detected Data	0
35043	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35044	Number of Missing Values		18	Percent Non-Detects	NaN%
35045					
35046	Warning: This data set only has 0 observations!				
35047	Data set is too small to compute reliable and meaningful statistics and estimates!				
35048	The data set for variable PAH|UG/KG|BENZO(A)PYRENE (gi_sd_nw_2005) was not processed!				
35049					
35050	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35051	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35052					
35053					
35054					
35055	PAH|UG/KG|BENZO(A)PYRENE (gi_sd_nw_2009)				
35056					
35057	General Statistics				
35058	Number of Valid Data		0	Number of Detected Data	0
35059	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35060	Number of Missing Values		7	Percent Non-Detects	NaN%
35061					
35062	Warning: This data set only has 0 observations!				
35063	Data set is too small to compute reliable and meaningful statistics and estimates!				
35064	The data set for variable PAH|UG/KG|BENZO(A)PYRENE (gi_sd_nw_2009) was not processed!				
35065					
35066	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
35067	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35068					
35069					
35070					
35071	PAH|UG/KG|BENZO(A)PYRENE (gi_sd_nw_2010)				
35072					
35073	General Statistics				
35074	Number of Valid Data		0	Number of Detected Data	0
35075	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35076	Number of Missing Values		4	Percent Non-Detects	NaN%
35077					
35078	Warning: This data set only has 0 observations!				
35079	Data set is too small to compute reliable and meaningful statistics and estimates!				
35080	The data set for variable PAH|UG/KG|BENZO(A)PYRENE (gi_sd_nw_2010) was not processed!				
35081					
35082	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35083	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35084					
35085					
35086					
35087	PAH|UG/KG|BENZO(A)PYRENE (gi_sd_ref_2009)				
35088					
35089	General Statistics				
35090	Number of Valid Observations		6	Number of Distinct Observations	6
35091					
35092	Raw Statistics			Log-transformed Statistics	
35093	Minimum		8.8	Minimum of Log Data	2.1747517
35094	Maximum		45	Maximum of Log Data	3.8066625
35095	Mean		21.766667	Mean of log Data	2.9166341
35096	Median		18.5	SD of log Data	0.6294569
35097	SD		13.716802		
35098	Coefficient of Variation		0.6301747		
35099	Skewness		1.0613799		
35100					
35101					
35102	Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!				
35103					
35104	It is suggested to collect at least 8 to 10 observations using these statistical methods!				
35105	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35106					
35107					
35108	Warning: There are only 6 Values in this data				
35109	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
35110	the resulting calculations may not be reliable enough to draw conclusions				
35111					
35112	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
35113					
35114	Relevant UCL Statistics				
35115	Normal Distribution Test			Lognormal Distribution Test	
35116	Shapiro Wilk Test Statistic		0.8961754	Shapiro Wilk Test Statistic	0.9448587
35117	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
35118	Data appear Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
35119					
35120	Assuming Normal Distribution			Assuming Lognormal Distribution	
35121	95% Student's-t UCL		33.050658	95% H-UCL	52.003055

	A	B	C	D	E
35122	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	45.960613
35123	95% Adjusted-CLT UCL (Chen-1995)		33.570322	97.5% Chebyshev (MVUE) UCL	56.451642
35124	95% Modified-t UCL (Johnson-1978)		33.455067	99% Chebyshev (MVUE) UCL	77.059237
35125					
35126	**Gamma Distribution Test**			**Data Distribution**	
35127	k star (bias corrected)		1.7163901	**Data appear Normal at 5% Significance Level**	
35128	Theta Star		12.681655		
35129	MLE of Mean		21.766667		
35130	MLE of Standard Deviation		16.614372		
35131	nu star		20.596681		
35132	Approximate Chi Square Value (.05)		11.292185	**Nonparametric Statistics**	
35133	Adjusted Level of Significance		0.01222	95% CLT UCL	30.977619
35134	Adjusted Chi Square Value		8.9120876	95% Jackknife UCL	33.050658
35135				95% Standard Bootstrap UCL	30.106753
35136	Anderson-Darling Test Statistic		0.2751618	95% Bootstrap-t UCL	43.254965
35137	Anderson-Darling 5% Critical Value		0.7010457	95% Hall's Bootstrap UCL	94.045544
35138	Kolmogorov-Smirnov Test Statistic		0.1899732	95% Percentile Bootstrap UCL	30.466667
35139	Kolmogorov-Smirnov 5% Critical Value		0.3343373	95% BCA Bootstrap UCL	31.466667
35140	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	46.175895
35141				97.5% Chebyshev(Mean, Sd) UCL	56.737788
35142	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	77.484581
35143	95% Approximate Gamma UCL		39.70189		
35144	95% Adjusted Gamma UCL		50.304835		
35145					
35146	**Potential UCL to Use**			Use 95% Student's-t UCL	33.050658
35147					
35148	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
35149	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
35150	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
35151					
35152					
35153	**PAH|UG/KG|BENZO(A)PYRENE (gi_sd_ref_2010)**				
35154					
35155	**General Statistics**				
35156	Number of Valid Observations		3	Number of Distinct Observations	3
35157					
35158					
35159	**Warning: This data set only has 3 observations!**				
35160	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35161	**The data set for variable PAH|UG/KG|BENZO(A)PYRENE (gi_sd_ref_2010) was not processed!**				
35162					
35163	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35164	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35165					
35166					
35167					
35168	**PAH|UG/KG|BENZO(A)PYRENE (gi_sd_s_2005)**				
35169					
35170	**General Statistics**				
35171	Number of Valid Data		0	Number of Detected Data	0
35172	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35173	Number of Missing Values		8	Percent Non-Detects	NaN%
35174					
35175	**Warning: This data set only has 0 observations!**				
35176	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35177	**The data set for variable PAH|UG/KG|BENZO(A)PYRENE (gi_sd_s_2005) was not processed!**				
35178					

	A	B	C	D	E
35179	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35180	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35181					
35182					
35183					
35184	PAH|UG/KG|BENZO(A)PYRENE (gi_sd_s_2010)				
35185					
35186	General Statistics				
35187	Number of Valid Data		0	Number of Detected Data	0
35188	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35189	Number of Missing Values		2	Percent Non-Detects	NaN%
35190					
35191	Warning: This data set only has 0 observations!				
35192	Data set is too small to compute reliable and meaningful statistics and estimates!				
35193	The data set for variable PAH|UG/KG|BENZO(A)PYRENE (gi_sd_s_2010) was not processed!				
35194					
35195	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35196	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35197					
35198					
35199					
35200	PAH|UG/KG|BENZO(A)PYRENE (gi_sd_stillwater_2005)				
35201					
35202	General Statistics				
35203	Number of Valid Data		0	Number of Detected Data	0
35204	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35205	Number of Missing Values		4	Percent Non-Detects	NaN%
35206					
35207	Warning: This data set only has 0 observations!				
35208	Data set is too small to compute reliable and meaningful statistics and estimates!				
35209	The data set for variable PAH|UG/KG|BENZO(A)PYRENE (gi_sd_stillwater_2005) was not processed!				
35210					
35211	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35212	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35213					
35214					
35215					
35216	PAH|UG/KG|BENZO(A)PYRENE (gi_sd_stillwater_2009)				
35217					
35218	General Statistics				
35219	Number of Valid Data		0	Number of Detected Data	0
35220	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35221	Number of Missing Values		60	Percent Non-Detects	NaN%
35222					
35223	Warning: This data set only has 0 observations!				
35224	Data set is too small to compute reliable and meaningful statistics and estimates!				
35225	The data set for variable PAH|UG/KG|BENZO(A)PYRENE (gi_sd_stillwater_2009) was not processed!				
35226					
35227	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
35228	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35229					
35230					
35231					
35232	PAH|UG/KG|BENZO(A)PYRENE (gi_sd_stillwater_2010)				
35233					
35234	General Statistics				
35235	Number of Valid Data		0	Number of Detected Data	0
35236	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35237	Number of Missing Values		11	Percent Non-Detects	NaN%
35238					
35239	Warning: This data set only has 0 observations!				
35240	Data set is too small to compute reliable and meaningful statistics and estimates!				
35241	The data set for variable PAH|UG/KG|BENZO(A)PYRENE (gi_sd_stillwater_2010) was not processed!				
35242					
35243	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35244	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35245					
35246					
35247					
35248	PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ne_2005)				
35249					
35250	General Statistics				
35251	Number of Valid Data		0	Number of Detected Data	0
35252	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35253	Number of Missing Values		36	Percent Non-Detects	NaN%
35254					
35255	Warning: This data set only has 0 observations!				
35256	Data set is too small to compute reliable and meaningful statistics and estimates!				
35257	The data set for variable PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ne_2005) was not processed!				
35258					
35259	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35260	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35261					
35262					
35263					
35264	PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ne_2009)				
35265					
35266	General Statistics				
35267	Number of Valid Data		0	Number of Detected Data	0
35268	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35269	Number of Missing Values		20	Percent Non-Detects	NaN%
35270					
35271	Warning: This data set only has 0 observations!				
35272	Data set is too small to compute reliable and meaningful statistics and estimates!				
35273	The data set for variable PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ne_2009) was not processed!				
35274					
35275	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35276	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35277					

	A	B	C	D	E
35278					
35279					
35280	PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ne_2010)				
35281					
35282	General Statistics				
35283	Number of Valid Data		0	Number of Detected Data	0
35284	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35285	Number of Missing Values		16	Percent Non-Detects	NaN%
35286					
35287	Warning: This data set only has 0 observations!				
35288	Data set is too small to compute reliable and meaningful statistics and estimates!				
35289	The data set for variable PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ne_2010) was not processed!				
35290					
35291	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35292	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35293					
35294					
35295					
35296	PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_nw_2005)				
35297					
35298	General Statistics				
35299	Number of Valid Data		0	Number of Detected Data	0
35300	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35301	Number of Missing Values		18	Percent Non-Detects	NaN%
35302					
35303	Warning: This data set only has 0 observations!				
35304	Data set is too small to compute reliable and meaningful statistics and estimates!				
35305	The data set for variable PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_nw_2005) was not processed!				
35306					
35307	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35308	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35309					
35310					
35311					
35312	PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_nw_2009)				
35313					
35314	General Statistics				
35315	Number of Valid Data		0	Number of Detected Data	0
35316	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35317	Number of Missing Values		7	Percent Non-Detects	NaN%
35318					
35319	Warning: This data set only has 0 observations!				
35320	Data set is too small to compute reliable and meaningful statistics and estimates!				
35321	The data set for variable PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_nw_2009) was not processed!				
35322					
35323	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35324	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35325					
35326					
35327					
35328	PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_nw_2010)				

	A	B	C	D	E
35329					
35330	**General Statistics**				
35331	Number of Valid Data		0	Number of Detected Data	0
35332	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35333	Number of Missing Values		4	Percent Non-Detects	NaN%
35334					
35335	**Warning: This data set only has 0 observations!**				
35336	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35337	**The data set for variable PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_nw_2010) was not processed!**				
35338					
35339	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35340	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35341					
35342					
35343					
35344	**PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ref_2009)**				
35345					
35346	**General Statistics**				
35347	Number of Valid Observations		6	Number of Distinct Observations	6
35348					
35349	**Raw Statistics**			**Log-transformed Statistics**	
35350	Minimum		11	Minimum of Log Data	2.3978953
35351	Maximum		52	Maximum of Log Data	3.9512437
35352	Mean		25.833333	Mean of log Data	3.1049171
35353	Median		23	SD of log Data	0.5972801
35354	SD		15.367715		
35355	Coefficient of Variation		0.5948793		
35356	Skewness		1.0322073		
35357					
35358					
35359	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
35360					
35361	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
35362	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35363					
35364					
35365	**Warning: There are only 6 Values in this data**				
35366	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
35367	**the resulting calculations may not be reliable enough to draw conclusions**				
35368					
35369	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
35370					
35371	**Relevant UCL Statistics**				
35372	**Normal Distribution Test**			**Lognormal Distribution Test**	
35373	Shapiro Wilk Test Statistic		0.906386	Shapiro Wilk Test Statistic	0.9457166
35374	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
35375	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
35376					
35377	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
35378	95% Student's-t UCL		38.475431	95% H-UCL	57.617205
35379	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	53.15798
35380	95% Adjusted-CLT UCL (Chen-1995)		38.977802	97.5% Chebyshev (MVUE) UCL	64.994
35381	95% Modified-t UCL (Johnson-1978)		38.916061	99% Chebyshev (MVUE) UCL	88.243567
35382					
35383	**Gamma Distribution Test**			**Data Distribution**	
35384	k star (bias corrected)		1.8937391	**Data appear Normal at 5% Significance Level**	
35385	Theta Star		13.641442		

	A	B	C	D	E
35386	MLE of Mean		25.833333		
35387	MLE of Standard Deviation		18.772425		
35388	nu star		22.724869		
35389	Approximate Chi Square Value (.05)		12.883174	**Nonparametric Statistics**	
35390	Adjusted Level of Significance		0.01222	95% CLT UCL	36.152887
35391	Adjusted Chi Square Value		10.311567	95% Jackknife UCL	38.475431
35392				95% Standard Bootstrap UCL	35.121112
35393	Anderson-Darling Test Statistic		0.2599249	95% Bootstrap-t UCL	45.912743
35394	Anderson-Darling 5% Critical Value		0.7005669	95% Hall's Bootstrap UCL	101.46335
35395	Kolmogorov-Smirnov Test Statistic		0.1971064	95% Percentile Bootstrap UCL	35.666667
35396	Kolmogorov-Smirnov 5% Critical Value		0.3339791	95% BCA Bootstrap UCL	37.166667
35397	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	53.180383
35398				97.5% Chebyshev(Mean, Sd) UCL	65.013473
35399	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	88.257287
35400	95% Approximate Gamma UCL		45.567895		
35401	95% Adjusted Gamma UCL		56.932097		
35402					
35403	**Potential UCL to Use**			Use 95% Student's-t UCL	38.475431
35404					
35405	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
35406	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
35407	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
35408					
35409					
35410	**PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ref_2010)**				
35411					
35412	**General Statistics**				
35413	Number of Valid Observations		3	Number of Distinct Observations	3
35414					
35415					
35416	**Warning: This data set only has 3 observations!**				
35417	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35418	**The data set for variable PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_ref_2010) was not processed!**				
35419					
35420	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35421	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35422					
35423					
35424					
35425	**PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_s_2005)**				
35426					
35427	**General Statistics**				
35428	Number of Valid Data		0	Number of Detected Data	0
35429	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35430	Number of Missing Values		8	Percent Non-Detects	NaN%
35431					
35432	**Warning: This data set only has 0 observations!**				
35433	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35434	**The data set for variable PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_s_2005) was not processed!**				
35435					
35436	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35437	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35438					
35439					

	A	B	C	D	E
35440					
35441	PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_s_2010)				
35442					
35443	General Statistics				
35444	Number of Valid Data		0	Number of Detected Data	0
35445	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35446	Number of Missing Values		2	Percent Non-Detects	NaN%
35447					
35448	Warning: This data set only has 0 observations!				
35449	Data set is too small to compute reliable and meaningful statistics and estimates!				
35450	The data set for variable PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_s_2010) was not processed!				
35451					
35452	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35453	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35454					
35455					
35456					
35457	PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_stillwater_2005)				
35458					
35459	General Statistics				
35460	Number of Valid Data		0	Number of Detected Data	0
35461	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35462	Number of Missing Values		4	Percent Non-Detects	NaN%
35463					
35464	Warning: This data set only has 0 observations!				
35465	Data set is too small to compute reliable and meaningful statistics and estimates!				
35466	The data set for variable PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_stillwater_2005) was not processed!				
35467					
35468	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35469	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35470					
35471					
35472					
35473	PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_stillwater_2009)				
35474					
35475	General Statistics				
35476	Number of Valid Data		0	Number of Detected Data	0
35477	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35478	Number of Missing Values		60	Percent Non-Detects	NaN%
35479					
35480	Warning: This data set only has 0 observations!				
35481	Data set is too small to compute reliable and meaningful statistics and estimates!				
35482	The data set for variable PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_stillwater_2009) was not processed!				
35483					
35484	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35485	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35486					
35487					
35488					
35489	PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_stillwater_2010)				
35490					

	A	B	C	D	E
35491	**General Statistics**				
35492	Number of Valid Data		0	Number of Detected Data	0
35493	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35494	Number of Missing Values		11	Percent Non-Detects	NaN%
35495					
35496	**Warning: This data set only has 0 observations!**				
35497	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35498	**The data set for variable PAH|UG/KG|BENZO(B)FLUORANTHENE (gi_sd_stillwater_2010) was not processed!**				
35499					
35500	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35501	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35502					
35503					
35504					
35505	**PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ne_2005)**				
35506					
35507	**General Statistics**				
35508	Number of Valid Data		0	Number of Detected Data	0
35509	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35510	Number of Missing Values		36	Percent Non-Detects	NaN%
35511					
35512	**Warning: This data set only has 0 observations!**				
35513	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35514	**The data set for variable PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ne_2005) was not processed!**				
35515					
35516	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35517	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35518					
35519					
35520					
35521	**PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ne_2009)**				
35522					
35523	**General Statistics**				
35524	Number of Valid Data		0	Number of Detected Data	0
35525	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35526	Number of Missing Values		20	Percent Non-Detects	NaN%
35527					
35528	**Warning: This data set only has 0 observations!**				
35529	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35530	**The data set for variable PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ne_2009) was not processed!**				
35531					
35532	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35533	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35534					
35535					
35536					
35537	**PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ne_2010)**				
35538					
35539	**General Statistics**				
35540	Number of Valid Data		0	Number of Detected Data	0
35541	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35542	Number of Missing Values		16	Percent Non-Detects	NaN%

	A	B	C	D	E
35543					
35544	**Warning: This data set only has 0 observations!**				
35545	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35546	**The data set for variable PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ne_2010) was not processed!**				
35547					
35548	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35549	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35550					
35551					
35552					
35553	**PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_nw_2005)**				
35554					
35555	**General Statistics**				
35556	Number of Valid Data		0	Number of Detected Data	0
35557	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35558	Number of Missing Values		18	Percent Non-Detects	NaN%
35559					
35560	**Warning: This data set only has 0 observations!**				
35561	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35562	**The data set for variable PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_nw_2005) was not processed!**				
35563					
35564	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35565	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35566					
35567					
35568					
35569	**PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_nw_2009)**				
35570					
35571	**General Statistics**				
35572	Number of Valid Data		0	Number of Detected Data	0
35573	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35574	Number of Missing Values		7	Percent Non-Detects	NaN%
35575					
35576	**Warning: This data set only has 0 observations!**				
35577	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35578	**The data set for variable PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_nw_2009) was not processed!**				
35579					
35580	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35581	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35582					
35583					
35584					
35585	**PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_nw_2010)**				
35586					
35587	**General Statistics**				
35588	Number of Valid Data		0	Number of Detected Data	0
35589	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35590	Number of Missing Values		4	Percent Non-Detects	NaN%
35591					
35592	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
35593	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35594	**The data set for variable PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_nw_2010) was not processed!**				
35595					
35596	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35597	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35598					
35599					
35600					
35601	**PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ref_2009)**				
35602					
35603	**General Statistics**				
35604	Number of Valid Observations		6	Number of Distinct Observations	4
35605					
35606	**Raw Statistics**			**Log-transformed Statistics**	
35607	Minimum		7.1	Minimum of Log Data	1.9600948
35608	Maximum		31	Maximum of Log Data	3.4339872
35609	Mean		15.366667	Mean of log Data	2.5880997
35610	Median		13	SD of log Data	0.5854399
35611	SD		9.2088363		
35612	Coefficient of Variation		0.5992735		
35613	Skewness		1.0922352		
35614					
35615					
35616	**Warning: There are only 4 Distinct Values in this data**				
35617	**There are insufficient Distinct Values to perform some GOF tests and bootstrap methods.**				
35618	**Those methods will return a 'N/A' value on your output display!**				
35619					
35620	**It is necessary to have 4 or more Distinct Values to compute bootstrap methods.**				
35621	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
35622	**It is recommended to have 10-15 or more observations for accurate and meaningful bootstrap results.**				
35623					
35624					
35625	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
35626					
35627	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
35628	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35629					
35630	**Relevant UCL Statistics**				
35631	**Normal Distribution Test**			**Lognormal Distribution Test**	
35632	Shapiro Wilk Test Statistic		0.8757967	Shapiro Wilk Test Statistic	0.9149101
35633	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
35634	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
35635					
35636	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
35637	95% Student's-t UCL		22.942224	95% H-UCL	33.329938
35638	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	31.208445
35639	95% Adjusted-CLT UCL (Chen-1995)		23.341705	97.5% Chebyshev (MVUE) UCL	38.090327
35640	95% Modified-t UCL (Johnson-1978)		23.221619	99% Chebyshev (MVUE) UCL	51.608452
35641					
35642	**Gamma Distribution Test**			**Data Distribution**	
35643	k star (bias corrected)		1.9251191	**Data appear Normal at 5% Significance Level**	
35644	Theta Star		7.9821901		
35645	MLE of Mean		15.366667		
35646	MLE of Standard Deviation		11.075182		
35647	nu star		23.101429		

	A	B	C	D	E
35648	Approximate Chi Square Value (.05)		13.16739	**Nonparametric Statistics**	
35649	Adjusted Level of Significance		0.01222	95% CLT UCL	21.55048
35650	Adjusted Chi Square Value		10.562794	95% Jackknife UCL	22.942224
35651				95% Standard Bootstrap UCL	20.890611
35652	Anderson-Darling Test Statistic		0.348098	95% Bootstrap-t UCL	30.517327
35653	Anderson-Darling 5% Critical Value		0.7004822	95% Hall's Bootstrap UCL	64.315909
35654	Kolmogorov-Smirnov Test Statistic		0.2190362	95% Percentile Bootstrap UCL	21.366667
35655	Kolmogorov-Smirnov 5% Critical Value		0.3339157	95% BCA Bootstrap UCL	21.666667
35656	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	31.753911
35657				97.5% Chebyshev(Mean, Sd) UCL	38.844685
35658	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	52.773137
35659	95% Approximate Gamma UCL		26.959934		
35660	95% Adjusted Gamma UCL		33.607772		
35661					
35662	**Potential UCL to Use**			Use 95% Student's-t UCL	22.942224
35663					
35664	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
35665	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
35666	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
35667					
35668					
35669	**PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ref_2010)**				
35670					
35671	**General Statistics**				
35672	Number of Valid Observations		3	Number of Distinct Observations	3
35673					
35674					
35675	**Warning: This data set only has 3 observations!**				
35676	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35677	**The data set for variable PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_ref_2010) was not processed!**				
35678					
35679	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35680	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35681					
35682					
35683					
35684	**PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_s_2005)**				
35685					
35686	**General Statistics**				
35687	Number of Valid Data		0	Number of Detected Data	0
35688	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35689	Number of Missing Values		8	Percent Non-Detects	NaN%
35690					
35691	**Warning: This data set only has 0 observations!**				
35692	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35693	**The data set for variable PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_s_2005) was not processed!**				
35694					
35695	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35696	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35697					
35698					
35699					
35700	**PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_s_2010)**				

	A	B	C	D	E
35701					
35702	**General Statistics**				
35703	Number of Valid Data		0	Number of Detected Data	0
35704	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35705	Number of Missing Values		2	Percent Non-Detects	NaN%
35706					
35707	**Warning: This data set only has 0 observations!**				
35708	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35709	**The data set for variable PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_s_2010) was not processed!**				
35710					
35711	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35712	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35713					
35714					
35715					
35716	**PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_stillwater_2005)**				
35717					
35718	**General Statistics**				
35719	Number of Valid Data		0	Number of Detected Data	0
35720	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35721	Number of Missing Values		4	Percent Non-Detects	NaN%
35722					
35723	**Warning: This data set only has 0 observations!**				
35724	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35725	**The data set for variable PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_stillwater_2005) was not processed!**				
35726					
35727	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35728	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35729					
35730					
35731					
35732	**PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_stillwater_2009)**				
35733					
35734	**General Statistics**				
35735	Number of Valid Data		0	Number of Detected Data	0
35736	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35737	Number of Missing Values		60	Percent Non-Detects	NaN%
35738					
35739	**Warning: This data set only has 0 observations!**				
35740	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35741	**The data set for variable PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_stillwater_2009) was not processed!**				
35742					
35743	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35744	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35745					
35746					
35747					
35748	**PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_stillwater_2010)**				
35749					
35750	**General Statistics**				
35751	Number of Valid Data		0	Number of Detected Data	0
35752	Number of Distinct Detected Data		0	Number of Non-Detect Data	0

	A	B	C	D	E
35753	Number of Missing Values		11	Percent Non-Detects	NaN%
35754					
35755	**Warning: This data set only has 0 observations!**				
35756	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35757	**The data set for variable PAH|UG/KG|BENZO(G,H,I)PERYLENE (gi_sd_stillwater_2010) was not processed!**				
35758					
35759	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35760	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35761					
35762					
35763					
35764	**PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ne_2005)**				
35765					
35766	**General Statistics**				
35767	Number of Valid Data		0	Number of Detected Data	0
35768	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35769	Number of Missing Values		36	Percent Non-Detects	NaN%
35770					
35771	**Warning: This data set only has 0 observations!**				
35772	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35773	**The data set for variable PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ne_2005) was not processed!**				
35774					
35775	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35776	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35777					
35778					
35779					
35780	**PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ne_2009)**				
35781					
35782	**General Statistics**				
35783	Number of Valid Data		0	Number of Detected Data	0
35784	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35785	Number of Missing Values		20	Percent Non-Detects	NaN%
35786					
35787	**Warning: This data set only has 0 observations!**				
35788	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35789	**The data set for variable PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ne_2009) was not processed!**				
35790					
35791	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35792	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35793					
35794					
35795					
35796	**PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ne_2010)**				
35797					
35798	**General Statistics**				
35799	Number of Valid Data		0	Number of Detected Data	0
35800	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35801	Number of Missing Values		16	Percent Non-Detects	NaN%
35802					
35803	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
35804	Data set is too small to compute reliable and meaningful statistics and estimates!				
35805	The data set for variable PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ne_2010) was not processed!				
35806					
35807	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35808	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35809					
35810					
35811					
35812	PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_nw_2005)				
35813					
35814	General Statistics				
35815	Number of Valid Data		0	Number of Detected Data	0
35816	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35817	Number of Missing Values		18	Percent Non-Detects	NaN%
35818					
35819	Warning: This data set only has 0 observations!				
35820	Data set is too small to compute reliable and meaningful statistics and estimates!				
35821	The data set for variable PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_nw_2005) was not processed!				
35822					
35823	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35824	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35825					
35826					
35827					
35828	PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_nw_2009)				
35829					
35830	General Statistics				
35831	Number of Valid Data		0	Number of Detected Data	0
35832	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35833	Number of Missing Values		7	Percent Non-Detects	NaN%
35834					
35835	Warning: This data set only has 0 observations!				
35836	Data set is too small to compute reliable and meaningful statistics and estimates!				
35837	The data set for variable PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_nw_2009) was not processed!				
35838					
35839	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35840	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35841					
35842					
35843					
35844	PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_nw_2010)				
35845					
35846	General Statistics				
35847	Number of Valid Data		0	Number of Detected Data	0
35848	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35849	Number of Missing Values		4	Percent Non-Detects	NaN%
35850					
35851	Warning: This data set only has 0 observations!				
35852	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
35853	**The data set for variable PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_nw_2010) was not processed!**				
35854					
35855	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35856	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35857					
35858					
35859					
35860	**PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ref_2009)**				
35861					
35862	**General Statistics**				
35863	Number of Valid Observations		6	Number of Distinct Observations	6
35864					
35865	**Raw Statistics**			**Log-transformed Statistics**	
35866	Minimum		6.8	Minimum of Log Data	1.9169226
35867	Maximum		33	Maximum of Log Data	3.4965076
35868	Mean		16.2	Mean of log Data	2.630571
35869	Median		13.25	SD of log Data	0.6061251
35870	SD		10.032547		
35871	Coefficient of Variation		0.619293		
35872	Skewness		1.069892		
35873					
35874					
35875	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
35876					
35877	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
35878	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35879					
35880					
35881	**Warning: There are only 6 Values in this data**				
35882	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
35883	**the resulting calculations may not be reliable enough to draw conclusions**				
35884					
35885	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
35886					
35887	**Relevant UCL Statistics**				
35888	**Normal Distribution Test**			**Lognormal Distribution Test**	
35889	Shapiro Wilk Test Statistic		0.887172	Shapiro Wilk Test Statistic	0.9470859
35890	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
35891	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
35892					
35893	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
35894	95% Student's-t UCL		24.453175	95% H-UCL	36.694907
35895	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	33.471416
35896	95% Adjusted-CLT UCL (Chen-1995)		24.848469	97.5% Chebyshev (MVUE) UCL	40.976703
35897	95% Modified-t UCL (Johnson-1978)		24.751334	99% Chebyshev (MVUE) UCL	55.719386
35898					
35899	**Gamma Distribution Test**			**Data Distribution**	
35900	k star (bias corrected)		1.8086623	**Data appear Normal at 5% Significance Level**	
35901	Theta Star		8.956896		
35902	MLE of Mean		16.2		
35903	MLE of Standard Deviation		12.045817		
35904	nu star		21.703947		
35905	Approximate Chi Square Value (.05)		12.116604	**Nonparametric Statistics**	
35906	Adjusted Level of Significance		0.01222	95% CLT UCL	22.936942
35907	Adjusted Chi Square Value		9.6357601	95% Jackknife UCL	24.453175
35908				95% Standard Bootstrap UCL	22.379481
35909	Anderson-Darling Test Statistic		0.2940851	95% Bootstrap-t UCL	34.238429
35910	Anderson-Darling 5% Critical Value		0.7007966	95% Hall's Bootstrap UCL	71.976159
35911	Kolmogorov-Smirnov Test Statistic		0.2229239	95% Percentile Bootstrap UCL	22.233333

	A	B	C	D	E
35912	Kolmogorov-Smirnov 5% Critical Value		0.3341509	95% BCA Bootstrap UCL	23.166667
35913	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	34.053048
35914				97.5% Chebyshev(Mean, Sd) UCL	41.778077
35915	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	56.952399
35916	95% Approximate Gamma UCL		29.018358		
35917	95% Adjusted Gamma UCL		36.489487		
35918					
35919	**Potential UCL to Use**			Use 95% Student's-t UCL	24.453175
35920					
35921	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
35922	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
35923	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
35924					
35925					
35926	**PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ref_2010)**				
35927					
35928	**General Statistics**				
35929	Number of Valid Observations		3	Number of Distinct Observations	3
35930					
35931					
35932	**Warning: This data set only has 3 observations!**				
35933	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35934	**The data set for variable PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_ref_2010) was not processed!**				
35935					
35936	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35937	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35938					
35939					
35940					
35941	**PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_s_2005)**				
35942					
35943	**General Statistics**				
35944	Number of Valid Data		0	Number of Detected Data	0
35945	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35946	Number of Missing Values		8	Percent Non-Detects	NaN%
35947					
35948	**Warning: This data set only has 0 observations!**				
35949	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
35950	**The data set for variable PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_s_2005) was not processed!**				
35951					
35952	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
35953	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
35954					
35955					
35956					
35957	**PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_s_2010)**				
35958					
35959	**General Statistics**				
35960	Number of Valid Data		0	Number of Detected Data	0
35961	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35962	Number of Missing Values		2	Percent Non-Detects	NaN%
35963					

	A	B	C	D	E
35964	Warning: This data set only has 0 observations!				
35965	Data set is too small to compute reliable and meaningful statistics and estimates!				
35966	The data set for variable PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_s_2010) was not processed!				
35967					
35968	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35969	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35970					
35971					
35972					
35973	PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_stillwater_2005)				
35974					
35975	General Statistics				
35976	Number of Valid Data		0	Number of Detected Data	0
35977	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35978	Number of Missing Values		4	Percent Non-Detects	NaN%
35979					
35980	Warning: This data set only has 0 observations!				
35981	Data set is too small to compute reliable and meaningful statistics and estimates!				
35982	The data set for variable PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_stillwater_2005) was not processed!				
35983					
35984	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
35985	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
35986					
35987					
35988					
35989	PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_stillwater_2009)				
35990					
35991	General Statistics				
35992	Number of Valid Data		0	Number of Detected Data	0
35993	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
35994	Number of Missing Values		60	Percent Non-Detects	NaN%
35995					
35996	Warning: This data set only has 0 observations!				
35997	Data set is too small to compute reliable and meaningful statistics and estimates!				
35998	The data set for variable PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_stillwater_2009) was not processed!				
35999					
36000	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36001	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36002					
36003					
36004					
36005	PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_stillwater_2010)				
36006					
36007	General Statistics				
36008	Number of Valid Data		0	Number of Detected Data	0
36009	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36010	Number of Missing Values		11	Percent Non-Detects	NaN%
36011					
36012	Warning: This data set only has 0 observations!				
36013	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
36014	**The data set for variable PAH|UG/KG|BENZO(K)FLUORANTHENE (gi_sd_stillwater_2010) was not processed!**				
36015					
36016	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36017	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36018					
36019					
36020					
36021	**PAH|UG/KG|CHRYSENE (gi_sd_ne_2005)**				
36022					
36023	**General Statistics**				
36024	Number of Valid Data		0	Number of Detected Data	0
36025	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36026	Number of Missing Values		36	Percent Non-Detects	NaN%
36027					
36028	**Warning: This data set only has 0 observations!**				
36029	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36030	**The data set for variable PAH|UG/KG|CHRYSENE (gi_sd_ne_2005) was not processed!**				
36031					
36032	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36033	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36034					
36035					
36036					
36037	**PAH|UG/KG|CHRYSENE (gi_sd_ne_2009)**				
36038					
36039	**General Statistics**				
36040	Number of Valid Data		0	Number of Detected Data	0
36041	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36042	Number of Missing Values		20	Percent Non-Detects	NaN%
36043					
36044	**Warning: This data set only has 0 observations!**				
36045	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36046	**The data set for variable PAH|UG/KG|CHRYSENE (gi_sd_ne_2009) was not processed!**				
36047					
36048	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36049	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36050					
36051					
36052					
36053	**PAH|UG/KG|CHRYSENE (gi_sd_ne_2010)**				
36054					
36055	**General Statistics**				
36056	Number of Valid Data		0	Number of Detected Data	0
36057	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36058	Number of Missing Values		16	Percent Non-Detects	NaN%
36059					
36060	**Warning: This data set only has 0 observations!**				
36061	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36062	**The data set for variable PAH|UG/KG|CHRYSENE (gi_sd_ne_2010) was not processed!**				
36063					
36064	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
36065	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36066					
36067					
36068					
36069	PAH|UG/KG|CHRYSENE (gi_sd_nw_2005)				
36070					
36071	General Statistics				
36072	Number of Valid Data		0	Number of Detected Data	0
36073	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36074	Number of Missing Values		18	Percent Non-Detects	NaN%
36075					
36076	Warning: This data set only has 0 observations!				
36077	Data set is too small to compute reliable and meaningful statistics and estimates!				
36078	The data set for variable PAH|UG/KG|CHRYSENE (gi_sd_nw_2005) was not processed!				
36079					
36080	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36081	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36082					
36083					
36084					
36085	PAH|UG/KG|CHRYSENE (gi_sd_nw_2009)				
36086					
36087	General Statistics				
36088	Number of Valid Data		0	Number of Detected Data	0
36089	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36090	Number of Missing Values		7	Percent Non-Detects	NaN%
36091					
36092	Warning: This data set only has 0 observations!				
36093	Data set is too small to compute reliable and meaningful statistics and estimates!				
36094	The data set for variable PAH|UG/KG|CHRYSENE (gi_sd_nw_2009) was not processed!				
36095					
36096	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36097	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36098					
36099					
36100					
36101	PAH|UG/KG|CHRYSENE (gi_sd_nw_2010)				
36102					
36103	General Statistics				
36104	Number of Valid Data		0	Number of Detected Data	0
36105	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36106	Number of Missing Values		4	Percent Non-Detects	NaN%
36107					
36108	Warning: This data set only has 0 observations!				
36109	Data set is too small to compute reliable and meaningful statistics and estimates!				
36110	The data set for variable PAH|UG/KG|CHRYSENE (gi_sd_nw_2010) was not processed!				
36111					
36112	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36113	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36114					
36115					
36116					
36117	PAH|UG/KG|CHRYSENE (gi_sd_ref_2009)				

	A	B	C	D	E
36118					
36119	**General Statistics**				
36120	Number of Valid Observations		6	Number of Distinct Observations	6
36121					
36122	**Raw Statistics**			**Log-transformed Statistics**	
36123	Minimum		11	Minimum of Log Data	2.3978953
36124	Maximum		44	Maximum of Log Data	3.7841896
36125	Mean		22.666667	Mean of log Data	3.004177
36126	Median		20.5	SD of log Data	0.5260108
36127	SD		12.290918		
36128	Coefficient of Variation		0.5422464		
36129	Skewness		1.1241518		
36130					
36131					
36132	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
36133					
36134	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
36135	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36136					
36137					
36138	**Warning: There are only 6 Values in this data**				
36139	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
36140	**the resulting calculations may not be reliable enough to draw conclusions**				
36141					
36142	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
36143					
36144	**Relevant UCL Statistics**				
36145	**Normal Distribution Test**			**Lognormal Distribution Test**	
36146	Shapiro Wilk Test Statistic		0.9052839	Shapiro Wilk Test Statistic	0.9571598
36147	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
36148	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
36149					
36150	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
36151	95% Student's-t UCL		32.777668	95% H-UCL	43.725068
36152	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	43.70575
36153	95% Adjusted-CLT UCL (Chen-1995)		33.38071	97.5% Chebyshev (MVUE) UCL	52.841383
36154	95% Modified-t UCL (Johnson-1978)		33.16147	99% Chebyshev (MVUE) UCL	70.786563
36155					
36156	**Gamma Distribution Test**			**Data Distribution**	
36157	k star (bias corrected)		2.332956	**Data appear Normal at 5% Significance Level**	
36158	Theta Star		9.7158571		
36159	MLE of Mean		22.666667		
36160	MLE of Standard Deviation		14.840017		
36161	nu star		27.995471		
36162	Approximate Chi Square Value (.05)		16.92451	**Nonparametric Statistics**	
36163	Adjusted Level of Significance		0.01222	95% CLT UCL	30.920125
36164	Adjusted Chi Square Value		13.912379	95% Jackknife UCL	32.777668
36165				95% Standard Bootstrap UCL	30.093654
36166	Anderson-Darling Test Statistic		0.2361973	95% Bootstrap-t UCL	39.211907
36167	Anderson-Darling 5% Critical Value		0.6991237	95% Hall's Bootstrap UCL	70.859382
36168	Kolmogorov-Smirnov Test Statistic		0.1856521	95% Percentile Bootstrap UCL	30.5
36169	Kolmogorov-Smirnov 5% Critical Value		0.3332072	95% BCA Bootstrap UCL	30.666667
36170	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	44.538516
36171				97.5% Chebyshev(Mean, Sd) UCL	54.002482
36172	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	72.592612
36173	95% Approximate Gamma UCL		37.493789		
36174	95% Adjusted Gamma UCL		45.611468		
36175					
36176	**Potential UCL to Use**			Use 95% Student's-t UCL	32.777668
36177					
36178	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
36179	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
36180	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
36181					
36182					
36183	PAH|UG/KG|CHRYSENE (gi_sd_ref_2010)				
36184					
36185	General Statistics				
36186	Number of Valid Observations		3	Number of Distinct Observations	3
36187					
36188					
36189	Warning: This data set only has 3 observations!				
36190	Data set is too small to compute reliable and meaningful statistics and estimates!				
36191	The data set for variable PAH|UG/KG|CHRYSENE (gi_sd_ref_2010) was not processed!				
36192					
36193	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36194	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36195					
36196					
36197					
36198	PAH|UG/KG|CHRYSENE (gi_sd_s_2005)				
36199					
36200	General Statistics				
36201	Number of Valid Data		0	Number of Detected Data	0
36202	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36203	Number of Missing Values		8	Percent Non-Detects	NaN%
36204					
36205	Warning: This data set only has 0 observations!				
36206	Data set is too small to compute reliable and meaningful statistics and estimates!				
36207	The data set for variable PAH|UG/KG|CHRYSENE (gi_sd_s_2005) was not processed!				
36208					
36209	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36210	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36211					
36212					
36213					
36214	PAH|UG/KG|CHRYSENE (gi_sd_s_2010)				
36215					
36216	General Statistics				
36217	Number of Valid Data		0	Number of Detected Data	0
36218	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36219	Number of Missing Values		2	Percent Non-Detects	NaN%
36220					
36221	Warning: This data set only has 0 observations!				
36222	Data set is too small to compute reliable and meaningful statistics and estimates!				
36223	The data set for variable PAH|UG/KG|CHRYSENE (gi_sd_s_2010) was not processed!				
36224					
36225	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36226	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36227					
36228					
36229					

	A	B	C	D	E
36230	**PAH|UG/KG|CHRYSENE (gi_sd_stillwater_2005)**				
36231					
36232	**General Statistics**				
36233	Number of Valid Data		0	Number of Detected Data	0
36234	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36235	Number of Missing Values		4	Percent Non-Detects	NaN%
36236					
36237	**Warning: This data set only has 0 observations!**				
36238	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36239	**The data set for variable PAH|UG/KG|CHRYSENE (gi_sd_stillwater_2005) was not processed!**				
36240					
36241	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36242	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36243					
36244					
36245					
36246	**PAH|UG/KG|CHRYSENE (gi_sd_stillwater_2009)**				
36247					
36248	**General Statistics**				
36249	Number of Valid Data		0	Number of Detected Data	0
36250	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36251	Number of Missing Values		60	Percent Non-Detects	NaN%
36252					
36253	**Warning: This data set only has 0 observations!**				
36254	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36255	**The data set for variable PAH|UG/KG|CHRYSENE (gi_sd_stillwater_2009) was not processed!**				
36256					
36257	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36258	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36259					
36260					
36261					
36262	**PAH|UG/KG|CHRYSENE (gi_sd_stillwater_2010)**				
36263					
36264	**General Statistics**				
36265	Number of Valid Data		0	Number of Detected Data	0
36266	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36267	Number of Missing Values		11	Percent Non-Detects	NaN%
36268					
36269	**Warning: This data set only has 0 observations!**				
36270	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36271	**The data set for variable PAH|UG/KG|CHRYSENE (gi_sd_stillwater_2010) was not processed!**				
36272					
36273	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36274	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36275					
36276					
36277					
36278	**PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ne_2005)**				
36279					
36280	**General Statistics**				

	A	B	C	D	E
36281	Number of Valid Data		0	Number of Detected Data	0
36282	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36283	Number of Missing Values		36	Percent Non-Detects	NaN%
36284					
36285	**Warning: This data set only has 0 observations!**				
36286	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36287	**The data set for variable PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ne_2005) was not processed!**				
36288					
36289	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36290	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36291					
36292					
36293					
36294	**PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ne_2009)**				
36295					
36296	**General Statistics**				
36297	Number of Valid Data		0	Number of Detected Data	0
36298	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36299	Number of Missing Values		20	Percent Non-Detects	NaN%
36300					
36301	**Warning: This data set only has 0 observations!**				
36302	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36303	**The data set for variable PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ne_2009) was not processed!**				
36304					
36305	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36306	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36307					
36308					
36309					
36310	**PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ne_2010)**				
36311					
36312	**General Statistics**				
36313	Number of Valid Data		0	Number of Detected Data	0
36314	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36315	Number of Missing Values		16	Percent Non-Detects	NaN%
36316					
36317	**Warning: This data set only has 0 observations!**				
36318	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36319	**The data set for variable PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ne_2010) was not processed!**				
36320					
36321	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36322	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36323					
36324					
36325					
36326	**PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_nw_2005)**				
36327					
36328	**General Statistics**				
36329	Number of Valid Data		0	Number of Detected Data	0
36330	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36331	Number of Missing Values		18	Percent Non-Detects	NaN%
36332					

	A	B	C	D	E
36333	Warning: This data set only has 0 observations!				
36334	Data set is too small to compute reliable and meaningful statistics and estimates!				
36335	The data set for variable PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_nw_2005) was not processed!				
36336					
36337	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36338	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36339					
36340					
36341					
36342	PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_nw_2009)				
36343					
36344	General Statistics				
36345	Number of Valid Data		0	Number of Detected Data	0
36346	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36347	Number of Missing Values		7	Percent Non-Detects	NaN%
36348					
36349	Warning: This data set only has 0 observations!				
36350	Data set is too small to compute reliable and meaningful statistics and estimates!				
36351	The data set for variable PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_nw_2009) was not processed!				
36352					
36353	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36354	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36355					
36356					
36357					
36358	PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_nw_2010)				
36359					
36360	General Statistics				
36361	Number of Valid Data		0	Number of Detected Data	0
36362	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36363	Number of Missing Values		4	Percent Non-Detects	NaN%
36364					
36365	Warning: This data set only has 0 observations!				
36366	Data set is too small to compute reliable and meaningful statistics and estimates!				
36367	The data set for variable PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_nw_2010) was not processed!				
36368					
36369	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36370	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36371					
36372					
36373					
36374	PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ref_2009)				
36375					
36376	General Statistics				
36377	Number of Valid Data		6	Number of Detected Data	4
36378	Number of Distinct Detected Data		4	Number of Non-Detect Data	2
36379				Percent Non-Detects	33.33%
36380					
36381	Raw Statistics			Log-transformed Statistics	
36382	Minimum Detected		3.9	Minimum Detected	1.3609766
36383	Maximum Detected		9.1	Maximum Detected	2.2082744
36384	Mean of Detected		5.8	Mean of Detected	1.7034486

	A	B	C	D	E
36385	SD of Detected		2.32379	SD of Detected	0.3711493
36386	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
36387	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
36388					
36389					
36390	**Warning: There are only 4 Distinct Detected Values in this data**				
36391	**Note: It should be noted that even though bootstrap may be performed on this data set**				
36392	**the resulting calculations may not be reliable enough to draw conclusions**				
36393					
36394	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
36395					
36396					
36397	**UCL Statistics**				
36398	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
36399	Shapiro Wilk Test Statistic		0.8795191	Shapiro Wilk Test Statistic	0.9359018
36400	5% Shapiro Wilk Critical Value		0.748	5% Shapiro Wilk Critical Value	0.748
36401	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
36402					
36403	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
36404	DL/2 Substitution Method			DL/2 Substitution Method	
36405	Mean		4.4166667	Mean	1.3025575
36406	SD		2.7986902	SD	0.6843712
36407	95% DL/2 (t) UCL		6.7189813	95% H-Stat (DL/2) UCL	12.105308
36408					
36409	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
36410	Mean		4.3417684	Mean in Log Scale	1.3540603
36411	SD		2.7740907	SD in Log Scale	0.6214615
36412	95% MLE (t) UCL		6.6238465	Mean in Original Scale	4.5170786
36413	95% MLE (Tiku) UCL		6.8040134	SD in Original Scale	2.688819
36414				95% t UCL	6.7290088
36415				95% Percentile Bootstrap UCL	6.2333333
36416				95% BCA Bootstrap UCL	6.6276586
36417					
36418	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
36419	k star (bias corrected)		2.5049602	**Data appear Normal at 5% Significance Level**	
36420	Theta Star		2.315406		
36421	nu star		20.039682		
36422					
36423	A-D Test Statistic		0.3311963	**Nonparametric Statistics**	
36424	5% A-D Critical Value		0.6573497	Kaplan-Meier (KM) Method	
36425	K-S Test Statistic		0.6573497	Mean	5.1666667
36426	5% K-S Critical Value		0.3950542	SD	1.8714225
36427	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.882197
36428				95% KM (t) UCL	6.9443364
36429	**Assuming Gamma Distribution**			95% KM (z) UCL	6.6177517
36430	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	6.8154423
36431	Minimum		3.4090101	95% KM (bootstrap t) UCL	7.8634269
36432	Maximum		9.1	95% KM (BCA) UCL	7.4
36433	Mean		5.2350973	95% KM (Percentile Bootstrap) UCL	6.8333333
36434	Median		4.6507867	95% KM (Chebyshev) UCL	9.0120744
36435	SD		2.0493412	97.5% KM (Chebyshev) UCL	10.675985
36436	k star		4.8346832	99% KM (Chebyshev) UCL	13.944416
36437	Theta star		1.0828212		
36438	Nu star		58.016199	**Potential UCLs to Use**	
36439	AppChi2		41.505705	95% KM (t) UCL	6.9443364
36440	95% Gamma Approximate UCL		7.317559	95% KM (Percentile Bootstrap) UCL	6.8333333
36441	95% Adjusted Gamma UCL		N/A		
36442	**Note: DL/2 is not a recommended method.**				
36443					
36444	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
36445	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
36446	**For additional insight, the user may want to consult a statistician.**				
36447					

	A	B	C	D	E
36448					
36449	PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ref_2010)				
36450					
36451	General Statistics				
36452	Number of Valid Observations		3	Number of Distinct Observations	3
36453					
36454					
36455	Warning: This data set only has 3 observations!				
36456	Data set is too small to compute reliable and meaningful statistics and estimates!				
36457	The data set for variable PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_ref_2010) was not processed!				
36458					
36459	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36460	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36461					
36462					
36463					
36464	PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_s_2005)				
36465					
36466	General Statistics				
36467	Number of Valid Data		0	Number of Detected Data	0
36468	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36469	Number of Missing Values		8	Percent Non-Detects	NaN%
36470					
36471	Warning: This data set only has 0 observations!				
36472	Data set is too small to compute reliable and meaningful statistics and estimates!				
36473	The data set for variable PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_s_2005) was not processed!				
36474					
36475	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36476	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36477					
36478					
36479					
36480	PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_s_2010)				
36481					
36482	General Statistics				
36483	Number of Valid Data		0	Number of Detected Data	0
36484	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36485	Number of Missing Values		2	Percent Non-Detects	NaN%
36486					
36487	Warning: This data set only has 0 observations!				
36488	Data set is too small to compute reliable and meaningful statistics and estimates!				
36489	The data set for variable PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_s_2010) was not processed!				
36490					
36491	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36492	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36493					
36494					
36495					
36496	PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_stillwater_2005)				
36497					
36498	General Statistics				

	A	B	C	D	E
36499	Number of Valid Data		0	Number of Detected Data	0
36500	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36501	Number of Missing Values		4	Percent Non-Detects	NaN%
36502					
36503	**Warning: This data set only has 0 observations!**				
36504	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36505	**The data set for variable PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_stillwater_2005) was not processed!**				
36506					
36507	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36508	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36509					
36510					
36511					
36512	**PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_stillwater_2009)**				
36513					
36514	**General Statistics**				
36515	Number of Valid Data		0	Number of Detected Data	0
36516	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36517	Number of Missing Values		60	Percent Non-Detects	NaN%
36518					
36519	**Warning: This data set only has 0 observations!**				
36520	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36521	**The data set for variable PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_stillwater_2009) was not processed!**				
36522					
36523	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36524	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36525					
36526					
36527					
36528	**PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_stillwater_2010)**				
36529					
36530	**General Statistics**				
36531	Number of Valid Data		0	Number of Detected Data	0
36532	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36533	Number of Missing Values		11	Percent Non-Detects	NaN%
36534					
36535	**Warning: This data set only has 0 observations!**				
36536	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36537	**The data set for variable PAH|UG/KG|DIBENZO(A,H)ANTHRACENE (gi_sd_stillwater_2010) was not processed!**				
36538					
36539	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36540	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36541					
36542					
36543					
36544	**PAH|UG/KG|FLUORANTHENE (gi_sd_ne_2005)**				
36545					
36546	**General Statistics**				
36547	Number of Valid Data		0	Number of Detected Data	0
36548	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36549	Number of Missing Values		36	Percent Non-Detects	NaN%
36550					

	A	B	C	D	E
36551	Warning: This data set only has 0 observations!				
36552	Data set is too small to compute reliable and meaningful statistics and estimates!				
36553	The data set for variable PAH|UG/KG|FLUORANTHENE (gi_sd_ne_2005) was not processed!				
36554					
36555	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36556	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36557					
36558					
36559					
36560	PAH|UG/KG|FLUORANTHENE (gi_sd_ne_2009)				
36561					
36562	General Statistics				
36563	Number of Valid Data		0	Number of Detected Data	0
36564	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36565	Number of Missing Values		20	Percent Non-Detects	NaN%
36566					
36567	Warning: This data set only has 0 observations!				
36568	Data set is too small to compute reliable and meaningful statistics and estimates!				
36569	The data set for variable PAH|UG/KG|FLUORANTHENE (gi_sd_ne_2009) was not processed!				
36570					
36571	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36572	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36573					
36574					
36575					
36576	PAH|UG/KG|FLUORANTHENE (gi_sd_ne_2010)				
36577					
36578	General Statistics				
36579	Number of Valid Data		0	Number of Detected Data	0
36580	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36581	Number of Missing Values		16	Percent Non-Detects	NaN%
36582					
36583	Warning: This data set only has 0 observations!				
36584	Data set is too small to compute reliable and meaningful statistics and estimates!				
36585	The data set for variable PAH|UG/KG|FLUORANTHENE (gi_sd_ne_2010) was not processed!				
36586					
36587	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36588	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36589					
36590					
36591					
36592	PAH|UG/KG|FLUORANTHENE (gi_sd_nw_2005)				
36593					
36594	General Statistics				
36595	Number of Valid Data		0	Number of Detected Data	0
36596	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36597	Number of Missing Values		18	Percent Non-Detects	NaN%
36598					
36599	Warning: This data set only has 0 observations!				
36600	Data set is too small to compute reliable and meaningful statistics and estimates!				
36601	The data set for variable PAH|UG/KG|FLUORANTHENE (gi_sd_nw_2005) was not processed!				

	A	B	C	D	E
36602					
36603	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36604	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36605					
36606					
36607					
36608	**PAH|UG/KG|FLUORANTHENE (gi_sd_nw_2009)**				
36609					
36610	**General Statistics**				
36611	Number of Valid Data		0	Number of Detected Data	0
36612	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36613	Number of Missing Values		7	Percent Non-Detects	NaN%
36614					
36615	**Warning: This data set only has 0 observations!**				
36616	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36617	**The data set for variable PAH|UG/KG|FLUORANTHENE (gi_sd_nw_2009) was not processed!**				
36618					
36619	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36620	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36621					
36622					
36623					
36624	**PAH|UG/KG|FLUORANTHENE (gi_sd_nw_2010)**				
36625					
36626	**General Statistics**				
36627	Number of Valid Data		0	Number of Detected Data	0
36628	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36629	Number of Missing Values		4	Percent Non-Detects	NaN%
36630					
36631	**Warning: This data set only has 0 observations!**				
36632	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36633	**The data set for variable PAH|UG/KG|FLUORANTHENE (gi_sd_nw_2010) was not processed!**				
36634					
36635	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36636	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36637					
36638					
36639					
36640	**PAH|UG/KG|FLUORANTHENE (gi_sd_ref_2009)**				
36641					
36642	**General Statistics**				
36643	Number of Valid Observations		6	Number of Distinct Observations	5
36644					
36645	**Raw Statistics**			**Log-transformed Statistics**	
36646	Minimum		19	Minimum of Log Data	2.944439
36647	Maximum		120	Maximum of Log Data	4.7874917
36648	Mean		51.583333	Mean of log Data	3.7320012
36649	Median		44.25	SD of log Data	0.7132908
36650	SD		37.603745		
36651	Coefficient of Variation		0.7289902		
36652	Skewness		1.4169282		
36653					
36654					
36655	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
36656					
36657	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				

	A	B	C	D	E
36658	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36659					
36660					
36661	Warning: There are only 6 Values in this data				
36662	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
36663	the resulting calculations may not be reliable enough to draw conclusions				
36664					
36665	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
36666					
36667	Relevant UCL Statistics				
36668	Normal Distribution Test			Lognormal Distribution Test	
36669	Shapiro Wilk Test Statistic		0.8595361	Shapiro Wilk Test Statistic	0.9280146
36670	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
36671	Data appear Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
36672					
36673	Assuming Normal Distribution			Assuming Lognormal Distribution	
36674	95% Student's-t UCL		82.51768	95% H-UCL	150.01142
36675	95% UCLs (Adjusted for Skewness)			95% Chebyshev (MVUE) UCL	116.11397
36676	95% Adjusted-CLT UCL (Chen-1995)		86.323305	97.5% Chebyshev (MVUE) UCL	144.15328
36677	95% Modified-t UCL (Johnson-1978)		83.99773	99% Chebyshev (MVUE) UCL	199.2311
36678					
36679	Gamma Distribution Test			Data Distribution	
36680	k star (bias corrected)		1.3719257	Data appear Normal at 5% Significance Level	
36681	Theta Star		37.599217		
36682	MLE of Mean		51.583333		
36683	MLE of Standard Deviation		44.039675		
36684	nu star		16.463109		
36685	Approximate Chi Square Value (.05)		8.2898871	Nonparametric Statistics	
36686	Adjusted Level of Significance		0.01222	95% CLT UCL	76.834575
36687	Adjusted Chi Square Value		6.3103769	95% Jackknife UCL	82.51768
36688				95% Standard Bootstrap UCL	74.513779
36689	Anderson-Darling Test Statistic		0.3006371	95% Bootstrap-t UCL	104.44191
36690	Anderson-Darling 5% Critical Value		0.7027077	95% Hall's Bootstrap UCL	205.17211
36691	Kolmogorov-Smirnov Test Statistic		0.2053548	95% Percentile Bootstrap UCL	77
36692	Kolmogorov-Smirnov 5% Critical Value		0.3351623	95% BCA Bootstrap UCL	79.5
36693	Data appear Gamma Distributed at 5% Significance Level			95% Chebyshev(Mean, Sd) UCL	118.49969
36694				97.5% Chebyshev(Mean, Sd) UCL	147.45445
36695	Assuming Gamma Distribution			99% Chebyshev(Mean, Sd) UCL	204.33047
36696	95% Approximate Gamma UCL		102.44072		
36697	95% Adjusted Gamma UCL		134.57548		
36698					
36699	Potential UCL to Use			Use 95% Student's-t UCL	82.51768
36700					
36701	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
36702	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)				
36703	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.				
36704					
36705					
36706	PAH|UG/KG|FLUORANTHENE (gi_sd_ref_2010)				
36707					
36708	General Statistics				
36709	Number of Valid Observations		3	Number of Distinct Observations	3
36710					
36711					
36712	Warning: This data set only has 3 observations!				
36713	Data set is too small to compute reliable and meaningful statistics and estimates!				
36714	The data set for variable PAH|UG/KG|FLUORANTHENE (gi_sd_ref_2010) was not processed!				
36715					

	A	B	C	D	E
36716	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36717	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36718					
36719					
36720					
36721	PAH|UG/KG|FLUORANTHENE (gi_sd_s_2005)				
36722					
36723	General Statistics				
36724	Number of Valid Data		0	Number of Detected Data	0
36725	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36726	Number of Missing Values		8	Percent Non-Detects	NaN%
36727					
36728	Warning: This data set only has 0 observations!				
36729	Data set is too small to compute reliable and meaningful statistics and estimates!				
36730	The data set for variable PAH|UG/KG|FLUORANTHENE (gi_sd_s_2005) was not processed!				
36731					
36732	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36733	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36734					
36735					
36736					
36737	PAH|UG/KG|FLUORANTHENE (gi_sd_s_2010)				
36738					
36739	General Statistics				
36740	Number of Valid Data		0	Number of Detected Data	0
36741	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36742	Number of Missing Values		2	Percent Non-Detects	NaN%
36743					
36744	Warning: This data set only has 0 observations!				
36745	Data set is too small to compute reliable and meaningful statistics and estimates!				
36746	The data set for variable PAH|UG/KG|FLUORANTHENE (gi_sd_s_2010) was not processed!				
36747					
36748	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36749	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36750					
36751					
36752					
36753	PAH|UG/KG|FLUORANTHENE (gi_sd_stillwater_2005)				
36754					
36755	General Statistics				
36756	Number of Valid Data		0	Number of Detected Data	0
36757	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36758	Number of Missing Values		4	Percent Non-Detects	NaN%
36759					
36760	Warning: This data set only has 0 observations!				
36761	Data set is too small to compute reliable and meaningful statistics and estimates!				
36762	The data set for variable PAH|UG/KG|FLUORANTHENE (gi_sd_stillwater_2005) was not processed!				
36763					
36764	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36765	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				

	A	B	C	D	E
36766					
36767					
36768					
36769	**PAH|UG/KG|FLUORANTHENE (gi_sd_stillwater_2009)**				
36770					
36771	**General Statistics**				
36772	Number of Valid Data		0	Number of Detected Data	0
36773	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36774	Number of Missing Values		60	Percent Non-Detects	NaN%
36775					
36776	**Warning: This data set only has 0 observations!**				
36777	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36778	**The data set for variable PAH|UG/KG|FLUORANTHENE (gi_sd_stillwater_2009) was not processed!**				
36779					
36780	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36781	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36782					
36783					
36784					
36785	**PAH|UG/KG|FLUORANTHENE (gi_sd_stillwater_2010)**				
36786					
36787	**General Statistics**				
36788	Number of Valid Data		0	Number of Detected Data	0
36789	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36790	Number of Missing Values		11	Percent Non-Detects	NaN%
36791					
36792	**Warning: This data set only has 0 observations!**				
36793	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36794	**The data set for variable PAH|UG/KG|FLUORANTHENE (gi_sd_stillwater_2010) was not processed!**				
36795					
36796	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36797	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36798					
36799					
36800					
36801	**PAH|UG/KG|FLUORENE (gi_sd_ne_2005)**				
36802					
36803	**General Statistics**				
36804	Number of Valid Data		0	Number of Detected Data	0
36805	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36806	Number of Missing Values		36	Percent Non-Detects	NaN%
36807					
36808	**Warning: This data set only has 0 observations!**				
36809	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36810	**The data set for variable PAH|UG/KG|FLUORENE (gi_sd_ne_2005) was not processed!**				
36811					
36812	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36813	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36814					
36815					
36816					
36817	**PAH|UG/KG|FLUORENE (gi_sd_ne_2009)**				
36818					

	A	B	C	D	E
36819	**General Statistics**				
36820	Number of Valid Data		0	Number of Detected Data	0
36821	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36822	Number of Missing Values		20	Percent Non-Detects	NaN%
36823					
36824	**Warning: This data set only has 0 observations!**				
36825	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36826	**The data set for variable PAH|UG/KG|FLUORENE (gi_sd_ne_2009) was not processed!**				
36827					
36828	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36829	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36830					
36831					
36832					
36833	**PAH|UG/KG|FLUORENE (gi_sd_ne_2010)**				
36834					
36835	**General Statistics**				
36836	Number of Valid Data		0	Number of Detected Data	0
36837	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36838	Number of Missing Values		16	Percent Non-Detects	NaN%
36839					
36840	**Warning: This data set only has 0 observations!**				
36841	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36842	**The data set for variable PAH|UG/KG|FLUORENE (gi_sd_ne_2010) was not processed!**				
36843					
36844	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36845	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36846					
36847					
36848					
36849	**PAH|UG/KG|FLUORENE (gi_sd_nw_2005)**				
36850					
36851	**General Statistics**				
36852	Number of Valid Data		0	Number of Detected Data	0
36853	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36854	Number of Missing Values		18	Percent Non-Detects	NaN%
36855					
36856	**Warning: This data set only has 0 observations!**				
36857	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36858	**The data set for variable PAH|UG/KG|FLUORENE (gi_sd_nw_2005) was not processed!**				
36859					
36860	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36861	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36862					
36863					
36864					
36865	**PAH|UG/KG|FLUORENE (gi_sd_nw_2009)**				
36866					
36867	**General Statistics**				
36868	Number of Valid Data		0	Number of Detected Data	0
36869	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36870	Number of Missing Values		7	Percent Non-Detects	NaN%
36871					
36872	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
36873	Data set is too small to compute reliable and meaningful statistics and estimates!				
36874	The data set for variable PAH|UG/KG|FLUORENE (gi_sd_nw_2009) was not processed!				
36875					
36876	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36877	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36878					
36879					
36880					
36881	PAH|UG/KG|FLUORENE (gi_sd_nw_2010)				
36882					
36883	General Statistics				
36884	Number of Valid Data		0	Number of Detected Data	0
36885	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36886	Number of Missing Values		4	Percent Non-Detects	NaN%
36887					
36888	Warning: This data set only has 0 observations!				
36889	Data set is too small to compute reliable and meaningful statistics and estimates!				
36890	The data set for variable PAH|UG/KG|FLUORENE (gi_sd_nw_2010) was not processed!				
36891					
36892	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
36893	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
36894					
36895					
36896					
36897	PAH|UG/KG|FLUORENE (gi_sd_ref_2009)				
36898					
36899	General Statistics				
36900	Number of Valid Data		6	Number of Detected Data	3
36901	Number of Distinct Detected Data		3	Number of Non-Detect Data	3
36902				Percent Non-Detects	50.00%
36903					
36904	Raw Statistics			Log-transformed Statistics	
36905	Minimum Detected		3.8	Minimum Detected	1.3350011
36906	Maximum Detected		7.2	Maximum Detected	1.974081
36907	Mean of Detected		5.0666667	Mean of Detected	1.5813889
36908	SD of Detected		1.8583146	SD of Detected	0.3437434
36909	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
36910	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
36911					
36912					
36913	Warning: There are only 3 Distinct Detected Values in this data set				
36914	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.				
36915	Those methods will return a 'N/A' value on your output display!				
36916					
36917	It is necessary to have 4 or more Distinct Values for bootstrap methods.				
36918	However, results obtained using 4 to 9 distinct values may not be reliable.				
36919	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.				
36920					
36921					
36922	UCL Statistics				
36923	Normal Distribution Test with Detected Values Only			Lognormal Distribution Test with Detected Values Only	
36924	Shapiro Wilk Test Statistic		0.8368565	Shapiro Wilk Test Statistic	0.8641186
36925	5% Shapiro Wilk Critical Value		0.767	5% Shapiro Wilk Critical Value	0.767
36926	Data appear Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	

	A	B	C	D	E
36927					
36928	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
36929	DL/2 Substitution Method			DL/2 Substitution Method	
36930	Mean		3.3583333	Mean	1.0410821
36931	SD		2.2098454	SD	0.6305407
36932	95% DL/2 (t) UCL		5.1762407	95% H-Stat (DL/2) UCL	7.9941776
36933					
36934	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
36935	Mean		3.2313666	Mean in Log Scale	1.0181513
36936	SD		2.3546944	SD in Log Scale	0.6864637
36937	95% MLE (t) UCL		5.1684325	Mean in Original Scale	3.3495856
36938	95% MLE (Tiku) UCL		5.6201088	SD in Original Scale	2.2420089
36939				95% t UCL	5.1939519
36940				95% Percentile Bootstrap UCL	4.7922041
36941				95% BCA Bootstrap UCL	5
36942					
36943	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
36944	k star (bias corrected)		N/A	**Data appear Normal at 5% Significance Level**	
36945	Theta Star		N/A		
36946	nu star		N/A		
36947					
36948	A-D Test Statistic		N/A	**Nonparametric Statistics**	
36949	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
36950	K-S Test Statistic		N/A	Mean	4.4333333
36951	5% K-S Critical Value		N/A	SD	1.2458821
36952	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.6229411
36953				95% KM (t) UCL	5.6885897
36954	**Assuming Gamma Distribution**			95% KM (z) UCL	5.4579802
36955	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	5.5095306
36956	Minimum		N/A	95% KM (bootstrap t) UCL	9.4566104
36957	Maximum		N/A	95% KM (BCA) UCL	7.2
36958	Mean		N/A	95% KM (Percentile Bootstrap) UCL	7.2
36959	Median		N/A	95% KM (Chebyshev) UCL	7.1486704
36960	SD		N/A	97.5% KM (Chebyshev) UCL	8.323599
36961	k star		N/A	99% KM (Chebyshev) UCL	10.631519
36962	Theta star		N/A		
36963	Nu star		N/A	**Potential UCLs to Use**	
36964	AppChi2		N/A	95% KM (t) UCL	5.6885897
36965	95% Gamma Approximate UCL		N/A	95% KM (Percentile Bootstrap) UCL	7.2
36966	95% Adjusted Gamma UCL		N/A		
36967	**Note: DL/2 is not a recommended method.**				
36968					
36969	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
36970	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
36971	**For additional insight, the user may want to consult a statistician.**				
36972					
36973					
36974	**PAH|UG/KG|FLUORENE (gi_sd_ref_2010)**				
36975					
36976	**General Statistics**				
36977	Number of Valid Observations		3	Number of Distinct Observations	3
36978					
36979					
36980	**Warning: This data set only has 3 observations!**				
36981	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
36982	**The data set for variable PAH|UG/KG|FLUORENE (gi_sd_ref_2010) was not processed!**				
36983					
36984	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
36985	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
36986					
36987					
36988					

	A	B	C	D	E
36989	PAH|UG/KG|FLUORENE (gi_sd_s_2005)				
36990					
36991	General Statistics				
36992	Number of Valid Data		0	Number of Detected Data	0
36993	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
36994	Number of Missing Values		8	Percent Non-Detects	NaN%
36995					
36996	Warning: This data set only has 0 observations!				
36997	Data set is too small to compute reliable and meaningful statistics and estimates!				
36998	The data set for variable PAH|UG/KG|FLUORENE (gi_sd_s_2005) was not processed!				
36999					
37000	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37001	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37002					
37003					
37004					
37005	PAH|UG/KG|FLUORENE (gi_sd_s_2010)				
37006					
37007	General Statistics				
37008	Number of Valid Data		0	Number of Detected Data	0
37009	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37010	Number of Missing Values		2	Percent Non-Detects	NaN%
37011					
37012	Warning: This data set only has 0 observations!				
37013	Data set is too small to compute reliable and meaningful statistics and estimates!				
37014	The data set for variable PAH|UG/KG|FLUORENE (gi_sd_s_2010) was not processed!				
37015					
37016	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37017	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37018					
37019					
37020					
37021	PAH|UG/KG|FLUORENE (gi_sd_stillwater_2005)				
37022					
37023	General Statistics				
37024	Number of Valid Data		0	Number of Detected Data	0
37025	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37026	Number of Missing Values		4	Percent Non-Detects	NaN%
37027					
37028	Warning: This data set only has 0 observations!				
37029	Data set is too small to compute reliable and meaningful statistics and estimates!				
37030	The data set for variable PAH|UG/KG|FLUORENE (gi_sd_stillwater_2005) was not processed!				
37031					
37032	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37033	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37034					
37035					
37036					
37037	PAH|UG/KG|FLUORENE (gi_sd_stillwater_2009)				
37038					
37039	General Statistics				
37040	Number of Valid Data		0	Number of Detected Data	0
37041	Number of Distinct Detected Data		0	Number of Non-Detect Data	0

	A	B	C	D	E
37042	Number of Missing Values		60	Percent Non-Detects	NaN%
37043					
37044	**Warning: This data set only has 0 observations!**				
37045	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
37046	**The data set for variable PAH|UG/KG|FLUORENE (gi_sd_stillwater_2009) was not processed!**				
37047					
37048	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
37049	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37050					
37051					
37052					
37053	**PAH|UG/KG|FLUORENE (gi_sd_stillwater_2010)**				
37054					
37055	**General Statistics**				
37056	Number of Valid Data		0	Number of Detected Data	0
37057	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37058	Number of Missing Values		11	Percent Non-Detects	NaN%
37059					
37060	**Warning: This data set only has 0 observations!**				
37061	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
37062	**The data set for variable PAH|UG/KG|FLUORENE (gi_sd_stillwater_2010) was not processed!**				
37063					
37064	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
37065	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37066					
37067					
37068					
37069	**PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ne_2005)**				
37070					
37071	**General Statistics**				
37072	Number of Valid Data		0	Number of Detected Data	0
37073	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37074	Number of Missing Values		36	Percent Non-Detects	NaN%
37075					
37076	**Warning: This data set only has 0 observations!**				
37077	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
37078	**The data set for variable PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ne_2005) was not processed!**				
37079					
37080	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
37081	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37082					
37083					
37084					
37085	**PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ne_2009)**				
37086					
37087	**General Statistics**				
37088	Number of Valid Data		0	Number of Detected Data	0
37089	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37090	Number of Missing Values		20	Percent Non-Detects	NaN%
37091					
37092	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
37093	Data set is too small to compute reliable and meaningful statistics and estimates!				
37094	The data set for variable PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ne_2009) was not processed!				
37095					
37096	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37097	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37098					
37099					
37100					
37101	PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ne_2010)				
37102					
37103	General Statistics				
37104	Number of Valid Data		0	Number of Detected Data	0
37105	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37106	Number of Missing Values		16	Percent Non-Detects	NaN%
37107					
37108	Warning: This data set only has 0 observations!				
37109	Data set is too small to compute reliable and meaningful statistics and estimates!				
37110	The data set for variable PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ne_2010) was not processed!				
37111					
37112	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37113	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37114					
37115					
37116					
37117	PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_nw_2005)				
37118					
37119	General Statistics				
37120	Number of Valid Data		0	Number of Detected Data	0
37121	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37122	Number of Missing Values		18	Percent Non-Detects	NaN%
37123					
37124	Warning: This data set only has 0 observations!				
37125	Data set is too small to compute reliable and meaningful statistics and estimates!				
37126	The data set for variable PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_nw_2005) was not processed!				
37127					
37128	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37129	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37130					
37131					
37132					
37133	PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_nw_2009)				
37134					
37135	General Statistics				
37136	Number of Valid Data		0	Number of Detected Data	0
37137	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37138	Number of Missing Values		7	Percent Non-Detects	NaN%
37139					
37140	Warning: This data set only has 0 observations!				
37141	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
37142	**The data set for variable PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_nw_2009) was not processed!**				
37143					
37144	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
37145	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37146					
37147					
37148					
37149	**PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_nw_2010)**				
37150					
37151	**General Statistics**				
37152	Number of Valid Data		0	Number of Detected Data	0
37153	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37154	Number of Missing Values		4	Percent Non-Detects	NaN%
37155					
37156	**Warning: This data set only has 0 observations!**				
37157	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
37158	**The data set for variable PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_nw_2010) was not processed!**				
37159					
37160	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
37161	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37162					
37163					
37164					
37165	**PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ref_2009)**				
37166					
37167	**General Statistics**				
37168	Number of Valid Observations		6	Number of Distinct Observations	6
37169					
37170	**Raw Statistics**			**Log-transformed Statistics**	
37171	Minimum		99	Minimum of Log Data	4.5951199
37172	Maximum		517.1	Maximum of Log Data	6.2482363
37173	Mean		241.2	Mean of log Data	5.3137443
37174	Median		207.45	SD of log Data	0.6431376
37175	SD		157.31505		
37176	Coefficient of Variation		0.6522183		
37177	Skewness		1.2097638		
37178					
37179					
37180	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
37181					
37182	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
37183	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37184					
37185					
37186	**Warning: There are only 6 Values in this data**				
37187	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
37188	**the resulting calculations may not be reliable enough to draw conclusions**				
37189					
37190	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
37191					
37192	**Relevant UCL Statistics**				
37193	**Normal Distribution Test**			**Lognormal Distribution Test**	
37194	Shapiro Wilk Test Statistic		0.8825404	Shapiro Wilk Test Statistic	0.9330428

	A	B	C	D	E
37195	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
37196	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
37197					
37198	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
37199	95% Student's-t UCL		370.61366	95% H-UCL	593.583
37200	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	514.44122
37201	95% Adjusted-CLT UCL (Chen-1995)		380.73064	97.5% Chebyshev (MVUE) UCL	633.04559
37202	95% Modified-t UCL (Johnson-1978)		375.90016	99% Chebyshev (MVUE) UCL	866.0209
37203					
37204	**Gamma Distribution Test**			**Data Distribution**	
37205	k star (bias corrected)		1.6438706	**Data appear Normal at 5% Significance Level**	
37206	Theta Star		146.72688		
37207	MLE of Mean		241.2		
37208	MLE of Standard Deviation		188.12369		
37209	nu star		19.726447		
37210	Approximate Chi Square Value (.05)		10.64973	**Nonparametric Statistics**	
37211	Adjusted Level of Significance		0.01222	95% CLT UCL	346.83842
37212	Adjusted Chi Square Value		8.35061	95% Jackknife UCL	370.61366
37213				95% Standard Bootstrap UCL	337.65956
37214	Anderson-Darling Test Statistic		0.2893028	95% Bootstrap-t UCL	462.43182
37215	Anderson-Darling 5% Critical Value		0.7012415	95% Hall's Bootstrap UCL	976.40531
37216	Kolmogorov-Smirnov Test Statistic		0.2025321	95% Percentile Bootstrap UCL	344.83333
37217	Kolmogorov-Smirnov 5% Critical Value		0.3344838	95% BCA Bootstrap UCL	363.75
37218	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	521.14418
37219				97.5% Chebyshev(Mean, Sd) UCL	642.27625
37220	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	880.21674
37221	95% Approximate Gamma UCL		446.77367		
37222	95% Adjusted Gamma UCL		569.78102		
37223					
37224	**Potential UCL to Use**			Use 95% Student's-t UCL	370.61366
37225					
37226	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
37227	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
37228	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
37229					
37230					
37231	**PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ref_2010)**				
37232					
37233	**General Statistics**				
37234	Number of Valid Observations		3	Number of Distinct Observations	3
37235					
37236					
37237	**Warning: This data set only has 3 observations!**				
37238	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
37239	**The data set for variable PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_ref_2010) was not processed!**				
37240					
37241	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
37242	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37243					
37244					
37245					
37246	**PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_s_2005)**				
37247					
37248	**General Statistics**				
37249	Number of Valid Data		0	Number of Detected Data	0
37250	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37251	Number of Missing Values		8	Percent Non-Detects	NaN%
37252					

	A	B	C	D	E
37253	Warning: This data set only has 0 observations!				
37254	Data set is too small to compute reliable and meaningful statistics and estimates!				
37255	The data set for variable PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_s_2005) was not processed!				
37256					
37257	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37258	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37259					
37260					
37261					
37262	PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_s_2010)				
37263					
37264	General Statistics				
37265	Number of Valid Data		0	Number of Detected Data	0
37266	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37267	Number of Missing Values		2	Percent Non-Detects	NaN%
37268					
37269	Warning: This data set only has 0 observations!				
37270	Data set is too small to compute reliable and meaningful statistics and estimates!				
37271	The data set for variable PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_s_2010) was not processed!				
37272					
37273	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37274	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37275					
37276					
37277					
37278	PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2005)				
37279					
37280	General Statistics				
37281	Number of Valid Data		0	Number of Detected Data	0
37282	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37283	Number of Missing Values		4	Percent Non-Detects	NaN%
37284					
37285	Warning: This data set only has 0 observations!				
37286	Data set is too small to compute reliable and meaningful statistics and estimates!				
37287	The data set for variable PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2005) was not processed!				
37288					
37289	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37290	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37291					
37292					
37293					
37294	PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2009)				
37295					
37296	General Statistics				
37297	Number of Valid Data		0	Number of Detected Data	0
37298	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37299	Number of Missing Values		60	Percent Non-Detects	NaN%
37300					
37301	Warning: This data set only has 0 observations!				
37302	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
37303	The data set for variable PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2009) was not processed!				
37304					
37305	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37306	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37307					
37308					
37309					
37310	PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2010)				
37311					
37312	General Statistics				
37313	Number of Valid Data		0	Number of Detected Data	0
37314	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37315	Number of Missing Values		11	Percent Non-Detects	NaN%
37316					
37317	Warning: This data set only has 0 observations!				
37318	Data set is too small to compute reliable and meaningful statistics and estimates!				
37319	The data set for variable PAH|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2010) was not processed!				
37320					
37321	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37322	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37323					
37324					
37325					
37326	PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ne_2005)				
37327					
37328	General Statistics				
37329	Number of Valid Data		0	Number of Detected Data	0
37330	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37331	Number of Missing Values		36	Percent Non-Detects	NaN%
37332					
37333	Warning: This data set only has 0 observations!				
37334	Data set is too small to compute reliable and meaningful statistics and estimates!				
37335	The data set for variable PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ne_2005) was not processed!				
37336					
37337	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37338	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37339					
37340					
37341					
37342	PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ne_2009)				
37343					
37344	General Statistics				
37345	Number of Valid Data		0	Number of Detected Data	0
37346	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37347	Number of Missing Values		20	Percent Non-Detects	NaN%
37348					
37349	Warning: This data set only has 0 observations!				
37350	Data set is too small to compute reliable and meaningful statistics and estimates!				
37351	The data set for variable PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ne_2009) was not processed!				
37352					

	A	B	C	D	E
37353	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37354	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37355					
37356					
37357					
37358	PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ne_2010)				
37359					
37360	General Statistics				
37361	Number of Valid Data		0	Number of Detected Data	0
37362	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37363	Number of Missing Values		16	Percent Non-Detects	NaN%
37364					
37365	Warning: This data set only has 0 observations!				
37366	Data set is too small to compute reliable and meaningful statistics and estimates!				
37367	The data set for variable PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ne_2010) was not processed!				
37368					
37369	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37370	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37371					
37372					
37373					
37374	PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_nw_2005)				
37375					
37376	General Statistics				
37377	Number of Valid Data		0	Number of Detected Data	0
37378	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37379	Number of Missing Values		18	Percent Non-Detects	NaN%
37380					
37381	Warning: This data set only has 0 observations!				
37382	Data set is too small to compute reliable and meaningful statistics and estimates!				
37383	The data set for variable PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_nw_2005) was not processed!				
37384					
37385	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37386	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37387					
37388					
37389					
37390	PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_nw_2009)				
37391					
37392	General Statistics				
37393	Number of Valid Data		0	Number of Detected Data	0
37394	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37395	Number of Missing Values		7	Percent Non-Detects	NaN%
37396					
37397	Warning: This data set only has 0 observations!				
37398	Data set is too small to compute reliable and meaningful statistics and estimates!				
37399	The data set for variable PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_nw_2009) was not processed!				
37400					
37401	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
37402	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37403					
37404					
37405					
37406	PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_nw_2010)				
37407					
37408	General Statistics				
37409	Number of Valid Data		0	Number of Detected Data	0
37410	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37411	Number of Missing Values		4	Percent Non-Detects	NaN%
37412					
37413	Warning: This data set only has 0 observations!				
37414	Data set is too small to compute reliable and meaningful statistics and estimates!				
37415	The data set for variable PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_nw_2010) was not processed!				
37416					
37417	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37418	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37419					
37420					
37421					
37422	PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ref_2009)				
37423					
37424	General Statistics				
37425	Number of Valid Observations		6	Number of Distinct Observations	6
37426					
37427	Raw Statistics			Log-transformed Statistics	
37428	Minimum		6	Minimum of Log Data	1.7917595
37429	Maximum		28	Maximum of Log Data	3.3322045
37430	Mean		13.55	Mean of log Data	2.4562812
37431	Median		11.5	SD of log Data	0.5967611
37432	SD		8.3315665		
37433	Coefficient of Variation		0.6148758		
37434	Skewness		1.1793661		
37435					
37436					
37437	Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!				
37438					
37439	It is suggested to collect at least 8 to 10 observations using these statistical methods!				
37440	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37441					
37442					
37443	Warning: There are only 6 Values in this data				
37444	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
37445	the resulting calculations may not be reliable enough to draw conclusions				
37446					
37447	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
37448					
37449	Relevant UCL Statistics				
37450	Normal Distribution Test			Lognormal Distribution Test	
37451	Shapiro Wilk Test Statistic		0.8842629	Shapiro Wilk Test Statistic	0.9387021
37452	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
37453	Data appear Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
37454					
37455	Assuming Normal Distribution			Assuming Lognormal Distribution	
37456	95% Student's-t UCL		20.40388	95% H-UCL	30.079201

	A	B	C	D	E
37457	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	27.769593
37458	95% Adjusted-CLT UCL (Chen-1995)		20.894584	97.5% Chebyshev (MVUE) UCL	33.950116
37459	95% Modified-t UCL (Johnson-1978)		20.676824	99% Chebyshev (MVUE) UCL	46.090556
37460					
37461	**Gamma Distribution Test**			**Data Distribution**	
37462	k star (bias corrected)		1.8555409	**Data appear Normal at 5% Significance Level**	
37463	Theta Star		7.302453		
37464	MLE of Mean		13.55		
37465	MLE of Standard Deviation		9.9472729		
37466	nu star		22.26649		
37467	Approximate Chi Square Value (.05)		12.538261	**Nonparametric Statistics**	
37468	Adjusted Level of Significance		0.01222	95% CLT UCL	19.144719
37469	Adjusted Chi Square Value		10.007161	95% Jackknife UCL	20.40388
37470				95% Standard Bootstrap UCL	18.55468
37471	Anderson-Darling Test Statistic		0.2874938	95% Bootstrap-t UCL	26.293247
37472	Anderson-Darling 5% Critical Value		0.70067	95% Hall's Bootstrap UCL	55.508923
37473	Kolmogorov-Smirnov Test Statistic		0.1933083	95% Percentile Bootstrap UCL	19.05
37474	Kolmogorov-Smirnov 5% Critical Value		0.3340563	95% BCA Bootstrap UCL	19.833333
37475	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	28.376131
37476				97.5% Chebyshev(Mean, Sd) UCL	34.79141
37477	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	47.392983
37478	95% Approximate Gamma UCL		24.063222		
37479	95% Adjusted Gamma UCL		30.149504		
37480					
37481	**Potential UCL to Use**			Use 95% Student's-t UCL	20.40388
37482					
37483	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
37484	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
37485	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
37486					
37487					
37488	**PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ref_2010)**				
37489					
37490	**General Statistics**				
37491	Number of Valid Observations		3	Number of Distinct Observations	3
37492					
37493					
37494	**Warning: This data set only has 3 observations!**				
37495	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
37496	**The data set for variable PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_ref_2010) was not processed!**				
37497					
37498	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
37499	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37500					
37501					
37502					
37503	**PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_s_2005)**				
37504					
37505	**General Statistics**				
37506	Number of Valid Data		0	Number of Detected Data	0
37507	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37508	Number of Missing Values		8	Percent Non-Detects	NaN%
37509					
37510	**Warning: This data set only has 0 observations!**				
37511	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
37512	**The data set for variable PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_s_2005) was not processed!**				
37513					

	A	B	C	D	E
37514	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37515	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37516					
37517					
37518					
37519	PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_s_2010)				
37520					
37521	General Statistics				
37522	Number of Valid Data		0	Number of Detected Data	0
37523	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37524	Number of Missing Values		2	Percent Non-Detects	NaN%
37525					
37526	Warning: This data set only has 0 observations!				
37527	Data set is too small to compute reliable and meaningful statistics and estimates!				
37528	The data set for variable PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_s_2010) was not processed!				
37529					
37530	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37531	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37532					
37533					
37534					
37535	PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_stillwater_2005)				
37536					
37537	General Statistics				
37538	Number of Valid Data		0	Number of Detected Data	0
37539	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37540	Number of Missing Values		4	Percent Non-Detects	NaN%
37541					
37542	Warning: This data set only has 0 observations!				
37543	Data set is too small to compute reliable and meaningful statistics and estimates!				
37544	The data set for variable PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_stillwater_2005) was not processed!				
37545					
37546	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37547	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37548					
37549					
37550					
37551	PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_stillwater_2009)				
37552					
37553	General Statistics				
37554	Number of Valid Data		0	Number of Detected Data	0
37555	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37556	Number of Missing Values		60	Percent Non-Detects	NaN%
37557					
37558	Warning: This data set only has 0 observations!				
37559	Data set is too small to compute reliable and meaningful statistics and estimates!				
37560	The data set for variable PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_stillwater_2009) was not processed!				
37561					
37562	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
37563	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37564					
37565					
37566					
37567	PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_stillwater_2010)				
37568					
37569	General Statistics				
37570	Number of Valid Data		0	Number of Detected Data	0
37571	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37572	Number of Missing Values		11	Percent Non-Detects	NaN%
37573					
37574	Warning: This data set only has 0 observations!				
37575	Data set is too small to compute reliable and meaningful statistics and estimates!				
37576	The data set for variable PAH|UG/KG|INDENO(1,2,3-CD)PYRENE (gi_sd_stillwater_2010) was not processed!				
37577					
37578	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37579	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37580					
37581					
37582					
37583	PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ne_2005)				
37584					
37585	General Statistics				
37586	Number of Valid Data		0	Number of Detected Data	0
37587	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37588	Number of Missing Values		36	Percent Non-Detects	NaN%
37589					
37590	Warning: This data set only has 0 observations!				
37591	Data set is too small to compute reliable and meaningful statistics and estimates!				
37592	The data set for variable PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ne_2005) was not processed!				
37593					
37594	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37595	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37596					
37597					
37598					
37599	PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ne_2009)				
37600					
37601	General Statistics				
37602	Number of Valid Data		0	Number of Detected Data	0
37603	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37604	Number of Missing Values		20	Percent Non-Detects	NaN%
37605					
37606	Warning: This data set only has 0 observations!				
37607	Data set is too small to compute reliable and meaningful statistics and estimates!				
37608	The data set for variable PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ne_2009) was not processed!				
37609					
37610	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37611	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37612					

	A	B	C	D	E
37613					
37614					
37615	PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ne_2010)				
37616					
37617	General Statistics				
37618	Number of Valid Data		0	Number of Detected Data	0
37619	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37620	Number of Missing Values		16	Percent Non-Detects	NaN%
37621					
37622	Warning: This data set only has 0 observations!				
37623	Data set is too small to compute reliable and meaningful statistics and estimates!				
37624	The data set for variable PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ne_2010) was not processed!				
37625					
37626	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37627	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37628					
37629					
37630					
37631	PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_nw_2005)				
37632					
37633	General Statistics				
37634	Number of Valid Data		0	Number of Detected Data	0
37635	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37636	Number of Missing Values		18	Percent Non-Detects	NaN%
37637					
37638	Warning: This data set only has 0 observations!				
37639	Data set is too small to compute reliable and meaningful statistics and estimates!				
37640	The data set for variable PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_nw_2005) was not processed!				
37641					
37642	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37643	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37644					
37645					
37646					
37647	PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_nw_2009)				
37648					
37649	General Statistics				
37650	Number of Valid Data		0	Number of Detected Data	0
37651	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37652	Number of Missing Values		7	Percent Non-Detects	NaN%
37653					
37654	Warning: This data set only has 0 observations!				
37655	Data set is too small to compute reliable and meaningful statistics and estimates!				
37656	The data set for variable PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_nw_2009) was not processed!				
37657					
37658	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37659	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37660					
37661					
37662					
37663	PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_nw_2010)				

	A	B	C	D	E
37664					
37665	**General Statistics**				
37666	Number of Valid Data		0	Number of Detected Data	0
37667	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37668	Number of Missing Values		4	Percent Non-Detects	NaN%
37669					
37670	**Warning: This data set only has 0 observations!**				
37671	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
37672	**The data set for variable PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_nw_2010) was not processed!**				
37673					
37674	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
37675	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37676					
37677					
37678					
37679	**PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ref_2009)**				
37680					
37681	**General Statistics**				
37682	Number of Valid Observations		6	Number of Distinct Observations	6
37683					
37684	**Raw Statistics**			**Log-transformed Statistics**	
37685	Minimum		10.3	Minimum of Log Data	2.3321439
37686	Maximum		103.3	Maximum of Log Data	4.6376374
37687	Mean		43.891667	Mean of log Data	3.4695827
37688	Median		38.625	SD of log Data	0.9154927
37689	SD		35.002092		
37690	Coefficient of Variation		0.7974655		
37691	Skewness		0.9905558		
37692					
37693					
37694	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
37695					
37696	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
37697	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37698					
37699					
37700	**Warning: There are only 6 Values in this data**				
37701	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
37702	**the resulting calculations may not be reliable enough to draw conclusions**				
37703					
37704	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
37705					
37706	**Relevant UCL Statistics**				
37707	**Normal Distribution Test**			**Lognormal Distribution Test**	
37708	Shapiro Wilk Test Statistic		0.9125797	Shapiro Wilk Test Statistic	0.9304781
37709	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
37710	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
37711					
37712	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
37713	95% Student's-t UCL		72.685789	95% H-UCL	233.38563
37714	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	116.97563
37715	95% Adjusted-CLT UCL (Chen-1995)		73.57038	97.5% Chebyshev (MVUE) UCL	148.19106
37716	95% Modified-t UCL (Johnson-1978)		73.648887	99% Chebyshev (MVUE) UCL	209.50771
37717					
37718	**Gamma Distribution Test**			**Data Distribution**	
37719	k star (bias corrected)		0.9861152	**Data appear Normal at 5% Significance Level**	
37720	Theta Star		44.509673		

	A	B	C	D	E
37721	MLE of Mean		43.891667		
37722	MLE of Standard Deviation		44.19959		
37723	nu star		11.833383		
37724	Approximate Chi Square Value (.05)		5.1174744	**Nonparametric Statistics**	
37725	Adjusted Level of Significance		0.01222	95% CLT UCL	67.395875
37726	Adjusted Chi Square Value		3.6460755	95% Jackknife UCL	72.685789
37727				95% Standard Bootstrap UCL	65.072622
37728	Anderson-Darling Test Statistic		0.2517341	95% Bootstrap-t UCL	86.556552
37729	Anderson-Darling 5% Critical Value		0.7059999	95% Hall's Bootstrap UCL	96.274957
37730	Kolmogorov-Smirnov Test Statistic		0.2092976	95% Percentile Bootstrap UCL	68.6
37731	Kolmogorov-Smirnov 5% Critical Value		0.33664	95% BCA Bootstrap UCL	71.35
37732	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	106.17835
37733				97.5% Chebyshev(Mean, Sd) UCL	133.12984
37734	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	186.07083
37735	95% Approximate Gamma UCL		101.49282		
37736	95% Adjusted Gamma UCL		142.45094		
37737					
37738	**Potential UCL to Use**			Use 95% Student's-t UCL	72.685789
37739					
37740	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
37741	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
37742	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
37743					
37744					
37745	**PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ref_2010)**				
37746					
37747	**General Statistics**				
37748	Number of Valid Observations		3	Number of Distinct Observations	3
37749					
37750					
37751	**Warning: This data set only has 3 observations!**				
37752	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
37753	**The data set for variable PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_ref_2010) was not processed!**				
37754					
37755	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
37756	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37757					
37758					
37759					
37760	**PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_s_2005)**				
37761					
37762	**General Statistics**				
37763	Number of Valid Data		0	Number of Detected Data	0
37764	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37765	Number of Missing Values		8	Percent Non-Detects	NaN%
37766					
37767	**Warning: This data set only has 0 observations!**				
37768	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
37769	**The data set for variable PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_s_2005) was not processed!**				
37770					
37771	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
37772	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37773					
37774					

	A	B	C	D	E
37775					
37776	PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_s_2010)				
37777					
37778	General Statistics				
37779	Number of Valid Data		0	Number of Detected Data	0
37780	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37781	Number of Missing Values		2	Percent Non-Detects	NaN%
37782					
37783	Warning: This data set only has 0 observations!				
37784	Data set is too small to compute reliable and meaningful statistics and estimates!				
37785	The data set for variable PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_s_2010) was not processed!				
37786					
37787	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37788	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37789					
37790					
37791					
37792	PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2005)				
37793					
37794	General Statistics				
37795	Number of Valid Data		0	Number of Detected Data	0
37796	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37797	Number of Missing Values		4	Percent Non-Detects	NaN%
37798					
37799	Warning: This data set only has 0 observations!				
37800	Data set is too small to compute reliable and meaningful statistics and estimates!				
37801	The data set for variable PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2005) was not processed!				
37802					
37803	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37804	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37805					
37806					
37807					
37808	PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2009)				
37809					
37810	General Statistics				
37811	Number of Valid Data		0	Number of Detected Data	0
37812	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37813	Number of Missing Values		60	Percent Non-Detects	NaN%
37814					
37815	Warning: This data set only has 0 observations!				
37816	Data set is too small to compute reliable and meaningful statistics and estimates!				
37817	The data set for variable PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2009) was not processed!				
37818					
37819	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37820	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37821					
37822					
37823					
37824	PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2010)				
37825					

	A	B	C	D	E
37826	**General Statistics**				
37827	Number of Valid Data		0	Number of Detected Data	0
37828	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37829	Number of Missing Values		11	Percent Non-Detects	NaN%
37830					
37831	**Warning: This data set only has 0 observations!**				
37832	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
37833	**The data set for variable PAH|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_sd_stillwater_2010) was not processed!**				
37834					
37835	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
37836	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37837					
37838					
37839					
37840	**PAH|UG/KG|NAPHTHALENE (gi_sd_ne_2005)**				
37841					
37842	**General Statistics**				
37843	Number of Valid Data		0	Number of Detected Data	0
37844	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37845	Number of Missing Values		36	Percent Non-Detects	NaN%
37846					
37847	**Warning: This data set only has 0 observations!**				
37848	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
37849	**The data set for variable PAH|UG/KG|NAPHTHALENE (gi_sd_ne_2005) was not processed!**				
37850					
37851	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
37852	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37853					
37854					
37855					
37856	**PAH|UG/KG|NAPHTHALENE (gi_sd_ne_2009)**				
37857					
37858	**General Statistics**				
37859	Number of Valid Data		0	Number of Detected Data	0
37860	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37861	Number of Missing Values		20	Percent Non-Detects	NaN%
37862					
37863	**Warning: This data set only has 0 observations!**				
37864	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
37865	**The data set for variable PAH|UG/KG|NAPHTHALENE (gi_sd_ne_2009) was not processed!**				
37866					
37867	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
37868	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
37869					
37870					
37871					
37872	**PAH|UG/KG|NAPHTHALENE (gi_sd_ne_2010)**				
37873					
37874	**General Statistics**				
37875	Number of Valid Data		0	Number of Detected Data	0
37876	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37877	Number of Missing Values		16	Percent Non-Detects	NaN%
37878					
37879	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
37880	Data set is too small to compute reliable and meaningful statistics and estimates!				
37881	The data set for variable PAH|UG/KG|NAPHTHALENE (gi_sd_ne_2010) was not processed!				
37882					
37883	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37884	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37885					
37886					
37887					
37888	PAH|UG/KG|NAPHTHALENE (gi_sd_nw_2005)				
37889					
37890	General Statistics				
37891	Number of Valid Data		0	Number of Detected Data	0
37892	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37893	Number of Missing Values		18	Percent Non-Detects	NaN%
37894					
37895	Warning: This data set only has 0 observations!				
37896	Data set is too small to compute reliable and meaningful statistics and estimates!				
37897	The data set for variable PAH|UG/KG|NAPHTHALENE (gi_sd_nw_2005) was not processed!				
37898					
37899	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37900	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37901					
37902					
37903					
37904	PAH|UG/KG|NAPHTHALENE (gi_sd_nw_2009)				
37905					
37906	General Statistics				
37907	Number of Valid Data		0	Number of Detected Data	0
37908	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37909	Number of Missing Values		7	Percent Non-Detects	NaN%
37910					
37911	Warning: This data set only has 0 observations!				
37912	Data set is too small to compute reliable and meaningful statistics and estimates!				
37913	The data set for variable PAH|UG/KG|NAPHTHALENE (gi_sd_nw_2009) was not processed!				
37914					
37915	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37916	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37917					
37918					
37919					
37920	PAH|UG/KG|NAPHTHALENE (gi_sd_nw_2010)				
37921					
37922	General Statistics				
37923	Number of Valid Data		0	Number of Detected Data	0
37924	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
37925	Number of Missing Values		4	Percent Non-Detects	NaN%
37926					
37927	Warning: This data set only has 0 observations!				
37928	Data set is too small to compute reliable and meaningful statistics and estimates!				
37929	The data set for variable PAH|UG/KG|NAPHTHALENE (gi_sd_nw_2010) was not processed!				
37930					

	A	B	C	D	E
37931	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
37932	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
37933					
37934					
37935					
37936	PAH|UG/KG|NAPHTHALENE (gi_sd_ref_2009)				
37937					
37938	General Statistics				
37939	Number of Valid Data		6	Number of Detected Data	2
37940	Number of Distinct Detected Data		2	Number of Non-Detect Data	4
37941				Percent Non-Detects	66.67%
37942					
37943	Raw Statistics			Log-transformed Statistics	
37944	Minimum Detected		4.5	Minimum Detected	1.5040774
37945	Maximum Detected		6.1	Maximum Detected	1.8082888
37946	Mean of Detected		5.3	Mean of Detected	1.6561831
37947	SD of Detected		1.1313708	SD of Detected	0.2151099
37948	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
37949	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
37950					
37951					
37952	Warning: Data set has only 2 Distinct Detected Values.				
37953	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.				
37954	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
37955					
37956	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.				
37957					
37958	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.				
37959	Those methods will return a 'N/A' value on your output display!				
37960					
37961	It is necessary to have 4 or more Distinct Values for bootstrap methods.				
37962	However, results obtained using 4 to 9 distinct values may not be reliable.				
37963	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.				
37964					
37965					
37966	UCL Statistics				
37967	Normal Distribution Test with Detected Values Only			Lognormal Distribution Test with Detected Values Only	
37968	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
37969	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
37970	Data not Normal at 5% Significance Level			Data not Lognormal at 5% Significance Level	
37971					
37972	Assuming Normal Distribution			Assuming Lognormal Distribution	
37973	DL/2 Substitution Method			DL/2 Substitution Method	
37974	Mean		2.8666667	Mean	0.8859112
37975	SD		1.9515806	SD	0.6043556
37976	95% DL/2 (t) UCL		4.472115	95% H-Stat (DL/2) UCL	6.3809834
37977					
37978	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
37979	MLE method failed to converge properly			Mean in Log Scale	N/A
37980				SD in Log Scale	N/A
37981				Mean in Original Scale	N/A
37982				SD in Original Scale	N/A
37983				95% t UCL	N/A
37984				95% Percentile Bootstrap UCL	N/A
37985				95% BCA Bootstrap UCL	N/A
37986					
37987	Gamma Distribution Test with Detected Values Only			Data Distribution Test with Detected Values Only	

	A	B	C	D	E
37988	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
37989	Theta Star		N/A		
37990	nu star		N/A		
37991					
37992	A-D Test Statistic		N/A	**Nonparametric Statistics**	
37993	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
37994	K-S Test Statistic		N/A	Mean	4.7666667
37995	5% K-S Critical Value		N/A	SD	0.5962848
37996	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.3442652
37997				95% KM (t) UCL	5.4603777
37998	**Assuming Gamma Distribution**			95% KM (z) UCL	5.3329325
37999	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	N/A
38000	Minimum		N/A	95% KM (bootstrap t) UCL	N/A
38001	Maximum		N/A	95% KM (BCA) UCL	N/A
38002	Mean		N/A	95% KM (Percentile Bootstrap) UCL	N/A
38003	Median		N/A	95% KM (Chebyshev) UCL	6.2672838
38004	SD		N/A	97.5% KM (Chebyshev) UCL	6.9166021
38005	k star		N/A	99% KM (Chebyshev) UCL	8.192062
38006	Theta star		N/A		
38007	Nu star		N/A	**Potential UCLs to Use**	
38008	AppChi2		N/A	95% KM (t) UCL	5.4603777
38009	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	N/A
38010	95% Adjusted Gamma UCL		N/A		
38011	**Note: DL/2 is not a recommended method.**				
38012					
38013	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
38014	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
38015	**For additional insight, the user may want to consult a statistician.**				
38016					
38017					
38018	**PAH|UG/KG|NAPHTHALENE (gi_sd_ref_2010)**				
38019					
38020	**General Statistics**				
38021	Number of Valid Data		3	Number of Detected Data	0
38022	Number of Distinct Detected Data		0	Number of Non-Detect Data	3
38023				Percent Non-Detects	100.00%
38024					
38025	**Warning: This data set only has 3 observations!**				
38026	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38027	**The data set for variable PAH|UG/KG|NAPHTHALENE (gi_sd_ref_2010) was not processed!**				
38028					
38029	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38030	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38031					
38032					
38033					
38034	**PAH|UG/KG|NAPHTHALENE (gi_sd_s_2005)**				
38035					
38036	**General Statistics**				
38037	Number of Valid Data		0	Number of Detected Data	0
38038	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38039	Number of Missing Values		8	Percent Non-Detects	NaN%
38040					
38041	**Warning: This data set only has 0 observations!**				
38042	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38043	**The data set for variable PAH|UG/KG|NAPHTHALENE (gi_sd_s_2005) was not processed!**				
38044					
38045	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
38046	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38047					
38048					
38049					
38050	PAH|UG/KG|NAPHTHALENE (gi_sd_s_2010)				
38051					
38052	General Statistics				
38053	Number of Valid Data		0	Number of Detected Data	0
38054	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38055	Number of Missing Values		2	Percent Non-Detects	NaN%
38056					
38057	Warning: This data set only has 0 observations!				
38058	Data set is too small to compute reliable and meaningful statistics and estimates!				
38059	The data set for variable PAH|UG/KG|NAPHTHALENE (gi_sd_s_2010) was not processed!				
38060					
38061	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38062	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38063					
38064					
38065					
38066	PAH|UG/KG|NAPHTHALENE (gi_sd_stillwater_2005)				
38067					
38068	General Statistics				
38069	Number of Valid Data		0	Number of Detected Data	0
38070	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38071	Number of Missing Values		4	Percent Non-Detects	NaN%
38072					
38073	Warning: This data set only has 0 observations!				
38074	Data set is too small to compute reliable and meaningful statistics and estimates!				
38075	The data set for variable PAH|UG/KG|NAPHTHALENE (gi_sd_stillwater_2005) was not processed!				
38076					
38077	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38078	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38079					
38080					
38081					
38082	PAH|UG/KG|NAPHTHALENE (gi_sd_stillwater_2009)				
38083					
38084	General Statistics				
38085	Number of Valid Data		0	Number of Detected Data	0
38086	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38087	Number of Missing Values		60	Percent Non-Detects	NaN%
38088					
38089	Warning: This data set only has 0 observations!				
38090	Data set is too small to compute reliable and meaningful statistics and estimates!				
38091	The data set for variable PAH|UG/KG|NAPHTHALENE (gi_sd_stillwater_2009) was not processed!				
38092					
38093	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38094	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38095					
38096					

	A	B	C	D	E
38097					
38098	PAH|UG/KG|NAPHTHALENE (gi_sd_stillwater_2010)				
38099					
38100	General Statistics				
38101	Number of Valid Data		0	Number of Detected Data	0
38102	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38103	Number of Missing Values		11	Percent Non-Detects	NaN%
38104					
38105	Warning: This data set only has 0 observations!				
38106	Data set is too small to compute reliable and meaningful statistics and estimates!				
38107	The data set for variable PAH|UG/KG|NAPHTHALENE (gi_sd_stillwater_2010) was not processed!				
38108					
38109	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38110	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38111					
38112					
38113					
38114	PAH|UG/KG|PHENANTHRENE (gi_sd_ne_2005)				
38115					
38116	General Statistics				
38117	Number of Valid Data		0	Number of Detected Data	0
38118	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38119	Number of Missing Values		36	Percent Non-Detects	NaN%
38120					
38121	Warning: This data set only has 0 observations!				
38122	Data set is too small to compute reliable and meaningful statistics and estimates!				
38123	The data set for variable PAH|UG/KG|PHENANTHRENE (gi_sd_ne_2005) was not processed!				
38124					
38125	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38126	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38127					
38128					
38129					
38130	PAH|UG/KG|PHENANTHRENE (gi_sd_ne_2009)				
38131					
38132	General Statistics				
38133	Number of Valid Data		0	Number of Detected Data	0
38134	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38135	Number of Missing Values		20	Percent Non-Detects	NaN%
38136					
38137	Warning: This data set only has 0 observations!				
38138	Data set is too small to compute reliable and meaningful statistics and estimates!				
38139	The data set for variable PAH|UG/KG|PHENANTHRENE (gi_sd_ne_2009) was not processed!				
38140					
38141	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38142	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38143					
38144					
38145					
38146	PAH|UG/KG|PHENANTHRENE (gi_sd_ne_2010)				
38147					
38148	General Statistics				
38149	Number of Valid Data		0	Number of Detected Data	0
38150	Number of Distinct Detected Data		0	Number of Non-Detect Data	0

	A	B	C	D	E
38151	Number of Missing Values		16	Percent Non-Detects	NaN%
38152					
38153	**Warning: This data set only has 0 observations!**				
38154	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38155	**The data set for variable PAH|UG/KG|PHENANTHRENE (gi_sd_ne_2010) was not processed!**				
38156					
38157	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38158	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38159					
38160					
38161					
38162	**PAH|UG/KG|PHENANTHRENE (gi_sd_nw_2005)**				
38163					
38164	**General Statistics**				
38165	Number of Valid Data		0	Number of Detected Data	0
38166	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38167	Number of Missing Values		18	Percent Non-Detects	NaN%
38168					
38169	**Warning: This data set only has 0 observations!**				
38170	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38171	**The data set for variable PAH|UG/KG|PHENANTHRENE (gi_sd_nw_2005) was not processed!**				
38172					
38173	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38174	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38175					
38176					
38177					
38178	**PAH|UG/KG|PHENANTHRENE (gi_sd_nw_2009)**				
38179					
38180	**General Statistics**				
38181	Number of Valid Data		0	Number of Detected Data	0
38182	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38183	Number of Missing Values		7	Percent Non-Detects	NaN%
38184					
38185	**Warning: This data set only has 0 observations!**				
38186	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38187	**The data set for variable PAH|UG/KG|PHENANTHRENE (gi_sd_nw_2009) was not processed!**				
38188					
38189	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38190	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38191					
38192					
38193					
38194	**PAH|UG/KG|PHENANTHRENE (gi_sd_nw_2010)**				
38195					
38196	**General Statistics**				
38197	Number of Valid Data		0	Number of Detected Data	0
38198	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38199	Number of Missing Values		4	Percent Non-Detects	NaN%
38200					
38201	**Warning: This data set only has 0 observations!**				
38202	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
38203	**The data set for variable PAH|UG/KG|PHENANTHRENE (gi_sd_nw_2010) was not processed!**				
38204					
38205	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38206	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38207					
38208					
38209					
38210	**PAH|UG/KG|PHENANTHRENE (gi_sd_ref_2009)**				
38211					
38212	**General Statistics**				
38213	Number of Valid Observations		6	Number of Distinct Observations	6
38214					
38215	**Raw Statistics**			**Log-transformed Statistics**	
38216	Minimum		6.7	Minimum of Log Data	1.9021075
38217	Maximum		57	Maximum of Log Data	4.0430513
38218	Mean		25.1	Mean of log Data	2.953056
38219	Median		24.25	SD of log Data	0.8486778
38220	SD		18.712776		
38221	Coefficient of Variation		0.7455289		
38222	Skewness		0.9511975		
38223					
38224					
38225	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
38226					
38227	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
38228	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38229					
38230					
38231	**Warning: There are only 6 Values in this data**				
38232	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
38233	**the resulting calculations may not be reliable enough to draw conclusions**				
38234					
38235	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
38236					
38237	**Relevant UCL Statistics**				
38238	**Normal Distribution Test**			**Lognormal Distribution Test**	
38239	Shapiro Wilk Test Statistic		0.9047924	Shapiro Wilk Test Statistic	0.9132582
38240	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
38241	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
38242					
38243	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
38244	95% Student's-t UCL		40.493879	95% H-UCL	108.57144
38245	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	63.814863
38246	95% Adjusted-CLT UCL (Chen-1995)		40.835637	97.5% Chebyshev (MVUE) UCL	80.36445
38247	95% Modified-t UCL (Johnson-1978)		40.988311	99% Chebyshev (MVUE) UCL	112.87291
38248					
38249	**Gamma Distribution Test**			**Data Distribution**	
38250	k star (bias corrected)		1.113016	**Data appear Normal at 5% Significance Level**	
38251	Theta Star		22.551338		
38252	MLE of Mean		25.1		
38253	MLE of Standard Deviation		23.791565		
38254	nu star		13.356192		
38255	Approximate Chi Square Value (.05)		6.1330112	**Nonparametric Statistics**	
38256	Adjusted Level of Significance		0.01222	95% CLT UCL	37.665792
38257	Adjusted Chi Square Value		4.4860478	95% Jackknife UCL	40.493879
38258				95% Standard Bootstrap UCL	36.641167
38259	Anderson-Darling Test Statistic		0.3091055	95% Bootstrap-t UCL	45.840496
38260	Anderson-Darling 5% Critical Value		0.704199	95% Hall's Bootstrap UCL	44.802159
38261	Kolmogorov-Smirnov Test Statistic		0.2151497	95% Percentile Bootstrap UCL	36.233333
38262	Kolmogorov-Smirnov 5% Critical Value		0.3358251	95% BCA Bootstrap UCL	38.666667

	A	B	C	D	E
38263	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	58.39963
38264				97.5% Chebyshev(Mean, Sd) UCL	72.808406
38265	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	101.11166
38266	95% Approximate Gamma UCL		54.661635		
38267	95% Adjusted Gamma UCL		74.72957		
38268					
38269	**Potential UCL to Use**			Use 95% Student's-t UCL	40.493879
38270					
38271	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
38272	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
38273	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
38274					
38275					
38276	**PAH|UG/KG|PHENANTHRENE (gi_sd_ref_2010)**				
38277					
38278	**General Statistics**				
38279	Number of Valid Data		3	Number of Detected Data	2
38280	Number of Distinct Detected Data		2	Number of Non-Detect Data	1
38281				Percent Non-Detects	33.33%
38282					
38283	**Warning: This data set only has 3 observations!**				
38284	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38285	**The data set for variable PAH|UG/KG|PHENANTHRENE (gi_sd_ref_2010) was not processed!**				
38286					
38287	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38288	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38289					
38290					
38291					
38292	**PAH|UG/KG|PHENANTHRENE (gi_sd_s_2005)**				
38293					
38294	**General Statistics**				
38295	Number of Valid Data		0	Number of Detected Data	0
38296	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38297	Number of Missing Values		8	Percent Non-Detects	NaN%
38298					
38299	**Warning: This data set only has 0 observations!**				
38300	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38301	**The data set for variable PAH|UG/KG|PHENANTHRENE (gi_sd_s_2005) was not processed!**				
38302					
38303	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38304	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38305					
38306					
38307					
38308	**PAH|UG/KG|PHENANTHRENE (gi_sd_s_2010)**				
38309					
38310	**General Statistics**				
38311	Number of Valid Data		0	Number of Detected Data	0
38312	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38313	Number of Missing Values		2	Percent Non-Detects	NaN%
38314					
38315	**Warning: This data set only has 0 observations!**				
38316	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
38317	The data set for variable PAH|UG/KG|PHENANTHRENE (gi_sd_s_2010) was not processed!				
38318					
38319	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38320	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38321					
38322					
38323					
38324	PAH|UG/KG|PHENANTHRENE (gi_sd_stillwater_2005)				
38325					
38326	General Statistics				
38327	Number of Valid Data		0	Number of Detected Data	0
38328	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38329	Number of Missing Values		4	Percent Non-Detects	NaN%
38330					
38331	Warning: This data set only has 0 observations!				
38332	Data set is too small to compute reliable and meaningful statistics and estimates!				
38333	The data set for variable PAH|UG/KG|PHENANTHRENE (gi_sd_stillwater_2005) was not processed!				
38334					
38335	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38336	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38337					
38338					
38339					
38340	PAH|UG/KG|PHENANTHRENE (gi_sd_stillwater_2009)				
38341					
38342	General Statistics				
38343	Number of Valid Data		0	Number of Detected Data	0
38344	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38345	Number of Missing Values		60	Percent Non-Detects	NaN%
38346					
38347	Warning: This data set only has 0 observations!				
38348	Data set is too small to compute reliable and meaningful statistics and estimates!				
38349	The data set for variable PAH|UG/KG|PHENANTHRENE (gi_sd_stillwater_2009) was not processed!				
38350					
38351	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38352	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38353					
38354					
38355					
38356	PAH|UG/KG|PHENANTHRENE (gi_sd_stillwater_2010)				
38357					
38358	General Statistics				
38359	Number of Valid Data		0	Number of Detected Data	0
38360	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38361	Number of Missing Values		11	Percent Non-Detects	NaN%
38362					
38363	Warning: This data set only has 0 observations!				
38364	Data set is too small to compute reliable and meaningful statistics and estimates!				
38365	The data set for variable PAH|UG/KG|PHENANTHRENE (gi_sd_stillwater_2010) was not processed!				
38366					

	A	B	C	D	E
38367	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38368	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38369					
38370					
38371					
38372	PAH|UG/KG|PYRENE (gi_sd_ne_2005)				
38373					
38374	General Statistics				
38375	Number of Valid Data		0	Number of Detected Data	0
38376	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38377	Number of Missing Values		36	Percent Non-Detects	NaN%
38378					
38379	Warning: This data set only has 0 observations!				
38380	Data set is too small to compute reliable and meaningful statistics and estimates!				
38381	The data set for variable PAH|UG/KG|PYRENE (gi_sd_ne_2005) was not processed!				
38382					
38383	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38384	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38385					
38386					
38387					
38388	PAH|UG/KG|PYRENE (gi_sd_ne_2009)				
38389					
38390	General Statistics				
38391	Number of Valid Data		0	Number of Detected Data	0
38392	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38393	Number of Missing Values		20	Percent Non-Detects	NaN%
38394					
38395	Warning: This data set only has 0 observations!				
38396	Data set is too small to compute reliable and meaningful statistics and estimates!				
38397	The data set for variable PAH|UG/KG|PYRENE (gi_sd_ne_2009) was not processed!				
38398					
38399	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38400	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38401					
38402					
38403					
38404	PAH|UG/KG|PYRENE (gi_sd_ne_2010)				
38405					
38406	General Statistics				
38407	Number of Valid Data		0	Number of Detected Data	0
38408	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38409	Number of Missing Values		16	Percent Non-Detects	NaN%
38410					
38411	Warning: This data set only has 0 observations!				
38412	Data set is too small to compute reliable and meaningful statistics and estimates!				
38413	The data set for variable PAH|UG/KG|PYRENE (gi_sd_ne_2010) was not processed!				
38414					
38415	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38416	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38417					
38418					
38419					
38420	PAH|UG/KG|PYRENE (gi_sd_nw_2005)				

	A	B	C	D	E
38421					
38422	**General Statistics**				
38423	Number of Valid Data		0	Number of Detected Data	0
38424	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38425	Number of Missing Values		18	Percent Non-Detects	NaN%
38426					
38427	**Warning: This data set only has 0 observations!**				
38428	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38429	**The data set for variable PAH|UG/KG|PYRENE (gi_sd_nw_2005) was not processed!**				
38430					
38431	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38432	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38433					
38434					
38435					
38436	**PAH|UG/KG|PYRENE (gi_sd_nw_2009)**				
38437					
38438	**General Statistics**				
38439	Number of Valid Data		0	Number of Detected Data	0
38440	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38441	Number of Missing Values		7	Percent Non-Detects	NaN%
38442					
38443	**Warning: This data set only has 0 observations!**				
38444	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38445	**The data set for variable PAH|UG/KG|PYRENE (gi_sd_nw_2009) was not processed!**				
38446					
38447	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38448	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38449					
38450					
38451					
38452	**PAH|UG/KG|PYRENE (gi_sd_nw_2010)**				
38453					
38454	**General Statistics**				
38455	Number of Valid Data		0	Number of Detected Data	0
38456	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38457	Number of Missing Values		4	Percent Non-Detects	NaN%
38458					
38459	**Warning: This data set only has 0 observations!**				
38460	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38461	**The data set for variable PAH|UG/KG|PYRENE (gi_sd_nw_2010) was not processed!**				
38462					
38463	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38464	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38465					
38466					
38467					
38468	**PAH|UG/KG|PYRENE (gi_sd_ref_2009)**				
38469					
38470	**General Statistics**				
38471	Number of Valid Observations		6	Number of Distinct Observations	6
38472					
38473	**Raw Statistics**			**Log-transformed Statistics**	
38474	Minimum		17	Minimum of Log Data	2.8332133
38475	Maximum		100	Maximum of Log Data	4.6051702
38476	Mean		45.916667	Mean of log Data	3.6456106
38477	Median		39.75	SD of log Data	0.6631099
38478	SD		30.627466		

	A	B	C	D	E
38479	Coefficient of Variation		0.6670229		
38480	Skewness		1.2341569		
38481					
38482					
38483	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
38484					
38485	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
38486	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38487					
38488					
38489	**Warning: There are only 6 Values in this data**				
38490	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
38491	**the resulting calculations may not be reliable enough to draw conclusions**				
38492					
38493	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
38494					
38495	**Relevant UCL Statistics**				
38496	**Normal Distribution Test**			**Lognormal Distribution Test**	
38497	Shapiro Wilk Test Statistic		0.8929156	Shapiro Wilk Test Statistic	0.9602844
38498	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
38499	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
38500					
38501	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
38502	95% Student's-t UCL		71.112047	95% H-UCL	118.46306
38503	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	99.632789
38504	95% Adjusted-CLT UCL (Chen-1995)		73.214757	97.5% Chebyshev (MVUE) UCL	122.92648
38505	95% Modified-t UCL (Johnson-1978)		72.162022	99% Chebyshev (MVUE) UCL	168.68242
38506					
38507	**Gamma Distribution Test**			**Data Distribution**	
38508	k star (bias corrected)		1.5686613	**Data appear Normal at 5% Significance Level**	
38509	Theta Star		29.271243		
38510	MLE of Mean		45.916667		
38511	MLE of Standard Deviation		36.661123		
38512	nu star		18.823936		
38513	Approximate Chi Square Value (.05)		9.9889243	**Nonparametric Statistics**	
38514	Adjusted Level of Significance		0.01222	95% CLT UCL	66.483276
38515	Adjusted Chi Square Value		7.7755692	95% Jackknife UCL	71.112047
38516				95% Standard Bootstrap UCL	64.789837
38517	Anderson-Darling Test Statistic		0.2389035	95% Bootstrap-t UCL	87.384358
38518	Anderson-Darling 5% Critical Value		0.7015745	95% Hall's Bootstrap UCL	185.2584
38519	Kolmogorov-Smirnov Test Statistic		0.1840718	95% Percentile Bootstrap UCL	66.083333
38520	Kolmogorov-Smirnov 5% Critical Value		0.3346587	95% BCA Bootstrap UCL	69.666667
38521	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	100.41864
38522				97.5% Chebyshev(Mean, Sd) UCL	124.00169
38523	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	170.32602
38524	95% Approximate Gamma UCL		86.529076		
38525	95% Adjusted Gamma UCL		111.16001		
38526					
38527	**Potential UCL to Use**			Use 95% Student's-t UCL	71.112047
38528					
38529	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
38530	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
38531	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
38532					
38533					
38534	**PAH|UG/KG|PYRENE (gi_sd_ref_2010)**				
38535					
38536	**General Statistics**				
38537	Number of Valid Observations		3	Number of Distinct Observations	3

	A	B	C	D	E
38538					
38539					
38540	**Warning: This data set only has 3 observations!**				
38541	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38542	**The data set for variable PAH|UG/KG|PYRENE (gi_sd_ref_2010) was not processed!**				
38543					
38544	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38545	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38546					
38547					
38548					
38549	**PAH|UG/KG|PYRENE (gi_sd_s_2005)**				
38550					
38551	**General Statistics**				
38552	Number of Valid Data		0	Number of Detected Data	0
38553	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38554	Number of Missing Values		8	Percent Non-Detects	NaN%
38555					
38556	**Warning: This data set only has 0 observations!**				
38557	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38558	**The data set for variable PAH|UG/KG|PYRENE (gi_sd_s_2005) was not processed!**				
38559					
38560	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38561	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38562					
38563					
38564					
38565	**PAH|UG/KG|PYRENE (gi_sd_s_2010)**				
38566					
38567	**General Statistics**				
38568	Number of Valid Data		0	Number of Detected Data	0
38569	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38570	Number of Missing Values		2	Percent Non-Detects	NaN%
38571					
38572	**Warning: This data set only has 0 observations!**				
38573	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38574	**The data set for variable PAH|UG/KG|PYRENE (gi_sd_s_2010) was not processed!**				
38575					
38576	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38577	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38578					
38579					
38580					
38581	**PAH|UG/KG|PYRENE (gi_sd_stillwater_2005)**				
38582					
38583	**General Statistics**				
38584	Number of Valid Data		0	Number of Detected Data	0
38585	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38586	Number of Missing Values		4	Percent Non-Detects	NaN%
38587					
38588	**Warning: This data set only has 0 observations!**				
38589	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38590	**The data set for variable PAH|UG/KG|PYRENE (gi_sd_stillwater_2005) was not processed!**				
38591					

	A	B	C	D	E
38592	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38593	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38594					
38595					
38596					
38597	PAH|UG/KG|PYRENE (gi_sd_stillwater_2009)				
38598					
38599	General Statistics				
38600	Number of Valid Data		0	Number of Detected Data	0
38601	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38602	Number of Missing Values		60	Percent Non-Detects	NaN%
38603					
38604	Warning: This data set only has 0 observations!				
38605	Data set is too small to compute reliable and meaningful statistics and estimates!				
38606	The data set for variable PAH|UG/KG|PYRENE (gi_sd_stillwater_2009) was not processed!				
38607					
38608	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38609	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38610					
38611					
38612					
38613	PAH|UG/KG|PYRENE (gi_sd_stillwater_2010)				
38614					
38615	General Statistics				
38616	Number of Valid Data		0	Number of Detected Data	0
38617	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38618	Number of Missing Values		11	Percent Non-Detects	NaN%
38619					
38620	Warning: This data set only has 0 observations!				
38621	Data set is too small to compute reliable and meaningful statistics and estimates!				
38622	The data set for variable PAH|UG/KG|PYRENE (gi_sd_stillwater_2010) was not processed!				
38623					
38624	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38625	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38626					
38627					
38628					
38629	PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ne_2005)				
38630					
38631	General Statistics				
38632	Number of Valid Data		0	Number of Detected Data	0
38633	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38634	Number of Missing Values		36	Percent Non-Detects	NaN%
38635					
38636	Warning: This data set only has 0 observations!				
38637	Data set is too small to compute reliable and meaningful statistics and estimates!				
38638	The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ne_2005) was not processed!				
38639					
38640	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38641	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38642					
38643					

	A	B	C	D	E
38644					
38645	PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ne_2009)				
38646					
38647	General Statistics				
38648	Number of Valid Data		0	Number of Detected Data	0
38649	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38650	Number of Missing Values		20	Percent Non-Detects	NaN%
38651					
38652	Warning: This data set only has 0 observations!				
38653	Data set is too small to compute reliable and meaningful statistics and estimates!				
38654	The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ne_2009) was not processed!				
38655					
38656	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38657	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38658					
38659					
38660					
38661	PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ne_2010)				
38662					
38663	General Statistics				
38664	Number of Valid Data		0	Number of Detected Data	0
38665	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38666	Number of Missing Values		16	Percent Non-Detects	NaN%
38667					
38668	Warning: This data set only has 0 observations!				
38669	Data set is too small to compute reliable and meaningful statistics and estimates!				
38670	The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ne_2010) was not processed!				
38671					
38672	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38673	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38674					
38675					
38676					
38677	PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_nw_2005)				
38678					
38679	General Statistics				
38680	Number of Valid Data		0	Number of Detected Data	0
38681	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38682	Number of Missing Values		18	Percent Non-Detects	NaN%
38683					
38684	Warning: This data set only has 0 observations!				
38685	Data set is too small to compute reliable and meaningful statistics and estimates!				
38686	The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_nw_2005) was not processed!				
38687					
38688	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38689	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38690					
38691					
38692					
38693	PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_nw_2009)				
38694					

	A	B	C	D	E
38695	**General Statistics**				
38696	Number of Valid Data		0	Number of Detected Data	0
38697	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38698	Number of Missing Values		7	Percent Non-Detects	NaN%
38699					
38700	**Warning: This data set only has 0 observations!**				
38701	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38702	**The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_nw_2009) was not processed!**				
38703					
38704	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38705	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38706					
38707					
38708					
38709	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_nw_2010)**				
38710					
38711	**General Statistics**				
38712	Number of Valid Data		0	Number of Detected Data	0
38713	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38714	Number of Missing Values		4	Percent Non-Detects	NaN%
38715					
38716	**Warning: This data set only has 0 observations!**				
38717	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38718	**The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_nw_2010) was not processed!**				
38719					
38720	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38721	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38722					
38723					
38724					
38725	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ref_2009)**				
38726					
38727	**General Statistics**				
38728	Number of Valid Observations		6	Number of Distinct Observations	6
38729					
38730	**Raw Statistics**			**Log-transformed Statistics**	
38731	Minimum		57	Minimum of Log Data	4.0430513
38732	Maximum		266	Maximum of Log Data	5.5834963
38733	Mean		128.76667	Mean of log Data	4.7045337
38734	Median		110	SD of log Data	0.6054511
38735	SD		79.565864		
38736	Coefficient of Variation		0.6179073		
38737	Skewness		1.1436547		
38738					
38739					
38740	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
38741					
38742	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
38743	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38744					
38745					
38746	**Warning: There are only 6 Values in this data**				
38747	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				

	A	B	C	D	E
38748	**the resulting calculations may not be reliable enough to draw conclusions**				
38749					
38750	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
38751					
38752	**Relevant UCL Statistics**				
38753	**Normal Distribution Test**			**Lognormal Distribution Test**	
38754	Shapiro Wilk Test Statistic		0.8832697	Shapiro Wilk Test Statistic	0.9277346
38755	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
38756	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
38757					
38758	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
38759	95% Student's-t UCL		194.22073	95% H-UCL	291.43757
38760	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	266.06958
38761	95% Adjusted-CLT UCL (Chen-1995)		198.4009	97.5% Chebyshev (MVUE) UCL	325.69864
38762	95% Modified-t UCL (Johnson-1978)		196.7484	99% Chebyshev (MVUE) UCL	442.8284
38763					
38764	**Gamma Distribution Test**			**Data Distribution**	
38765	k star (bias corrected)		1.8189433	**Data appear Normal at 5% Significance Level**	
38766	Theta Star		70.79202		
38767	MLE of Mean		128.76667		
38768	MLE of Standard Deviation		95.475926		
38769	nu star		21.827319		
38770	Approximate Chi Square Value (.05)		12.20892	**Nonparametric Statistics**	
38771	Adjusted Level of Significance		0.01222	95% CLT UCL	182.19583
38772	Adjusted Chi Square Value		9.7170026	95% Jackknife UCL	194.22073
38773				95% Standard Bootstrap UCL	177.66966
38774	Anderson-Darling Test Statistic		0.3049513	95% Bootstrap-t UCL	257.65494
38775	Anderson-Darling 5% Critical Value		0.7007689	95% Hall's Bootstrap UCL	523.79426
38776	Kolmogorov-Smirnov Test Statistic		0.2020521	95% Percentile Bootstrap UCL	180.76667
38777	Kolmogorov-Smirnov 5% Critical Value		0.3341302	95% BCA Bootstrap UCL	184.16667
38778	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	270.35516
38779				97.5% Chebyshev(Mean, Sd) UCL	331.62061
38780	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	451.96473
38781	95% Approximate Gamma UCL		230.21128		
38782	95% Adjusted Gamma UCL		289.24878		
38783					
38784	**Potential UCL to Use**			Use 95% Student's-t UCL	194.22073
38785					
38786	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
38787	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
38788	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
38789					
38790					
38791	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ref_2010)**				
38792					
38793	**General Statistics**				
38794	Number of Valid Observations		3	Number of Distinct Observations	3
38795					
38796					
38797	**Warning: This data set only has 3 observations!**				
38798	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38799	**The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_ref_2010) was not processed!**				
38800					
38801	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38802	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38803					
38804					

	A	B	C	D	E
38805					
38806	PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_s_2005)				
38807					
38808	General Statistics				
38809	Number of Valid Data		0	Number of Detected Data	0
38810	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38811	Number of Missing Values		8	Percent Non-Detects	NaN%
38812					
38813	Warning: This data set only has 0 observations!				
38814	Data set is too small to compute reliable and meaningful statistics and estimates!				
38815	The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_s_2005) was not processed!				
38816					
38817	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38818	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38819					
38820					
38821					
38822	PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_s_2010)				
38823					
38824	General Statistics				
38825	Number of Valid Data		0	Number of Detected Data	0
38826	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38827	Number of Missing Values		2	Percent Non-Detects	NaN%
38828					
38829	Warning: This data set only has 0 observations!				
38830	Data set is too small to compute reliable and meaningful statistics and estimates!				
38831	The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_s_2010) was not processed!				
38832					
38833	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38834	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38835					
38836					
38837					
38838	PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_stillwater_2005)				
38839					
38840	General Statistics				
38841	Number of Valid Data		0	Number of Detected Data	0
38842	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38843	Number of Missing Values		4	Percent Non-Detects	NaN%
38844					
38845	Warning: This data set only has 0 observations!				
38846	Data set is too small to compute reliable and meaningful statistics and estimates!				
38847	The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_stillwater_2005) was not processed!				
38848					
38849	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38850	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38851					
38852					
38853					
38854	PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_stillwater_2009)				
38855					

	A	B	C	D	E
38856	**General Statistics**				
38857	Number of Valid Data		0	Number of Detected Data	0
38858	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38859	Number of Missing Values		60	Percent Non-Detects	NaN%
38860					
38861	**Warning: This data set only has 0 observations!**				
38862	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38863	**The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_stillwater_2009) was not processed!**				
38864					
38865	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38866	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38867					
38868					
38869					
38870	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_stillwater_2010)**				
38871					
38872	**General Statistics**				
38873	Number of Valid Data		0	Number of Detected Data	0
38874	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38875	Number of Missing Values		11	Percent Non-Detects	NaN%
38876					
38877	**Warning: This data set only has 0 observations!**				
38878	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38879	**The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_sd_stillwater_2010) was not processed!**				
38880					
38881	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38882	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38883					
38884					
38885					
38886	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ne_2005)**				
38887					
38888	**General Statistics**				
38889	Number of Valid Data		0	Number of Detected Data	0
38890	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38891	Number of Missing Values		36	Percent Non-Detects	NaN%
38892					
38893	**Warning: This data set only has 0 observations!**				
38894	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38895	**The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ne_2005) was not processed!**				
38896					
38897	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38898	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38899					
38900					
38901					
38902	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ne_2009)**				
38903					
38904	**General Statistics**				
38905	Number of Valid Data		0	Number of Detected Data	0
38906	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38907	Number of Missing Values		20	Percent Non-Detects	NaN%

	A	B	C	D	E
38908					
38909	**Warning: This data set only has 0 observations!**				
38910	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38911	**The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ne_2009) was not processed!**				
38912					
38913	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38914	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38915					
38916					
38917					
38918	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ne_2010)**				
38919					
38920	**General Statistics**				
38921	Number of Valid Data		0	Number of Detected Data	0
38922	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38923	Number of Missing Values		16	Percent Non-Detects	NaN%
38924					
38925	**Warning: This data set only has 0 observations!**				
38926	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38927	**The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ne_2010) was not processed!**				
38928					
38929	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38930	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38931					
38932					
38933					
38934	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_nw_2005)**				
38935					
38936	**General Statistics**				
38937	Number of Valid Data		0	Number of Detected Data	0
38938	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38939	Number of Missing Values		18	Percent Non-Detects	NaN%
38940					
38941	**Warning: This data set only has 0 observations!**				
38942	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
38943	**The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_nw_2005) was not processed!**				
38944					
38945	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
38946	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
38947					
38948					
38949					
38950	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_nw_2009)**				
38951					
38952	**General Statistics**				
38953	Number of Valid Data		0	Number of Detected Data	0
38954	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38955	Number of Missing Values		7	Percent Non-Detects	NaN%
38956					
38957	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
38958	Data set is too small to compute reliable and meaningful statistics and estimates!				
38959	The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_nw_2009) was not processed!				
38960					
38961	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38962	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38963					
38964					
38965					
38966	PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_nw_2010)				
38967					
38968	General Statistics				
38969	Number of Valid Data		0	Number of Detected Data	0
38970	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
38971	Number of Missing Values		4	Percent Non-Detects	NaN%
38972					
38973	Warning: This data set only has 0 observations!				
38974	Data set is too small to compute reliable and meaningful statistics and estimates!				
38975	The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_nw_2010) was not processed!				
38976					
38977	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
38978	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
38979					
38980					
38981					
38982	PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ref_2009)				
38983					
38984	General Statistics				
38985	Number of Valid Observations		6	Number of Distinct Observations	6
38986					
38987	Raw Statistics			Log-transformed Statistics	
38988	Minimum		55.4	Minimum of Log Data	4.0145796
38989	Maximum		266	Maximum of Log Data	5.5834963
38990	Mean		128.21667	Mean of log Data	4.6947954
38991	Median		110	SD of log Data	0.6181695
38992	SD		80.160949		
38993	Coefficient of Variation		0.6251991		
38994	Skewness		1.1191211		
38995					
38996					
38997	Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!				
38998					
38999	It is suggested to collect at least 8 to 10 observations using these statistical methods!				
39000	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39001					
39002					
39003	Warning: There are only 6 Values in this data				
39004	Note: It should be noted that even though bootstrap methods may be performed on this data set,				
39005	the resulting calculations may not be reliable enough to draw conclusions				
39006					
39007	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.				
39008					
39009	Relevant UCL Statistics				

	A	B	C	D	E
39010	**Normal Distribution Test**			**Lognormal Distribution Test**	
39011	Shapiro Wilk Test Statistic		0.88595	Shapiro Wilk Test Statistic	0.9267929
39012	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
39013	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
39014					
39015	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
39016	95% Student's-t UCL		194.16027	95% H-UCL	298.53786
39017	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	267.98666
39018	95% Adjusted-CLT UCL (Chen-1995)		198.02148	97.5% Chebyshev (MVUE) UCL	328.6405
39019	95% Modified-t UCL (Johnson-1978)		196.65221	99% Chebyshev (MVUE) UCL	447.78323
39020					
39021	**Gamma Distribution Test**			**Data Distribution**	
39022	k star (bias corrected)		1.762835	**Data appear Normal at 5% Significance Level**	
39023	Theta Star		72.733221		
39024	MLE of Mean		128.21667		
39025	MLE of Standard Deviation		96.569204		
39026	nu star		21.15402		
39027	Approximate Chi Square Value (.05)		11.706211	**Nonparametric Statistics**	
39028	Adjusted Level of Significance		0.01222	95% CLT UCL	182.04544
39029	Adjusted Chi Square Value		9.2750931	95% Jackknife UCL	194.16027
39030				95% Standard Bootstrap UCL	177.57503
39031	Anderson-Darling Test Statistic		0.3033601	95% Bootstrap-t UCL	245.16594
39032	Anderson-Darling 5% Critical Value		0.7009203	95% Hall's Bootstrap UCL	539.1797
39033	Kolmogorov-Smirnov Test Statistic		0.2043815	95% Percentile Bootstrap UCL	178.98333
39034	Kolmogorov-Smirnov 5% Critical Value		0.3342435	95% BCA Bootstrap UCL	188.65
39035	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	270.86412
39036				97.5% Chebyshev(Mean, Sd) UCL	332.58779
39037	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	453.83198
39038	95% Approximate Gamma UCL		231.69733		
39039	95% Adjusted Gamma UCL		292.4281		
39040					
39041	**Potential UCL to Use**			Use 95% Student's-t UCL	194.16027
39042					
39043	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
39044	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
39045	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
39046					
39047					
39048	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ref_2010)**				
39049					
39050	**General Statistics**				
39051	Number of Valid Observations		3	Number of Distinct Observations	3
39052					
39053					
39054	**Warning: This data set only has 3 observations!**				
39055	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39056	**The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_ref_2010) was not processed!**				
39057					
39058	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39059	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39060					
39061					
39062					
39063	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_s_2005)**				
39064					
39065	**General Statistics**				
39066	Number of Valid Data		0	Number of Detected Data	0
39067	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39068	Number of Missing Values		8	Percent Non-Detects	NaN%

	A	B	C	D	E
39069					
39070	**Warning: This data set only has 0 observations!**				
39071	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39072	**The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_s_2005) was not processed!**				
39073					
39074	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39075	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39076					
39077					
39078					
39079	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_s_2010)**				
39080					
39081	**General Statistics**				
39082	Number of Valid Data		0	Number of Detected Data	0
39083	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39084	Number of Missing Values		2	Percent Non-Detects	NaN%
39085					
39086	**Warning: This data set only has 0 observations!**				
39087	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39088	**The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_s_2010) was not processed!**				
39089					
39090	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39091	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39092					
39093					
39094					
39095	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_stillwater_2005)**				
39096					
39097	**General Statistics**				
39098	Number of Valid Data		0	Number of Detected Data	0
39099	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39100	Number of Missing Values		4	Percent Non-Detects	NaN%
39101					
39102	**Warning: This data set only has 0 observations!**				
39103	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39104	**The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_stillwater_2005) was not processed!**				
39105					
39106	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39107	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39108					
39109					
39110					
39111	**PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_stillwater_2009)**				
39112					
39113	**General Statistics**				
39114	Number of Valid Data		0	Number of Detected Data	0
39115	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39116	Number of Missing Values		60	Percent Non-Detects	NaN%
39117					
39118	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
39119	Data set is too small to compute reliable and meaningful statistics and estimates!				
39120	The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_stillwater_2009) was not processed!				
39121					
39122	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39123	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39124					
39125					
39126					
39127	PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_stillwater_2010)				
39128					
39129	General Statistics				
39130	Number of Valid Data		0	Number of Detected Data	0
39131	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39132	Number of Missing Values		11	Percent Non-Detects	NaN%
39133					
39134	Warning: This data set only has 0 observations!				
39135	Data set is too small to compute reliable and meaningful statistics and estimates!				
39136	The data set for variable PAH|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_sd_stillwater_2010) was not processed!				
39137					
39138	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39139	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39140					
39141					
39142					
39143	PAH|UG/KG|TOTAL PAHS (gi_sd_ne_2005)				
39144					
39145	General Statistics				
39146	Number of Valid Data		0	Number of Detected Data	0
39147	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39148	Number of Missing Values		36	Percent Non-Detects	NaN%
39149					
39150	Warning: This data set only has 0 observations!				
39151	Data set is too small to compute reliable and meaningful statistics and estimates!				
39152	The data set for variable PAH|UG/KG|TOTAL PAHS (gi_sd_ne_2005) was not processed!				
39153					
39154	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39155	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39156					
39157					
39158					
39159	PAH|UG/KG|TOTAL PAHS (gi_sd_ne_2009)				
39160					
39161	General Statistics				
39162	Number of Valid Data		0	Number of Detected Data	0
39163	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39164	Number of Missing Values		20	Percent Non-Detects	NaN%
39165					
39166	Warning: This data set only has 0 observations!				
39167	Data set is too small to compute reliable and meaningful statistics and estimates!				
39168	The data set for variable PAH|UG/KG|TOTAL PAHS (gi_sd_ne_2009) was not processed!				
39169					

	A	B	C	D	E
39170	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39171	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39172					
39173					
39174					
39175	PAH|UG/KG|TOTAL PAHS (gi_sd_ne_2010)				
39176					
39177	General Statistics				
39178	Number of Valid Data		0	Number of Detected Data	0
39179	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39180	Number of Missing Values		16	Percent Non-Detects	NaN%
39181					
39182	Warning: This data set only has 0 observations!				
39183	Data set is too small to compute reliable and meaningful statistics and estimates!				
39184	The data set for variable PAH|UG/KG|TOTAL PAHS (gi_sd_ne_2010) was not processed!				
39185					
39186	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39187	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39188					
39189					
39190					
39191	PAH|UG/KG|TOTAL PAHS (gi_sd_nw_2005)				
39192					
39193	General Statistics				
39194	Number of Valid Data		0	Number of Detected Data	0
39195	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39196	Number of Missing Values		18	Percent Non-Detects	NaN%
39197					
39198	Warning: This data set only has 0 observations!				
39199	Data set is too small to compute reliable and meaningful statistics and estimates!				
39200	The data set for variable PAH|UG/KG|TOTAL PAHS (gi_sd_nw_2005) was not processed!				
39201					
39202	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39203	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39204					
39205					
39206					
39207	PAH|UG/KG|TOTAL PAHS (gi_sd_nw_2009)				
39208					
39209	General Statistics				
39210	Number of Valid Data		0	Number of Detected Data	0
39211	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39212	Number of Missing Values		7	Percent Non-Detects	NaN%
39213					
39214	Warning: This data set only has 0 observations!				
39215	Data set is too small to compute reliable and meaningful statistics and estimates!				
39216	The data set for variable PAH|UG/KG|TOTAL PAHS (gi_sd_nw_2009) was not processed!				
39217					
39218	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39219	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39220					
39221					
39222					
39223	PAH|UG/KG|TOTAL PAHS (gi_sd_nw_2010)				

	A	B	C	D	E
39224					
39225	**General Statistics**				
39226	Number of Valid Data		0	Number of Detected Data	0
39227	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39228	Number of Missing Values		4	Percent Non-Detects	NaN%
39229					
39230	**Warning: This data set only has 0 observations!**				
39231	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39232	**The data set for variable PAH|UG/KG|TOTAL PAHS (gi_sd_nw_2010) was not processed!**				
39233					
39234	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39235	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39236					
39237					
39238					
39239	**PAH|UG/KG|TOTAL PAHS (gi_sd_ref_2009)**				
39240					
39241	**General Statistics**				
39242	Number of Valid Observations		6	Number of Distinct Observations	6
39243					
39244	**Raw Statistics**			**Log-transformed Statistics**	
39245	Minimum		109.3	Minimum of Log Data	4.6940964
39246	Maximum		620.4	Maximum of Log Data	6.4303644
39247	Mean		285.09167	Mean of log Data	5.4648183
39248	Median		246.075	SD of log Data	0.6772573
39249	SD		192.16321		
39250	Coefficient of Variation		0.6740401		
39251	Skewness		1.1730321		
39252					
39253					
39254	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**				
39255					
39256	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**				
39257	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39258					
39259					
39260	**Warning: There are only 6 Values in this data**				
39261	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
39262	**the resulting calculations may not be reliable enough to draw conclusions**				
39263					
39264	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
39265					
39266	**Relevant UCL Statistics**				
39267	**Normal Distribution Test**			**Lognormal Distribution Test**	
39268	Shapiro Wilk Test Statistic		0.8893933	Shapiro Wilk Test Statistic	0.9357527
39269	Shapiro Wilk Critical Value		0.788	Shapiro Wilk Critical Value	0.788
39270	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
39271					
39272	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
39273	95% Student's-t UCL		443.17282	95% H-UCL	761.20995
39274	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	626.09322
39275	95% Adjusted-CLT UCL (Chen-1995)		454.27388	97.5% Chebyshev (MVUE) UCL	773.86895
39276	95% Modified-t UCL (Johnson-1978)		449.43431	99% Chebyshev (MVUE) UCL	1064.1458
39277					
39278	**Gamma Distribution Test**			**Data Distribution**	
39279	k star (bias corrected)		1.5187398	**Data appear Normal at 5% Significance Level**	
39280	Theta Star		187.71593		
39281	MLE of Mean		285.09167		
39282	MLE of Standard Deviation		231.33579		

	A	B	C	D	E
39283	nu star		18.224878		
39284	Approximate Chi Square Value (.05)		9.5535808	**Nonparametric Statistics**	
39285	Adjusted Level of Significance		0.01222	95% CLT UCL	414.13093
39286	Adjusted Chi Square Value		7.3982144	95% Jackknife UCL	443.17282
39287				95% Standard Bootstrap UCL	404.12578
39288	Anderson-Darling Test Statistic		0.2742044	95% Bootstrap-t UCL	544.05707
39289	Anderson-Darling 5% Critical Value		0.7018621	95% Hall's Bootstrap UCL	1173.1189
39290	Kolmogorov-Smirnov Test Statistic		0.2042695	95% Percentile Bootstrap UCL	410.53333
39291	Kolmogorov-Smirnov 5% Critical Value		0.3347865	95% BCA Bootstrap UCL	429.14167
39292	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	627.0486
39293				97.5% Chebyshev(Mean, Sd) UCL	775.01364
39294	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	1065.6623
39295	95% Approximate Gamma UCL		543.85481		
39296	95% Adjusted Gamma UCL		702.2993		
39297					
39298	**Potential UCL to Use**			Use 95% Student's-t UCL	443.17282
39299					
39300	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
39301	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
39302	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
39303					
39304					
39305	**PAH|UG/KG|TOTAL PAHS (gi_sd_ref_2010)**				
39306					
39307	**General Statistics**				
39308	Number of Valid Observations		3	Number of Distinct Observations	3
39309					
39310					
39311	**Warning: This data set only has 3 observations!**				
39312	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39313	**The data set for variable PAH|UG/KG|TOTAL PAHS (gi_sd_ref_2010) was not processed!**				
39314					
39315	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39316	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39317					
39318					
39319					
39320	**PAH|UG/KG|TOTAL PAHS (gi_sd_s_2005)**				
39321					
39322	**General Statistics**				
39323	Number of Valid Data		0	Number of Detected Data	0
39324	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39325	Number of Missing Values		8	Percent Non-Detects	NaN%
39326					
39327	**Warning: This data set only has 0 observations!**				
39328	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39329	**The data set for variable PAH|UG/KG|TOTAL PAHS (gi_sd_s_2005) was not processed!**				
39330					
39331	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39332	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39333					
39334					
39335					
39336	**PAH|UG/KG|TOTAL PAHS (gi_sd_s_2010)**				
39337					
39338	**General Statistics**				
39339	Number of Valid Data		0	Number of Detected Data	0
39340	Number of Distinct Detected Data		0	Number of Non-Detect Data	0

	A	B	C	D	E
39341	Number of Missing Values		2	Percent Non-Detects	NaN%
39342					
39343	**Warning: This data set only has 0 observations!**				
39344	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39345	**The data set for variable PAH|UG/KG|TOTAL PAHS (gi_sd_s_2010) was not processed!**				
39346					
39347	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39348	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39349					
39350					
39351					
39352	**PAH|UG/KG|TOTAL PAHS (gi_sd_stillwater_2005)**				
39353					
39354	**General Statistics**				
39355	Number of Valid Data		0	Number of Detected Data	0
39356	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39357	Number of Missing Values		4	Percent Non-Detects	NaN%
39358					
39359	**Warning: This data set only has 0 observations!**				
39360	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39361	**The data set for variable PAH|UG/KG|TOTAL PAHS (gi_sd_stillwater_2005) was not processed!**				
39362					
39363	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39364	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39365					
39366					
39367					
39368	**PAH|UG/KG|TOTAL PAHS (gi_sd_stillwater_2009)**				
39369					
39370	**General Statistics**				
39371	Number of Valid Data		0	Number of Detected Data	0
39372	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39373	Number of Missing Values		60	Percent Non-Detects	NaN%
39374					
39375	**Warning: This data set only has 0 observations!**				
39376	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39377	**The data set for variable PAH|UG/KG|TOTAL PAHS (gi_sd_stillwater_2009) was not processed!**				
39378					
39379	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39380	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39381					
39382					
39383					
39384	**PAH|UG/KG|TOTAL PAHS (gi_sd_stillwater_2010)**				
39385					
39386	**General Statistics**				
39387	Number of Valid Data		0	Number of Detected Data	0
39388	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39389	Number of Missing Values		11	Percent Non-Detects	NaN%
39390					
39391	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
39392	Data set is too small to compute reliable and meaningful statistics and estimates!				
39393	The data set for variable PAH|UG/KG|TOTAL PAHS (gi_sd_stillwater_2010) was not processed!				
39394					
39395	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39396	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39397					
39398					
39399					
39400	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_ne_2005)				
39401					
39402	General Statistics				
39403	Number of Valid Data		0	Number of Detected Data	0
39404	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39405	Number of Missing Values		36	Percent Non-Detects	NaN%
39406					
39407	Warning: This data set only has 0 observations!				
39408	Data set is too small to compute reliable and meaningful statistics and estimates!				
39409	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_ne_2005) was not processed!				
39410					
39411	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39412	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39413					
39414					
39415					
39416	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_ne_2009)				
39417					
39418	General Statistics				
39419	Number of Valid Data		0	Number of Detected Data	0
39420	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39421	Number of Missing Values		20	Percent Non-Detects	NaN%
39422					
39423	Warning: This data set only has 0 observations!				
39424	Data set is too small to compute reliable and meaningful statistics and estimates!				
39425	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_ne_2009) was not processed!				
39426					
39427	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39428	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39429					
39430					
39431					
39432	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_ne_2010)				
39433					
39434	General Statistics				
39435	Number of Valid Data		16	Number of Detected Data	1
39436	Number of Distinct Detected Data		1	Number of Non-Detect Data	15
39437				Percent Non-Detects	93.75%
39438					
39439	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				

	A	B	C	D	E
39440	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
39441					
39442	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_ne_2010) was not processed!				
39443					
39444					
39445					
39446	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_nw_2005)				
39447					
39448	General Statistics				
39449	Number of Valid Data		0	Number of Detected Data	0
39450	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39451	Number of Missing Values		18	Percent Non-Detects	NaN%
39452					
39453	Warning: This data set only has 0 observations!				
39454	Data set is too small to compute reliable and meaningful statistics and estimates!				
39455	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_nw_2005) was not processed!				
39456					
39457	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39458	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39459					
39460					
39461					
39462	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_nw_2009)				
39463					
39464	General Statistics				
39465	Number of Valid Data		0	Number of Detected Data	0
39466	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39467	Number of Missing Values		7	Percent Non-Detects	NaN%
39468					
39469	Warning: This data set only has 0 observations!				
39470	Data set is too small to compute reliable and meaningful statistics and estimates!				
39471	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_nw_2009) was not processed!				
39472					
39473	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39474	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39475					
39476					
39477					
39478	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_nw_2010)				
39479					
39480	General Statistics				
39481	Number of Valid Data		4	Number of Detected Data	0
39482	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
39483				Percent Non-Detects	100.00%
39484					
39485	Warning: This data set only has 4 observations!				
39486	Data set is too small to compute reliable and meaningful statistics and estimates!				
39487	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_nw_2010) was not processed!				
39488					

	A	B	C	D	E
39489	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39490	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39491					
39492					
39493					
39494	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_ref_2009)				
39495					
39496	General Statistics				
39497	Number of Valid Data		0	Number of Detected Data	0
39498	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39499	Number of Missing Values		6	Percent Non-Detects	NaN%
39500					
39501	Warning: This data set only has 0 observations!				
39502	Data set is too small to compute reliable and meaningful statistics and estimates!				
39503	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_ref_2009) was not processed!				
39504					
39505	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39506	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39507					
39508					
39509					
39510	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_ref_2010)				
39511					
39512	General Statistics				
39513	Number of Valid Data		3	Number of Detected Data	0
39514	Number of Distinct Detected Data		0	Number of Non-Detect Data	3
39515				Percent Non-Detects	100.00%
39516					
39517	Warning: This data set only has 3 observations!				
39518	Data set is too small to compute reliable and meaningful statistics and estimates!				
39519	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_ref_2010) was not processed!				
39520					
39521	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39522	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39523					
39524					
39525					
39526	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_s_2005)				
39527					
39528	General Statistics				
39529	Number of Valid Data		0	Number of Detected Data	0
39530	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39531	Number of Missing Values		8	Percent Non-Detects	NaN%
39532					
39533	Warning: This data set only has 0 observations!				
39534	Data set is too small to compute reliable and meaningful statistics and estimates!				
39535	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_s_2005) was not processed!				
39536					
39537	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
39538	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39539					
39540					
39541					
39542	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_s_2010)				
39543					
39544	General Statistics				
39545	Number of Valid Data		2	Number of Detected Data	0
39546	Number of Distinct Detected Data		0	Number of Non-Detect Data	2
39547				Percent Non-Detects	100.00%
39548					
39549	Warning: This data set only has 2 observations!				
39550	Data set is too small to compute reliable and meaningful statistics and estimates!				
39551	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_s_2010) was not processed!				
39552					
39553	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39554	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39555					
39556					
39557					
39558	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_stillwater_2005)				
39559					
39560	General Statistics				
39561	Number of Valid Data		0	Number of Detected Data	0
39562	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39563	Number of Missing Values		4	Percent Non-Detects	NaN%
39564					
39565	Warning: This data set only has 0 observations!				
39566	Data set is too small to compute reliable and meaningful statistics and estimates!				
39567	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_stillwater_2005) was not processed!				
39568					
39569	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39570	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39571					
39572					
39573					
39574	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_stillwater_2009)				
39575					
39576	General Statistics				
39577	Number of Valid Data		0	Number of Detected Data	0
39578	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39579	Number of Missing Values		60	Percent Non-Detects	NaN%
39580					
39581	Warning: This data set only has 0 observations!				
39582	Data set is too small to compute reliable and meaningful statistics and estimates!				
39583	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_stillwater_2009) was not processed!				
39584					
39585	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39586	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39587					

	A	B	C	D	E
39588					
39589					
39590	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_stillwater_2010)				
39591					
39592	General Statistics				
39593	Number of Valid Data		11	Number of Detected Data	0
39594	Number of Distinct Detected Data		0	Number of Non-Detect Data	11
39595				Percent Non-Detects	100.00%
39596					
39597	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
39598	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
39599	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
39600					
39601	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_sd_stillwater_2010) was not processed!				
39602					
39603					
39604					
39605	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_ne_2005)				
39606					
39607	General Statistics				
39608	Number of Valid Data		0	Number of Detected Data	0
39609	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39610	Number of Missing Values		36	Percent Non-Detects	NaN%
39611					
39612	Warning: This data set only has 0 observations!				
39613	Data set is too small to compute reliable and meaningful statistics and estimates!				
39614	The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_ne_2005) was not processed!				
39615					
39616	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39617	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39618					
39619					
39620					
39621	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_ne_2009)				
39622					
39623	General Statistics				
39624	Number of Valid Data		0	Number of Detected Data	0
39625	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39626	Number of Missing Values		20	Percent Non-Detects	NaN%
39627					
39628	Warning: This data set only has 0 observations!				
39629	Data set is too small to compute reliable and meaningful statistics and estimates!				
39630	The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_ne_2009) was not processed!				
39631					
39632	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39633	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39634					
39635					
39636					
39637	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_ne_2010)				
39638					

	A	B	C	D	E
39639	**General Statistics**				
39640	Number of Valid Data		16	Number of Detected Data	11
39641	Number of Distinct Detected Data		11	Number of Non-Detect Data	5
39642				Percent Non-Detects	31.25%
39643					
39644	**Raw Statistics**			**Log-transformed Statistics**	
39645	Minimum Detected		4.1	Minimum Detected	1.410987
39646	Maximum Detected		410	Maximum Detected	6.0161572
39647	Mean of Detected		85.836364	Mean of Detected	3.7687523
39648	SD of Detected		114.0347	SD of Detected	1.3446585
39649	Minimum Non-Detect		1	Minimum Non-Detect	0
39650	Maximum Non-Detect		3.7	Maximum Non-Detect	1.3083328
39651					
39652	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	5
39653	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	11
39654	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	31.25%
39655					
39656	**UCL Statistics**				
39657	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
39658	Shapiro Wilk Test Statistic		0.6570179	Shapiro Wilk Test Statistic	0.9372596
39659	5% Shapiro Wilk Critical Value		0.85	5% Shapiro Wilk Critical Value	0.85
39660	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
39661					
39662	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
39663	DL/2 Substitution Method			DL/2 Substitution Method	
39664	Mean		59.3375	Mean	2.5634943
39665	SD		101.57348	SD	2.1676893
39666	95% DL/2 (t) UCL		103.85336	95% H-Stat (DL/2) UCL	1985.9051
39667					
39668	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
39669	Mean		31.266821	Mean in Log Scale	2.7927542
39670	SD		127.68666	SD in Log Scale	1.8549324
39671	95% MLE (t) UCL		87.227106	Mean in Original Scale	59.608453
39672	95% MLE (Tiku) UCL		90.136921	SD in Original Scale	101.40786
39673				95% t UCL	104.05173
39674				95% Percentile Bootstrap UCL	104.73882
39675				95% BCA Bootstrap UCL	131.6647
39676					
39677	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
39678	k star (bias corrected)		0.6860486	**Data appear Gamma Distributed at 5% Significance Level**	
39679	Theta Star		125.11702		
39680	nu star		15.09307		
39681					
39682	A-D Test Statistic		0.3320055	**Nonparametric Statistics**	
39683	5% A-D Critical Value		0.7576939	Kaplan-Meier (KM) Method	
39684	K-S Test Statistic		0.7576939	Mean	60.29375
39685	5% K-S Critical Value		0.2638138	SD	97.789471
39686	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	25.640616
39687				95% KM (t) UCL	105.24304
39688	**Assuming Gamma Distribution**			95% KM (z) UCL	102.46881
39689	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	104.32884
39690	Minimum		2.7473138	95% KM (bootstrap t) UCL	164.39841
39691	Maximum		410	95% KM (BCA) UCL	110.10625
39692	Mean		59.871036	95% KM (Percentile Bootstrap) UCL	107.5875
39693	Median		30.5	95% KM (Chebyshev) UCL	172.0586
39694	SD		101.24917	97.5% KM (Chebyshev) UCL	220.41934
39695	k star		0.473045	99% KM (Chebyshev) UCL	315.41465
39696	Theta star		126.56519		
39697	Nu star		15.137441	**Potential UCLs to Use**	
39698	AppChi2		7.3572535	95% KM (BCA) UCL	110.10625
39699	95% Gamma Approximate UCL		123.18378		
39700	95% Adjusted Gamma UCL		134.32073		
39701	**Note: DL/2 is not a recommended method.**				
39702					
39703	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
39704	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
39705	**For additional insight, the user may want to consult a statistician.**				

	A	B	C	D	E
39706					
39707					
39708	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_nw_2005)				
39709					
39710	General Statistics				
39711	Number of Valid Data		0	Number of Detected Data	0
39712	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39713	Number of Missing Values		18	Percent Non-Detects	NaN%
39714					
39715	Warning: This data set only has 0 observations!				
39716	Data set is too small to compute reliable and meaningful statistics and estimates!				
39717	The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_nw_2005) was not processed!				
39718					
39719	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39720	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39721					
39722					
39723					
39724	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_nw_2009)				
39725					
39726	General Statistics				
39727	Number of Valid Data		0	Number of Detected Data	0
39728	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39729	Number of Missing Values		7	Percent Non-Detects	NaN%
39730					
39731	Warning: This data set only has 0 observations!				
39732	Data set is too small to compute reliable and meaningful statistics and estimates!				
39733	The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_nw_2009) was not processed!				
39734					
39735	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39736	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39737					
39738					
39739					
39740	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_nw_2010)				
39741					
39742	General Statistics				
39743	Number of Valid Data		4	Number of Detected Data	0
39744	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
39745				Percent Non-Detects	100.00%
39746					
39747	Warning: This data set only has 4 observations!				
39748	Data set is too small to compute reliable and meaningful statistics and estimates!				
39749	The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_nw_2010) was not processed!				
39750					
39751	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39752	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39753					
39754					
39755					
39756	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_ref_2009)				

	A	B	C	D	E
39757					
39758	**General Statistics**				
39759	Number of Valid Data		0	Number of Detected Data	0
39760	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39761	Number of Missing Values		6	Percent Non-Detects	NaN%
39762					
39763	**Warning: This data set only has 0 observations!**				
39764	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39765	**The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_ref_2009) was not processed!**				
39766					
39767	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39768	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39769					
39770					
39771					
39772	**PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_ref_2010)**				
39773					
39774	**General Statistics**				
39775	Number of Valid Data		3	Number of Detected Data	0
39776	Number of Distinct Detected Data		0	Number of Non-Detect Data	3
39777				Percent Non-Detects	100.00%
39778					
39779	**Warning: This data set only has 3 observations!**				
39780	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39781	**The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_ref_2010) was not processed!**				
39782					
39783	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39784	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39785					
39786					
39787					
39788	**PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_s_2005)**				
39789					
39790	**General Statistics**				
39791	Number of Valid Data		0	Number of Detected Data	0
39792	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39793	Number of Missing Values		8	Percent Non-Detects	NaN%
39794					
39795	**Warning: This data set only has 0 observations!**				
39796	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39797	**The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_s_2005) was not processed!**				
39798					
39799	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39800	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39801					
39802					
39803					
39804	**PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_s_2010)**				
39805					
39806	**General Statistics**				
39807	Number of Valid Data		2	Number of Detected Data	0
39808	Number of Distinct Detected Data		0	Number of Non-Detect Data	2

	A	B	C	D	E
39809				Percent Non-Detects	100.00%
39810					
39811	**Warning: This data set only has 2 observations!**				
39812	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39813	**The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_s_2010) was not processed!**				
39814					
39815	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39816	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39817					
39818					
39819					
39820	**PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_stillwater_2005)**				
39821					
39822	**General Statistics**				
39823	Number of Valid Data		0	Number of Detected Data	0
39824	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39825	Number of Missing Values		4	Percent Non-Detects	NaN%
39826					
39827	**Warning: This data set only has 0 observations!**				
39828	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39829	**The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_stillwater_2005) was not processed!**				
39830					
39831	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39832	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39833					
39834					
39835					
39836	**PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_stillwater_2009)**				
39837					
39838	**General Statistics**				
39839	Number of Valid Data		0	Number of Detected Data	0
39840	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39841	Number of Missing Values		60	Percent Non-Detects	NaN%
39842					
39843	**Warning: This data set only has 0 observations!**				
39844	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
39845	**The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_stillwater_2009) was not processed!**				
39846					
39847	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
39848	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
39849					
39850					
39851					
39852	**PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_sd_stillwater_2010)**				
39853					
39854	**General Statistics**				
39855	Number of Valid Data		11	Number of Detected Data	10
39856	Number of Distinct Detected Data		8	Number of Non-Detect Data	1
39857				Percent Non-Detects	9.09%
39858					
39859	**Raw Statistics**			**Log-transformed Statistics**	
39860	Minimum Detected		8.3	Minimum Detected	2.1162555

	A	B	C	D	E
39861	Maximum Detected		970	Maximum Detected	6.8772961
39862	Mean of Detected		406.33	Mean of Detected	5.5481469
39863	SD of Detected		311.79644	SD of Detected	1.3452518
39864	Minimum Non-Detect		5.9	Minimum Non-Detect	1.7749524
39865	Maximum Non-Detect		5.9	Maximum Non-Detect	1.7749524
39866					
39867					
39868	**UCL Statistics**				
39869	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
39870	Shapiro Wilk Test Statistic		0.888355	Shapiro Wilk Test Statistic	0.778662
39871	5% Shapiro Wilk Critical Value		0.842	5% Shapiro Wilk Critical Value	0.842
39872	**Data appear Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
39873					
39874	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
39875	DL/2 Substitution Method			DL/2 Substitution Method	
39876	Mean		369.65909	Mean	5.1421158
39877	SD		319.82438	SD	1.8553182
39878	95% DL/2 (t) UCL		544.43595	95% H-Stat (DL/2) UCL	16214.11
39879					
39880	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
39881	Mean		354.5729	Mean in Log Scale	5.2928692
39882	SD		328.96872	SD in Log Scale	1.5315241
39883	95% MLE (t) UCL		534.34693	Mean in Original Scale	370.79895
39884	95% MLE (Tiku) UCL		532.04737	SD in Original Scale	318.40593
39885				95% t UCL	544.80065
39886				95% Percentile Bootstrap UCL	528.02727
39887				95% BCA Bootstrap UCL	556.36364
39888					
39889	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
39890	k star (bias corrected)		0.9270969	**Data appear Normal at 5% Significance Level**	
39891	Theta Star		438.28214		
39892	nu star		18.541937		
39893					
39894	A-D Test Statistic		0.4551768	**Nonparametric Statistics**	
39895	5% A-D Critical Value		0.7441263	Kaplan-Meier (KM) Method	
39896	K-S Test Statistic		0.7441263	Mean	370.14545
39897	5% K-S Critical Value		0.2725445	SD	304.35902
39898	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	96.731647
39899				95% KM (t) UCL	545.46781
39900	**Assuming Gamma Distribution**			95% KM (z) UCL	529.25485
39901	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	541.46342
39902	Minimum		1E-12	95% KM (bootstrap t) UCL	623.1491
39903	Maximum		970	95% KM (BCA) UCL	547.72727
39904	Mean		369.39091	95% KM (Percentile Bootstrap) UCL	537.27273
39905	Median		360	95% KM (Chebyshev) UCL	791.78893
39906	SD		320.16368	97.5% KM (Chebyshev) UCL	974.23439
39907	k star		0.2171392	99% KM (Chebyshev) UCL	1332.6132
39908	Theta star		1701.1712		
39909	Nu star		4.7770618	**Potential UCLs to Use**	
39910	AppChi2		1.0506107	95% KM (t) UCL	545.46781
39911	95% Gamma Approximate UCL		1679.5976	95% KM (Percentile Bootstrap) UCL	537.27273
39912	95% Adjusted Gamma UCL		2211.0426		
39913	**Note: DL/2 is not a recommended method.**				
39914					
39915	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
39916	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
39917	**For additional insight, the user may want to consult a statistician.**				
39918					
39919					
39920	**PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_ne_2005)**				
39921					
39922	**General Statistics**				
39923	Number of Valid Data		0	Number of Detected Data	0
39924	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39925	Number of Missing Values		36	Percent Non-Detects	NaN%
39926					

	A	B	C	D	E
39927	Warning: This data set only has 0 observations!				
39928	Data set is too small to compute reliable and meaningful statistics and estimates!				
39929	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_ne_2005) was not processed!				
39930					
39931	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39932	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39933					
39934					
39935					
39936	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_ne_2009)				
39937					
39938	General Statistics				
39939	Number of Valid Data		0	Number of Detected Data	0
39940	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
39941	Number of Missing Values		20	Percent Non-Detects	NaN%
39942					
39943	Warning: This data set only has 0 observations!				
39944	Data set is too small to compute reliable and meaningful statistics and estimates!				
39945	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_ne_2009) was not processed!				
39946					
39947	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
39948	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
39949					
39950					
39951					
39952	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_ne_2010)				
39953					
39954	General Statistics				
39955	Number of Valid Data		16	Number of Detected Data	15
39956	Number of Distinct Detected Data		15	Number of Non-Detect Data	1
39957				Percent Non-Detects	6.25%
39958					
39959	Raw Statistics			Log-transformed Statistics	
39960	Minimum Detected		3.2	Minimum Detected	1.1631508
39961	Maximum Detected		650	Maximum Detected	6.4769724
39962	Mean of Detected		98.6	Mean of Detected	3.6037797
39963	SD of Detected		162.3853	SD of Detected	1.5481093
39964	Minimum Non-Detect		1.3	Minimum Non-Detect	0.2623643
39965	Maximum Non-Detect		1.3	Maximum Non-Detect	0.2623643
39966					
39967					
39968	UCL Statistics				
39969	Normal Distribution Test with Detected Values Only			Lognormal Distribution Test with Detected Values Only	
39970	Shapiro Wilk Test Statistic		0.5826846	Shapiro Wilk Test Statistic	0.9606017
39971	5% Shapiro Wilk Critical Value		0.881	5% Shapiro Wilk Critical Value	0.881
39972	Data not Normal at 5% Significance Level			Data appear Lognormal at 5% Significance Level	
39973					
39974	Assuming Normal Distribution			Assuming Lognormal Distribution	
39975	DL/2 Substitution Method			DL/2 Substitution Method	
39976	Mean		92.478125	Mean	3.3516195
39977	SD		158.77875	SD	1.8039463
39978	95% DL/2 (t) UCL		162.06491	95% H-Stat (DL/2) UCL	980.95379
39979					
39980	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
39981	Mean		86.155271	Mean in Log Scale	3.3660598
39982	SD		160.69202	SD in Log Scale	1.7722975
39983	95% MLE (t) UCL		156.58057	Mean in Original Scale	92.488684
39984	95% MLE (Tiku) UCL		151.10326	SD in Original Scale	158.77224

	A	B	C	D	E
39985				95% t UCL	162.07262
39986				95% Percentile Bootstrap UCL	163.22112
39987				95% BCA Bootstrap UCL	203.9
39988					
39989	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
39990	k star (bias corrected)		0.5424164	**Data appear Gamma Distributed at 5% Significance Level**	
39991	Theta Star		181.77916		
39992	nu star		16.272492		
39993					
39994	A-D Test Statistic		0.4065179	**Nonparametric Statistics**	
39995	5% A-D Critical Value		0.7842313	Kaplan-Meier (KM) Method	
39996	K-S Test Statistic		0.7842313	Mean	92.6375
39997	5% K-S Critical Value		0.2320514	SD	153.64288
39998	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	39.758872
39999				95% KM (t) UCL	162.3368
40000	**Assuming Gamma Distribution**			95% KM (z) UCL	158.03502
40001	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	162.13121
40002	Minimum		1E-12	95% KM (bootstrap t) UCL	264.52936
40003	Maximum		650	95% KM (BCA) UCL	162.78125
40004	Mean		92.4375	95% KM (Percentile Bootstrap) UCL	167.93125
40005	Median		40	95% KM (Chebyshev) UCL	265.9424
40006	SD		158.80389	97.5% KM (Chebyshev) UCL	340.93157
40007	k star		0.2427352	99% KM (Chebyshev) UCL	488.23328
40008	Theta star		380.81614		
40009	Nu star		7.767528	**Potential UCLs to Use**	
40010	AppChi2		2.6011449	95% KM (Chebyshev) UCL	265.9424
40011	95% Gamma Approximate UCL		276.03648		
40012	95% Adjusted Gamma UCL		315.86808		
40013	**Note: DL/2 is not a recommended method.**				
40014					
40015	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
40016	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
40017	**For additional insight, the user may want to consult a statistician.**				
40018					
40019					
40020	**PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_nw_2005)**				
40021					
40022	**General Statistics**				
40023	Number of Valid Data		0	Number of Detected Data	0
40024	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40025	Number of Missing Values		18	Percent Non-Detects	NaN%
40026					
40027	**Warning: This data set only has 0 observations!**				
40028	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
40029	**The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_nw_2005) was not processed!**				
40030					
40031	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
40032	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40033					
40034					
40035					
40036	**PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_nw_2009)**				
40037					
40038	**General Statistics**				
40039	Number of Valid Data		0	Number of Detected Data	0
40040	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40041	Number of Missing Values		7	Percent Non-Detects	NaN%
40042					
40043	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
40044	Data set is too small to compute reliable and meaningful statistics and estimates!				
40045	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_nw_2009) was not processed!				
40046					
40047	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40048	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40049					
40050					
40051					
40052	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_nw_2010)				
40053					
40054	General Statistics				
40055	Number of Valid Data		4	Number of Detected Data	3
40056	Number of Distinct Detected Data		3	Number of Non-Detect Data	1
40057				Percent Non-Detects	25.00%
40058					
40059	Warning: This data set only has 4 observations!				
40060	Data set is too small to compute reliable and meaningful statistics and estimates!				
40061	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_nw_2010) was not processed!				
40062					
40063	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40064	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40065					
40066					
40067					
40068	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_ref_2009)				
40069					
40070	General Statistics				
40071	Number of Valid Data		0	Number of Detected Data	0
40072	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40073	Number of Missing Values		6	Percent Non-Detects	NaN%
40074					
40075	Warning: This data set only has 0 observations!				
40076	Data set is too small to compute reliable and meaningful statistics and estimates!				
40077	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_ref_2009) was not processed!				
40078					
40079	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40080	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40081					
40082					
40083					
40084	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_ref_2010)				
40085					
40086	General Statistics				
40087	Number of Valid Data		3	Number of Detected Data	0
40088	Number of Distinct Detected Data		0	Number of Non-Detect Data	3
40089				Percent Non-Detects	100.00%
40090					
40091	Warning: This data set only has 3 observations!				
40092	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
40093	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_ref_2010) was not processed!				
40094					
40095	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40096	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40097					
40098					
40099					
40100	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_s_2005)				
40101					
40102	General Statistics				
40103	Number of Valid Data		0	Number of Detected Data	0
40104	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40105	Number of Missing Values		8	Percent Non-Detects	NaN%
40106					
40107	Warning: This data set only has 0 observations!				
40108	Data set is too small to compute reliable and meaningful statistics and estimates!				
40109	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_s_2005) was not processed!				
40110					
40111	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40112	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40113					
40114					
40115					
40116	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_s_2010)				
40117					
40118	General Statistics				
40119	Number of Valid Data		2	Number of Detected Data	1
40120	Number of Distinct Detected Data		1	Number of Non-Detect Data	1
40121				Percent Non-Detects	50.00%
40122					
40123	Warning: This data set only has 2 observations!				
40124	Data set is too small to compute reliable and meaningful statistics and estimates!				
40125	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_s_2010) was not processed!				
40126					
40127	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40128	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40129					
40130					
40131					
40132	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_stillwater_2005)				
40133					
40134	General Statistics				
40135	Number of Valid Data		0	Number of Detected Data	0
40136	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40137	Number of Missing Values		4	Percent Non-Detects	NaN%
40138					
40139	Warning: This data set only has 0 observations!				
40140	Data set is too small to compute reliable and meaningful statistics and estimates!				
40141	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_stillwater_2005) was not processed!				
40142					

	A	B	C	D	E
40143	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
40144	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40145					
40146					
40147					
40148	**PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_stillwater_2009)**				
40149					
40150	**General Statistics**				
40151	Number of Valid Data		0	Number of Detected Data	0
40152	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40153	Number of Missing Values		60	Percent Non-Detects	NaN%
40154					
40155	**Warning: This data set only has 0 observations!**				
40156	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
40157	**The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_stillwater_2009) was not processed!**				
40158					
40159	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
40160	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40161					
40162					
40163					
40164	**PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_sd_stillwater_2010)**				
40165					
40166	**General Statistics**				
40167	Number of Valid Data		11	Number of Detected Data	10
40168	Number of Distinct Detected Data		10	Number of Non-Detect Data	1
40169				Percent Non-Detects	9.09%
40170					
40171	**Raw Statistics**			**Log-transformed Statistics**	
40172	Minimum Detected		17	Minimum Detected	2.8332133
40173	Maximum Detected		1400	Maximum Detected	7.2442275
40174	Mean of Detected		539.2	Mean of Detected	5.8325161
40175	SD of Detected		461.33232	SD of Detected	1.2431033
40176	Minimum Non-Detect		4.7	Minimum Non-Detect	1.5475625
40177	Maximum Non-Detect		4.7	Maximum Non-Detect	1.5475625
40178					
40179					
40180	**UCL Statistics**				
40181	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
40182	Shapiro Wilk Test Statistic		0.8413118	Shapiro Wilk Test Statistic	0.8508979
40183	5% Shapiro Wilk Critical Value		0.842	5% Shapiro Wilk Critical Value	0.842
40184	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
40185					
40186	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
40187	DL/2 Substitution Method			DL/2 Substitution Method	
40188	Mean		490.39545	Mean	5.3799615
40189	SD		466.63206	SD	1.9088315
40190	95% DL/2 (t) UCL		745.39942	95% H-Stat (DL/2) UCL	26559.57
40191					
40192	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
40193	Mean		467.41125	Mean in Log Scale	5.5828037
40194	SD		479.49541	SD in Log Scale	1.441074
40195	95% MLE (t) UCL		729.44475	Mean in Original Scale	492.17112
40196	95% MLE (Tiku) UCL		723.84852	SD in Original Scale	464.62203
40197				95% t UCL	746.07665
40198				95% Percentile Bootstrap UCL	714.72727
40199				95% BCA Bootstrap UCL	759.54545
40200					
40201	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
40202	k star (bias corrected)		0.929565	**Data appear Gamma Distributed at 5% Significance Level**	

	A	B	C	D	E
40203	Theta Star		580.05627		
40204	nu star		18.5913		
40205					
40206	A-D Test Statistic		0.3492937	**Nonparametric Statistics**	
40207	5% A-D Critical Value		0.7440626	Kaplan-Meier (KM) Method	
40208	K-S Test Statistic		0.7440626	Mean	491.72727
40209	5% K-S Critical Value		0.2725259	SD	443.47288
40210	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	140.94493
40211				95% KM (t) UCL	747.18449
40212	**Assuming Gamma Distribution**			95% KM (z) UCL	723.56106
40213	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	740.99283
40214	Minimum		1E-12	95% KM (bootstrap t) UCL	960.61162
40215	Maximum		1400	95% KM (BCA) UCL	757.27273
40216	Mean		490.18182	95% KM (Percentile Bootstrap) UCL	726.54545
40217	Median		430	95% KM (Chebyshev) UCL	1106.092
40218	SD		466.87832	97.5% KM (Chebyshev) UCL	1371.9281
40219	k star		0.2161697	99% KM (Chebyshev) UCL	1894.1117
40220	Theta star		2267.5789		
40221	Nu star		4.7557332	**Potential UCLs to Use**	
40222	AppChi2		1.0410478	95% KM (Chebyshev) UCL	1106.092
40223	95% Gamma Approximate UCL		2239.2573		
40224	95% Adjusted Gamma UCL		2950.2987		
40225	**Note: DL/2 is not a recommended method.**				
40226					
40227	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
40228	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
40229	**For additional insight, the user may want to consult a statistician.**				
40230					
40231					
40232	**PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_ne_2005)**				
40233					
40234	**General Statistics**				
40235	Number of Valid Data		0	Number of Detected Data	0
40236	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40237	Number of Missing Values		36	Percent Non-Detects	NaN%
40238					
40239	**Warning: This data set only has 0 observations!**				
40240	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
40241	**The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_ne_2005) was not processed!**				
40242					
40243	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
40244	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40245					
40246					
40247					
40248	**PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_ne_2009)**				
40249					
40250	**General Statistics**				
40251	Number of Valid Data		0	Number of Detected Data	0
40252	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40253	Number of Missing Values		20	Percent Non-Detects	NaN%
40254					
40255	**Warning: This data set only has 0 observations!**				
40256	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
40257	**The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_ne_2009) was not processed!**				
40258					
40259	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
40260	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40261					
40262					
40263					
40264	**PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_ne_2010)**				
40265					
40266	**General Statistics**				
40267	Number of Valid Data		16	Number of Detected Data	5
40268	Number of Distinct Detected Data		5	Number of Non-Detect Data	11
40269				Percent Non-Detects	68.75%
40270					
40271	**Raw Statistics**			**Log-transformed Statistics**	
40272	Minimum Detected		11	Minimum Detected	2.3978953
40273	Maximum Detected		190	Maximum Detected	5.2470241
40274	Mean of Detected		54	Mean of Detected	3.3738325
40275	SD of Detected		76.462409	SD of Detected	1.132446
40276	Minimum Non-Detect		0.89	Minimum Non-Detect	-0.116534
40277	Maximum Non-Detect		26	Maximum Non-Detect	3.2580965
40278					
40279	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	13
40280	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	3
40281	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	81.25%
40282					
40283	**Warning: There are only 5 Detected Values in this data**				
40284	**Note: It should be noted that even though bootstrap may be performed on this data set**				
40285	**the resulting calculations may not be reliable enough to draw conclusions**				
40286					
40287	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
40288					
40289					
40290	**UCL Statistics**				
40291	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
40292	Shapiro Wilk Test Statistic		0.6476147	Shapiro Wilk Test Statistic	0.855864
40293	5% Shapiro Wilk Critical Value		0.762	5% Shapiro Wilk Critical Value	0.762
40294	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
40295					
40296	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
40297	DL/2 Substitution Method			DL/2 Substitution Method	
40298	Mean		19.818438	Mean	1.7933462
40299	SD		46.207325	SD	1.4779098
40300	95% DL/2 (t) UCL		40.069379	95% H-Stat (DL/2) UCL	68.217289
40301					
40302	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
40303	**MLE yields a negative mean**			Mean in Log Scale	1.062725
40304				SD in Log Scale	1.7227893
40305				Mean in Original Scale	17.589659
40306				SD in Original Scale	46.92424
40307				95% t UCL	38.154798
40308				95% Percentile Bootstrap UCL	39.373655
40309				95% BCA Bootstrap UCL	52.452545
40310					
40311	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
40312	k star (bias corrected)		0.511219	**Data appear Gamma Distributed at 5% Significance Level**	
40313	Theta Star		105.62987		
40314	nu star		5.1121904		
40315					
40316	A-D Test Statistic		0.6552084	**Nonparametric Statistics**	
40317	5% A-D Critical Value		0.6928681	Kaplan-Meier (KM) Method	
40318	K-S Test Statistic		0.6928681	Mean	24.475
40319	5% K-S Critical Value		0.3649098	SD	43.103792
40320	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	12.048161
40321				95% KM (t) UCL	45.596032
40322	**Assuming Gamma Distribution**			95% KM (z) UCL	44.292461
40323	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	42.979413

	A	B	C	D	E
40324	Minimum		11	95% KM (bootstrap t) UCL	135.98034
40325	Maximum		190	95% KM (BCA) UCL	67
40326	Mean		49.703002	95% KM (Percentile Bootstrap) UCL	47.875
40327	Median		54	95% KM (Chebyshev) UCL	76.991715
40328	SD		40.551353	97.5% KM (Chebyshev) UCL	99.715739
40329	k star		2.0752164	99% KM (Chebyshev) UCL	144.35268
40330	Theta star		23.950757		
40331	Nu star		66.406924	**Potential UCLs to Use**	
40332	AppChi2		48.653963	95% KM (t) UCL	45.596032
40333	95% Gamma Approximate UCL		67.838738		
40334	95% Adjusted Gamma UCL		70.336129		
40335	**Note: DL/2 is not a recommended method.**				
40336					
40337	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
40338	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
40339	**For additional insight, the user may want to consult a statistician.**				
40340					
40341					
40342	**PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_nw_2005)**				
40343					
40344	**General Statistics**				
40345	Number of Valid Data		0	Number of Detected Data	0
40346	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40347	Number of Missing Values		18	Percent Non-Detects	NaN%
40348					
40349	**Warning: This data set only has 0 observations!**				
40350	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
40351	**The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_nw_2005) was not processed!**				
40352					
40353	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
40354	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40355					
40356					
40357					
40358	**PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_nw_2009)**				
40359					
40360	**General Statistics**				
40361	Number of Valid Data		0	Number of Detected Data	0
40362	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40363	Number of Missing Values		7	Percent Non-Detects	NaN%
40364					
40365	**Warning: This data set only has 0 observations!**				
40366	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
40367	**The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_nw_2009) was not processed!**				
40368					
40369	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
40370	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40371					
40372					
40373					
40374	**PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_nw_2010)**				
40375					
40376	**General Statistics**				
40377	Number of Valid Data		4	Number of Detected Data	0
40378	Number of Distinct Detected Data		0	Number of Non-Detect Data	4

	A	B	C	D	E
40379				Percent Non-Detects	100.00%
40380					
40381	Warning: This data set only has 4 observations!				
40382	Data set is too small to compute reliable and meaningful statistics and estimates!				
40383	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_nw_2010) was not processed!				
40384					
40385	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40386	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40387					
40388					
40389					
40390	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_ref_2009)				
40391					
40392	General Statistics				
40393	Number of Valid Data		0	Number of Detected Data	0
40394	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40395	Number of Missing Values		6	Percent Non-Detects	NaN%
40396					
40397	Warning: This data set only has 0 observations!				
40398	Data set is too small to compute reliable and meaningful statistics and estimates!				
40399	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_ref_2009) was not processed!				
40400					
40401	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40402	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40403					
40404					
40405					
40406	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_ref_2010)				
40407					
40408	General Statistics				
40409	Number of Valid Data		3	Number of Detected Data	0
40410	Number of Distinct Detected Data		0	Number of Non-Detect Data	3
40411				Percent Non-Detects	100.00%
40412					
40413	Warning: This data set only has 3 observations!				
40414	Data set is too small to compute reliable and meaningful statistics and estimates!				
40415	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_ref_2010) was not processed!				
40416					
40417	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40418	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40419					
40420					
40421					
40422	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_s_2005)				
40423					
40424	General Statistics				
40425	Number of Valid Data		0	Number of Detected Data	0
40426	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40427	Number of Missing Values		8	Percent Non-Detects	NaN%
40428					
40429	Warning: This data set only has 0 observations!				

	A	B	C	D	E
40430	Data set is too small to compute reliable and meaningful statistics and estimates!				
40431	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_s_2005) was not processed!				
40432					
40433	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40434	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40435					
40436					
40437					
40438	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_s_2010)				
40439					
40440	General Statistics				
40441	Number of Valid Data		2	Number of Detected Data	0
40442	Number of Distinct Detected Data		0	Number of Non-Detect Data	2
40443				Percent Non-Detects	100.00%
40444					
40445	Warning: This data set only has 2 observations!				
40446	Data set is too small to compute reliable and meaningful statistics and estimates!				
40447	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_s_2010) was not processed!				
40448					
40449	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40450	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40451					
40452					
40453					
40454	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_stillwater_2005)				
40455					
40456	General Statistics				
40457	Number of Valid Data		0	Number of Detected Data	0
40458	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40459	Number of Missing Values		4	Percent Non-Detects	NaN%
40460					
40461	Warning: This data set only has 0 observations!				
40462	Data set is too small to compute reliable and meaningful statistics and estimates!				
40463	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_stillwater_2005) was not processed!				
40464					
40465	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40466	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40467					
40468					
40469					
40470	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_stillwater_2009)				
40471					
40472	General Statistics				
40473	Number of Valid Data		0	Number of Detected Data	0
40474	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40475	Number of Missing Values		60	Percent Non-Detects	NaN%
40476					
40477	Warning: This data set only has 0 observations!				
40478	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
40479	**The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_stillwater_2009) was not processed!**				
40480					
40481	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
40482	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40483					
40484					
40485					
40486	**PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_sd_stillwater_2010)**				
40487					
40488	**General Statistics**				
40489	Number of Valid Data		11	Number of Detected Data	6
40490	Number of Distinct Detected Data		6	Number of Non-Detect Data	5
40491				Percent Non-Detects	45.45%
40492					
40493	**Raw Statistics**			**Log-transformed Statistics**	
40494	Minimum Detected		35	Minimum Detected	3.5553481
40495	Maximum Detected		300	Maximum Detected	5.7037825
40496	Mean of Detected		122.08333	Mean of Detected	4.4653443
40497	SD of Detected		110.80272	SD of Detected	0.8896699
40498	Minimum Non-Detect		4.7	Minimum Non-Detect	1.5475625
40499	Maximum Non-Detect		51	Maximum Non-Detect	3.9318256
40500					
40501	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	7
40502	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	4
40503	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	63.64%
40504					
40505	**Warning: There are only 6 Detected Values in this data**				
40506	**Note: It should be noted that even though bootstrap may be performed on this data set**				
40507	**the resulting calculations may not be reliable enough to draw conclusions**				
40508					
40509	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
40510					
40511					
40512	**UCL Statistics**				
40513	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
40514	Shapiro Wilk Test Statistic		0.8054222	Shapiro Wilk Test Statistic	0.8914168
40515	5% Shapiro Wilk Critical Value		0.788	5% Shapiro Wilk Critical Value	0.788
40516	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
40517					
40518	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
40519	DL/2 Substitution Method			DL/2 Substitution Method	
40520	Mean		73.495455	Mean	3.4624343
40521	SD		96.486078	SD	1.5285756
40522	95% DL/2 (t) UCL		126.22293	95% H-Stat (DL/2) UCL	742.6799
40523					
40524	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
40525	**MLE yields a negative mean**			Mean in Log Scale	3.6431795
40526				SD in Log Scale	1.1626515
40527				Mean in Original Scale	73.464657
40528				SD in Original Scale	96.283397
40529				95% t UCL	126.08138
40530				95% Percentile Bootstrap UCL	122.75269
40531				95% BCA Bootstrap UCL	135.81818
40532					
40533	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
40534	k star (bias corrected)		0.9210885	**Data appear Normal at 5% Significance Level**	
40535	Theta Star		132.54246		
40536	nu star		11.053062		
40537					
40538	A-D Test Statistic		0.4909206	**Nonparametric Statistics**	
40539	5% A-D Critical Value		0.7069311	Kaplan-Meier (KM) Method	

	A	B	C	D	E
40540	K-S Test Statistic		0.7069311	Mean	82.909091
40541	5% K-S Critical Value		0.3370613	SD	86.163776
40542	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	28.465132
40543				95% KM (t) UCL	134.50104
40544	**Assuming Gamma Distribution**			95% KM (z) UCL	129.73007
40545	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	130.99792
40546	Minimum		35	95% KM (bootstrap t) UCL	312.23753
40547	Maximum		300	95% KM (BCA) UCL	145.72727
40548	Mean		119.49872	95% KM (Percentile Bootstrap) UCL	133.54545
40549	Median		108.27876	95% KM (Chebyshev) UCL	206.98573
40550	SD		78.545582	97.5% KM (Chebyshev) UCL	260.67379
40551	k star		2.1274316	99% KM (Chebyshev) UCL	366.13358
40552	Theta star		56.170418		
40553	Nu star		46.803496	**Potential UCLs to Use**	
40554	AppChi2		32.104702	95% KM (t) UCL	134.50104
40555	95% Gamma Approximate UCL		174.20994	95% KM (Percentile Bootstrap) UCL	133.54545
40556	95% Adjusted Gamma UCL		185.62275		
40557	**Note: DL/2 is not a recommended method.**				
40558					
40559	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
40560	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
40561	**For additional insight, the user may want to consult a statistician.**				
40562					
40563					
40564	**PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_ne_2005)**				
40565					
40566	**General Statistics**				
40567	Number of Valid Data		0	Number of Detected Data	0
40568	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40569	Number of Missing Values		36	Percent Non-Detects	NaN%
40570					
40571	**Warning: This data set only has 0 observations!**				
40572	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
40573	**The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_ne_2005) was not processed!**				
40574					
40575	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
40576	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40577					
40578					
40579					
40580	**PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_ne_2009)**				
40581					
40582	**General Statistics**				
40583	Number of Valid Data		0	Number of Detected Data	0
40584	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40585	Number of Missing Values		20	Percent Non-Detects	NaN%
40586					
40587	**Warning: This data set only has 0 observations!**				
40588	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
40589	**The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_ne_2009) was not processed!**				
40590					
40591	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
40592	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40593					
40594					

	A	B	C	D	E
40595					
40596	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_ne_2010)				
40597					
40598	General Statistics				
40599	Number of Valid Data		16	Number of Detected Data	1
40600	Number of Distinct Detected Data		1	Number of Non-Detect Data	15
40601				Percent Non-Detects	93.75%
40602					
40603	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
40604	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
40605					
40606	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_ne_2010) was not processed!				
40607					
40608					
40609					
40610	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_nw_2005)				
40611					
40612	General Statistics				
40613	Number of Valid Data		0	Number of Detected Data	0
40614	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40615	Number of Missing Values		18	Percent Non-Detects	NaN%
40616					
40617	Warning: This data set only has 0 observations!				
40618	Data set is too small to compute reliable and meaningful statistics and estimates!				
40619	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_nw_2005) was not processed!				
40620					
40621	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40622	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40623					
40624					
40625					
40626	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_nw_2009)				
40627					
40628	General Statistics				
40629	Number of Valid Data		0	Number of Detected Data	0
40630	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40631	Number of Missing Values		7	Percent Non-Detects	NaN%
40632					
40633	Warning: This data set only has 0 observations!				
40634	Data set is too small to compute reliable and meaningful statistics and estimates!				
40635	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_nw_2009) was not processed!				
40636					
40637	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40638	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40639					
40640					
40641					
40642	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_nw_2010)				
40643					
40644	General Statistics				
40645	Number of Valid Data		4	Number of Detected Data	0
40646	Number of Distinct Detected Data		0	Number of Non-Detect Data	4

	A	B	C	D	E
40647				Percent Non-Detects	100.00%
40648					
40649	Warning: This data set only has 4 observations!				
40650	Data set is too small to compute reliable and meaningful statistics and estimates!				
40651	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_nw_2010) was not processed!				
40652					
40653	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40654	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40655					
40656					
40657					
40658	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_ref_2009)				
40659					
40660	General Statistics				
40661	Number of Valid Data		0	Number of Detected Data	0
40662	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40663	Number of Missing Values		6	Percent Non-Detects	NaN%
40664					
40665	Warning: This data set only has 0 observations!				
40666	Data set is too small to compute reliable and meaningful statistics and estimates!				
40667	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_ref_2009) was not processed!				
40668					
40669	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40670	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40671					
40672					
40673					
40674	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_ref_2010)				
40675					
40676	General Statistics				
40677	Number of Valid Data		3	Number of Detected Data	0
40678	Number of Distinct Detected Data		0	Number of Non-Detect Data	3
40679				Percent Non-Detects	100.00%
40680					
40681	Warning: This data set only has 3 observations!				
40682	Data set is too small to compute reliable and meaningful statistics and estimates!				
40683	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_ref_2010) was not processed!				
40684					
40685	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40686	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40687					
40688					
40689					
40690	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_s_2005)				
40691					
40692	General Statistics				
40693	Number of Valid Data		0	Number of Detected Data	0
40694	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40695	Number of Missing Values		8	Percent Non-Detects	NaN%
40696					
40697	Warning: This data set only has 0 observations!				

	A	B	C	D	E
40698	Data set is too small to compute reliable and meaningful statistics and estimates!				
40699	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_s_2005) was not processed!				
40700					
40701	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40702	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40703					
40704					
40705					
40706	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_s_2010)				
40707					
40708	General Statistics				
40709	Number of Valid Data		2	Number of Detected Data	0
40710	Number of Distinct Detected Data		0	Number of Non-Detect Data	2
40711				Percent Non-Detects	100.00%
40712					
40713	Warning: This data set only has 2 observations!				
40714	Data set is too small to compute reliable and meaningful statistics and estimates!				
40715	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_s_2010) was not processed!				
40716					
40717	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40718	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40719					
40720					
40721					
40722	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_stillwater_2005)				
40723					
40724	General Statistics				
40725	Number of Valid Data		0	Number of Detected Data	0
40726	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40727	Number of Missing Values		4	Percent Non-Detects	NaN%
40728					
40729	Warning: This data set only has 0 observations!				
40730	Data set is too small to compute reliable and meaningful statistics and estimates!				
40731	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_stillwater_2005) was not processed!				
40732					
40733	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40734	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40735					
40736					
40737					
40738	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_stillwater_2009)				
40739					
40740	General Statistics				
40741	Number of Valid Data		0	Number of Detected Data	0
40742	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40743	Number of Missing Values		60	Percent Non-Detects	NaN%
40744					
40745	Warning: This data set only has 0 observations!				
40746	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
40747	**The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_stillwater_2009) was not processed!**				
40748					
40749	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
40750	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40751					
40752					
40753					
40754	**PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_sd_stillwater_2010)**				
40755					
40756	**General Statistics**				
40757	Number of Valid Data		11	Number of Detected Data	3
40758	Number of Distinct Detected Data		3	Number of Non-Detect Data	8
40759				Percent Non-Detects	72.73%
40760					
40761	**Raw Statistics**			**Log-transformed Statistics**	
40762	Minimum Detected		1.98	Minimum Detected	0.6830968
40763	Maximum Detected		22	Maximum Detected	3.0910425
40764	Mean of Detected		10.06	Mean of Detected	1.8662295
40765	SD of Detected		10.553426	SD of Detected	1.2045138
40766	Minimum Non-Detect		0.45	Minimum Non-Detect	-0.798508
40767	Maximum Non-Detect		5.2	Maximum Non-Detect	1.6486586
40768					
40769	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	9
40770	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	2
40771	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	81.82%
40772					
40773	**Warning: There are only 3 Distinct Detected Values in this data set**				
40774	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
40775	**Those methods will return a 'N/A' value on your output display!**				
40776					
40777	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
40778	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
40779	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
40780					
40781					
40782	**UCL Statistics**				
40783	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
40784	Shapiro Wilk Test Statistic		0.8996486	Shapiro Wilk Test Statistic	0.9990828
40785	5% Shapiro Wilk Critical Value		0.767	5% Shapiro Wilk Critical Value	0.767
40786	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
40787					
40788	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
40789	DL/2 Substitution Method			DL/2 Substitution Method	
40790	Mean		3.9777273	Mean	0.7497751
40791	SD		6.1667096	SD	1.1241636
40792	95% DL/2 (t) UCL		7.3476959	95% H-Stat (DL/2) UCL	12.603962
40793					
40794	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
40795	**MLE method failed to converge properly**			Mean in Log Scale	0.1532189
40796				SD in Log Scale	1.2654845
40797				Mean in Original Scale	3.211639
40798				SD in Original Scale	6.4528961
40799				95% t UCL	6.7380022
40800				95% Percentile Bootstrap UCL	6.9259376
40801				95% BCA Bootstrap UCL	8.9041492
40802					
40803	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
40804	k star (bias corrected)		N/A	**Data appear Normal at 5% Significance Level**	

	A	B	C	D	E
40805	Theta Star		N/A		
40806	nu star		N/A		
40807					
40808	A-D Test Statistic		N/A	**Nonparametric Statistics**	
40809	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
40810	K-S Test Statistic		N/A	Mean	4.1836364
40811	5% K-S Critical Value		N/A	SD	5.7618862
40812	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	2.1277175
40813				95% KM (t) UCL	8.0400416
40814	**Assuming Gamma Distribution**			95% KM (z) UCL	7.6834202
40815	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	7.9183721
40816	Minimum		N/A	95% KM (bootstrap t) UCL	9.7537452
40817	Maximum		N/A	95% KM (BCA) UCL	22
40818	Mean		N/A	95% KM (Percentile Bootstrap) UCL	22
40819	Median		N/A	95% KM (Chebyshev) UCL	13.458142
40820	SD		N/A	97.5% KM (Chebyshev) UCL	17.471228
40821	k star		N/A	99% KM (Chebyshev) UCL	25.354158
40822	Theta star		N/A		
40823	Nu star		N/A	**Potential UCLs to Use**	
40824	AppChi2		N/A	95% KM (t) UCL	8.0400416
40825	95% Gamma Approximate UCL		N/A	95% KM (Percentile Bootstrap) UCL	22
40826	95% Adjusted Gamma UCL		N/A		
40827	**Note: DL/2 is not a recommended method.**				
40828					
40829	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
40830	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
40831	**For additional insight, the user may want to consult a statistician.**				
40832					
40833					
40834	**PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_ne_2005)**				
40835					
40836	**General Statistics**				
40837	Number of Valid Data		0	Number of Detected Data	0
40838	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40839	Number of Missing Values		36	Percent Non-Detects	NaN%
40840					
40841	**Warning: This data set only has 0 observations!**				
40842	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
40843	**The data set for variable PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_ne_2005) was not processed!**				
40844					
40845	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
40846	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40847					
40848					
40849					
40850	**PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_ne_2009)**				
40851					
40852	**General Statistics**				
40853	Number of Valid Data		0	Number of Detected Data	0
40854	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40855	Number of Missing Values		20	Percent Non-Detects	NaN%
40856					
40857	**Warning: This data set only has 0 observations!**				
40858	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
40859	**The data set for variable PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_ne_2009) was not processed!**				
40860					
40861	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
40862	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40863					
40864					
40865					
40866	**PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_ne_2010)**				
40867					
40868	**General Statistics**				
40869	Number of Valid Data		16	Number of Detected Data	9
40870	Number of Distinct Detected Data		9	Number of Non-Detect Data	7
40871				Percent Non-Detects	43.75%
40872					
40873	**Raw Statistics**			**Log-transformed Statistics**	
40874	Minimum Detected		1.4	Minimum Detected	0.3364722
40875	Maximum Detected		74	Maximum Detected	4.3040651
40876	Mean of Detected		14.533333	Mean of Detected	2.0687595
40877	SD of Detected		22.542072	SD of Detected	1.0719079
40878	Minimum Non-Detect		1	Minimum Non-Detect	0
40879	Maximum Non-Detect		6	Maximum Non-Detect	1.7917595
40880					
40881	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	9
40882	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	7
40883	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	56.25%
40884					
40885	**Warning: There are only 9 Detected Values in this data**				
40886	**Note: It should be noted that even though bootstrap may be performed on this data set**				
40887	**the resulting calculations may not be reliable enough to draw conclusions**				
40888					
40889	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
40890					
40891					
40892	**UCL Statistics**				
40893	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
40894	Shapiro Wilk Test Statistic		0.5324212	Shapiro Wilk Test Statistic	0.9043978
40895	5% Shapiro Wilk Critical Value		0.829	5% Shapiro Wilk Critical Value	0.829
40896	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
40897					
40898	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
40899	DL/2 Substitution Method			DL/2 Substitution Method	
40900	Mean		8.746875	Mean	1.2016117
40901	SD		17.811368	SD	1.3447462
40902	95% DL/2 (t) UCL		16.552931	95% H-Stat (DL/2) UCL	25.566426
40903					
40904	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
40905	**MLE yields a negative mean**			Mean in Log Scale	1.0155446
40906				SD in Log Scale	1.4732732
40907				Mean in Original Scale	8.498466
40908				SD in Original Scale	17.915747
40909				95% t UCL	16.350268
40910				95% Percentile Bootstrap UCL	16.619501
40911				95% BCA Bootstrap UCL	21.629655
40912					
40913	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
40914	k star (bias corrected)		0.7107834	**Data appear Lognormal at 5% Significance Level**	
40915	Theta Star		20.446922		
40916	nu star		12.794101		
40917					
40918	A-D Test Statistic		0.9270118	**Nonparametric Statistics**	
40919	5% A-D Critical Value		0.7449062	Kaplan-Meier (KM) Method	
40920	K-S Test Statistic		0.7449062	Mean	8.8178571
40921	5% K-S Critical Value		0.2873278	SD	17.208196
40922	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	4.5634501
40923				95% KM (t) UCL	16.817815
40924	**Assuming Gamma Distribution**			95% KM (z) UCL	16.324065
40925	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	16.134686

	A	B	C	D	E
40926	Minimum		1.4	95% KM (bootstrap t) UCL	38.596865
40927	Maximum		74	95% KM (BCA) UCL	19.9375
40928	Mean		14.298592	95% KM (Percentile Bootstrap) UCL	17.60625
40929	Median		12.706194	95% KM (Chebyshev) UCL	28.709475
40930	SD		16.466971	97.5% KM (Chebyshev) UCL	37.316594
40931	k star		1.3478887	99% KM (Chebyshev) UCL	54.223613
40932	Theta star		10.608141		
40933	Nu star		43.132437	**Potential UCLs to Use**	
40934	AppChi2		29.073627	97.5% KM (Chebyshev) UCL	37.316594
40935	95% Gamma Approximate UCL		21.212804		
40936	95% Adjusted Gamma UCL		22.214313		
40937	**Note: DL/2 is not a recommended method.**				
40938					
40939	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
40940	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
40941	**For additional insight, the user may want to consult a statistician.**				
40942					
40943					
40944	**PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_nw_2005)**				
40945					
40946	**General Statistics**				
40947	Number of Valid Data		0	Number of Detected Data	0
40948	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40949	Number of Missing Values		18	Percent Non-Detects	NaN%
40950					
40951	**Warning: This data set only has 0 observations!**				
40952	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
40953	**The data set for variable PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_nw_2005) was not processed!**				
40954					
40955	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
40956	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40957					
40958					
40959					
40960	**PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_nw_2009)**				
40961					
40962	**General Statistics**				
40963	Number of Valid Data		0	Number of Detected Data	0
40964	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40965	Number of Missing Values		7	Percent Non-Detects	NaN%
40966					
40967	**Warning: This data set only has 0 observations!**				
40968	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
40969	**The data set for variable PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_nw_2009) was not processed!**				
40970					
40971	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
40972	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
40973					
40974					
40975					
40976	**PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_nw_2010)**				
40977					
40978	**General Statistics**				
40979	Number of Valid Data		4	Number of Detected Data	0
40980	Number of Distinct Detected Data		0	Number of Non-Detect Data	4

	A	B	C	D	E
40981				Percent Non-Detects	100.00%
40982					
40983	Warning: This data set only has 4 observations!				
40984	Data set is too small to compute reliable and meaningful statistics and estimates!				
40985	The data set for variable PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_nw_2010) was not processed!				
40986					
40987	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
40988	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
40989					
40990					
40991					
40992	PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_ref_2009)				
40993					
40994	General Statistics				
40995	Number of Valid Data		0	Number of Detected Data	0
40996	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
40997	Number of Missing Values		6	Percent Non-Detects	NaN%
40998					
40999	Warning: This data set only has 0 observations!				
41000	Data set is too small to compute reliable and meaningful statistics and estimates!				
41001	The data set for variable PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_ref_2009) was not processed!				
41002					
41003	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41004	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41005					
41006					
41007					
41008	PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_ref_2010)				
41009					
41010	General Statistics				
41011	Number of Valid Data		3	Number of Detected Data	0
41012	Number of Distinct Detected Data		0	Number of Non-Detect Data	3
41013				Percent Non-Detects	100.00%
41014					
41015	Warning: This data set only has 3 observations!				
41016	Data set is too small to compute reliable and meaningful statistics and estimates!				
41017	The data set for variable PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_ref_2010) was not processed!				
41018					
41019	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41020	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41021					
41022					
41023					
41024	PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_s_2005)				
41025					
41026	General Statistics				
41027	Number of Valid Data		0	Number of Detected Data	0
41028	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41029	Number of Missing Values		8	Percent Non-Detects	NaN%
41030					
41031	Warning: This data set only has 0 observations!				

	A	B	C	D	E
41032	Data set is too small to compute reliable and meaningful statistics and estimates!				
41033	The data set for variable PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_s_2005) was not processed!				
41034					
41035	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41036	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41037					
41038					
41039					
41040	PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_s_2010)				
41041					
41042	General Statistics				
41043	Number of Valid Data		2	Number of Detected Data	0
41044	Number of Distinct Detected Data		0	Number of Non-Detect Data	2
41045				Percent Non-Detects	100.00%
41046					
41047	Warning: This data set only has 2 observations!				
41048	Data set is too small to compute reliable and meaningful statistics and estimates!				
41049	The data set for variable PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_s_2010) was not processed!				
41050					
41051	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41052	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41053					
41054					
41055					
41056	PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_stillwater_2005)				
41057					
41058	General Statistics				
41059	Number of Valid Data		0	Number of Detected Data	0
41060	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41061	Number of Missing Values		4	Percent Non-Detects	NaN%
41062					
41063	Warning: This data set only has 0 observations!				
41064	Data set is too small to compute reliable and meaningful statistics and estimates!				
41065	The data set for variable PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_stillwater_2005) was not processed!				
41066					
41067	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41068	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41069					
41070					
41071					
41072	PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_stillwater_2009)				
41073					
41074	General Statistics				
41075	Number of Valid Data		0	Number of Detected Data	0
41076	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41077	Number of Missing Values		60	Percent Non-Detects	NaN%
41078					
41079	Warning: This data set only has 0 observations!				
41080	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
41081	**The data set for variable PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_stillwater_2009) was not processed!**				
41082					
41083	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41084	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41085					
41086					
41087					
41088	**PCBH|UG/KG|TOTAL OCTACHLOROBIPHENYLS (gi_sd_stillwater_2010)**				
41089					
41090	**General Statistics**				
41091	Number of Valid Data		11	Number of Detected Data	9
41092	Number of Distinct Detected Data		9	Number of Non-Detect Data	2
41093				Percent Non-Detects	18.18%
41094					
41095	**Raw Statistics**			**Log-transformed Statistics**	
41096	Minimum Detected		14	Minimum Detected	2.6390573
41097	Maximum Detected		130	Maximum Detected	4.8675345
41098	Mean of Detected		52.777778	Mean of Detected	3.7418485
41099	SD of Detected		38.552003	SD of Detected	0.7121539
41100	Minimum Non-Detect		0.58	Minimum Non-Detect	-0.544727
41101	Maximum Non-Detect		5.9	Maximum Non-Detect	1.7749524
41102					
41103	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	2
41104	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	9
41105	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	18.18%
41106					
41107	**Warning: There are only 9 Detected Values in this data**				
41108	**Note: It should be noted that even though bootstrap may be performed on this data set**				
41109	**the resulting calculations may not be reliable enough to draw conclusions**				
41110					
41111	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
41112					
41113					
41114	**UCL Statistics**				
41115	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
41116	Shapiro Wilk Test Statistic		0.8557638	Shapiro Wilk Test Statistic	0.9700648
41117	5% Shapiro Wilk Critical Value		0.829	5% Shapiro Wilk Critical Value	0.829
41118	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
41119					
41120	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
41121	DL/2 Substitution Method			DL/2 Substitution Method	
41122	Mean		43.476364	Mean	3.0473243
41123	SD		40.219585	SD	1.7499935
41124	95% DL/2 (t) UCL		65.455466	95% H-Stat (DL/2) UCL	1232.7278
41125					
41126	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
41127	Mean		39.655474	Mean in Log Scale	3.4298131
41128	SD		44.002974	SD in Log Scale	0.9421745
41129	95% MLE (t) UCL		63.702114	Mean in Original Scale	44.560194
41130	95% MLE (Tiku) UCL		63.977715	SD in Original Scale	39.029125
41131				95% t UCL	65.888736
41132				95% Percentile Bootstrap UCL	63.143733
41133				95% BCA Bootstrap UCL	67.431199
41134					
41135	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
41136	k star (bias corrected)		1.6628254	**Data appear Normal at 5% Significance Level**	
41137	Theta Star		31.739819		
41138	nu star		29.930858		
41139					
41140	A-D Test Statistic		0.3019487	**Nonparametric Statistics**	
41141	5% A-D Critical Value		0.7286321	Kaplan-Meier (KM) Method	

	A	B	C	D	E
41142	K-S Test Statistic		0.7286321	Mean	45.727273
41143	5% K-S Critical Value		0.2820432	SD	36.11935
41144	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	11.551007
41145				95% KM (t) UCL	66.663024
41146	**Assuming Gamma Distribution**			95% KM (z) UCL	64.726988
41147	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	65.88337
41148	Minimum		4.5791135	95% KM (bootstrap t) UCL	87.882574
41149	Maximum		130	95% KM (BCA) UCL	67.136364
41150	Mean		44.014384	95% KM (Percentile Bootstrap) UCL	66.090909
41151	Median		40	95% KM (Chebyshev) UCL	96.076945
41152	SD		39.612511	97.5% KM (Chebyshev) UCL	117.86329
41153	k star		0.9775122	99% KM (Chebyshev) UCL	160.65834
41154	Theta star		45.026941		
41155	Nu star		21.505269	**Potential UCLs to Use**	
41156	AppChi2		11.968127	95% KM (t) UCL	66.663024
41157	95% Gamma Approximate UCL		79.088499	95% KM (Percentile Bootstrap) UCL	66.090909
41158	95% Adjusted Gamma UCL		87.443031		
41159	**Note: DL/2 is not a recommended method.**				
41160					
41161	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
41162	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
41163	**For additional insight, the user may want to consult a statistician.**				
41164					
41165					
41166	**PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_ne_2005)**				
41167					
41168	**General Statistics**				
41169	Number of Valid Data		0	Number of Detected Data	0
41170	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41171	Number of Missing Values		36	Percent Non-Detects	NaN%
41172					
41173	**Warning: This data set only has 0 observations!**				
41174	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41175	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_ne_2005) was not processed!**				
41176					
41177	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41178	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41179					
41180					
41181					
41182	**PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_ne_2009)**				
41183					
41184	**General Statistics**				
41185	Number of Valid Data		0	Number of Detected Data	0
41186	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41187	Number of Missing Values		20	Percent Non-Detects	NaN%
41188					
41189	**Warning: This data set only has 0 observations!**				
41190	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41191	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_ne_2009) was not processed!**				
41192					
41193	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41194	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41195					
41196					

	A	B	C	D	E
41197					
41198	**PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_ne_2010)**				
41199					
41200	**General Statistics**				
41201	Number of Valid Data		16	Number of Detected Data	15
41202	Number of Distinct Detected Data		15	Number of Non-Detect Data	1
41203				Percent Non-Detects	6.25%
41204					
41205	**Raw Statistics**			**Log-transformed Statistics**	
41206	Minimum Detected		3.2	Minimum Detected	1.1631508
41207	Maximum Detected		1340	Maximum Detected	7.2004249
41208	Mean of Detected		190.68	Mean of Detected	4.0507461
41209	SD of Detected		335.25877	SD of Detected	1.7873785
41210	Minimum Non-Detect		2.14	Minimum Non-Detect	0.7608058
41211	Maximum Non-Detect		2.14	Maximum Non-Detect	0.7608058
41212					
41213					
41214	**UCL Statistics**				
41215	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
41216	Shapiro Wilk Test Statistic		0.5572832	Shapiro Wilk Test Statistic	0.9462893
41217	5% Shapiro Wilk Critical Value		0.881	5% Shapiro Wilk Critical Value	0.881
41218	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
41219					
41220	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
41221	DL/2 Substitution Method			DL/2 Substitution Method	
41222	Mean		178.82938	Mean	3.8018031
41223	SD		327.34112	SD	1.9933143
41224	95% DL/2 (t) UCL		322.29074	95% H-Stat (DL/2) UCL	3237.23
41225					
41226	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
41227	Mean		165.59415	Mean in Log Scale	3.7786751
41228	SD		331.11161	SD in Log Scale	2.0411031
41229	95% MLE (t) UCL		310.70798	Mean in Original Scale	178.80869
41230	95% MLE (Tiku) UCL		298.98415	SD in Original Scale	327.35311
41231				95% t UCL	322.27531
41232				95% Percentile Bootstrap UCL	318.38857
41233				95% BCA Bootstrap UCL	405.00869
41234					
41235	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
41236	k star (bias corrected)		0.4647327	**Data appear Gamma Distributed at 5% Significance Level**	
41237	Theta Star		410.3004		
41238	nu star		13.94198		
41239					
41240	A-D Test Statistic		0.4450615	**Nonparametric Statistics**	
41241	5% A-D Critical Value		0.7911762	Kaplan-Meier (KM) Method	
41242	K-S Test Statistic		0.7911762	Mean	178.9625
41243	5% K-S Critical Value		0.2334458	SD	316.87242
41244	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	81.99853
41245				95% KM (t) UCL	322.71005
41246	**Assuming Gamma Distribution**			95% KM (z) UCL	313.83808
41247	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	322.33882
41248	Minimum		1E-12	95% KM (bootstrap t) UCL	548.03767
41249	Maximum		1340	95% KM (BCA) UCL	348.75
41250	Mean		178.7625	95% KM (Percentile Bootstrap) UCL	330.31875
41251	Median		81.05	95% KM (Chebyshev) UCL	536.38581
41252	SD		327.37996	97.5% KM (Chebyshev) UCL	691.04316
41253	k star		0.2292861	99% KM (Chebyshev) UCL	994.83757
41254	Theta star		779.64819		
41255	Nu star		7.3371555	**Potential UCLs to Use**	
41256	AppChi2		2.3574425	95% KM (Chebyshev) UCL	536.38581
41257	95% Gamma Approximate UCL		556.36913		
41258	95% Adjusted Gamma UCL		640.13157		
41259	**Note: DL/2 is not a recommended method.**				
41260					
41261	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
41262	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
41263	**For additional insight, the user may want to consult a statistician.**				

	A	B	C	D	E
41264					
41265					
41266	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_nw_2005)				
41267					
41268	General Statistics				
41269	Number of Valid Data		0	Number of Detected Data	0
41270	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41271	Number of Missing Values		18	Percent Non-Detects	NaN%
41272					
41273	Warning: This data set only has 0 observations!				
41274	Data set is too small to compute reliable and meaningful statistics and estimates!				
41275	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_nw_2005) was not processed!				
41276					
41277	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41278	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41279					
41280					
41281					
41282	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_nw_2009)				
41283					
41284	General Statistics				
41285	Number of Valid Data		0	Number of Detected Data	0
41286	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41287	Number of Missing Values		7	Percent Non-Detects	NaN%
41288					
41289	Warning: This data set only has 0 observations!				
41290	Data set is too small to compute reliable and meaningful statistics and estimates!				
41291	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_nw_2009) was not processed!				
41292					
41293	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41294	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41295					
41296					
41297					
41298	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_nw_2010)				
41299					
41300	General Statistics				
41301	Number of Valid Data		4	Number of Detected Data	3
41302	Number of Distinct Detected Data		3	Number of Non-Detect Data	1
41303				Percent Non-Detects	25.00%
41304					
41305	Warning: This data set only has 4 observations!				
41306	Data set is too small to compute reliable and meaningful statistics and estimates!				
41307	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_nw_2010) was not processed!				
41308					
41309	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41310	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41311					
41312					
41313					
41314	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_ref_2009)				

	A	B	C	D	E
41315					
41316	**General Statistics**				
41317	Number of Valid Data		0	Number of Detected Data	0
41318	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41319	Number of Missing Values		6	Percent Non-Detects	NaN%
41320					
41321	**Warning: This data set only has 0 observations!**				
41322	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41323	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_ref_2009) was not processed!**				
41324					
41325	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41326	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41327					
41328					
41329					
41330	**PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_ref_2010)**				
41331					
41332	**General Statistics**				
41333	Number of Valid Data		3	Number of Detected Data	0
41334	Number of Distinct Detected Data		0	Number of Non-Detect Data	3
41335				Percent Non-Detects	100.00%
41336					
41337	**Warning: This data set only has 3 observations!**				
41338	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41339	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_ref_2010) was not processed!**				
41340					
41341	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41342	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41343					
41344					
41345					
41346	**PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_s_2005)**				
41347					
41348	**General Statistics**				
41349	Number of Valid Data		0	Number of Detected Data	0
41350	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41351	Number of Missing Values		8	Percent Non-Detects	NaN%
41352					
41353	**Warning: This data set only has 0 observations!**				
41354	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41355	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_s_2005) was not processed!**				
41356					
41357	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41358	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41359					
41360					
41361					
41362	**PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_s_2010)**				
41363					
41364	**General Statistics**				
41365	Number of Valid Data		2	Number of Detected Data	1
41366	Number of Distinct Detected Data		1	Number of Non-Detect Data	1

	A	B	C	D	E
41367				Percent Non-Detects	50.00%
41368					
41369	**Warning: This data set only has 2 observations!**				
41370	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41371	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_s_2010) was not processed!**				
41372					
41373	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41374	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41375					
41376					
41377					
41378	**PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_stillwater_2005)**				
41379					
41380	**General Statistics**				
41381	Number of Valid Data		0	Number of Detected Data	0
41382	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41383	Number of Missing Values		4	Percent Non-Detects	NaN%
41384					
41385	**Warning: This data set only has 0 observations!**				
41386	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41387	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_stillwater_2005) was not processed!**				
41388					
41389	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41390	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41391					
41392					
41393					
41394	**PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_stillwater_2009)**				
41395					
41396	**General Statistics**				
41397	Number of Valid Data		0	Number of Detected Data	0
41398	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41399	Number of Missing Values		60	Percent Non-Detects	NaN%
41400					
41401	**Warning: This data set only has 0 observations!**				
41402	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41403	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_stillwater_2009) was not processed!**				
41404					
41405	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41406	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41407					
41408					
41409					
41410	**PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_sd_stillwater_2010)**				
41411					
41412	**General Statistics**				
41413	Number of Valid Data		11	Number of Detected Data	10
41414	Number of Distinct Detected Data		10	Number of Non-Detect Data	1
41415				Percent Non-Detects	9.09%
41416					
41417	**Raw Statistics**			**Log-transformed Statistics**	
41418	Minimum Detected		25.3	Minimum Detected	3.2308044

	A	B	C	D	E
41419	Maximum Detected		2720	Maximum Detected	7.9083872
41420	Mean of Detected		1068.33	Mean of Detected	6.4946039
41421	SD of Detected		903.33113	SD of Detected	1.3181509
41422	Minimum Non-Detect		5.71	Minimum Non-Detect	1.742219
41423	Maximum Non-Detect		5.71	Maximum Non-Detect	1.742219
41424					
41425					
41426	**UCL Statistics**				
41427	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
41428	Shapiro Wilk Test Statistic		0.8420872	Shapiro Wilk Test Statistic	0.8221296
41429	5% Shapiro Wilk Critical Value		0.842	5% Shapiro Wilk Critical Value	0.842
41430	**Data appear Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
41431					
41432	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
41433	DL/2 Substitution Method			DL/2 Substitution Method	
41434	Mean		971.46864	Mean	5.9995555
41435	SD		915.21024	SD	2.0638729
41436	95% DL/2 (t) UCL		1471.6105	95% H-Stat (DL/2) UCL	107850.64
41437					
41438	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
41439	Mean		926.44693	Mean in Log Scale	6.2357807
41440	SD		940.83697	SD in Log Scale	1.5167904
41441	95% MLE (t) UCL		1440.5933	Mean in Original Scale	974.69823
41442	95% MLE (Tiku) UCL		1430.2611	SD in Original Scale	911.50558
41443				95% t UCL	1472.8156
41444				95% Percentile Bootstrap UCL	1416.4255
41445				95% BCA Bootstrap UCL	1512.9364
41446					
41447	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
41448	k star (bias corrected)		0.8941527	**Data appear Normal at 5% Significance Level**	
41449	Theta Star		1194.7959		
41450	nu star		17.883055		
41451					
41452	A-D Test Statistic		0.3852926	**Nonparametric Statistics**	
41453	5% A-D Critical Value		0.7449772	Kaplan-Meier (KM) Method	
41454	K-S Test Statistic		0.7449772	Mean	973.50909
41455	5% K-S Critical Value		0.272792	SD	870.37477
41456	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	276.62326
41457				95% KM (t) UCL	1474.878
41458	**Assuming Gamma Distribution**			95% KM (z) UCL	1428.5139
41459	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	1462.895
41460	Minimum		1E-12	95% KM (bootstrap t) UCL	1854.3316
41461	Maximum		2720	95% KM (BCA) UCL	1525.6
41462	Mean		971.20909	95% KM (Percentile Bootstrap) UCL	1429.6636
41463	Median		862	95% KM (Chebyshev) UCL	2179.2819
41464	SD		915.51275	97.5% KM (Chebyshev) UCL	2701.0208
41465	k star		0.2130088	99% KM (Chebyshev) UCL	3725.8758
41466	Theta star		4559.4777		
41467	Nu star		4.6861946	**Potential UCLs to Use**	
41468	AppChi2		1.0100633	95% KM (t) UCL	1474.878
41469	95% Gamma Approximate UCL		4505.9304	95% KM (Percentile Bootstrap) UCL	1429.6636
41470	95% Adjusted Gamma UCL		5953.4589		
41471	**Note: DL/2 is not a recommended method.**				
41472					
41473	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
41474	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
41475	**For additional insight, the user may want to consult a statistician.**				
41476					
41477					
41478	**PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_ne_2005)**				
41479					
41480	**General Statistics**				
41481	Number of Valid Data		0	Number of Detected Data	0
41482	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41483	Number of Missing Values		36	Percent Non-Detects	NaN%
41484					

	A	B	C	D	E
41485	**Warning: This data set only has 0 observations!**				
41486	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41487	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_ne_2005) was not processed!**				
41488					
41489	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41490	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41491					
41492					
41493					
41494	**PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_ne_2009)**				
41495					
41496	**General Statistics**				
41497	Number of Valid Data		0	Number of Detected Data	0
41498	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41499	Number of Missing Values		20	Percent Non-Detects	NaN%
41500					
41501	**Warning: This data set only has 0 observations!**				
41502	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41503	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_ne_2009) was not processed!**				
41504					
41505	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41506	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41507					
41508					
41509					
41510	**PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_ne_2010)**				
41511					
41512	**General Statistics**				
41513	Number of Valid Data		16	Number of Detected Data	15
41514	Number of Distinct Detected Data		15	Number of Non-Detect Data	1
41515				Percent Non-Detects	6.25%
41516					
41517	**Raw Statistics**			**Log-transformed Statistics**	
41518	Minimum Detected		9.16	Minimum Detected	2.2148462
41519	Maximum Detected		1340	Maximum Detected	7.2004249
41520	Mean of Detected		200.71067	Mean of Detected	4.3879379
41521	SD of Detected		332.98243	SD of Detected	1.4447143
41522	Minimum Non-Detect		2.14	Minimum Non-Detect	0.7608058
41523	Maximum Non-Detect		2.14	Maximum Non-Detect	0.7608058
41524					
41525					
41526	**UCL Statistics**				
41527	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
41528	Shapiro Wilk Test Statistic		0.5658303	Shapiro Wilk Test Statistic	0.9547728
41529	5% Shapiro Wilk Critical Value		0.881	5% Shapiro Wilk Critical Value	0.881
41530	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
41531					
41532	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
41533	DL/2 Substitution Method			DL/2 Substitution Method	
41534	Mean		188.23313	Mean	4.1179205
41535	SD		325.54032	SD	1.7648239
41536	95% DL/2 (t) UCL		330.90527	95% H-Stat (DL/2) UCL	1827.0279
41537					
41538	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
41539	Mean		175.23879	Mean in Log Scale	4.1665697
41540	SD		329.45932	SD in Log Scale	1.6529111
41541	95% MLE (t) UCL		319.62849	Mean in Original Scale	188.3119
41542	95% MLE (Tiku) UCL		308.36445	SD in Original Scale	325.49216

	A	B	C	D	E
41543				95% t UCL	330.96294
41544				95% Percentile Bootstrap UCL	337.87875
41545				95% BCA Bootstrap UCL	412.735
41546					
41547	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
41548	k star (bias corrected)		0.5771865	**Data appear Gamma Distributed at 5% Significance Level**	
41549	Theta Star		347.73968		
41550	nu star		17.315596		
41551					
41552	A-D Test Statistic		0.4931637	**Nonparametric Statistics**	
41553	5% A-D Critical Value		0.7811229	Kaplan-Meier (KM) Method	
41554	K-S Test Statistic		0.7811229	Mean	188.73875
41555	5% K-S Critical Value		0.2314273	SD	314.90878
41556	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	81.490388
41557				95% KM (t) UCL	331.5955
41558	**Assuming Gamma Distribution**			95% KM (z) UCL	322.77851
41559	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	331.17865
41560	Minimum		1E-12	95% KM (bootstrap t) UCL	552.25219
41561	Maximum		1340	95% KM (BCA) UCL	358.725
41562	Mean		188.16625	95% KM (Percentile Bootstrap) UCL	334.91125
41563	Median		85.4	95% KM (Chebyshev) UCL	543.94711
41564	SD		325.58144	97.5% KM (Chebyshev) UCL	697.64606
41565	k star		0.2442139	99% KM (Chebyshev) UCL	999.55787
41566	Theta star		770.49778		
41567	Nu star		7.814844	**Potential UCLs to Use**	
41568	AppChi2		2.6282696	95% KM (Chebyshev) UCL	543.94711
41569	95% Gamma Approximate UCL		559.48975		
41570	95% Adjusted Gamma UCL		639.8609		
41571	**Note: DL/2 is not a recommended method.**				
41572					
41573	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
41574	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
41575	**For additional insight, the user may want to consult a statistician.**				
41576					
41577					
41578	**PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_nw_2005)**				
41579					
41580	**General Statistics**				
41581	Number of Valid Data		0	Number of Detected Data	0
41582	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41583	Number of Missing Values		18	Percent Non-Detects	NaN%
41584					
41585	**Warning: This data set only has 0 observations!**				
41586	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41587	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_nw_2005) was not processed!**				
41588					
41589	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41590	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41591					
41592					
41593					
41594	**PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_nw_2009)**				
41595					
41596	**General Statistics**				
41597	Number of Valid Data		0	Number of Detected Data	0
41598	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41599	Number of Missing Values		7	Percent Non-Detects	NaN%
41600					
41601	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
41602	Data set is too small to compute reliable and meaningful statistics and estimates!				
41603	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_nw_2009) was not processed!				
41604					
41605	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41606	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41607					
41608					
41609					
41610	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_nw_2010)				
41611					
41612	General Statistics				
41613	Number of Valid Data		4	Number of Detected Data	3
41614	Number of Distinct Detected Data		3	Number of Non-Detect Data	1
41615				Percent Non-Detects	25.00%
41616					
41617	Warning: This data set only has 4 observations!				
41618	Data set is too small to compute reliable and meaningful statistics and estimates!				
41619	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_nw_2010) was not processed!				
41620					
41621	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41622	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41623					
41624					
41625					
41626	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_ref_2009)				
41627					
41628	General Statistics				
41629	Number of Valid Data		0	Number of Detected Data	0
41630	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41631	Number of Missing Values		6	Percent Non-Detects	NaN%
41632					
41633	Warning: This data set only has 0 observations!				
41634	Data set is too small to compute reliable and meaningful statistics and estimates!				
41635	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_ref_2009) was not processed!				
41636					
41637	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41638	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41639					
41640					
41641					
41642	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_ref_2010)				
41643					
41644	General Statistics				
41645	Number of Valid Data		3	Number of Detected Data	0
41646	Number of Distinct Detected Data		0	Number of Non-Detect Data	3
41647				Percent Non-Detects	100.00%
41648					
41649	Warning: This data set only has 3 observations!				
41650	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
41651	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_ref_2010) was not processed!				
41652					
41653	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41654	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41655					
41656					
41657					
41658	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_s_2005)				
41659					
41660	General Statistics				
41661	Number of Valid Data		0	Number of Detected Data	0
41662	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41663	Number of Missing Values		8	Percent Non-Detects	NaN%
41664					
41665	Warning: This data set only has 0 observations!				
41666	Data set is too small to compute reliable and meaningful statistics and estimates!				
41667	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_s_2005) was not processed!				
41668					
41669	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41670	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41671					
41672					
41673					
41674	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_s_2010)				
41675					
41676	General Statistics				
41677	Number of Valid Data		2	Number of Detected Data	1
41678	Number of Distinct Detected Data		1	Number of Non-Detect Data	1
41679				Percent Non-Detects	50.00%
41680					
41681	Warning: This data set only has 2 observations!				
41682	Data set is too small to compute reliable and meaningful statistics and estimates!				
41683	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_s_2010) was not processed!				
41684					
41685	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41686	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41687					
41688					
41689					
41690	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_stillwater_2005)				
41691					
41692	General Statistics				
41693	Number of Valid Data		0	Number of Detected Data	0
41694	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41695	Number of Missing Values		4	Percent Non-Detects	NaN%
41696					
41697	Warning: This data set only has 0 observations!				
41698	Data set is too small to compute reliable and meaningful statistics and estimates!				
41699	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_stillwater_2005) was not processed!				
41700					

	A	B	C	D	E
41701	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41702	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41703					
41704					
41705					
41706	**PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_stillwater_2009)**				
41707					
41708	**General Statistics**				
41709	Number of Valid Data		0	Number of Detected Data	0
41710	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41711	Number of Missing Values		60	Percent Non-Detects	NaN%
41712					
41713	**Warning: This data set only has 0 observations!**				
41714	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41715	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_stillwater_2009) was not processed!**				
41716					
41717	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41718	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41719					
41720					
41721					
41722	**PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_sd_stillwater_2010)**				
41723					
41724	**General Statistics**				
41725	Number of Valid Data		11	Number of Detected Data	10
41726	Number of Distinct Detected Data		10	Number of Non-Detect Data	1
41727				Percent Non-Detects	9.09%
41728					
41729	**Raw Statistics**			**Log-transformed Statistics**	
41730	Minimum Detected		29.9	Minimum Detected	3.3978585
41731	Maximum Detected		2740	Maximum Detected	7.9157132
41732	Mean of Detected		1087.89	Mean of Detected	6.5358145
41733	SD of Detected		905.11586	SD of Detected	1.2716996
41734	Minimum Non-Detect		5.71	Minimum Non-Detect	1.742219
41735	Maximum Non-Detect		5.71	Maximum Non-Detect	1.742219
41736					
41737					
41738	**UCL Statistics**				
41739	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
41740	Shapiro Wilk Test Statistic		0.8427678	Shapiro Wilk Test Statistic	0.8238485
41741	5% Shapiro Wilk Critical Value		0.842	5% Shapiro Wilk Critical Value	0.842
41742	**Data appear Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
41743					
41744	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
41745	DL/2 Substitution Method			DL/2 Substitution Method	
41746	Mean		989.25045	Mean	6.0370197
41747	SD		918.879	SD	2.0475001
41748	95% DL/2 (t) UCL		1491.3972	95% H-Stat (DL/2) UCL	102803.99
41749					
41750	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
41751	Mean		944.29061	Mean in Log Scale	6.2856667
41752	SD		944.83418	SD in Log Scale	1.4641758
41753	95% MLE (t) UCL		1460.6213	Mean in Original Scale	992.99091
41754	95% MLE (Tiku) UCL		1450.9438	SD in Original Scale	914.53566
41755				95% t UCL	1492.7642
41756				95% Percentile Bootstrap UCL	1436.6364
41757				95% BCA Bootstrap UCL	1528
41758					
41759	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
41760	k star (bias corrected)		0.9319476	**Data appear Normal at 5% Significance Level**	

	A	B	C	D	E
41761	Theta Star		1167.3296		
41762	nu star		18.638951		
41763					
41764	A-D Test Statistic		0.4000141	**Nonparametric Statistics**	
41765	5% A-D Critical Value		0.744001	Kaplan-Meier (KM) Method	
41766	K-S Test Statistic		0.744001	Mean	991.70909
41767	5% K-S Critical Value		0.272508	SD	873.37886
41768	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	277.57802
41769				95% KM (t) UCL	1494.8085
41770	**Assuming Gamma Distribution**			95% KM (z) UCL	1448.2843
41771	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	1482.4434
41772	Minimum		1E-12	95% KM (bootstrap t) UCL	1917.6151
41773	Maximum		2740	95% KM (BCA) UCL	1498.8182
41774	Mean		988.99091	95% KM (Percentile Bootstrap) UCL	1462.3636
41775	Median		896	95% KM (Chebyshev) UCL	2201.6436
41776	SD		919.18583	97.5% KM (Chebyshev) UCL	2725.1833
41777	k star		0.2137424	99% KM (Chebyshev) UCL	3753.5755
41778	Theta star		4627.0226		
41779	Nu star		4.7023328	**Potential UCLs to Use**	
41780	AppChi2		1.0172274	95% KM (t) UCL	1494.8085
41781	95% Gamma Approximate UCL		4571.8041	95% KM (Percentile Bootstrap) UCL	1462.3636
41782	95% Adjusted Gamma UCL		6036.5178		
41783	**Note: DL/2 is not a recommended method.**				
41784					
41785	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
41786	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
41787	**For additional insight, the user may want to consult a statistician.**				
41788					
41789					
41790	**PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_ne_2005)**				
41791					
41792	**General Statistics**				
41793	Number of Valid Data		0	Number of Detected Data	0
41794	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41795	Number of Missing Values		36	Percent Non-Detects	NaN%
41796					
41797	**Warning: This data set only has 0 observations!**				
41798	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41799	**The data set for variable PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_ne_2005) was not processed!**				
41800					
41801	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41802	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41803					
41804					
41805					
41806	**PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_ne_2009)**				
41807					
41808	**General Statistics**				
41809	Number of Valid Data		0	Number of Detected Data	0
41810	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41811	Number of Missing Values		20	Percent Non-Detects	NaN%
41812					
41813	**Warning: This data set only has 0 observations!**				
41814	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41815	**The data set for variable PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_ne_2009) was not processed!**				
41816					
41817	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
41818	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41819					
41820					
41821					
41822	PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_ne_2010)				
41823					
41824	General Statistics				
41825	Number of Valid Data		16	Number of Detected Data	1
41826	Number of Distinct Detected Data		1	Number of Non-Detect Data	15
41827				Percent Non-Detects	93.75%
41828					
41829	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
41830	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
41831					
41832	The data set for variable PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_ne_2010) was not processed!				
41833					
41834					
41835					
41836	PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_nw_2005)				
41837					
41838	General Statistics				
41839	Number of Valid Data		0	Number of Detected Data	0
41840	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41841	Number of Missing Values		18	Percent Non-Detects	NaN%
41842					
41843	Warning: This data set only has 0 observations!				
41844	Data set is too small to compute reliable and meaningful statistics and estimates!				
41845	The data set for variable PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_nw_2005) was not processed!				
41846					
41847	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41848	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41849					
41850					
41851					
41852	PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_nw_2009)				
41853					
41854	General Statistics				
41855	Number of Valid Data		0	Number of Detected Data	0
41856	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41857	Number of Missing Values		7	Percent Non-Detects	NaN%
41858					
41859	Warning: This data set only has 0 observations!				
41860	Data set is too small to compute reliable and meaningful statistics and estimates!				
41861	The data set for variable PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_nw_2009) was not processed!				
41862					
41863	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41864	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41865					
41866					
41867					

	A	B	C	D	E
41868	PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_nw_2010)				
41869					
41870	General Statistics				
41871	Number of Valid Data		4	Number of Detected Data	2
41872	Number of Distinct Detected Data		2	Number of Non-Detect Data	2
41873				Percent Non-Detects	50.00%
41874					
41875	Warning: This data set only has 4 observations!				
41876	Data set is too small to compute reliable and meaningful statistics and estimates!				
41877	The data set for variable PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_nw_2010) was not processed!				
41878					
41879	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41880	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41881					
41882					
41883					
41884	PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_ref_2009)				
41885					
41886	General Statistics				
41887	Number of Valid Data		0	Number of Detected Data	0
41888	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41889	Number of Missing Values		6	Percent Non-Detects	NaN%
41890					
41891	Warning: This data set only has 0 observations!				
41892	Data set is too small to compute reliable and meaningful statistics and estimates!				
41893	The data set for variable PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_ref_2009) was not processed!				
41894					
41895	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41896	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41897					
41898					
41899					
41900	PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_ref_2010)				
41901					
41902	General Statistics				
41903	Number of Valid Data		3	Number of Detected Data	0
41904	Number of Distinct Detected Data		0	Number of Non-Detect Data	3
41905				Percent Non-Detects	100.00%
41906					
41907	Warning: This data set only has 3 observations!				
41908	Data set is too small to compute reliable and meaningful statistics and estimates!				
41909	The data set for variable PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_ref_2010) was not processed!				
41910					
41911	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41912	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41913					
41914					
41915					
41916	PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_s_2005)				
41917					
41918	General Statistics				

	A	B	C	D	E
41919	Number of Valid Data		0	Number of Detected Data	0
41920	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41921	Number of Missing Values		8	Percent Non-Detects	NaN%
41922					
41923	**Warning: This data set only has 0 observations!**				
41924	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41925	**The data set for variable PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_s_2005) was not processed!**				
41926					
41927	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41928	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41929					
41930					
41931					
41932	**PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_s_2010)**				
41933					
41934	**General Statistics**				
41935	Number of Valid Data		2	Number of Detected Data	0
41936	Number of Distinct Detected Data		0	Number of Non-Detect Data	2
41937				Percent Non-Detects	100.00%
41938					
41939	**Warning: This data set only has 2 observations!**				
41940	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41941	**The data set for variable PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_s_2010) was not processed!**				
41942					
41943	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41944	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41945					
41946					
41947					
41948	**PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_stillwater_2005)**				
41949					
41950	**General Statistics**				
41951	Number of Valid Data		0	Number of Detected Data	0
41952	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41953	Number of Missing Values		4	Percent Non-Detects	NaN%
41954					
41955	**Warning: This data set only has 0 observations!**				
41956	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
41957	**The data set for variable PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_stillwater_2005) was not processed!**				
41958					
41959	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
41960	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
41961					
41962					
41963					
41964	**PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_stillwater_2009)**				
41965					
41966	**General Statistics**				
41967	Number of Valid Data		0	Number of Detected Data	0
41968	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
41969	Number of Missing Values		60	Percent Non-Detects	NaN%
41970					

	A	B	C	D	E
41971	Warning: This data set only has 0 observations!				
41972	Data set is too small to compute reliable and meaningful statistics and estimates!				
41973	The data set for variable PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_stillwater_2009) was not processed!				
41974					
41975	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
41976	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
41977					
41978					
41979					
41980	PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_stillwater_2010)				
41981					
41982	General Statistics				
41983	Number of Valid Data		11	Number of Detected Data	0
41984	Number of Distinct Detected Data		0	Number of Non-Detect Data	11
41985				Percent Non-Detects	100.00%
41986					
41987	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
41988	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
41989	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
41990					
41991	The data set for variable PCBH|UG/KG|TOTAL TRICHLOROBIPHENYLS (gi_sd_stillwater_2010) was not processed!				
41992					
41993					
41994					
41995	PEST/PCB|UG/KG|4,4'-DDE (gi_sd_ne_2005)				
41996					
41997	General Statistics				
41998	Number of Valid Data		36	Number of Detected Data	1
41999	Number of Distinct Detected Data		1	Number of Non-Detect Data	35
42000				Percent Non-Detects	97.22%
42001					
42002	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
42003	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
42004					
42005	The data set for variable PEST/PCB|UG/KG|4,4'-DDE (gi_sd_ne_2005) was not processed!				
42006					
42007					
42008					
42009	PEST/PCB|UG/KG|4,4'-DDE (gi_sd_ne_2009)				
42010					
42011	General Statistics				
42012	Number of Valid Data		0	Number of Detected Data	0
42013	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42014	Number of Missing Values		20	Percent Non-Detects	NaN%
42015					
42016	Warning: This data set only has 0 observations!				
42017	Data set is too small to compute reliable and meaningful statistics and estimates!				
42018	The data set for variable PEST/PCB|UG/KG|4,4'-DDE (gi_sd_ne_2009) was not processed!				
42019					

	A	B	C	D	E
42020	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42021	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42022					
42023					
42024					
42025	PEST/PCB|UG/KG|4,4'-DDE (gi_sd_ne_2010)				
42026					
42027	General Statistics				
42028	Number of Valid Data		0	Number of Detected Data	0
42029	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42030	Number of Missing Values		16	Percent Non-Detects	NaN%
42031					
42032	Warning: This data set only has 0 observations!				
42033	Data set is too small to compute reliable and meaningful statistics and estimates!				
42034	The data set for variable PEST/PCB|UG/KG|4,4'-DDE (gi_sd_ne_2010) was not processed!				
42035					
42036	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42037	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42038					
42039					
42040					
42041	PEST/PCB|UG/KG|4,4'-DDE (gi_sd_nw_2005)				
42042					
42043	General Statistics				
42044	Number of Valid Data		18	Number of Detected Data	0
42045	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
42046				Percent Non-Detects	100.00%
42047					
42048	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
42049	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
42050	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
42051					
42052	The data set for variable PEST/PCB|UG/KG|4,4'-DDE (gi_sd_nw_2005) was not processed!				
42053					
42054					
42055					
42056	PEST/PCB|UG/KG|4,4'-DDE (gi_sd_nw_2009)				
42057					
42058	General Statistics				
42059	Number of Valid Data		0	Number of Detected Data	0
42060	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42061	Number of Missing Values		7	Percent Non-Detects	NaN%
42062					
42063	Warning: This data set only has 0 observations!				
42064	Data set is too small to compute reliable and meaningful statistics and estimates!				
42065	The data set for variable PEST/PCB|UG/KG|4,4'-DDE (gi_sd_nw_2009) was not processed!				
42066					
42067	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42068	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42069					
42070					

	A	B	C	D	E
42071					
42072	**PEST/PCB|UG/KG|4,4'-DDE (gi_sd_nw_2010)**				
42073					
42074	**General Statistics**				
42075	Number of Valid Data		0	Number of Detected Data	0
42076	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42077	Number of Missing Values		4	Percent Non-Detects	NaN%
42078					
42079	**Warning: This data set only has 0 observations!**				
42080	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42081	**The data set for variable PEST/PCB|UG/KG|4,4'-DDE (gi_sd_nw_2010) was not processed!**				
42082					
42083	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42084	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42085					
42086					
42087					
42088	**PEST/PCB|UG/KG|4,4'-DDE (gi_sd_ref_2009)**				
42089					
42090	**General Statistics**				
42091	Number of Valid Data		0	Number of Detected Data	0
42092	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42093	Number of Missing Values		6	Percent Non-Detects	NaN%
42094					
42095	**Warning: This data set only has 0 observations!**				
42096	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42097	**The data set for variable PEST/PCB|UG/KG|4,4'-DDE (gi_sd_ref_2009) was not processed!**				
42098					
42099	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42100	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42101					
42102					
42103					
42104	**PEST/PCB|UG/KG|4,4'-DDE (gi_sd_ref_2010)**				
42105					
42106	**General Statistics**				
42107	Number of Valid Data		0	Number of Detected Data	0
42108	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42109	Number of Missing Values		3	Percent Non-Detects	NaN%
42110					
42111	**Warning: This data set only has 0 observations!**				
42112	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42113	**The data set for variable PEST/PCB|UG/KG|4,4'-DDE (gi_sd_ref_2010) was not processed!**				
42114					
42115	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42116	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42117					
42118					
42119					
42120	**PEST/PCB|UG/KG|4,4'-DDE (gi_sd_s_2005)**				
42121					
42122	**General Statistics**				
42123	Number of Valid Data		8	Number of Detected Data	0
42124	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
42125				Percent Non-Detects	100.00%

	A	B	C	D	E
42126					
42127	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
42128	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
42129	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
42130					
42131	The data set for variable PEST/PCB|UG/KG|4,4'-DDE (gi_sd_s_2005) was not processed!				
42132					
42133					
42134					
42135	PEST/PCB|UG/KG|4,4'-DDE (gi_sd_s_2010)				
42136					
42137	General Statistics				
42138	Number of Valid Data		0	Number of Detected Data	0
42139	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42140	Number of Missing Values		2	Percent Non-Detects	NaN%
42141					
42142	Warning: This data set only has 0 observations!				
42143	Data set is too small to compute reliable and meaningful statistics and estimates!				
42144	The data set for variable PEST/PCB|UG/KG|4,4'-DDE (gi_sd_s_2010) was not processed!				
42145					
42146	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42147	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42148					
42149					
42150					
42151	PEST/PCB|UG/KG|4,4'-DDE (gi_sd_stillwater_2005)				
42152					
42153	General Statistics				
42154	Number of Valid Data		4	Number of Detected Data	3
42155	Number of Distinct Detected Data		3	Number of Non-Detect Data	1
42156				Percent Non-Detects	25.00%
42157					
42158	Warning: This data set only has 4 observations!				
42159	Data set is too small to compute reliable and meaningful statistics and estimates!				
42160	The data set for variable PEST/PCB|UG/KG|4,4'-DDE (gi_sd_stillwater_2005) was not processed!				
42161					
42162	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42163	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42164					
42165					
42166					
42167	PEST/PCB|UG/KG|4,4'-DDE (gi_sd_stillwater_2009)				
42168					
42169	General Statistics				
42170	Number of Valid Data		0	Number of Detected Data	0
42171	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42172	Number of Missing Values		60	Percent Non-Detects	NaN%
42173					
42174	Warning: This data set only has 0 observations!				
42175	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
42176	**The data set for variable PEST/PCB|UG/KG|4,4'-DDE (gi_sd_stillwater_2009) was not processed!**				
42177					
42178	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42179	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42180					
42181					
42182					
42183	**PEST/PCB|UG/KG|4,4'-DDE (gi_sd_stillwater_2010)**				
42184					
42185	**General Statistics**				
42186	Number of Valid Data		0	Number of Detected Data	0
42187	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42188	Number of Missing Values		11	Percent Non-Detects	NaN%
42189					
42190	**Warning: This data set only has 0 observations!**				
42191	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42192	**The data set for variable PEST/PCB|UG/KG|4,4'-DDE (gi_sd_stillwater_2010) was not processed!**				
42193					
42194	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42195	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42196					
42197					
42198					
42199	**PEST/PCB|UG/KG|4,4'-DDT (gi_sd_ne_2005)**				
42200					
42201	**General Statistics**				
42202	Number of Valid Data		36	Number of Detected Data	0
42203	Number of Distinct Detected Data		0	Number of Non-Detect Data	36
42204				Percent Non-Detects	100.00%
42205					
42206	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
42207	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
42208	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
42209					
42210	**The data set for variable PEST/PCB|UG/KG|4,4'-DDT (gi_sd_ne_2005) was not processed!**				
42211					
42212					
42213					
42214	**PEST/PCB|UG/KG|4,4'-DDT (gi_sd_ne_2009)**				
42215					
42216	**General Statistics**				
42217	Number of Valid Data		0	Number of Detected Data	0
42218	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42219	Number of Missing Values		20	Percent Non-Detects	NaN%
42220					
42221	**Warning: This data set only has 0 observations!**				
42222	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42223	**The data set for variable PEST/PCB|UG/KG|4,4'-DDT (gi_sd_ne_2009) was not processed!**				
42224					
42225	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
42226	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42227					
42228					
42229					
42230	PEST/PCB|UG/KG|4,4'-DDT (gi_sd_ne_2010)				
42231					
42232	General Statistics				
42233	Number of Valid Data		0	Number of Detected Data	0
42234	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42235	Number of Missing Values		16	Percent Non-Detects	NaN%
42236					
42237	Warning: This data set only has 0 observations!				
42238	Data set is too small to compute reliable and meaningful statistics and estimates!				
42239	The data set for variable PEST/PCB|UG/KG|4,4'-DDT (gi_sd_ne_2010) was not processed!				
42240					
42241	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42242	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42243					
42244					
42245					
42246	PEST/PCB|UG/KG|4,4'-DDT (gi_sd_nw_2005)				
42247					
42248	General Statistics				
42249	Number of Valid Data		18	Number of Detected Data	0
42250	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
42251				Percent Non-Detects	100.00%
42252					
42253	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
42254	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
42255	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
42256					
42257	The data set for variable PEST/PCB|UG/KG|4,4'-DDT (gi_sd_nw_2005) was not processed!				
42258					
42259					
42260					
42261	PEST/PCB|UG/KG|4,4'-DDT (gi_sd_nw_2009)				
42262					
42263	General Statistics				
42264	Number of Valid Data		0	Number of Detected Data	0
42265	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42266	Number of Missing Values		7	Percent Non-Detects	NaN%
42267					
42268	Warning: This data set only has 0 observations!				
42269	Data set is too small to compute reliable and meaningful statistics and estimates!				
42270	The data set for variable PEST/PCB|UG/KG|4,4'-DDT (gi_sd_nw_2009) was not processed!				
42271					
42272	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42273	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42274					
42275					
42276					
42277	PEST/PCB|UG/KG|4,4'-DDT (gi_sd_nw_2010)				
42278					

	A	B	C	D	E
42279	**General Statistics**				
42280	Number of Valid Data		0	Number of Detected Data	0
42281	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42282	Number of Missing Values		4	Percent Non-Detects	NaN%
42283					
42284	**Warning: This data set only has 0 observations!**				
42285	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42286	**The data set for variable PEST/PCB|UG/KG|4,4'-DDT (gi_sd_nw_2010) was not processed!**				
42287					
42288	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42289	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42290					
42291					
42292					
42293	**PEST/PCB|UG/KG|4,4'-DDT (gi_sd_ref_2009)**				
42294					
42295	**General Statistics**				
42296	Number of Valid Data		0	Number of Detected Data	0
42297	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42298	Number of Missing Values		6	Percent Non-Detects	NaN%
42299					
42300	**Warning: This data set only has 0 observations!**				
42301	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42302	**The data set for variable PEST/PCB|UG/KG|4,4'-DDT (gi_sd_ref_2009) was not processed!**				
42303					
42304	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42305	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42306					
42307					
42308					
42309	**PEST/PCB|UG/KG|4,4'-DDT (gi_sd_ref_2010)**				
42310					
42311	**General Statistics**				
42312	Number of Valid Data		0	Number of Detected Data	0
42313	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42314	Number of Missing Values		3	Percent Non-Detects	NaN%
42315					
42316	**Warning: This data set only has 0 observations!**				
42317	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42318	**The data set for variable PEST/PCB|UG/KG|4,4'-DDT (gi_sd_ref_2010) was not processed!**				
42319					
42320	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42321	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42322					
42323					
42324					
42325	**PEST/PCB|UG/KG|4,4'-DDT (gi_sd_s_2005)**				
42326					
42327	**General Statistics**				
42328	Number of Valid Data		8	Number of Detected Data	0
42329	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
42330				Percent Non-Detects	100.00%
42331					

	A	B	C	D	E
42332	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
42333	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
42334	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
42335					
42336	The data set for variable PEST/PCB|UG/KG|4,4'-DDT (gi_sd_s_2005) was not processed!				
42337					
42338					
42339					
42340	PEST/PCB|UG/KG|4,4'-DDT (gi_sd_s_2010)				
42341					
42342	General Statistics				
42343	Number of Valid Data		0	Number of Detected Data	0
42344	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42345	Number of Missing Values		2	Percent Non-Detects	NaN%
42346					
42347	Warning: This data set only has 0 observations!				
42348	Data set is too small to compute reliable and meaningful statistics and estimates!				
42349	The data set for variable PEST/PCB|UG/KG|4,4'-DDT (gi_sd_s_2010) was not processed!				
42350					
42351	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42352	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42353					
42354					
42355					
42356	PEST/PCB|UG/KG|4,4'-DDT (gi_sd_stillwater_2005)				
42357					
42358	General Statistics				
42359	Number of Valid Data		4	Number of Detected Data	1
42360	Number of Distinct Detected Data		1	Number of Non-Detect Data	3
42361				Percent Non-Detects	75.00%
42362					
42363	Warning: This data set only has 4 observations!				
42364	Data set is too small to compute reliable and meaningful statistics and estimates!				
42365	The data set for variable PEST/PCB|UG/KG|4,4'-DDT (gi_sd_stillwater_2005) was not processed!				
42366					
42367	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42368	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42369					
42370					
42371					
42372	PEST/PCB|UG/KG|4,4'-DDT (gi_sd_stillwater_2009)				
42373					
42374	General Statistics				
42375	Number of Valid Data		0	Number of Detected Data	0
42376	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42377	Number of Missing Values		60	Percent Non-Detects	NaN%
42378					
42379	Warning: This data set only has 0 observations!				
42380	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
42381	**The data set for variable PEST/PCB|UG/KG|4,4'-DDT (gi_sd_stillwater_2009) was not processed!**				
42382					
42383	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42384	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42385					
42386					
42387					
42388	**PEST/PCB|UG/KG|4,4'-DDT (gi_sd_stillwater_2010)**				
42389					
42390	**General Statistics**				
42391	Number of Valid Data		0	Number of Detected Data	0
42392	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42393	Number of Missing Values		11	Percent Non-Detects	NaN%
42394					
42395	**Warning: This data set only has 0 observations!**				
42396	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42397	**The data set for variable PEST/PCB|UG/KG|4,4'-DDT (gi_sd_stillwater_2010) was not processed!**				
42398					
42399	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42400	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42401					
42402					
42403					
42404	**PEST/PCB|UG/KG|ALDRIN (gi_sd_ne_2005)**				
42405					
42406	**General Statistics**				
42407	Number of Valid Data		36	Number of Detected Data	2
42408	Number of Distinct Detected Data		2	Number of Non-Detect Data	34
42409				Percent Non-Detects	94.44%
42410					
42411	**Raw Statistics**			**Log-transformed Statistics**	
42412	Minimum Detected		1.9	Minimum Detected	0.6418539
42413	Maximum Detected		2	Maximum Detected	0.6931472
42414	Mean of Detected		1.95	Mean of Detected	0.6675005
42415	SD of Detected		0.0707107	SD of Detected	0.0362698
42416	Minimum Non-Detect		1.7	Minimum Non-Detect	0.5306283
42417	Maximum Non-Detect		17	Maximum Non-Detect	2.8332133
42418					
42419	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
42420	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
42421	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
42422					
42423	**Warning: Data set has only 2 Distinct Detected Values.**				
42424	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
42425	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
42426					
42427	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
42428					
42429	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
42430	**Those methods will return a 'N/A' value on your output display!**				
42431					
42432	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				

	A	B	C	D	E
42433	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
42434	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
42435					
42436					
42437	**UCL Statistics**				
42438	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
42439	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
42440	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
42441	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
42442					
42443	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
42444	DL/2 Substitution Method			DL/2 Substitution Method	
42445	Mean		1.9361111	Mean	0.3167047
42446	SD		2.2092455	SD	0.7142382
42447	95% DL/2 (t) UCL		2.5582245	95% H-Stat (DL/2) UCL	2.279299
42448					
42449	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
42450	**MLE method failed to converge properly**			Mean in Log Scale	N/A
42451				SD in Log Scale	N/A
42452				Mean in Original Scale	N/A
42453				SD in Original Scale	N/A
42454				95% t UCL	N/A
42455				95% Percentile Bootstrap UCL	N/A
42456				95% BCA Bootstrap UCL	N/A
42457					
42458	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
42459	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
42460	Theta Star		N/A		
42461	nu star		N/A		
42462					
42463	A-D Test Statistic		N/A	**Nonparametric Statistics**	
42464	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
42465	K-S Test Statistic		N/A	Mean	1.9058824
42466	5% K-S Critical Value		N/A	SD	0.0235294
42467	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0080705
42468				95% KM (t) UCL	1.9195181
42469	**Assuming Gamma Distribution**			95% KM (z) UCL	1.9191572
42470	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	1.9696835
42471	Minimum		N/A	95% KM (bootstrap t) UCL	N/A
42472	Maximum		N/A	95% KM (BCA) UCL	2
42473	Mean		N/A	95% KM (Percentile Bootstrap) UCL	2
42474	Median		N/A	95% KM (Chebyshev) UCL	1.9410609
42475	SD		N/A	97.5% KM (Chebyshev) UCL	1.9562827
42476	k star		N/A	99% KM (Chebyshev) UCL	1.986183
42477	Theta star		N/A		
42478	Nu star		N/A	**Potential UCLs to Use**	
42479	AppChi2		N/A	95% KM (t) UCL	1.9195181
42480	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	2
42481	95% Adjusted Gamma UCL		N/A		
42482	**Note: DL/2 is not a recommended method.**				
42483					
42484	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
42485	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
42486	**For additional insight, the user may want to consult a statistician.**				
42487					
42488					
42489	**PEST/PCB|UG/KG|ALDRIN (gi_sd_ne_2009)**				
42490					
42491	**General Statistics**				
42492	Number of Valid Data		0	Number of Detected Data	0
42493	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42494	Number of Missing Values		20	Percent Non-Detects	NaN%
42495					
42496	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
42497	Data set is too small to compute reliable and meaningful statistics and estimates!				
42498	The data set for variable PEST/PCB|UG/KG|ALDRIN (gi_sd_ne_2009) was not processed!				
42499					
42500	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42501	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42502					
42503					
42504					
42505	PEST/PCB|UG/KG|ALDRIN (gi_sd_ne_2010)				
42506					
42507	General Statistics				
42508	Number of Valid Data		0	Number of Detected Data	0
42509	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42510	Number of Missing Values		16	Percent Non-Detects	NaN%
42511					
42512	Warning: This data set only has 0 observations!				
42513	Data set is too small to compute reliable and meaningful statistics and estimates!				
42514	The data set for variable PEST/PCB|UG/KG|ALDRIN (gi_sd_ne_2010) was not processed!				
42515					
42516	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42517	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42518					
42519					
42520					
42521	PEST/PCB|UG/KG|ALDRIN (gi_sd_nw_2005)				
42522					
42523	General Statistics				
42524	Number of Valid Data		18	Number of Detected Data	0
42525	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
42526				Percent Non-Detects	100.00%
42527					
42528	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
42529	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
42530	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
42531					
42532	The data set for variable PEST/PCB|UG/KG|ALDRIN (gi_sd_nw_2005) was not processed!				
42533					
42534					
42535					
42536	PEST/PCB|UG/KG|ALDRIN (gi_sd_nw_2009)				
42537					
42538	General Statistics				
42539	Number of Valid Data		0	Number of Detected Data	0
42540	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42541	Number of Missing Values		7	Percent Non-Detects	NaN%
42542					
42543	Warning: This data set only has 0 observations!				
42544	Data set is too small to compute reliable and meaningful statistics and estimates!				
42545	The data set for variable PEST/PCB|UG/KG|ALDRIN (gi_sd_nw_2009) was not processed!				
42546					

	A	B	C	D	E
42547	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42548	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42549					
42550					
42551					
42552	PEST/PCB|UG/KG|ALDRIN (gi_sd_nw_2010)				
42553					
42554	General Statistics				
42555	Number of Valid Data		0	Number of Detected Data	0
42556	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42557	Number of Missing Values		4	Percent Non-Detects	NaN%
42558					
42559	Warning: This data set only has 0 observations!				
42560	Data set is too small to compute reliable and meaningful statistics and estimates!				
42561	The data set for variable PEST/PCB|UG/KG|ALDRIN (gi_sd_nw_2010) was not processed!				
42562					
42563	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42564	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42565					
42566					
42567					
42568	PEST/PCB|UG/KG|ALDRIN (gi_sd_ref_2009)				
42569					
42570	General Statistics				
42571	Number of Valid Data		0	Number of Detected Data	0
42572	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42573	Number of Missing Values		6	Percent Non-Detects	NaN%
42574					
42575	Warning: This data set only has 0 observations!				
42576	Data set is too small to compute reliable and meaningful statistics and estimates!				
42577	The data set for variable PEST/PCB|UG/KG|ALDRIN (gi_sd_ref_2009) was not processed!				
42578					
42579	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42580	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42581					
42582					
42583					
42584	PEST/PCB|UG/KG|ALDRIN (gi_sd_ref_2010)				
42585					
42586	General Statistics				
42587	Number of Valid Data		0	Number of Detected Data	0
42588	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42589	Number of Missing Values		3	Percent Non-Detects	NaN%
42590					
42591	Warning: This data set only has 0 observations!				
42592	Data set is too small to compute reliable and meaningful statistics and estimates!				
42593	The data set for variable PEST/PCB|UG/KG|ALDRIN (gi_sd_ref_2010) was not processed!				
42594					
42595	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42596	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42597					

	A	B	C	D	E
42598					
42599					
42600	PEST/PCB|UG/KG|ALDRIN (gi_sd_s_2005)				
42601					
42602	General Statistics				
42603	Number of Valid Data		8	Number of Detected Data	0
42604	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
42605				Percent Non-Detects	100.00%
42606					
42607	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
42608	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
42609	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
42610					
42611	The data set for variable PEST/PCB|UG/KG|ALDRIN (gi_sd_s_2005) was not processed!				
42612					
42613					
42614					
42615	PEST/PCB|UG/KG|ALDRIN (gi_sd_s_2010)				
42616					
42617	General Statistics				
42618	Number of Valid Data		0	Number of Detected Data	0
42619	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42620	Number of Missing Values		2	Percent Non-Detects	NaN%
42621					
42622	Warning: This data set only has 0 observations!				
42623	Data set is too small to compute reliable and meaningful statistics and estimates!				
42624	The data set for variable PEST/PCB|UG/KG|ALDRIN (gi_sd_s_2010) was not processed!				
42625					
42626	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42627	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42628					
42629					
42630					
42631	PEST/PCB|UG/KG|ALDRIN (gi_sd_stillwater_2005)				
42632					
42633	General Statistics				
42634	Number of Valid Data		4	Number of Detected Data	0
42635	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
42636				Percent Non-Detects	100.00%
42637					
42638	Warning: This data set only has 4 observations!				
42639	Data set is too small to compute reliable and meaningful statistics and estimates!				
42640	The data set for variable PEST/PCB|UG/KG|ALDRIN (gi_sd_stillwater_2005) was not processed!				
42641					
42642	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42643	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42644					
42645					
42646					
42647	PEST/PCB|UG/KG|ALDRIN (gi_sd_stillwater_2009)				
42648					
42649	General Statistics				
42650	Number of Valid Data		0	Number of Detected Data	0

	A	B	C	D	E
42651	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42652	Number of Missing Values		60	Percent Non-Detects	NaN%
42653					
42654	**Warning: This data set only has 0 observations!**				
42655	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42656	**The data set for variable PEST/PCB|UG/KG|ALDRIN (gi_sd_stillwater_2009) was not processed!**				
42657					
42658	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42659	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42660					
42661					
42662					
42663	**PEST/PCB|UG/KG|ALDRIN (gi_sd_stillwater_2010)**				
42664					
42665	**General Statistics**				
42666	Number of Valid Data		0	Number of Detected Data	0
42667	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42668	Number of Missing Values		11	Percent Non-Detects	NaN%
42669					
42670	**Warning: This data set only has 0 observations!**				
42671	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42672	**The data set for variable PEST/PCB|UG/KG|ALDRIN (gi_sd_stillwater_2010) was not processed!**				
42673					
42674	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42675	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42676					
42677					
42678					
42679	**PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_ne_2005)**				
42680					
42681	**General Statistics**				
42682	Number of Valid Data		36	Number of Detected Data	1
42683	Number of Distinct Detected Data		1	Number of Non-Detect Data	35
42684				Percent Non-Detects	97.22%
42685					
42686	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**				
42687	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**				
42688					
42689	**The data set for variable PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_ne_2005) was not processed!**				
42690					
42691					
42692					
42693	**PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_ne_2009)**				
42694					
42695	**General Statistics**				
42696	Number of Valid Data		0	Number of Detected Data	0
42697	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42698	Number of Missing Values		20	Percent Non-Detects	NaN%
42699					
42700	**Warning: This data set only has 0 observations!**				
42701	**Data set is too small to compute reliable and meaningful statistics and estimates!**				

	A	B	C	D	E
42702	The data set for variable PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_ne_2009) was not processed!				
42703					
42704	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42705	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42706					
42707					
42708					
42709	PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_ne_2010)				
42710					
42711	General Statistics				
42712	Number of Valid Data		0	Number of Detected Data	0
42713	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42714	Number of Missing Values		16	Percent Non-Detects	NaN%
42715					
42716	Warning: This data set only has 0 observations!				
42717	Data set is too small to compute reliable and meaningful statistics and estimates!				
42718	The data set for variable PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_ne_2010) was not processed!				
42719					
42720	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42721	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42722					
42723					
42724					
42725	PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_nw_2005)				
42726					
42727	General Statistics				
42728	Number of Valid Data		18	Number of Detected Data	0
42729	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
42730				Percent Non-Detects	100.00%
42731					
42732	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
42733	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
42734	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
42735					
42736	The data set for variable PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_nw_2005) was not processed!				
42737					
42738					
42739					
42740	PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_nw_2009)				
42741					
42742	General Statistics				
42743	Number of Valid Data		0	Number of Detected Data	0
42744	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42745	Number of Missing Values		7	Percent Non-Detects	NaN%
42746					
42747	Warning: This data set only has 0 observations!				
42748	Data set is too small to compute reliable and meaningful statistics and estimates!				
42749	The data set for variable PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_nw_2009) was not processed!				
42750					

	A	B	C	D	E
42751	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42752	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42753					
42754					
42755					
42756	PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_nw_2010)				
42757					
42758	General Statistics				
42759	Number of Valid Data		0	Number of Detected Data	0
42760	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42761	Number of Missing Values		4	Percent Non-Detects	NaN%
42762					
42763	Warning: This data set only has 0 observations!				
42764	Data set is too small to compute reliable and meaningful statistics and estimates!				
42765	The data set for variable PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_nw_2010) was not processed!				
42766					
42767	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42768	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42769					
42770					
42771					
42772	PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_ref_2009)				
42773					
42774	General Statistics				
42775	Number of Valid Data		0	Number of Detected Data	0
42776	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42777	Number of Missing Values		6	Percent Non-Detects	NaN%
42778					
42779	Warning: This data set only has 0 observations!				
42780	Data set is too small to compute reliable and meaningful statistics and estimates!				
42781	The data set for variable PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_ref_2009) was not processed!				
42782					
42783	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42784	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42785					
42786					
42787					
42788	PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_ref_2010)				
42789					
42790	General Statistics				
42791	Number of Valid Data		0	Number of Detected Data	0
42792	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42793	Number of Missing Values		3	Percent Non-Detects	NaN%
42794					
42795	Warning: This data set only has 0 observations!				
42796	Data set is too small to compute reliable and meaningful statistics and estimates!				
42797	The data set for variable PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_ref_2010) was not processed!				
42798					
42799	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
42800	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42801					
42802					
42803					
42804	**PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_s_2005)**				
42805					
42806	**General Statistics**				
42807	Number of Valid Data		8	Number of Detected Data	0
42808	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
42809				Percent Non-Detects	100.00%
42810					
42811	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
42812	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
42813	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
42814					
42815	**The data set for variable PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_s_2005) was not processed!**				
42816					
42817					
42818					
42819	**PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_s_2010)**				
42820					
42821	**General Statistics**				
42822	Number of Valid Data		0	Number of Detected Data	0
42823	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42824	Number of Missing Values		2	Percent Non-Detects	NaN%
42825					
42826	**Warning: This data set only has 0 observations!**				
42827	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42828	**The data set for variable PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_s_2010) was not processed!**				
42829					
42830	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42831	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42832					
42833					
42834					
42835	**PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_stillwater_2005)**				
42836					
42837	**General Statistics**				
42838	Number of Valid Data		4	Number of Detected Data	0
42839	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
42840				Percent Non-Detects	100.00%
42841					
42842	**Warning: This data set only has 4 observations!**				
42843	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42844	**The data set for variable PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_stillwater_2005) was not processed!**				
42845					
42846	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42847	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42848					
42849					
42850					

	A	B	C	D	E
42851	**PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_stillwater_2009)**				
42852					
42853	**General Statistics**				
42854	Number of Valid Data		0	Number of Detected Data	0
42855	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42856	Number of Missing Values		60	Percent Non-Detects	NaN%
42857					
42858	**Warning: This data set only has 0 observations!**				
42859	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42860	**The data set for variable PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_stillwater_2009) was not processed!**				
42861					
42862	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42863	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42864					
42865					
42866					
42867	**PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_stillwater_2010)**				
42868					
42869	**General Statistics**				
42870	Number of Valid Data		0	Number of Detected Data	0
42871	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42872	Number of Missing Values		11	Percent Non-Detects	NaN%
42873					
42874	**Warning: This data set only has 0 observations!**				
42875	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
42876	**The data set for variable PEST/PCB|UG/KG|ALPHA-BHC (gi_sd_stillwater_2010) was not processed!**				
42877					
42878	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
42879	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
42880					
42881					
42882					
42883	**PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_ne_2005)**				
42884					
42885	**General Statistics**				
42886	Number of Valid Data		36	Number of Detected Data	2
42887	Number of Distinct Detected Data		2	Number of Non-Detect Data	34
42888				Percent Non-Detects	94.44%
42889					
42890	**Raw Statistics**			**Log-transformed Statistics**	
42891	Minimum Detected		39	Minimum Detected	3.6635616
42892	Maximum Detected		93.2	Maximum Detected	4.5347477
42893	Mean of Detected		66.1	Mean of Detected	4.0991547
42894	SD of Detected		38.325188	SD of Detected	0.6160216
42895	Minimum Non-Detect		33	Minimum Non-Detect	3.4965076
42896	Maximum Non-Detect		330	Maximum Non-Detect	5.7990927
42897					
42898	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
42899	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
42900	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
42901					
42902	**Warning: Data set has only 2 Distinct Detected Values.**				
42903	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
42904	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				

	A	B	C	D	E
42905					
42906	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
42907					
42908	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
42909	**Those methods will return a 'N/A' value on your output display!**				
42910					
42911	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
42912	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
42913	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
42914					
42915					
42916	**UCL Statistics**				
42917	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
42918	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
42919	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
42920	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
42921					
42922	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
42923	DL/2 Substitution Method			DL/2 Substitution Method	
42924	Mean		37.783333	Mean	3.2373499
42925	SD		47.418306	SD	0.7415971
42926	95% DL/2 (t) UCL		51.136111	95% H-Stat (DL/2) UCL	43.698279
42927					
42928	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
42929	**MLE method failed to converge properly**			Mean in Log Scale	N/A
42930				SD in Log Scale	N/A
42931				Mean in Original Scale	N/A
42932				SD in Original Scale	N/A
42933				95% t UCL	N/A
42934				95% Percentile Bootstrap UCL	N/A
42935				95% BCA Bootstrap UCL	N/A
42936					
42937	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
42938	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
42939	Theta Star		N/A		
42940	nu star		N/A		
42941					
42942	A-D Test Statistic		N/A	**Nonparametric Statistics**	
42943	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
42944	K-S Test Statistic		N/A	Mean	40.69375
42945	5% K-S Critical Value		N/A	SD	9.4304009
42946	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	2.3576002
42947				95% KM (t) UCL	44.677086
42948	**Assuming Gamma Distribution**			95% KM (z) UCL	44.571657
42949	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	75.998133
42950	Minimum		N/A	95% KM (bootstrap t) UCL	40.894327
42951	Maximum		N/A	95% KM (BCA) UCL	93.2
42952	Mean		N/A	95% KM (Percentile Bootstrap) UCL	N/A
42953	Median		N/A	95% KM (Chebyshev) UCL	50.970291
42954	SD		N/A	97.5% KM (Chebyshev) UCL	55.416959
42955	k star		N/A	99% KM (Chebyshev) UCL	64.151576
42956	Theta star		N/A		
42957	Nu star		N/A	**Potential UCLs to Use**	
42958	AppChi2		N/A	95% KM (t) UCL	44.677086
42959	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	N/A
42960	95% Adjusted Gamma UCL		N/A		
42961	**Note: DL/2 is not a recommended method.**				
42962					
42963	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
42964	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				

	A	B	C	D	E
42965	For additional insight, the user may want to consult a statistician.				
42966					
42967					
42968	PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_ne_2009)				
42969					
42970	General Statistics				
42971	Number of Valid Data		20	Number of Detected Data	1
42972	Number of Distinct Detected Data		1	Number of Non-Detect Data	19
42973				Percent Non-Detects	95.00%
42974					
42975	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
42976	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
42977					
42978	The data set for variable PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_ne_2009) was not processed!				
42979					
42980					
42981					
42982	PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_ne_2010)				
42983					
42984	General Statistics				
42985	Number of Valid Data		0	Number of Detected Data	0
42986	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
42987	Number of Missing Values		16	Percent Non-Detects	NaN%
42988					
42989	Warning: This data set only has 0 observations!				
42990	Data set is too small to compute reliable and meaningful statistics and estimates!				
42991	The data set for variable PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_ne_2010) was not processed!				
42992					
42993	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
42994	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
42995					
42996					
42997					
42998	PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_nw_2005)				
42999					
43000	General Statistics				
43001	Number of Valid Data		18	Number of Detected Data	0
43002	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
43003				Percent Non-Detects	100.00%
43004					
43005	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
43006	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
43007	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
43008					
43009	The data set for variable PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_nw_2005) was not processed!				
43010					
43011					
43012					
43013	PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_nw_2009)				
43014					
43015	General Statistics				

	A	B	C	D	E
43016	Number of Valid Data		7	Number of Detected Data	0
43017	Number of Distinct Detected Data		0	Number of Non-Detect Data	7
43018				Percent Non-Detects	100.00%
43019					
43020	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
43021	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
43022	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
43023					
43024	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_nw_2009) was not processed!**				
43025					
43026					
43027					
43028	**PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_nw_2010)**				
43029					
43030	**General Statistics**				
43031	Number of Valid Data		0	Number of Detected Data	0
43032	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43033	Number of Missing Values		4	Percent Non-Detects	NaN%
43034					
43035	**Warning: This data set only has 0 observations!**				
43036	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
43037	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_nw_2010) was not processed!**				
43038					
43039	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
43040	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
43041					
43042					
43043					
43044	**PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_ref_2009)**				
43045					
43046	**General Statistics**				
43047	Number of Valid Data		6	Number of Detected Data	0
43048	Number of Distinct Detected Data		0	Number of Non-Detect Data	6
43049				Percent Non-Detects	100.00%
43050					
43051	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
43052	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
43053	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
43054					
43055	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_ref_2009) was not processed!**				
43056					
43057					
43058					
43059	**PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_ref_2010)**				
43060					
43061	**General Statistics**				
43062	Number of Valid Data		0	Number of Detected Data	0
43063	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43064	Number of Missing Values		3	Percent Non-Detects	NaN%
43065					
43066	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
43067	Data set is too small to compute reliable and meaningful statistics and estimates!				
43068	The data set for variable PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_ref_2010) was not processed!				
43069					
43070	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
43071	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
43072					
43073					
43074					
43075	PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_s_2005)				
43076					
43077	General Statistics				
43078	Number of Valid Data		8	Number of Detected Data	0
43079	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
43080				Percent Non-Detects	100.00%
43081					
43082	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
43083	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
43084	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
43085					
43086	The data set for variable PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_s_2005) was not processed!				
43087					
43088					
43089					
43090	PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_s_2010)				
43091					
43092	General Statistics				
43093	Number of Valid Data		0	Number of Detected Data	0
43094	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43095	Number of Missing Values		2	Percent Non-Detects	NaN%
43096					
43097	Warning: This data set only has 0 observations!				
43098	Data set is too small to compute reliable and meaningful statistics and estimates!				
43099	The data set for variable PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_s_2010) was not processed!				
43100					
43101	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
43102	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
43103					
43104					
43105					
43106	PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_stillwater_2005)				
43107					
43108	General Statistics				
43109	Number of Valid Data		4	Number of Detected Data	0
43110	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
43111				Percent Non-Detects	100.00%
43112					
43113	Warning: This data set only has 4 observations!				
43114	Data set is too small to compute reliable and meaningful statistics and estimates!				
43115	The data set for variable PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_stillwater_2005) was not processed!				

	A	B	C	D	E
43116					
43117	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
43118	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
43119					
43120					
43121					
43122	PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_stillwater_2009)				
43123					
43124	General Statistics				
43125	Number of Valid Data		60	Number of Detected Data	1
43126	Number of Distinct Detected Data		1	Number of Non-Detect Data	59
43127				Percent Non-Detects	98.33%
43128					
43129	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
43130	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
43131					
43132	The data set for variable PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_stillwater_2009) was not processed!				
43133					
43134					
43135					
43136	PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_stillwater_2010)				
43137					
43138	General Statistics				
43139	Number of Valid Data		0	Number of Detected Data	0
43140	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43141	Number of Missing Values		11	Percent Non-Detects	NaN%
43142					
43143	Warning: This data set only has 0 observations!				
43144	Data set is too small to compute reliable and meaningful statistics and estimates!				
43145	The data set for variable PEST/PCB|UG/KG|AROCLOR-1248 (gi_sd_stillwater_2010) was not processed!				
43146					
43147	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
43148	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
43149					
43150					
43151					
43152	PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_ne_2005)				
43153					
43154	General Statistics				
43155	Number of Valid Data		36	Number of Detected Data	0
43156	Number of Distinct Detected Data		0	Number of Non-Detect Data	36
43157				Percent Non-Detects	100.00%
43158					
43159	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
43160	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
43161	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
43162					
43163	The data set for variable PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_ne_2005) was not processed!				
43164					

	A	B	C	D	E
43165					
43166					
43167	**PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_ne_2009)**				
43168					
43169	**General Statistics**				
43170	Number of Valid Data		20	Number of Detected Data	0
43171	Number of Distinct Detected Data		0	Number of Non-Detect Data	20
43172				Percent Non-Detects	100.00%
43173					
43174	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
43175	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
43176	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
43177					
43178	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_ne_2009) was not processed!**				
43179					
43180					
43181					
43182	**PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_ne_2010)**				
43183					
43184	**General Statistics**				
43185	Number of Valid Data		0	Number of Detected Data	0
43186	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43187	Number of Missing Values		16	Percent Non-Detects	NaN%
43188					
43189	**Warning: This data set only has 0 observations!**				
43190	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
43191	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_ne_2010) was not processed!**				
43192					
43193	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
43194	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
43195					
43196					
43197					
43198	**PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_nw_2005)**				
43199					
43200	**General Statistics**				
43201	Number of Valid Data		18	Number of Detected Data	0
43202	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
43203				Percent Non-Detects	100.00%
43204					
43205	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
43206	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
43207	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
43208					
43209	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_nw_2005) was not processed!**				
43210					
43211					
43212					
43213	**PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_nw_2009)**				
43214					
43215	**General Statistics**				

	A	B	C	D	E
43216	Number of Valid Data		7	Number of Detected Data	0
43217	Number of Distinct Detected Data		0	Number of Non-Detect Data	7
43218				Percent Non-Detects	100.00%
43219					
43220	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
43221	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
43222	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
43223					
43224	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_nw_2009) was not processed!**				
43225					
43226					
43227					
43228	**PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_nw_2010)**				
43229					
43230	**General Statistics**				
43231	Number of Valid Data		0	Number of Detected Data	0
43232	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43233	Number of Missing Values		4	Percent Non-Detects	NaN%
43234					
43235	**Warning: This data set only has 0 observations!**				
43236	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
43237	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_nw_2010) was not processed!**				
43238					
43239	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
43240	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
43241					
43242					
43243					
43244	**PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_ref_2009)**				
43245					
43246	**General Statistics**				
43247	Number of Valid Data		6	Number of Detected Data	0
43248	Number of Distinct Detected Data		0	Number of Non-Detect Data	6
43249				Percent Non-Detects	100.00%
43250					
43251	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
43252	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
43253	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
43254					
43255	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_ref_2009) was not processed!**				
43256					
43257					
43258					
43259	**PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_ref_2010)**				
43260					
43261	**General Statistics**				
43262	Number of Valid Data		0	Number of Detected Data	0
43263	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43264	Number of Missing Values		3	Percent Non-Detects	NaN%
43265					
43266	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
43267	Data set is too small to compute reliable and meaningful statistics and estimates!				
43268	The data set for variable PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_ref_2010) was not processed!				
43269					
43270	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
43271	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
43272					
43273					
43274					
43275	PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_s_2005)				
43276					
43277	General Statistics				
43278	Number of Valid Data		8	Number of Detected Data	0
43279	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
43280				Percent Non-Detects	100.00%
43281					
43282	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
43283	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
43284	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
43285					
43286	The data set for variable PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_s_2005) was not processed!				
43287					
43288					
43289					
43290	PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_s_2010)				
43291					
43292	General Statistics				
43293	Number of Valid Data		0	Number of Detected Data	0
43294	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43295	Number of Missing Values		2	Percent Non-Detects	NaN%
43296					
43297	Warning: This data set only has 0 observations!				
43298	Data set is too small to compute reliable and meaningful statistics and estimates!				
43299	The data set for variable PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_s_2010) was not processed!				
43300					
43301	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
43302	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
43303					
43304					
43305					
43306	PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_stillwater_2005)				
43307					
43308	General Statistics				
43309	Number of Valid Data		4	Number of Detected Data	0
43310	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
43311				Percent Non-Detects	100.00%
43312					
43313	Warning: This data set only has 4 observations!				
43314	Data set is too small to compute reliable and meaningful statistics and estimates!				
43315	The data set for variable PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_stillwater_2005) was not processed!				

	A	B	C	D	E
43316					
43317	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
43318	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
43319					
43320					
43321					
43322	**PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_stillwater_2009)**				
43323					
43324	**General Statistics**				
43325	Number of Valid Data		60	Number of Detected Data	9
43326	Number of Distinct Detected Data		9	Number of Non-Detect Data	51
43327				Percent Non-Detects	85.00%
43328					
43329	**Raw Statistics**			**Log-transformed Statistics**	
43330	Minimum Detected		35	Minimum Detected	3.5553481
43331	Maximum Detected		320	Maximum Detected	5.768321
43332	Mean of Detected		90.444444	Mean of Detected	4.2329906
43333	SD of Detected		90.222102	SD of Detected	0.6958387
43334	Minimum Non-Detect		33	Minimum Non-Detect	3.4965076
43335	Maximum Non-Detect		9900	Maximum Non-Detect	9.20029
43336					
43337	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	60
43338	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
43339	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
43340					
43341	**Warning: There are only 9 Detected Values in this data**				
43342	**Note: It should be noted that even though bootstrap may be performed on this data set**				
43343	**the resulting calculations may not be reliable enough to draw conclusions**				
43344					
43345	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
43346					
43347					
43348	**UCL Statistics**				
43349	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
43350	Shapiro Wilk Test Statistic		0.6388223	Shapiro Wilk Test Statistic	0.8581347
43351	5% Shapiro Wilk Critical Value		0.829	5% Shapiro Wilk Critical Value	0.829
43352	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
43353					
43354	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
43355	DL/2 Substitution Method			DL/2 Substitution Method	
43356	Mean		212.91667	Mean	3.8913394
43357	SD		688.32802	SD	1.4347913
43358	95% DL/2 (t) UCL		361.41461	95% H-Stat (DL/2) UCL	245.45243
43359					
43360	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
43361	**MLE method failed to converge properly**			Mean in Log Scale	2.2436368
43362				SD in Log Scale	1.2521852
43363				Mean in Original Scale	21.826352
43364				SD in Original Scale	44.78888
43365				95% t UCL	31.488979
43366				95% Percentile Bootstrap UCL	32.247115
43367				95% BCA Bootstrap UCL	37.059938
43368					
43369	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
43370	k star (bias corrected)		1.4010812	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
43371	Theta Star		64.553323		
43372	nu star		25.219461		
43373					
43374	A-D Test Statistic		0.8296641	**Nonparametric Statistics**	
43375	5% A-D Critical Value		0.7298571	Kaplan-Meier (KM) Method	
43376	K-S Test Statistic		0.7298571	Mean	46.349417
43377	5% K-S Critical Value		0.2825085	SD	43.746778

	A	B	C	D	E
43378	**Data follow Appr. Gamma Distribution at 5% Significance Level**			SE of Mean	6.8865049
43379				95% KM (t) UCL	57.857407
43380	**Assuming Gamma Distribution**			95% KM (z) UCL	57.676709
43381	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	55.455492
43382	Minimum		1E-12	95% KM (bootstrap t) UCL	79.88616
43383	Maximum		581.90694	95% KM (BCA) UCL	66.162203
43384	Mean		289.97602	95% KM (Percentile Bootstrap) UCL	62.932381
43385	Median		316.86412	95% KM (Chebyshev) UCL	76.366996
43386	SD		165.221	97.5% KM (Chebyshev) UCL	89.355626
43387	k star		0.7324195	99% KM (Chebyshev) UCL	114.86928
43388	Theta star		395.91524		
43389	Nu star		87.890335	**Potential UCLs to Use**	
43390	AppChi2		67.27722	95% KM (t) UCL	57.857407
43391	95% Gamma Approximate UCL		378.82198		
43392	95% Adjusted Gamma UCL		381.33369		
43393	**Note: DL/2 is not a recommended method.**				
43394					
43395	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
43396	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
43397	**For additional insight, the user may want to consult a statistician.**				
43398					
43399					
43400	**PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_stillwater_2010)**				
43401					
43402	**General Statistics**				
43403	Number of Valid Data		0	Number of Detected Data	0
43404	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43405	Number of Missing Values		11	Percent Non-Detects	NaN%
43406					
43407	**Warning: This data set only has 0 observations!**				
43408	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
43409	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1254 (gi_sd_stillwater_2010) was not processed!**				
43410					
43411	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
43412	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
43413					
43414					
43415					
43416	**PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_ne_2005)**				
43417					
43418	**General Statistics**				
43419	Number of Valid Data		36	Number of Detected Data	22
43420	Number of Distinct Detected Data		20	Number of Non-Detect Data	14
43421				Percent Non-Detects	38.89%
43422					
43423	**Raw Statistics**			**Log-transformed Statistics**	
43424	Minimum Detected		41	Minimum Detected	3.7135721
43425	Maximum Detected		3800	Maximum Detected	8.2427563
43426	Mean of Detected		834.06364	Mean of Detected	5.8466638
43427	SD of Detected		1206.3866	SD of Detected	1.3604491
43428	Minimum Non-Detect		33	Minimum Non-Detect	3.4965076
43429	Maximum Non-Detect		52	Maximum Non-Detect	3.9512437
43430					
43431	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	17
43432	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	19
43433	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	47.22%
43434					
43435	**UCL Statistics**				
43436	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
43437	Shapiro Wilk Test Statistic		0.6466604	Shapiro Wilk Test Statistic	0.9435381
43438	5% Shapiro Wilk Critical Value		0.911	5% Shapiro Wilk Critical Value	0.911

	A	B	C	D	E
43439	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
43440					
43441	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
43442	DL/2 Substitution Method			DL/2 Substitution Method	
43443	Mean		517.58056	Mean	4.7390429
43444	SD		1017.4075	SD	1.7610334
43445	95% DL/2 (t) UCL		804.07785	95% H-Stat (DL/2) UCL	1469.9583
43446					
43447	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
43448	**MLE yields a negative mean**			Mean in Log Scale	4.5710429
43449				SD in Log Scale	1.9703547
43450				Mean in Original Scale	515.64215
43451				SD in Original Scale	1018.3954
43452				95% t UCL	802.41762
43453				95% Percentile Bootstrap UCL	816.30848
43454				95% BCA Bootstrap UCL	875.58117
43455					
43456	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
43457	k star (bias corrected)		0.6250123	**Data appear Lognormal at 5% Significance Level**	
43458	Theta Star		1334.4755		
43459	nu star		27.500543		
43460					
43461	A-D Test Statistic		1.1609602	**Nonparametric Statistics**	
43462	5% A-D Critical Value		0.7881955	Kaplan-Meier (KM) Method	
43463	K-S Test Statistic		0.7881955	Mean	525.69199
43464	5% K-S Critical Value		0.1934633	SD	999.19833
43465	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	170.45204
43466				95% KM (t) UCL	813.68306
43467	**Assuming Gamma Distribution**			95% KM (z) UCL	806.06064
43468	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	809.68987
43469	Minimum		1E-12	95% KM (bootstrap t) UCL	990.43629
43470	Maximum		3800	95% KM (BCA) UCL	835.73333
43471	Mean		593.10019	95% KM (Percentile Bootstrap) UCL	833.24444
43472	Median		255	95% KM (Chebyshev) UCL	1268.6752
43473	SD		994.27368	97.5% KM (Chebyshev) UCL	1590.1646
43474	k star		0.13567	99% KM (Chebyshev) UCL	2221.6684
43475	Theta star		4371.6371		
43476	Nu star		9.7682429	**Potential UCLs to Use**	
43477	AppChi2		3.797434	97.5% KM (Chebyshev) UCL	1590.1646
43478	95% Gamma Approximate UCL		1525.6478		
43479	95% Adjusted Gamma UCL		1596.3397		
43480	**Note: DL/2 is not a recommended method.**				
43481					
43482	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
43483	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
43484	**For additional insight, the user may want to consult a statistician.**				
43485					
43486					
43487	**PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_ne_2009)**				
43488					
43489	**General Statistics**				
43490	Number of Valid Data		20	Number of Detected Data	10
43491	Number of Distinct Detected Data		9	Number of Non-Detect Data	10
43492				Percent Non-Detects	50.00%
43493					
43494	**Raw Statistics**			**Log-transformed Statistics**	
43495	Minimum Detected		42	Minimum Detected	3.7376696
43496	Maximum Detected		890	Maximum Detected	6.7912215
43497	Mean of Detected		276.7	Mean of Detected	5.3181797
43498	SD of Detected		243.93991	SD of Detected	0.8396445
43499	Minimum Non-Detect		33	Minimum Non-Detect	3.4965076
43500	Maximum Non-Detect		33	Maximum Non-Detect	3.4965076
43501					
43502					
43503	**UCL Statistics**				
43504	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
43505	Shapiro Wilk Test Statistic		0.7894611	Shapiro Wilk Test Statistic	0.9754181

	A	B	C	D	E
43506	5% Shapiro Wilk Critical Value		0.842	5% Shapiro Wilk Critical Value	0.842
43507	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
43508					
43509	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
43510	DL/2 Substitution Method			DL/2 Substitution Method	
43511	Mean		146.6	Mean	4.0607701
43512	SD		214.48596	SD	1.413592
43513	95% DL/2 (t) UCL		229.53011	95% H-Stat (DL/2) UCL	456.5746
43514					
43515	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
43516	Mean		14.813082	Mean in Log Scale	4.1243421
43517	SD		342.60451	SD in Log Scale	1.462107
43518	95% MLE (t) UCL		147.2797	Mean in Original Scale	150.32788
43519	95% MLE (Tiku) UCL		178.3751	SD in Original Scale	212.40347
43520				95% t UCL	232.4528
43521				95% Percentile Bootstrap UCL	231.20009
43522				95% BCA Bootstrap UCL	262.05779
43523					
43524	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
43525	k star (bias corrected)		1.3191563	**Data appear Gamma Distributed at 5% Significance Level**	
43526	Theta Star		209.75528		
43527	nu star		26.383126		
43528					
43529	A-D Test Statistic		0.2953374	**Nonparametric Statistics**	
43530	5% A-D Critical Value		0.7371183	Kaplan-Meier (KM) Method	
43531	K-S Test Statistic		0.7371183	Mean	159.35
43532	5% K-S Critical Value		0.2703621	SD	201.36789
43533	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	47.462867
43534				95% KM (t) UCL	241.4196
43535	**Assuming Gamma Distribution**			95% KM (z) UCL	237.41947
43536	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	230.18231
43537	Minimum		1E-12	95% KM (bootstrap t) UCL	285.01267
43538	Maximum		890	95% KM (BCA) UCL	292
43539	Mean		279.01173	95% KM (Percentile Bootstrap) UCL	260.25
43540	Median		222.55922	95% KM (Chebyshev) UCL	366.23584
43541	SD		214.42209	97.5% KM (Chebyshev) UCL	455.75551
43542	k star		0.3374506	99% KM (Chebyshev) UCL	631.59956
43543	Theta star		826.82254		
43544	Nu star		13.498022	**Potential UCLs to Use**	
43545	AppChi2		6.2291449	95% KM (t) UCL	241.4196
43546	95% Gamma Approximate UCL		604.59447		
43547	95% Adjusted Gamma UCL		644.69593		
43548	**Note: DL/2 is not a recommended method.**				
43549					
43550	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
43551	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
43552	**For additional insight, the user may want to consult a statistician.**				
43553					
43554					
43555	**PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_ne_2010)**				
43556					
43557	**General Statistics**				
43558	Number of Valid Data		0	Number of Detected Data	0
43559	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43560	Number of Missing Values		16	Percent Non-Detects	NaN%
43561					
43562	**Warning: This data set only has 0 observations!**				
43563	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
43564	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_ne_2010) was not processed!**				
43565					
43566	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
43567	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
43568					
43569					
43570					
43571	PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_nw_2005)				
43572					
43573	General Statistics				
43574	Number of Valid Data		18	Number of Detected Data	2
43575	Number of Distinct Detected Data		2	Number of Non-Detect Data	16
43576				Percent Non-Detects	88.89%
43577					
43578	Raw Statistics			Log-transformed Statistics	
43579	Minimum Detected		33	Minimum Detected	3.4965076
43580	Maximum Detected		46	Maximum Detected	3.8286414
43581	Mean of Detected		39.5	Mean of Detected	3.6625745
43582	SD of Detected		9.1923882	SD of Detected	0.2348541
43583	Minimum Non-Detect		33	Minimum Non-Detect	3.4965076
43584	Maximum Non-Detect		33	Maximum Non-Detect	3.4965076
43585					
43586					
43587	Warning: Data set has only 2 Distinct Detected Values.				
43588	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.				
43589	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
43590					
43591	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.				
43592					
43593	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.				
43594	Those methods will return a 'N/A' value on your output display!				
43595					
43596	It is necessary to have 4 or more Distinct Values for bootstrap methods.				
43597	However, results obtained using 4 to 9 distinct values may not be reliable.				
43598	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.				
43599					
43600					
43601	UCL Statistics				
43602	Normal Distribution Test with Detected Values Only			Lognormal Distribution Test with Detected Values Only	
43603	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
43604	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
43605	Data not Normal at 5% Significance Level			Data not Lognormal at 5% Significance Level	
43606					
43607	Assuming Normal Distribution			Assuming Lognormal Distribution	
43608	DL/2 Substitution Method			DL/2 Substitution Method	
43609	Mean		19.055556	Mean	2.8988286
43610	SD		7.7647183	SD	0.2836318
43611	95% DL/2 (t) UCL		22.239317	95% H-Stat (DL/2) UCL	21.44994
43612					
43613	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
43614	MLE method failed to converge properly			Mean in Log Scale	N/A
43615				SD in Log Scale	N/A
43616				Mean in Original Scale	N/A
43617				SD in Original Scale	N/A
43618				95% t UCL	N/A
43619				95% Percentile Bootstrap UCL	N/A
43620				95% BCA Bootstrap UCL	N/A
43621					
43622	Gamma Distribution Test with Detected Values Only			Data Distribution Test with Detected Values Only	
43623	k star (bias corrected)		N/A	Data do not follow a Discernable Distribution (0.05)	

	A	B	C	D	E
43624	Theta Star		N/A		
43625	nu star		N/A		
43626					
43627	A-D Test Statistic		N/A	**Nonparametric Statistics**	
43628	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
43629	K-S Test Statistic		N/A	Mean	33.722222
43630	5% K-S Critical Value		N/A	SD	2.9777985
43631	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.9925995
43632				95% KM (t) UCL	35.448955
43633	**Assuming Gamma Distribution**			95% KM (z) UCL	35.354903
43634	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	N/A
43635	Minimum		N/A	95% KM (bootstrap t) UCL	N/A
43636	Maximum		N/A	95% KM (BCA) UCL	N/A
43637	Mean		N/A	95% KM (Percentile Bootstrap) UCL	N/A
43638	Median		N/A	95% KM (Chebyshev) UCL	38.048863
43639	SD		N/A	97.5% KM (Chebyshev) UCL	39.921004
43640	k star		N/A	99% KM (Chebyshev) UCL	43.598463
43641	Theta star		N/A		
43642	Nu star		N/A	**Potential UCLs to Use**	
43643	AppChi2		N/A	95% KM (t) UCL	35.448955
43644	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	N/A
43645	95% Adjusted Gamma UCL		N/A		
43646	**Note: DL/2 is not a recommended method.**				
43647					
43648	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
43649	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
43650	**For additional insight, the user may want to consult a statistician.**				
43651					
43652					
43653	**PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_nw_2009)**				
43654					
43655	**General Statistics**				
43656	Number of Valid Data		7	Number of Detected Data	0
43657	Number of Distinct Detected Data		0	Number of Non-Detect Data	7
43658				Percent Non-Detects	100.00%
43659					
43660	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
43661	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
43662	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
43663					
43664	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_nw_2009) was not processed!**				
43665					
43666					
43667					
43668	**PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_nw_2010)**				
43669					
43670	**General Statistics**				
43671	Number of Valid Data		0	Number of Detected Data	0
43672	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43673	Number of Missing Values		4	Percent Non-Detects	NaN%
43674					
43675	**Warning: This data set only has 0 observations!**				
43676	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
43677	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_nw_2010) was not processed!**				
43678					
43679	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
43680	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
43681					
43682					
43683					
43684	PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_ref_2009)				
43685					
43686	General Statistics				
43687	Number of Valid Data		6	Number of Detected Data	0
43688	Number of Distinct Detected Data		0	Number of Non-Detect Data	6
43689				Percent Non-Detects	100.00%
43690					
43691	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
43692	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
43693	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
43694					
43695	The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_ref_2009) was not processed!				
43696					
43697					
43698					
43699	PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_ref_2010)				
43700					
43701	General Statistics				
43702	Number of Valid Data		0	Number of Detected Data	0
43703	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43704	Number of Missing Values		3	Percent Non-Detects	NaN%
43705					
43706	Warning: This data set only has 0 observations!				
43707	Data set is too small to compute reliable and meaningful statistics and estimates!				
43708	The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_ref_2010) was not processed!				
43709					
43710	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
43711	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
43712					
43713					
43714					
43715	PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_s_2005)				
43716					
43717	General Statistics				
43718	Number of Valid Data		8	Number of Detected Data	3
43719	Number of Distinct Detected Data		3	Number of Non-Detect Data	5
43720				Percent Non-Detects	62.50%
43721					
43722	Raw Statistics			Log-transformed Statistics	
43723	Minimum Detected		85	Minimum Detected	4.4426513
43724	Maximum Detected		230	Maximum Detected	5.4380793
43725	Mean of Detected		145	Mean of Detected	4.8894074
43726	SD of Detected		75.66373	SD of Detected	0.5054793
43727	Minimum Non-Detect		33	Minimum Non-Detect	3.4965076
43728	Maximum Non-Detect		33	Maximum Non-Detect	3.4965076
43729					
43730					
43731	Warning: There are only 3 Distinct Detected Values in this data set				
43732	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.				
43733	Those methods will return a 'N/A' value on your output display!				

	A	B	C	D	E
43734					
43735	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
43736	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
43737	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
43738					
43739					
43740	**UCL Statistics**				
43741	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
43742	Shapiro Wilk Test Statistic		0.9181047	Shapiro Wilk Test Statistic	0.9694929
43743	5% Shapiro Wilk Critical Value		0.767	5% Shapiro Wilk Critical Value	0.767
43744	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
43745					
43746	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
43747	DL/2 Substitution Method			DL/2 Substitution Method	
43748	Mean		64.6875	Mean	3.585628
43749	SD		77.837256	SD	1.1129276
43750	95% DL/2 (t) UCL		116.82559	95% H-Stat (DL/2) UCL	319.03546
43751					
43752	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
43753	Mean		149.83482	Mean in Log Scale	3.6407505
43754	SD		61.779177	SD in Log Scale	1.1912512
43755	95% MLE (t) UCL		191.21665	Mean in Original Scale	67.816999
43756	95% MLE (Tiku) UCL		216.5377	SD in Original Scale	76.299279
43757				95% t UCL	118.9249
43758				95% Percentile Bootstrap UCL	111.1677
43759				95% BCA Bootstrap UCL	120.60882
43760					
43761	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
43762	k star (bias corrected)		N/A	**Data appear Normal at 5% Significance Level**	
43763	Theta Star		N/A		
43764	nu star		N/A		
43765					
43766	A-D Test Statistic		N/A	**Nonparametric Statistics**	
43767	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
43768	K-S Test Statistic		N/A	Mean	107.5
43769	5% K-S Critical Value		N/A	SD	47.69696
43770	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	20.65339
43771				95% KM (t) UCL	146.62947
43772	**Assuming Gamma Distribution**			95% KM (z) UCL	141.4718
43773	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	143.83947
43774	Minimum		N/A	95% KM (bootstrap t) UCL	155.88154
43775	Maximum		N/A	95% KM (BCA) UCL	230
43776	Mean		N/A	95% KM (Percentile Bootstrap) UCL	230
43777	Median		N/A	95% KM (Chebyshev) UCL	197.52604
43778	SD		N/A	97.5% KM (Chebyshev) UCL	236.48038
43779	k star		N/A	99% KM (Chebyshev) UCL	312.99863
43780	Theta star		N/A		
43781	Nu star		N/A	**Potential UCLs to Use**	
43782	AppChi2		N/A	95% KM (t) UCL	146.62947
43783	95% Gamma Approximate UCL		N/A	95% KM (Percentile Bootstrap) UCL	230
43784	95% Adjusted Gamma UCL		N/A		
43785	**Note: DL/2 is not a recommended method.**				
43786					
43787	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
43788	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
43789	**For additional insight, the user may want to consult a statistician.**				
43790					
43791					
43792	**PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_s_2010)**				
43793					
43794	**General Statistics**				
43795	Number of Valid Data		0	Number of Detected Data	0
43796	Number of Distinct Detected Data		0	Number of Non-Detect Data	0

	A	B	C	D	E
43797	Number of Missing Values		2	Percent Non-Detects	NaN%
43798					
43799	**Warning: This data set only has 0 observations!**				
43800	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
43801	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_s_2010) was not processed!**				
43802					
43803	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
43804	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
43805					
43806					
43807					
43808	**PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_stillwater_2005)**				
43809					
43810	**General Statistics**				
43811	Number of Valid Observations		4	Number of Distinct Observations	3
43812					
43813					
43814	**Warning: This data set only has 4 observations!**				
43815	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
43816	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_stillwater_2005) was not processed!**				
43817					
43818	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
43819	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
43820					
43821					
43822					
43823	**PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_stillwater_2009)**				
43824					
43825	**General Statistics**				
43826	Number of Valid Data		60	Number of Detected Data	35
43827	Number of Distinct Detected Data		34	Number of Non-Detect Data	25
43828				Percent Non-Detects	41.67%
43829					
43830	**Raw Statistics**			**Log-transformed Statistics**	
43831	Minimum Detected		34	Minimum Detected	3.5263605
43832	Maximum Detected		55000	Maximum Detected	10.915088
43833	Mean of Detected		3666.3086	Mean of Detected	6.4818996
43834	SD of Detected		9692.2675	SD of Detected	1.959848
43835	Minimum Non-Detect		33	Minimum Non-Detect	3.4965076
43836	Maximum Non-Detect		33	Maximum Non-Detect	3.4965076
43837					
43838					
43839	**UCL Statistics**				
43840	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
43841	Shapiro Wilk Test Statistic		0.3948237	Shapiro Wilk Test Statistic	0.95333
43842	5% Shapiro Wilk Critical Value		0.934	5% Shapiro Wilk Critical Value	0.934
43843	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
43844					
43845	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
43846	DL/2 Substitution Method			DL/2 Substitution Method	
43847	Mean		2145.555	Mean	4.9491749
43848	SD		7578.0993	SD	2.3575724
43849	95% DL/2 (t) UCL		3780.4328	95% H-Stat (DL/2) UCL	9276.2195
43850					
43851	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
43852	**MLE yields a negative mean**			Mean in Log Scale	4.3863931
43853				SD in Log Scale	3.0932999
43854				Mean in Original Scale	2142.8648

	A	B	C	D	E
43855				SD in Original Scale	7578.8716
43856				95% t UCL	3777.9092
43857				95% Percentile Bootstrap UCL	3897.336
43858				95% BCA Bootstrap UCL	4763.3566
43859					
43860	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
43861	k star (bias corrected)		0.3701213	**Data appear Lognormal at 5% Significance Level**	
43862	Theta Star		9905.696		
43863	nu star		25.908488		
43864					
43865	A-D Test Statistic		1.4111574	**Nonparametric Statistics**	
43866	5% A-D Critical Value		0.8378847	Kaplan-Meier (KM) Method	
43867	K-S Test Statistic		0.8378847	Mean	2152.8467
43868	5% K-S Critical Value		0.1595647	SD	7512.622
43869	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	984.03484
43870				95% KM (t) UCL	3797.2604
43871	**Assuming Gamma Distribution**			95% KM (z) UCL	3771.4399
43872	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	3786.885
43873	Minimum		1E-12	95% KM (bootstrap t) UCL	8215.8559
43874	Maximum		55000	95% KM (BCA) UCL	4134.2433
43875	Mean		2563.1533	95% KM (Percentile Bootstrap) UCL	3922.8167
43876	Median		315	95% KM (Chebyshev) UCL	6442.1551
43877	SD		7553.1708	97.5% KM (Chebyshev) UCL	8298.1423
43878	k star		0.0918919	99% KM (Chebyshev) UCL	11943.87
43879	Theta star		27893.13		
43880	Nu star		11.027031	**Potential UCLs to Use**	
43881	AppChi2		4.5933888	97.5% KM (Chebyshev) UCL	8298.1423
43882	95% Gamma Approximate UCL		6153.1849		
43883	95% Adjusted Gamma UCL		6293.281		
43884	**Note: DL/2 is not a recommended method.**				
43885					
43886	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
43887	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
43888	**For additional insight, the user may want to consult a statistician.**				
43889					
43890					
43891	**PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_stillwater_2010)**				
43892					
43893	**General Statistics**				
43894	Number of Valid Data		0	Number of Detected Data	0
43895	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43896	Number of Missing Values		11	Percent Non-Detects	NaN%
43897					
43898	**Warning: This data set only has 0 observations!**				
43899	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
43900	**The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_sd_stillwater_2010) was not processed!**				
43901					
43902	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
43903	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
43904					
43905					
43906					
43907	**PEST/PCB|UG/KG|BETA-BHC (gi_sd_ne_2005)**				
43908					
43909	**General Statistics**				
43910	Number of Valid Data		36	Number of Detected Data	9
43911	Number of Distinct Detected Data		8	Number of Non-Detect Data	27
43912				Percent Non-Detects	75.00%
43913					
43914	**Raw Statistics**			**Log-transformed Statistics**	
43915	Minimum Detected		2.1	Minimum Detected	0.7419373
43916	Maximum Detected		7.62	Maximum Detected	2.0307764

	A	B	C	D	E
43917	Mean of Detected		4.2577778	Mean of Detected	1.3716284
43918	SD of Detected		1.7957017	SD of Detected	0.4168602
43919	Minimum Non-Detect		1.7	Minimum Non-Detect	0.5306283
43920	Maximum Non-Detect		17	Maximum Non-Detect	2.8332133
43921					
43922	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
43923	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
43924	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
43925					
43926	**Warning: There are only 9 Detected Values in this data**				
43927	**Note: It should be noted that even though bootstrap may be performed on this data set**				
43928	**the resulting calculations may not be reliable enough to draw conclusions**				
43929					
43930	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
43931					
43932					
43933	**UCL Statistics**				
43934	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
43935	Shapiro Wilk Test Statistic		0.9221388	Shapiro Wilk Test Statistic	0.9648729
43936	5% Shapiro Wilk Critical Value		0.829	5% Shapiro Wilk Critical Value	0.829
43937	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
43938					
43939	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
43940	DL/2 Substitution Method			DL/2 Substitution Method	
43941	Mean		2.5956944	Mean	0.5792288
43942	SD		2.4942812	SD	0.8337314
43943	95% DL/2 (t) UCL		3.2980726	95% H-Stat (DL/2) UCL	3.4469442
43944					
43945	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
43946	**MLE method failed to converge properly**			Mean in Log Scale	0.3079398
43947				SD in Log Scale	0.7741724
43948				Mean in Original Scale	1.8597336
43949				SD in Original Scale	1.6993383
43950				95% t UCL	2.3382594
43951				95% Percentile Bootstrap UCL	2.3361649
43952				95% BCA Bootstrap UCL	2.4427979
43953					
43954	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
43955	k star (bias corrected)		4.5045555	**Data appear Normal at 5% Significance Level**	
43956	Theta Star		0.945216		
43957	nu star		81.081999		
43958					
43959	A-D Test Statistic		0.2607151	**Nonparametric Statistics**	
43960	5% A-D Critical Value		0.7224276	Kaplan-Meier (KM) Method	
43961	K-S Test Statistic		0.7224276	Mean	2.7264516
43962	5% K-S Critical Value		0.2796688	SD	1.3384477
43963	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.2549745
43964				95% KM (t) UCL	3.1572496
43965	**Assuming Gamma Distribution**			95% KM (z) UCL	3.1458474
43966	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	3.1292598
43967	Minimum		1.3281621	95% KM (bootstrap t) UCL	3.2314466
43968	Maximum		7.62	95% KM (BCA) UCL	4.174
43969	Mean		4.6940055	95% KM (Percentile Bootstrap) UCL	3.9064516
43970	Median		4.8004678	95% KM (Chebyshev) UCL	3.8378599
43971	SD		1.4760521	97.5% KM (Chebyshev) UCL	4.3187671
43972	k star		7.8670745	99% KM (Chebyshev) UCL	5.2634163
43973	Theta star		0.5966647		
43974	Nu star		566.42937	**Potential UCLs to Use**	
43975	AppChi2		512.22706	95% KM (t) UCL	3.1572496
43976	95% Gamma Approximate UCL		5.1907108	95% KM (Percentile Bootstrap) UCL	3.9064516
43977	95% Adjusted Gamma UCL		5.2144529		
43978	**Note: DL/2 is not a recommended method.**				
43979					
43980	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				

	A	B	C	D	E
43981	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
43982	**For additional insight, the user may want to consult a statistician.**				
43983					
43984					
43985	**PEST/PCB|UG/KG|BETA-BHC (gi_sd_ne_2009)**				
43986					
43987	**General Statistics**				
43988	Number of Valid Data		0	Number of Detected Data	0
43989	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
43990	Number of Missing Values		20	Percent Non-Detects	NaN%
43991					
43992	**Warning: This data set only has 0 observations!**				
43993	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
43994	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_sd_ne_2009) was not processed!**				
43995					
43996	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
43997	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
43998					
43999					
44000					
44001	**PEST/PCB|UG/KG|BETA-BHC (gi_sd_ne_2010)**				
44002					
44003	**General Statistics**				
44004	Number of Valid Data		0	Number of Detected Data	0
44005	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44006	Number of Missing Values		16	Percent Non-Detects	NaN%
44007					
44008	**Warning: This data set only has 0 observations!**				
44009	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44010	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_sd_ne_2010) was not processed!**				
44011					
44012	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44013	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44014					
44015					
44016					
44017	**PEST/PCB|UG/KG|BETA-BHC (gi_sd_nw_2005)**				
44018					
44019	**General Statistics**				
44020	Number of Valid Data		18	Number of Detected Data	7
44021	Number of Distinct Detected Data		7	Number of Non-Detect Data	11
44022				Percent Non-Detects	61.11%
44023					
44024	**Raw Statistics**			**Log-transformed Statistics**	
44025	Minimum Detected		1.7	Minimum Detected	0.5306283
44026	Maximum Detected		6.8	Maximum Detected	1.9169226
44027	Mean of Detected		3.3071429	Mean of Detected	1.0986082
44028	SD of Detected		1.7321539	SD of Detected	0.4576061
44029	Minimum Non-Detect		1.7	Minimum Non-Detect	0.5306283
44030	Maximum Non-Detect		14	Maximum Non-Detect	2.6390573
44031					
44032	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	18
44033	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
44034	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
44035					
44036	**Warning: There are only 7 Detected Values in this data**				
44037	**Note: It should be noted that even though bootstrap may be performed on this data set**				

	A	B	C	D	E
44038	**the resulting calculations may not be reliable enough to draw conclusions**				
44039					
44040	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
44041					
44042					
44043	**UCL Statistics**				
44044	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
44045	Shapiro Wilk Test Statistic		0.8305757	Shapiro Wilk Test Statistic	0.9402537
44046	5% Shapiro Wilk Critical Value		0.803	5% Shapiro Wilk Critical Value	0.803
44047	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
44048					
44049	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
44050	DL/2 Substitution Method			DL/2 Substitution Method	
44051	Mean		2.1944444	Mean	0.4888133
44052	SD		1.9703604	SD	0.7495514
44053	95% DL/2 (t) UCL		3.0023498	95% H-Stat (DL/2) UCL	3.2789469
44054					
44055	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
44056	**MLE method failed to converge properly**			Mean in Log Scale	0.3503129
44057				SD in Log Scale	0.7352284
44058				Mean in Original Scale	1.8593521
44059				SD in Original Scale	1.5905394
44060				95% t UCL	2.5115197
44061				95% Percentile Bootstrap UCL	2.4849775
44062				95% BCA Bootstrap UCL	2.5982275
44063					
44064	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
44065	k star (bias corrected)		3.1183645	**Data appear Normal at 5% Significance Level**	
44066	Theta Star		1.0605376		
44067	nu star		43.657103		
44068					
44069	A-D Test Statistic		0.3952745	**Nonparametric Statistics**	
44070	5% A-D Critical Value		0.7097798	Kaplan-Meier (KM) Method	
44071	K-S Test Statistic		0.7097798	Mean	2.3714932
44072	5% K-S Critical Value		0.3129473	SD	1.2956513
44073	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.3400187
44074				95% KM (t) UCL	2.962992
44075	**Assuming Gamma Distribution**			95% KM (z) UCL	2.9307742
44076	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	2.9038427
44077	Minimum		0.9940355	95% KM (bootstrap t) UCL	3.3813313
44078	Maximum		6.8	95% KM (BCA) UCL	3.4333333
44079	Mean		3.5368296	95% KM (Percentile Bootstrap) UCL	3.1957265
44080	Median		3.6828158	95% KM (Chebyshev) UCL	3.8536003
44081	SD		1.4289672	97.5% KM (Chebyshev) UCL	4.4949092
44082	k star		4.7933692	99% KM (Chebyshev) UCL	5.7546364
44083	Theta star		0.7378588		
44084	Nu star		172.56129	**Potential UCLs to Use**	
44085	AppChi2		143.18259	95% KM (t) UCL	2.962992
44086	95% Gamma Approximate UCL		4.2625284	95% KM (Percentile Bootstrap) UCL	3.1957265
44087	95% Adjusted Gamma UCL		4.3403496		
44088	**Note: DL/2 is not a recommended method.**				
44089					
44090	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
44091	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
44092	**For additional insight, the user may want to consult a statistician.**				
44093					
44094					
44095	**PEST/PCB|UG/KG|BETA-BHC (gi_sd_nw_2009)**				
44096					
44097	**General Statistics**				
44098	Number of Valid Data		0	Number of Detected Data	0
44099	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44100	Number of Missing Values		7	Percent Non-Detects	NaN%
44101					

	A	B	C	D	E
44102	Warning: This data set only has 0 observations!				
44103	Data set is too small to compute reliable and meaningful statistics and estimates!				
44104	The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_sd_nw_2009) was not processed!				
44105					
44106	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44107	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44108					
44109					
44110					
44111	PEST/PCB|UG/KG|BETA-BHC (gi_sd_nw_2010)				
44112					
44113	General Statistics				
44114	Number of Valid Data		0	Number of Detected Data	0
44115	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44116	Number of Missing Values		4	Percent Non-Detects	NaN%
44117					
44118	Warning: This data set only has 0 observations!				
44119	Data set is too small to compute reliable and meaningful statistics and estimates!				
44120	The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_sd_nw_2010) was not processed!				
44121					
44122	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44123	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44124					
44125					
44126					
44127	PEST/PCB|UG/KG|BETA-BHC (gi_sd_ref_2009)				
44128					
44129	General Statistics				
44130	Number of Valid Data		0	Number of Detected Data	0
44131	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44132	Number of Missing Values		6	Percent Non-Detects	NaN%
44133					
44134	Warning: This data set only has 0 observations!				
44135	Data set is too small to compute reliable and meaningful statistics and estimates!				
44136	The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_sd_ref_2009) was not processed!				
44137					
44138	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44139	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44140					
44141					
44142					
44143	PEST/PCB|UG/KG|BETA-BHC (gi_sd_ref_2010)				
44144					
44145	General Statistics				
44146	Number of Valid Data		0	Number of Detected Data	0
44147	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44148	Number of Missing Values		3	Percent Non-Detects	NaN%
44149					
44150	Warning: This data set only has 0 observations!				
44151	Data set is too small to compute reliable and meaningful statistics and estimates!				
44152	The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_sd_ref_2010) was not processed!				

	A	B	C	D	E
44153					
44154	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44155	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44156					
44157					
44158					
44159	**PEST/PCB|UG/KG|BETA-BHC (gi_sd_s_2005)**				
44160					
44161	**General Statistics**				
44162	Number of Valid Data		8	Number of Detected Data	3
44163	Number of Distinct Detected Data		3	Number of Non-Detect Data	5
44164				Percent Non-Detects	62.50%
44165					
44166	**Raw Statistics**			**Log-transformed Statistics**	
44167	Minimum Detected		1.8	Minimum Detected	0.5877867
44168	Maximum Detected		7.4	Maximum Detected	2.00148
44169	Mean of Detected		4.0666667	Mean of Detected	1.229293
44170	SD of Detected		2.9484459	SD of Detected	0.7158494
44171	Minimum Non-Detect		1.7	Minimum Non-Detect	0.5306283
44172	Maximum Non-Detect		17	Maximum Non-Detect	2.8332133
44173					
44174	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	8
44175	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
44176	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
44177					
44178	**Warning: There are only 3 Distinct Detected Values in this data set**				
44179	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
44180	**Those methods will return a 'N/A' value on your output display!**				
44181					
44182	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
44183	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
44184	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
44185					
44186					
44187	**UCL Statistics**				
44188	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
44189	Shapiro Wilk Test Statistic		0.9018232	Shapiro Wilk Test Statistic	0.974987
44190	5% Shapiro Wilk Critical Value		0.767	5% Shapiro Wilk Critical Value	0.767
44191	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
44192					
44193	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
44194	DL/2 Substitution Method			DL/2 Substitution Method	
44195	Mean		3.0375	Mean	0.6736473
44196	SD		3.1329755	SD	0.9702326
44197	95% DL/2 (t) UCL		5.1360757	95% H-Stat (DL/2) UCL	10.739012
44198					
44199	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
44200	**MLE method failed to converge properly**			Mean in Log Scale	0.0864576
44201				SD in Log Scale	1.1143266
44202				Mean in Original Scale	1.9137092
44203				SD in Original Scale	2.3914541
44204				95% t UCL	3.5155881
44205				95% Percentile Bootstrap UCL	3.4153616
44206				95% BCA Bootstrap UCL	3.7724236
44207					
44208	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
44209	k star (bias corrected)		N/A	**Data appear Normal at 5% Significance Level**	
44210	Theta Star		N/A		
44211	nu star		N/A		
44212					
44213	A-D Test Statistic		N/A	**Nonparametric Statistics**	

	A	B	C	D	E
44214	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
44215	K-S Test Statistic		N/A	Mean	2.7714286
44216	5% K-S Critical Value		N/A	SD	1.9344355
44217	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.8954696
44218				95% KM (t) UCL	4.4679662
44219	**Assuming Gamma Distribution**			95% KM (z) UCL	4.2443451
44220	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	4.2754459
44221	Minimum		N/A	95% KM (bootstrap t) UCL	5.6986717
44222	Maximum		N/A	95% KM (BCA) UCL	N/A
44223	Mean		N/A	95% KM (Percentile Bootstrap) UCL	7.4
44224	Median		N/A	95% KM (Chebyshev) UCL	6.6746903
44225	SD		N/A	97.5% KM (Chebyshev) UCL	8.3636347
44226	k star		N/A	99% KM (Chebyshev) UCL	11.681239
44227	Theta star		N/A		
44228	Nu star		N/A	**Potential UCLs to Use**	
44229	AppChi2		N/A	95% KM (t) UCL	4.4679662
44230	95% Gamma Approximate UCL		N/A	95% KM (Percentile Bootstrap) UCL	7.4
44231	95% Adjusted Gamma UCL		N/A		
44232	**Note: DL/2 is not a recommended method.**				
44233					
44234	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
44235	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
44236	**For additional insight, the user may want to consult a statistician.**				
44237					
44238					
44239	**PEST/PCB|UG/KG|BETA-BHC (gi_sd_s_2010)**				
44240					
44241	**General Statistics**				
44242	Number of Valid Data		0	Number of Detected Data	0
44243	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44244	Number of Missing Values		2	Percent Non-Detects	NaN%
44245					
44246	**Warning: This data set only has 0 observations!**				
44247	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44248	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_sd_s_2010) was not processed!**				
44249					
44250	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44251	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44252					
44253					
44254					
44255	**PEST/PCB|UG/KG|BETA-BHC (gi_sd_stillwater_2005)**				
44256					
44257	**General Statistics**				
44258	Number of Valid Data		4	Number of Detected Data	2
44259	Number of Distinct Detected Data		2	Number of Non-Detect Data	2
44260				Percent Non-Detects	50.00%
44261					
44262	**Warning: This data set only has 4 observations!**				
44263	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44264	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_sd_stillwater_2005) was not processed!**				
44265					
44266	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44267	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44268					
44269					

	A	B	C	D	E
44270					
44271	**PEST/PCB|UG/KG|BETA-BHC (gi_sd_stillwater_2009)**				
44272					
44273	**General Statistics**				
44274	Number of Valid Data		0	Number of Detected Data	0
44275	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44276	Number of Missing Values		60	Percent Non-Detects	NaN%
44277					
44278	**Warning: This data set only has 0 observations!**				
44279	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44280	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_sd_stillwater_2009) was not processed!**				
44281					
44282	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44283	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44284					
44285					
44286					
44287	**PEST/PCB|UG/KG|BETA-BHC (gi_sd_stillwater_2010)**				
44288					
44289	**General Statistics**				
44290	Number of Valid Data		0	Number of Detected Data	0
44291	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44292	Number of Missing Values		11	Percent Non-Detects	NaN%
44293					
44294	**Warning: This data set only has 0 observations!**				
44295	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44296	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_sd_stillwater_2010) was not processed!**				
44297					
44298	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44299	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44300					
44301					
44302					
44303	**PEST/PCB|UG/KG|DELTA-BHC (gi_sd_ne_2005)**				
44304					
44305	**General Statistics**				
44306	Number of Valid Data		36	Number of Detected Data	2
44307	Number of Distinct Detected Data		2	Number of Non-Detect Data	34
44308				Percent Non-Detects	94.44%
44309					
44310	**Raw Statistics**			**Log-transformed Statistics**	
44311	Minimum Detected		0.915	Minimum Detected	-0.088831
44312	Maximum Detected		1.6	Maximum Detected	0.4700036
44313	Mean of Detected		1.2575	Mean of Detected	0.1905862
44314	SD of Detected		0.4843681	SD of Detected	0.3951559
44315	Minimum Non-Detect		1.7	Minimum Non-Detect	0.5306283
44316	Maximum Non-Detect		17	Maximum Non-Detect	2.8332133
44317					
44318	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
44319	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
44320	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
44321					
44322	**Warning: Data set has only 2 Distinct Detected Values.**				
44323	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				

	A	B	C	D	E
44324	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
44325					
44326	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
44327					
44328	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
44329	**Those methods will return a 'N/A' value on your output display!**				
44330					
44331	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
44332	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
44333	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
44334					
44335					
44336	**UCL Statistics**				
44337	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
44338	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
44339	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
44340	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
44341					
44342	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
44343	DL/2 Substitution Method			DL/2 Substitution Method	
44344	Mean		1.8976389	Mean	0.2902095
44345	SD		2.2163276	SD	0.7125413
44346	95% DL/2 (t) UCL		2.5217466	95% H-Stat (DL/2) UCL	2.2152685
44347					
44348	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
44349	**MLE method failed to converge properly**			Mean in Log Scale	N/A
44350				SD in Log Scale	N/A
44351				Mean in Original Scale	N/A
44352				SD in Original Scale	N/A
44353				95% t UCL	N/A
44354				95% Percentile Bootstrap UCL	N/A
44355				95% BCA Bootstrap UCL	N/A
44356					
44357	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
44358	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
44359	Theta Star		N/A		
44360	nu star		N/A		
44361					
44362	A-D Test Statistic		N/A	**Nonparametric Statistics**	
44363	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
44364	K-S Test Statistic		N/A	Mean	1.2575
44365	5% K-S Critical Value		N/A	SD	0.3425
44366	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.3425
44367				95% KM (t) UCL	1.8361786
44368	**Assuming Gamma Distribution**			95% KM (z) UCL	1.8208624
44369	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	2.0644287
44370	Minimum		N/A	95% KM (bootstrap t) UCL	1.9425
44371	Maximum		N/A	95% KM (BCA) UCL	1.6
44372	Mean		N/A	95% KM (Percentile Bootstrap) UCL	N/A
44373	Median		N/A	95% KM (Chebyshev) UCL	2.7504229
44374	SD		N/A	97.5% KM (Chebyshev) UCL	3.3964118
44375	k star		N/A	99% KM (Chebyshev) UCL	4.665332
44376	Theta star		N/A		
44377	Nu star		N/A	**Potential UCLs to Use**	
44378	AppChi2		N/A	95% KM (t) UCL	1.8361786
44379	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	N/A
44380	95% Adjusted Gamma UCL		N/A		
44381	**Warning: Recommended UCL exceeds the maximum observation**				
44382	**Note: DL/2 is not a recommended method.**				
44383					

	A	B	C	D	E
44384	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
44385	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).				
44386	For additional insight, the user may want to consult a statistician.				
44387					
44388					
44389	PEST/PCB|UG/KG|DELTA-BHC (gi_sd_ne_2009)				
44390					
44391	General Statistics				
44392	Number of Valid Data		0	Number of Detected Data	0
44393	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44394	Number of Missing Values		20	Percent Non-Detects	NaN%
44395					
44396	Warning: This data set only has 0 observations!				
44397	Data set is too small to compute reliable and meaningful statistics and estimates!				
44398	The data set for variable PEST/PCB|UG/KG|DELTA-BHC (gi_sd_ne_2009) was not processed!				
44399					
44400	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44401	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44402					
44403					
44404					
44405	PEST/PCB|UG/KG|DELTA-BHC (gi_sd_ne_2010)				
44406					
44407	General Statistics				
44408	Number of Valid Data		0	Number of Detected Data	0
44409	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44410	Number of Missing Values		16	Percent Non-Detects	NaN%
44411					
44412	Warning: This data set only has 0 observations!				
44413	Data set is too small to compute reliable and meaningful statistics and estimates!				
44414	The data set for variable PEST/PCB|UG/KG|DELTA-BHC (gi_sd_ne_2010) was not processed!				
44415					
44416	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44417	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44418					
44419					
44420					
44421	PEST/PCB|UG/KG|DELTA-BHC (gi_sd_nw_2005)				
44422					
44423	General Statistics				
44424	Number of Valid Data		18	Number of Detected Data	0
44425	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
44426				Percent Non-Detects	100.00%
44427					
44428	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
44429	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
44430	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
44431					

	A	B	C	D	E
44432	The data set for variable PEST/PCB|UG/KG|DELTA-BHC (gi_sd_nw_2005) was not processed!				
44433					
44434					
44435					
44436	PEST/PCB|UG/KG|DELTA-BHC (gi_sd_nw_2009)				
44437					
44438	General Statistics				
44439	Number of Valid Data		0	Number of Detected Data	0
44440	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44441	Number of Missing Values		7	Percent Non-Detects	NaN%
44442					
44443	Warning: This data set only has 0 observations!				
44444	Data set is too small to compute reliable and meaningful statistics and estimates!				
44445	The data set for variable PEST/PCB|UG/KG|DELTA-BHC (gi_sd_nw_2009) was not processed!				
44446					
44447	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44448	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44449					
44450					
44451					
44452	PEST/PCB|UG/KG|DELTA-BHC (gi_sd_nw_2010)				
44453					
44454	General Statistics				
44455	Number of Valid Data		0	Number of Detected Data	0
44456	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44457	Number of Missing Values		4	Percent Non-Detects	NaN%
44458					
44459	Warning: This data set only has 0 observations!				
44460	Data set is too small to compute reliable and meaningful statistics and estimates!				
44461	The data set for variable PEST/PCB|UG/KG|DELTA-BHC (gi_sd_nw_2010) was not processed!				
44462					
44463	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44464	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44465					
44466					
44467					
44468	PEST/PCB|UG/KG|DELTA-BHC (gi_sd_ref_2009)				
44469					
44470	General Statistics				
44471	Number of Valid Data		0	Number of Detected Data	0
44472	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44473	Number of Missing Values		6	Percent Non-Detects	NaN%
44474					
44475	Warning: This data set only has 0 observations!				
44476	Data set is too small to compute reliable and meaningful statistics and estimates!				
44477	The data set for variable PEST/PCB|UG/KG|DELTA-BHC (gi_sd_ref_2009) was not processed!				
44478					
44479	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44480	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44481					

	A	B	C	D	E
44482					
44483					
44484	PEST/PCB|UG/KG|DELTA-BHC (gi_sd_ref_2010)				
44485					
44486	General Statistics				
44487	Number of Valid Data		0	Number of Detected Data	0
44488	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44489	Number of Missing Values		3	Percent Non-Detects	NaN%
44490					
44491	Warning: This data set only has 0 observations!				
44492	Data set is too small to compute reliable and meaningful statistics and estimates!				
44493	The data set for variable PEST/PCB|UG/KG|DELTA-BHC (gi_sd_ref_2010) was not processed!				
44494					
44495	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44496	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44497					
44498					
44499					
44500	PEST/PCB|UG/KG|DELTA-BHC (gi_sd_s_2005)				
44501					
44502	General Statistics				
44503	Number of Valid Data		8	Number of Detected Data	0
44504	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
44505				Percent Non-Detects	100.00%
44506					
44507	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
44508	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
44509	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
44510					
44511	The data set for variable PEST/PCB|UG/KG|DELTA-BHC (gi_sd_s_2005) was not processed!				
44512					
44513					
44514					
44515	PEST/PCB|UG/KG|DELTA-BHC (gi_sd_s_2010)				
44516					
44517	General Statistics				
44518	Number of Valid Data		0	Number of Detected Data	0
44519	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44520	Number of Missing Values		2	Percent Non-Detects	NaN%
44521					
44522	Warning: This data set only has 0 observations!				
44523	Data set is too small to compute reliable and meaningful statistics and estimates!				
44524	The data set for variable PEST/PCB|UG/KG|DELTA-BHC (gi_sd_s_2010) was not processed!				
44525					
44526	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44527	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44528					
44529					
44530					
44531	PEST/PCB|UG/KG|DELTA-BHC (gi_sd_stillwater_2005)				
44532					
44533	General Statistics				
44534	Number of Valid Data		4	Number of Detected Data	0

	A	B	C	D	E
44535	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
44536				Percent Non-Detects	100.00%
44537					
44538	**Warning: This data set only has 4 observations!**				
44539	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44540	**The data set for variable PEST/PCB|UG/KG|DELTA-BHC (gi_sd_stillwater_2005) was not processed!**				
44541					
44542	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44543	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44544					
44545					
44546					
44547	**PEST/PCB|UG/KG|DELTA-BHC (gi_sd_stillwater_2009)**				
44548					
44549	**General Statistics**				
44550	Number of Valid Data		0	Number of Detected Data	0
44551	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44552	Number of Missing Values		60	Percent Non-Detects	NaN%
44553					
44554	**Warning: This data set only has 0 observations!**				
44555	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44556	**The data set for variable PEST/PCB|UG/KG|DELTA-BHC (gi_sd_stillwater_2009) was not processed!**				
44557					
44558	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44559	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44560					
44561					
44562					
44563	**PEST/PCB|UG/KG|DELTA-BHC (gi_sd_stillwater_2010)**				
44564					
44565	**General Statistics**				
44566	Number of Valid Data		0	Number of Detected Data	0
44567	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44568	Number of Missing Values		11	Percent Non-Detects	NaN%
44569					
44570	**Warning: This data set only has 0 observations!**				
44571	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44572	**The data set for variable PEST/PCB|UG/KG|DELTA-BHC (gi_sd_stillwater_2010) was not processed!**				
44573					
44574	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44575	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44576					
44577					
44578					
44579	**PEST/PCB|UG/KG|DIELDRIN (gi_sd_ne_2005)**				
44580					
44581	**General Statistics**				
44582	Number of Valid Data		36	Number of Detected Data	1
44583	Number of Distinct Detected Data		1	Number of Non-Detect Data	35
44584				Percent Non-Detects	97.22%
44585					

	A	B	C	D	E
44586	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
44587	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
44588					
44589	The data set for variable PEST/PCB|UG/KG|DIELDRIN (gi_sd_ne_2005) was not processed!				
44590					
44591					
44592					
44593	PEST/PCB|UG/KG|DIELDRIN (gi_sd_ne_2009)				
44594					
44595	General Statistics				
44596	Number of Valid Data		0	Number of Detected Data	0
44597	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44598	Number of Missing Values		20	Percent Non-Detects	NaN%
44599					
44600	Warning: This data set only has 0 observations!				
44601	Data set is too small to compute reliable and meaningful statistics and estimates!				
44602	The data set for variable PEST/PCB|UG/KG|DIELDRIN (gi_sd_ne_2009) was not processed!				
44603					
44604	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44605	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44606					
44607					
44608					
44609	PEST/PCB|UG/KG|DIELDRIN (gi_sd_ne_2010)				
44610					
44611	General Statistics				
44612	Number of Valid Data		0	Number of Detected Data	0
44613	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44614	Number of Missing Values		16	Percent Non-Detects	NaN%
44615					
44616	Warning: This data set only has 0 observations!				
44617	Data set is too small to compute reliable and meaningful statistics and estimates!				
44618	The data set for variable PEST/PCB|UG/KG|DIELDRIN (gi_sd_ne_2010) was not processed!				
44619					
44620	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44621	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44622					
44623					
44624					
44625	PEST/PCB|UG/KG|DIELDRIN (gi_sd_nw_2005)				
44626					
44627	General Statistics				
44628	Number of Valid Data		18	Number of Detected Data	0
44629	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
44630				Percent Non-Detects	100.00%
44631					
44632	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
44633	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
44634	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
44635					

	A	B	C	D	E
44636	**The data set for variable PEST/PCB|UG/KG|DIELDRIN (gi_sd_nw_2005) was not processed!**				
44637					
44638					
44639					
44640	**PEST/PCB|UG/KG|DIELDRIN (gi_sd_nw_2009)**				
44641					
44642	**General Statistics**				
44643	Number of Valid Data		0	Number of Detected Data	0
44644	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44645	Number of Missing Values		7	Percent Non-Detects	NaN%
44646					
44647	**Warning: This data set only has 0 observations!**				
44648	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44649	**The data set for variable PEST/PCB|UG/KG|DIELDRIN (gi_sd_nw_2009) was not processed!**				
44650					
44651	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44652	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44653					
44654					
44655					
44656	**PEST/PCB|UG/KG|DIELDRIN (gi_sd_nw_2010)**				
44657					
44658	**General Statistics**				
44659	Number of Valid Data		0	Number of Detected Data	0
44660	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44661	Number of Missing Values		4	Percent Non-Detects	NaN%
44662					
44663	**Warning: This data set only has 0 observations!**				
44664	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44665	**The data set for variable PEST/PCB|UG/KG|DIELDRIN (gi_sd_nw_2010) was not processed!**				
44666					
44667	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44668	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44669					
44670					
44671					
44672	**PEST/PCB|UG/KG|DIELDRIN (gi_sd_ref_2009)**				
44673					
44674	**General Statistics**				
44675	Number of Valid Data		0	Number of Detected Data	0
44676	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44677	Number of Missing Values		6	Percent Non-Detects	NaN%
44678					
44679	**Warning: This data set only has 0 observations!**				
44680	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44681	**The data set for variable PEST/PCB|UG/KG|DIELDRIN (gi_sd_ref_2009) was not processed!**				
44682					
44683	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44684	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44685					
44686					
44687					
44688	**PEST/PCB|UG/KG|DIELDRIN (gi_sd_ref_2010)**				

	A	B	C	D	E
44689					
44690	**General Statistics**				
44691	Number of Valid Data		0	Number of Detected Data	0
44692	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44693	Number of Missing Values		3	Percent Non-Detects	NaN%
44694					
44695	**Warning: This data set only has 0 observations!**				
44696	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44697	**The data set for variable PEST/PCB|UG/KG|DIELDRIN (gi_sd_ref_2010) was not processed!**				
44698					
44699	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44700	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44701					
44702					
44703					
44704	**PEST/PCB|UG/KG|DIELDRIN (gi_sd_s_2005)**				
44705					
44706	**General Statistics**				
44707	Number of Valid Data		8	Number of Detected Data	0
44708	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
44709				Percent Non-Detects	100.00%
44710					
44711	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
44712	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
44713	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
44714					
44715	**The data set for variable PEST/PCB|UG/KG|DIELDRIN (gi_sd_s_2005) was not processed!**				
44716					
44717					
44718					
44719	**PEST/PCB|UG/KG|DIELDRIN (gi_sd_s_2010)**				
44720					
44721	**General Statistics**				
44722	Number of Valid Data		0	Number of Detected Data	0
44723	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44724	Number of Missing Values		2	Percent Non-Detects	NaN%
44725					
44726	**Warning: This data set only has 0 observations!**				
44727	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44728	**The data set for variable PEST/PCB|UG/KG|DIELDRIN (gi_sd_s_2010) was not processed!**				
44729					
44730	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44731	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44732					
44733					
44734					
44735	**PEST/PCB|UG/KG|DIELDRIN (gi_sd_stillwater_2005)**				
44736					
44737	**General Statistics**				
44738	Number of Valid Data		4	Number of Detected Data	0
44739	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
44740				Percent Non-Detects	100.00%
44741					

	A	B	C	D	E
44742	Warning: This data set only has 4 observations!				
44743	Data set is too small to compute reliable and meaningful statistics and estimates!				
44744	The data set for variable PEST/PCB|UG/KG|DIELDRIN (gi_sd_stillwater_2005) was not processed!				
44745					
44746	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44747	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44748					
44749					
44750					
44751	PEST/PCB|UG/KG|DIELDRIN (gi_sd_stillwater_2009)				
44752					
44753	General Statistics				
44754	Number of Valid Data		0	Number of Detected Data	0
44755	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44756	Number of Missing Values		60	Percent Non-Detects	NaN%
44757					
44758	Warning: This data set only has 0 observations!				
44759	Data set is too small to compute reliable and meaningful statistics and estimates!				
44760	The data set for variable PEST/PCB|UG/KG|DIELDRIN (gi_sd_stillwater_2009) was not processed!				
44761					
44762	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44763	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44764					
44765					
44766					
44767	PEST/PCB|UG/KG|DIELDRIN (gi_sd_stillwater_2010)				
44768					
44769	General Statistics				
44770	Number of Valid Data		0	Number of Detected Data	0
44771	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44772	Number of Missing Values		11	Percent Non-Detects	NaN%
44773					
44774	Warning: This data set only has 0 observations!				
44775	Data set is too small to compute reliable and meaningful statistics and estimates!				
44776	The data set for variable PEST/PCB|UG/KG|DIELDRIN (gi_sd_stillwater_2010) was not processed!				
44777					
44778	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44779	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44780					
44781					
44782					
44783	PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_ne_2005)				
44784					
44785	General Statistics				
44786	Number of Valid Data		36	Number of Detected Data	1
44787	Number of Distinct Detected Data		1	Number of Non-Detect Data	35
44788				Percent Non-Detects	97.22%
44789					
44790	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				

	A	B	C	D	E
44791	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
44792					
44793	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_ne_2005) was not processed!				
44794					
44795					
44796					
44797	PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_ne_2009)				
44798					
44799	General Statistics				
44800	Number of Valid Data		0	Number of Detected Data	0
44801	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44802	Number of Missing Values		20	Percent Non-Detects	NaN%
44803					
44804	Warning: This data set only has 0 observations!				
44805	Data set is too small to compute reliable and meaningful statistics and estimates!				
44806	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_ne_2009) was not processed!				
44807					
44808	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44809	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44810					
44811					
44812					
44813	PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_ne_2010)				
44814					
44815	General Statistics				
44816	Number of Valid Data		0	Number of Detected Data	0
44817	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44818	Number of Missing Values		16	Percent Non-Detects	NaN%
44819					
44820	Warning: This data set only has 0 observations!				
44821	Data set is too small to compute reliable and meaningful statistics and estimates!				
44822	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_ne_2010) was not processed!				
44823					
44824	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44825	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44826					
44827					
44828					
44829	PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_nw_2005)				
44830					
44831	General Statistics				
44832	Number of Valid Data		18	Number of Detected Data	0
44833	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
44834				Percent Non-Detects	100.00%
44835					
44836	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
44837	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
44838	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
44839					

	A	B	C	D	E
44840	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_nw_2005) was not processed!				
44841					
44842					
44843					
44844	PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_nw_2009)				
44845					
44846	General Statistics				
44847	Number of Valid Data		0	Number of Detected Data	0
44848	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44849	Number of Missing Values		7	Percent Non-Detects	NaN%
44850					
44851	Warning: This data set only has 0 observations!				
44852	Data set is too small to compute reliable and meaningful statistics and estimates!				
44853	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_nw_2009) was not processed!				
44854					
44855	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44856	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44857					
44858					
44859					
44860	PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_nw_2010)				
44861					
44862	General Statistics				
44863	Number of Valid Data		0	Number of Detected Data	0
44864	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44865	Number of Missing Values		4	Percent Non-Detects	NaN%
44866					
44867	Warning: This data set only has 0 observations!				
44868	Data set is too small to compute reliable and meaningful statistics and estimates!				
44869	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_nw_2010) was not processed!				
44870					
44871	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44872	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44873					
44874					
44875					
44876	PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_ref_2009)				
44877					
44878	General Statistics				
44879	Number of Valid Data		0	Number of Detected Data	0
44880	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44881	Number of Missing Values		6	Percent Non-Detects	NaN%
44882					
44883	Warning: This data set only has 0 observations!				
44884	Data set is too small to compute reliable and meaningful statistics and estimates!				
44885	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_ref_2009) was not processed!				
44886					
44887	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
44888	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
44889					

	A	B	C	D	E
44890					
44891					
44892	**PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_ref_2010)**				
44893					
44894	**General Statistics**				
44895	Number of Valid Data		0	Number of Detected Data	0
44896	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44897	Number of Missing Values		3	Percent Non-Detects	NaN%
44898					
44899	**Warning: This data set only has 0 observations!**				
44900	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44901	**The data set for variable PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_ref_2010) was not processed!**				
44902					
44903	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44904	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44905					
44906					
44907					
44908	**PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_s_2005)**				
44909					
44910	**General Statistics**				
44911	Number of Valid Data		8	Number of Detected Data	0
44912	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
44913				Percent Non-Detects	100.00%
44914					
44915	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
44916	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
44917	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
44918					
44919	**The data set for variable PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_s_2005) was not processed!**				
44920					
44921					
44922					
44923	**PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_s_2010)**				
44924					
44925	**General Statistics**				
44926	Number of Valid Data		0	Number of Detected Data	0
44927	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44928	Number of Missing Values		2	Percent Non-Detects	NaN%
44929					
44930	**Warning: This data set only has 0 observations!**				
44931	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44932	**The data set for variable PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_s_2010) was not processed!**				
44933					
44934	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44935	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44936					
44937					
44938					
44939	**PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_stillwater_2005)**				
44940					

	A	B	C	D	E
44941	**General Statistics**				
44942	Number of Valid Data		4	Number of Detected Data	0
44943	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
44944				Percent Non-Detects	100.00%
44945					
44946	**Warning: This data set only has 4 observations!**				
44947	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44948	**The data set for variable PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_stillwater_2005) was not processed!**				
44949					
44950	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44951	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44952					
44953					
44954					
44955	**PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_stillwater_2009)**				
44956					
44957	**General Statistics**				
44958	Number of Valid Data		0	Number of Detected Data	0
44959	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44960	Number of Missing Values		60	Percent Non-Detects	NaN%
44961					
44962	**Warning: This data set only has 0 observations!**				
44963	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44964	**The data set for variable PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_stillwater_2009) was not processed!**				
44965					
44966	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44967	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44968					
44969					
44970					
44971	**PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_stillwater_2010)**				
44972					
44973	**General Statistics**				
44974	Number of Valid Data		0	Number of Detected Data	0
44975	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
44976	Number of Missing Values		11	Percent Non-Detects	NaN%
44977					
44978	**Warning: This data set only has 0 observations!**				
44979	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
44980	**The data set for variable PEST/PCB|UG/KG|ENDOSULFAN I (gi_sd_stillwater_2010) was not processed!**				
44981					
44982	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
44983	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
44984					
44985					
44986					
44987	**PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_ne_2005)**				
44988					
44989	**General Statistics**				
44990	Number of Valid Data		36	Number of Detected Data	13
44991	Number of Distinct Detected Data		12	Number of Non-Detect Data	23
44992				Percent Non-Detects	63.89%

	A	B	C	D	E
44993					
44994	**Raw Statistics**			**Log-transformed Statistics**	
44995	Minimum Detected		3.12	Minimum Detected	1.137833
44996	Maximum Detected		79	Maximum Detected	4.3694479
44997	Mean of Detected		20.724615	Mean of Detected	2.5535691
44998	SD of Detected		24.35915	SD of Detected	0.9522005
44999	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
45000	Maximum Non-Detect		58	Maximum Non-Detect	4.060443
45001					
45002	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	34
45003	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	2
45004	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	94.44%
45005					
45006	**UCL Statistics**				
45007	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
45008	Shapiro Wilk Test Statistic		0.674071	Shapiro Wilk Test Statistic	0.8944824
45009	5% Shapiro Wilk Critical Value		0.866	5% Shapiro Wilk Critical Value	0.866
45010	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
45011					
45012	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
45013	DL/2 Substitution Method			DL/2 Substitution Method	
45014	Mean		9.6686111	Mean	1.467536
45015	SD		17.177891	SD	1.1180694
45016	95% DL/2 (t) UCL		14.505827	95% H-Stat (DL/2) UCL	13.050341
45017					
45018	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
45019	**MLE method failed to converge properly**			Mean in Log Scale	1.2864895
45020				SD in Log Scale	1.2135163
45021				Mean in Original Scale	8.8029185
45022				SD in Original Scale	16.935088
45023				95% t UCL	13.571761
45024				95% Percentile Bootstrap UCL	13.687988
45025				95% BCA Bootstrap UCL	15.86146
45026					
45027	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
45028	k star (bias corrected)		0.9631801	**Data appear Lognormal at 5% Significance Level**	
45029	Theta Star		21.516863		
45030	nu star		25.042684		
45031					
45032	A-D Test Statistic		1.0837157	**Nonparametric Statistics**	
45033	5% A-D Critical Value		0.7547775	Kaplan-Meier (KM) Method	
45034	K-S Test Statistic		0.7547775	Mean	9.5935679
45035	5% K-S Critical Value		0.242251	SD	16.405918
45036	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	2.8519574
45037				95% KM (t) UCL	14.412157
45038	**Assuming Gamma Distribution**			95% KM (z) UCL	14.28462
45039	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	13.564526
45040	Minimum		3.12	95% KM (bootstrap t) UCL	19.622207
45041	Maximum		79	95% KM (BCA) UCL	16.917816
45042	Mean		21.118817	95% KM (Percentile Bootstrap) UCL	15.657243
45043	Median		20.639448	95% KM (Chebyshev) UCL	22.024962
45044	SD		15.483822	97.5% KM (Chebyshev) UCL	27.404036
45045	k star		2.2558248	99% KM (Chebyshev) UCL	37.970186
45046	Theta star		9.3619049		
45047	Nu star		162.41938	**Potential UCLs to Use**	
45048	AppChi2		133.9535	95% KM (t) UCL	14.412157
45049	95% Gamma Approximate UCL		25.606686	95% KM (% Bootstrap) UCL	15.657243
45050	95% Adjusted Gamma UCL		25.832743		
45051	**Note: DL/2 is not a recommended method.**				
45052					
45053	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
45054	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
45055	**For additional insight, the user may want to consult a statistician.**				
45056					
45057					
45058	**PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_ne_2009)**				

	A	B	C	D	E
45059					
45060	**General Statistics**				
45061	Number of Valid Data		0	Number of Detected Data	0
45062	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45063	Number of Missing Values		20	Percent Non-Detects	NaN%
45064					
45065	**Warning: This data set only has 0 observations!**				
45066	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45067	**The data set for variable PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_ne_2009) was not processed!**				
45068					
45069	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45070	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45071					
45072					
45073					
45074	**PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_ne_2010)**				
45075					
45076	**General Statistics**				
45077	Number of Valid Data		0	Number of Detected Data	0
45078	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45079	Number of Missing Values		16	Percent Non-Detects	NaN%
45080					
45081	**Warning: This data set only has 0 observations!**				
45082	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45083	**The data set for variable PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_ne_2010) was not processed!**				
45084					
45085	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45086	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45087					
45088					
45089					
45090	**PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_nw_2005)**				
45091					
45092	**General Statistics**				
45093	Number of Valid Data		18	Number of Detected Data	0
45094	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
45095				Percent Non-Detects	100.00%
45096					
45097	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
45098	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
45099	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
45100					
45101	**The data set for variable PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_nw_2005) was not processed!**				
45102					
45103					
45104					
45105	**PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_nw_2009)**				
45106					
45107	**General Statistics**				
45108	Number of Valid Data		0	Number of Detected Data	0
45109	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45110	Number of Missing Values		7	Percent Non-Detects	NaN%

	A	B	C	D	E
45111					
45112	Warning: This data set only has 0 observations!				
45113	Data set is too small to compute reliable and meaningful statistics and estimates!				
45114	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_nw_2009) was not processed!				
45115					
45116	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45117	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45118					
45119					
45120					
45121	PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_nw_2010)				
45122					
45123	General Statistics				
45124	Number of Valid Data		0	Number of Detected Data	0
45125	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45126	Number of Missing Values		4	Percent Non-Detects	NaN%
45127					
45128	Warning: This data set only has 0 observations!				
45129	Data set is too small to compute reliable and meaningful statistics and estimates!				
45130	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_nw_2010) was not processed!				
45131					
45132	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45133	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45134					
45135					
45136					
45137	PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_ref_2009)				
45138					
45139	General Statistics				
45140	Number of Valid Data		0	Number of Detected Data	0
45141	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45142	Number of Missing Values		6	Percent Non-Detects	NaN%
45143					
45144	Warning: This data set only has 0 observations!				
45145	Data set is too small to compute reliable and meaningful statistics and estimates!				
45146	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_ref_2009) was not processed!				
45147					
45148	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45149	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45150					
45151					
45152					
45153	PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_ref_2010)				
45154					
45155	General Statistics				
45156	Number of Valid Data		0	Number of Detected Data	0
45157	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45158	Number of Missing Values		3	Percent Non-Detects	NaN%
45159					
45160	Warning: This data set only has 0 observations!				

	A	B	C	D	E
45161	Data set is too small to compute reliable and meaningful statistics and estimates!				
45162	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_ref_2010) was not processed!				
45163					
45164	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45165	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45166					
45167					
45168					
45169	PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_s_2005)				
45170					
45171	General Statistics				
45172	Number of Valid Data		8	Number of Detected Data	1
45173	Number of Distinct Detected Data		1	Number of Non-Detect Data	7
45174				Percent Non-Detects	87.50%
45175					
45176	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
45177	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
45178					
45179	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_s_2005) was not processed!				
45180					
45181					
45182					
45183	PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_s_2010)				
45184					
45185	General Statistics				
45186	Number of Valid Data		0	Number of Detected Data	0
45187	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45188	Number of Missing Values		2	Percent Non-Detects	NaN%
45189					
45190	Warning: This data set only has 0 observations!				
45191	Data set is too small to compute reliable and meaningful statistics and estimates!				
45192	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_s_2010) was not processed!				
45193					
45194	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45195	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45196					
45197					
45198					
45199	PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_stillwater_2005)				
45200					
45201	General Statistics				
45202	Number of Valid Data		4	Number of Detected Data	3
45203	Number of Distinct Detected Data		3	Number of Non-Detect Data	1
45204				Percent Non-Detects	25.00%
45205					
45206	Warning: This data set only has 4 observations!				
45207	Data set is too small to compute reliable and meaningful statistics and estimates!				
45208	The data set for variable PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_stillwater_2005) was not processed!				
45209					

	A	B	C	D	E
45210	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45211	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45212					
45213					
45214					
45215	**PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_stillwater_2009)**				
45216					
45217	**General Statistics**				
45218	Number of Valid Data		0	Number of Detected Data	0
45219	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45220	Number of Missing Values		60	Percent Non-Detects	NaN%
45221					
45222	**Warning: This data set only has 0 observations!**				
45223	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45224	**The data set for variable PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_stillwater_2009) was not processed!**				
45225					
45226	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45227	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45228					
45229					
45230					
45231	**PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_stillwater_2010)**				
45232					
45233	**General Statistics**				
45234	Number of Valid Data		0	Number of Detected Data	0
45235	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45236	Number of Missing Values		11	Percent Non-Detects	NaN%
45237					
45238	**Warning: This data set only has 0 observations!**				
45239	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45240	**The data set for variable PEST/PCB|UG/KG|ENDOSULFAN SULFATE (gi_sd_stillwater_2010) was not processed!**				
45241					
45242	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45243	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45244					
45245					
45246					
45247	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_ne_2005)**				
45248					
45249	**General Statistics**				
45250	Number of Valid Data		36	Number of Detected Data	3
45251	Number of Distinct Detected Data		3	Number of Non-Detect Data	33
45252				Percent Non-Detects	91.67%
45253					
45254	**Raw Statistics**			**Log-transformed Statistics**	
45255	Minimum Detected		1.78	Minimum Detected	0.5766134
45256	Maximum Detected		5.8	Maximum Detected	1.7578579
45257	Mean of Detected		3.7333333	Mean of Detected	1.2069818
45258	SD of Detected		2.0123949	SD of Detected	0.5946208
45259	Minimum Non-Detect		3.2	Minimum Non-Detect	1.1631508
45260	Maximum Non-Detect		35	Maximum Non-Detect	3.5553481
45261					
45262	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
45263	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
45264	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%

	A	B	C	D	E
45265					
45266	**Warning: There are only 3 Distinct Detected Values in this data set**				
45267	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
45268	**Those methods will return a 'N/A' value on your output display!**				
45269					
45270	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
45271	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
45272	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
45273					
45274					
45275	**UCL Statistics**				
45276	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
45277	Shapiro Wilk Test Statistic		0.9976021	Shapiro Wilk Test Statistic	0.9865772
45278	5% Shapiro Wilk Critical Value		0.767	5% Shapiro Wilk Critical Value	0.767
45279	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
45280					
45281	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
45282	DL/2 Substitution Method			DL/2 Substitution Method	
45283	Mean		3.9291667	Mean	1.0245495
45284	SD		4.4139703	SD	0.7193767
45285	95% DL/2 (t) UCL		5.1721204	95% H-Stat (DL/2) UCL	4.6542967
45286					
45287	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
45288	**MLE method failed to converge properly**			Mean in Log Scale	0.6455968
45289				SD in Log Scale	0.3360295
45290				Mean in Original Scale	2.0279095
45291				SD in Original Scale	0.846578
45292				95% t UCL	2.266302
45293				95% Percentile Bootstrap UCL	2.2820448
45294				95% BCA Bootstrap UCL	2.3260754
45295					
45296	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
45297	k star (bias corrected)		N/A	**Data appear Normal at 5% Significance Level**	
45298	Theta Star		N/A		
45299	nu star		N/A		
45300					
45301	A-D Test Statistic		N/A	**Nonparametric Statistics**	
45302	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
45303	K-S Test Statistic		N/A	Mean	2.075697
45304	5% K-S Critical Value		N/A	SD	0.8653125
45305	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.2440657
45306				95% KM (t) UCL	2.4880636
45307	**Assuming Gamma Distribution**			95% KM (z) UCL	2.4771493
45308	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	3.2059222
45309	Minimum		N/A	95% KM (bootstrap t) UCL	2.3274381
45310	Maximum		N/A	95% KM (BCA) UCL	N/A
45311	Mean		N/A	95% KM (Percentile Bootstrap) UCL	5.8
45312	Median		N/A	95% KM (Chebyshev) UCL	3.1395546
45313	SD		N/A	97.5% KM (Chebyshev) UCL	3.5998866
45314	k star		N/A	99% KM (Chebyshev) UCL	4.5041198
45315	Theta star		N/A		
45316	Nu star		N/A	**Potential UCLs to Use**	
45317	AppChi2		N/A	95% KM (t) UCL	2.4880636
45318	95% Gamma Approximate UCL		N/A	95% KM (Percentile Bootstrap) UCL	5.8
45319	95% Adjusted Gamma UCL		N/A		
45320	**Note: DL/2 is not a recommended method.**				
45321					
45322	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
45323	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
45324	**For additional insight, the user may want to consult a statistician.**				

	A	B	C	D	E
45325					
45326					
45327	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_ne_2009)**				
45328					
45329	**General Statistics**				
45330	Number of Valid Data		0	Number of Detected Data	0
45331	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45332	Number of Missing Values		20	Percent Non-Detects	NaN%
45333					
45334	**Warning: This data set only has 0 observations!**				
45335	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45336	**The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_ne_2009) was not processed!**				
45337					
45338	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45339	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45340					
45341					
45342					
45343	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_ne_2010)**				
45344					
45345	**General Statistics**				
45346	Number of Valid Data		0	Number of Detected Data	0
45347	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45348	Number of Missing Values		16	Percent Non-Detects	NaN%
45349					
45350	**Warning: This data set only has 0 observations!**				
45351	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45352	**The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_ne_2010) was not processed!**				
45353					
45354	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45355	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45356					
45357					
45358					
45359	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_nw_2005)**				
45360					
45361	**General Statistics**				
45362	Number of Valid Data		18	Number of Detected Data	0
45363	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
45364				Percent Non-Detects	100.00%
45365					
45366	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
45367	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
45368	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
45369					
45370	**The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_nw_2005) was not processed!**				
45371					
45372					
45373					
45374	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_nw_2009)**				
45375					

	A	B	C	D	E
45376	**General Statistics**				
45377	Number of Valid Data		0	Number of Detected Data	0
45378	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45379	Number of Missing Values		7	Percent Non-Detects	NaN%
45380					
45381	**Warning: This data set only has 0 observations!**				
45382	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45383	**The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_nw_2009) was not processed!**				
45384					
45385	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45386	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45387					
45388					
45389					
45390	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_nw_2010)**				
45391					
45392	**General Statistics**				
45393	Number of Valid Data		0	Number of Detected Data	0
45394	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45395	Number of Missing Values		4	Percent Non-Detects	NaN%
45396					
45397	**Warning: This data set only has 0 observations!**				
45398	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45399	**The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_nw_2010) was not processed!**				
45400					
45401	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45402	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45403					
45404					
45405					
45406	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_ref_2009)**				
45407					
45408	**General Statistics**				
45409	Number of Valid Data		0	Number of Detected Data	0
45410	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45411	Number of Missing Values		6	Percent Non-Detects	NaN%
45412					
45413	**Warning: This data set only has 0 observations!**				
45414	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45415	**The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_ref_2009) was not processed!**				
45416					
45417	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45418	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45419					
45420					
45421					
45422	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_ref_2010)**				
45423					
45424	**General Statistics**				
45425	Number of Valid Data		0	Number of Detected Data	0
45426	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45427	Number of Missing Values		3	Percent Non-Detects	NaN%

	A	B	C	D	E
45428					
45429	Warning: This data set only has 0 observations!				
45430	Data set is too small to compute reliable and meaningful statistics and estimates!				
45431	The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_ref_2010) was not processed!				
45432					
45433	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45434	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45435					
45436					
45437					
45438	PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_s_2005)				
45439					
45440	General Statistics				
45441	Number of Valid Data		8	Number of Detected Data	0
45442	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
45443				Percent Non-Detects	100.00%
45444					
45445	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
45446	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
45447	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
45448					
45449	The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_s_2005) was not processed!				
45450					
45451					
45452					
45453	PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_s_2010)				
45454					
45455	General Statistics				
45456	Number of Valid Data		0	Number of Detected Data	0
45457	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45458	Number of Missing Values		2	Percent Non-Detects	NaN%
45459					
45460	Warning: This data set only has 0 observations!				
45461	Data set is too small to compute reliable and meaningful statistics and estimates!				
45462	The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_s_2010) was not processed!				
45463					
45464	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45465	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45466					
45467					
45468					
45469	PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_stillwater_2005)				
45470					
45471	General Statistics				
45472	Number of Valid Data		4	Number of Detected Data	1
45473	Number of Distinct Detected Data		1	Number of Non-Detect Data	3
45474				Percent Non-Detects	75.00%
45475					
45476	Warning: This data set only has 4 observations!				
45477	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
45478	**The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_stillwater_2005) was not processed!**				
45479					
45480	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45481	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45482					
45483					
45484					
45485	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_stillwater_2009)**				
45486					
45487	**General Statistics**				
45488	Number of Valid Data		0	Number of Detected Data	0
45489	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45490	Number of Missing Values		60	Percent Non-Detects	NaN%
45491					
45492	**Warning: This data set only has 0 observations!**				
45493	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45494	**The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_stillwater_2009) was not processed!**				
45495					
45496	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45497	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45498					
45499					
45500					
45501	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_stillwater_2010)**				
45502					
45503	**General Statistics**				
45504	Number of Valid Data		0	Number of Detected Data	0
45505	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45506	Number of Missing Values		11	Percent Non-Detects	NaN%
45507					
45508	**Warning: This data set only has 0 observations!**				
45509	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45510	**The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_sd_stillwater_2010) was not processed!**				
45511					
45512	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45513	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45514					
45515					
45516					
45517	**PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_ne_2005)**				
45518					
45519	**General Statistics**				
45520	Number of Valid Data		36	Number of Detected Data	4
45521	Number of Distinct Detected Data		4	Number of Non-Detect Data	32
45522				Percent Non-Detects	88.89%
45523					
45524	**Raw Statistics**			**Log-transformed Statistics**	
45525	Minimum Detected		3.4	Minimum Detected	1.2237754
45526	Maximum Detected		13.5	Maximum Detected	2.6026897
45527	Mean of Detected		7.775	Mean of Detected	1.9342217
45528	SD of Detected		4.2350718	SD of Detected	0.5692193
45529	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
45530	Maximum Non-Detect		33	Maximum Non-Detect	3.4965076
45531					

	A	B	C	D	E
45532	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	36
45533	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	0
45534	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	100.00%
45535					
45536	**Warning: There are only 4 Distinct Detected Values in this data**				
45537	**Note: It should be noted that even though bootstrap may be performed on this data set**				
45538	**the resulting calculations may not be reliable enough to draw conclusions**				
45539					
45540	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
45541					
45542					
45543	**UCL Statistics**				
45544	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
45545	Shapiro Wilk Test Statistic		0.9568889	Shapiro Wilk Test Statistic	0.989577
45546	5% Shapiro Wilk Critical Value		0.748	5% Shapiro Wilk Critical Value	0.748
45547	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
45548					
45549	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
45550	DL/2 Substitution Method			DL/2 Substitution Method	
45551	Mean		4.1680556	Mean	1.0638283
45552	SD		4.5505597	SD	0.7606439
45553	95% DL/2 (t) UCL		5.4494723	95% H-Stat (DL/2) UCL	5.0898714
45554					
45555	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
45556	**MLE method failed to converge properly**			Mean in Log Scale	-0.238054
45557				SD in Log Scale	1.0938831
45558				Mean in Original Scale	1.565942
45559				SD in Original Scale	2.6028294
45560				95% t UCL	2.2988868
45561				95% Percentile Bootstrap UCL	2.3458345
45562				95% BCA Bootstrap UCL	2.6280586
45563					
45564	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
45565	k star (bias corrected)		1.2778342	**Data appear Normal at 5% Significance Level**	
45566	Theta Star		6.084514		
45567	nu star		10.222673		
45568					
45569	A-D Test Statistic		0.2180429	**Nonparametric Statistics**	
45570	5% A-D Critical Value		0.6589467	Kaplan-Meier (KM) Method	
45571	K-S Test Statistic		0.6589467	Mean	3.9679724
45572	5% K-S Critical Value		0.3960399	SD	1.9731345
45573	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	0.4097529
45574				95% KM (t) UCL	4.6602796
45575	**Assuming Gamma Distribution**			95% KM (z) UCL	4.6419559
45576	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	5.8493502
45577	Minimum		2.9107368	95% KM (bootstrap t) UCL	4.6174468
45578	Maximum		32.211643	95% KM (BCA) UCL	N/A
45579	Mean		18.502977	95% KM (Percentile Bootstrap) UCL	8.1677419
45580	Median		20.346949	95% KM (Chebyshev) UCL	5.7540438
45581	SD		8.506149	97.5% KM (Chebyshev) UCL	6.5268784
45582	k star		3.3471321	99% KM (Chebyshev) UCL	8.0449622
45583	Theta star		5.5280093		
45584	Nu star		240.99351	**Potential UCLs to Use**	
45585	AppChi2		206.05431	95% KM (t) UCL	4.6602796
45586	95% Gamma Approximate UCL		21.640399	95% KM (Percentile Bootstrap) UCL	8.1677419
45587	95% Adjusted Gamma UCL		N/A		
45588	**Note: DL/2 is not a recommended method.**				
45589					
45590	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
45591	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
45592	**For additional insight, the user may want to consult a statistician.**				
45593					

	A	B	C	D	E
45594					
45595	**PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_ne_2009)**				
45596					
45597	**General Statistics**				
45598	Number of Valid Data		0	Number of Detected Data	0
45599	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45600	Number of Missing Values		20	Percent Non-Detects	NaN%
45601					
45602	**Warning: This data set only has 0 observations!**				
45603	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45604	**The data set for variable PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_ne_2009) was not processed!**				
45605					
45606	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45607	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45608					
45609					
45610					
45611	**PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_ne_2010)**				
45612					
45613	**General Statistics**				
45614	Number of Valid Data		0	Number of Detected Data	0
45615	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45616	Number of Missing Values		16	Percent Non-Detects	NaN%
45617					
45618	**Warning: This data set only has 0 observations!**				
45619	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45620	**The data set for variable PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_ne_2010) was not processed!**				
45621					
45622	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45623	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45624					
45625					
45626					
45627	**PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_nw_2005)**				
45628					
45629	**General Statistics**				
45630	Number of Valid Data		18	Number of Detected Data	2
45631	Number of Distinct Detected Data		2	Number of Non-Detect Data	16
45632				Percent Non-Detects	88.89%
45633					
45634	**Raw Statistics**			**Log-transformed Statistics**	
45635	Minimum Detected		5	Minimum Detected	1.6094379
45636	Maximum Detected		5.2	Maximum Detected	1.6486586
45637	Mean of Detected		5.1	Mean of Detected	1.6290483
45638	SD of Detected		0.1414214	SD of Detected	0.0277332
45639	Minimum Non-Detect		3.3	Minimum Non-Detect	1.1939225
45640	Maximum Non-Detect		3.3	Maximum Non-Detect	1.1939225
45641					
45642					
45643	**Warning: Data set has only 2 Distinct Detected Values.**				
45644	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
45645	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
45646					

	A	B	C	D	E
45647	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
45648					
45649	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
45650	**Those methods will return a 'N/A' value on your output display!**				
45651					
45652	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
45653	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
45654	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
45655					
45656					
45657	**UCL Statistics**				
45658	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
45659	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
45660	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
45661	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
45662					
45663	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
45664	DL/2 Substitution Method			DL/2 Substitution Method	
45665	Mean		2.0333333	Mean	0.626139
45666	SD		1.116191	SD	0.3649239
45667	95% DL/2 (t) UCL		2.4910043	95% H-Stat (DL/2) UCL	2.365734
45668					
45669	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
45670	**MLE method failed to converge properly**			Mean in Log Scale	N/A
45671				SD in Log Scale	N/A
45672				Mean in Original Scale	N/A
45673				SD in Original Scale	N/A
45674				95% t UCL	N/A
45675				95% Percentile Bootstrap UCL	N/A
45676				95% BCA Bootstrap UCL	N/A
45677					
45678	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
45679	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
45680	Theta Star		N/A		
45681	nu star		N/A		
45682					
45683	A-D Test Statistic		N/A	**Nonparametric Statistics**	
45684	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
45685	K-S Test Statistic		N/A	Mean	5.0111111
45686	5% K-S Critical Value		N/A	SD	0.0458123
45687	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.0152708
45688				95% KM (t) UCL	5.0376762
45689	**Assuming Gamma Distribution**			95% KM (z) UCL	5.0362293
45690	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	N/A
45691	Minimum		N/A	95% KM (bootstrap t) UCL	N/A
45692	Maximum		N/A	95% KM (BCA) UCL	N/A
45693	Mean		N/A	95% KM (Percentile Bootstrap) UCL	N/A
45694	Median		N/A	95% KM (Chebyshev) UCL	5.0776748
45695	SD		N/A	97.5% KM (Chebyshev) UCL	5.106477
45696	k star		N/A	99% KM (Chebyshev) UCL	5.1630533
45697	Theta star		N/A		
45698	Nu star		N/A	**Potential UCLs to Use**	
45699	AppChi2		N/A	95% KM (t) UCL	5.0376762
45700	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	N/A
45701	95% Adjusted Gamma UCL		N/A		
45702	**Note: DL/2 is not a recommended method.**				
45703					
45704	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
45705	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				

	A	B	C	D	E
45706	For additional insight, the user may want to consult a statistician.				
45707					
45708					
45709	PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_nw_2009)				
45710					
45711	General Statistics				
45712	Number of Valid Data		0	Number of Detected Data	0
45713	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45714	Number of Missing Values		7	Percent Non-Detects	NaN%
45715					
45716	Warning: This data set only has 0 observations!				
45717	Data set is too small to compute reliable and meaningful statistics and estimates!				
45718	The data set for variable PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_nw_2009) was not processed!				
45719					
45720	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45721	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45722					
45723					
45724					
45725	PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_nw_2010)				
45726					
45727	General Statistics				
45728	Number of Valid Data		0	Number of Detected Data	0
45729	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45730	Number of Missing Values		4	Percent Non-Detects	NaN%
45731					
45732	Warning: This data set only has 0 observations!				
45733	Data set is too small to compute reliable and meaningful statistics and estimates!				
45734	The data set for variable PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_nw_2010) was not processed!				
45735					
45736	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45737	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45738					
45739					
45740					
45741	PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_ref_2009)				
45742					
45743	General Statistics				
45744	Number of Valid Data		0	Number of Detected Data	0
45745	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45746	Number of Missing Values		6	Percent Non-Detects	NaN%
45747					
45748	Warning: This data set only has 0 observations!				
45749	Data set is too small to compute reliable and meaningful statistics and estimates!				
45750	The data set for variable PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_ref_2009) was not processed!				
45751					
45752	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45753	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45754					
45755					
45756					

	A	B	C	D	E
45757	**PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_ref_2010)**				
45758					
45759	**General Statistics**				
45760	Number of Valid Data		0	Number of Detected Data	0
45761	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45762	Number of Missing Values		3	Percent Non-Detects	NaN%
45763					
45764	**Warning: This data set only has 0 observations!**				
45765	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45766	**The data set for variable PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_ref_2010) was not processed!**				
45767					
45768	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45769	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45770					
45771					
45772					
45773	**PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_s_2005)**				
45774					
45775	**General Statistics**				
45776	Number of Valid Data		8	Number of Detected Data	1
45777	Number of Distinct Detected Data		1	Number of Non-Detect Data	7
45778				Percent Non-Detects	87.50%
45779					
45780	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**				
45781	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**				
45782					
45783	**The data set for variable PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_s_2005) was not processed!**				
45784					
45785					
45786					
45787	**PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_s_2010)**				
45788					
45789	**General Statistics**				
45790	Number of Valid Data		0	Number of Detected Data	0
45791	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45792	Number of Missing Values		2	Percent Non-Detects	NaN%
45793					
45794	**Warning: This data set only has 0 observations!**				
45795	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45796	**The data set for variable PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_s_2010) was not processed!**				
45797					
45798	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45799	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45800					
45801					
45802					
45803	**PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_stillwater_2005)**				
45804					
45805	**General Statistics**				
45806	Number of Valid Data		4	Number of Detected Data	0
45807	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
45808				Percent Non-Detects	100.00%

	A	B	C	D	E
45809					
45810	Warning: This data set only has 4 observations!				
45811	Data set is too small to compute reliable and meaningful statistics and estimates!				
45812	The data set for variable PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_stillwater_2005) was not processed!				
45813					
45814	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45815	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45816					
45817					
45818					
45819	PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_stillwater_2009)				
45820					
45821	General Statistics				
45822	Number of Valid Data		0	Number of Detected Data	0
45823	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45824	Number of Missing Values		60	Percent Non-Detects	NaN%
45825					
45826	Warning: This data set only has 0 observations!				
45827	Data set is too small to compute reliable and meaningful statistics and estimates!				
45828	The data set for variable PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_stillwater_2009) was not processed!				
45829					
45830	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45831	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45832					
45833					
45834					
45835	PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_stillwater_2010)				
45836					
45837	General Statistics				
45838	Number of Valid Data		0	Number of Detected Data	0
45839	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45840	Number of Missing Values		11	Percent Non-Detects	NaN%
45841					
45842	Warning: This data set only has 0 observations!				
45843	Data set is too small to compute reliable and meaningful statistics and estimates!				
45844	The data set for variable PEST/PCB|UG/KG|ENDRIN KETONE (gi_sd_stillwater_2010) was not processed!				
45845					
45846	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45847	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45848					
45849					
45850					
45851	PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_ne_2005)				
45852					
45853	General Statistics				
45854	Number of Valid Data		36	Number of Detected Data	1
45855	Number of Distinct Detected Data		1	Number of Non-Detect Data	35
45856				Percent Non-Detects	97.22%
45857					
45858	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				

	A	B	C	D	E
45859	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
45860					
45861	The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_ne_2005) was not processed!				
45862					
45863					
45864					
45865	PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_ne_2009)				
45866					
45867	General Statistics				
45868	Number of Valid Data		0	Number of Detected Data	0
45869	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45870	Number of Missing Values		20	Percent Non-Detects	NaN%
45871					
45872	Warning: This data set only has 0 observations!				
45873	Data set is too small to compute reliable and meaningful statistics and estimates!				
45874	The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_ne_2009) was not processed!				
45875					
45876	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45877	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45878					
45879					
45880					
45881	PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_ne_2010)				
45882					
45883	General Statistics				
45884	Number of Valid Data		0	Number of Detected Data	0
45885	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45886	Number of Missing Values		16	Percent Non-Detects	NaN%
45887					
45888	Warning: This data set only has 0 observations!				
45889	Data set is too small to compute reliable and meaningful statistics and estimates!				
45890	The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_ne_2010) was not processed!				
45891					
45892	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
45893	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
45894					
45895					
45896					
45897	PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_nw_2005)				
45898					
45899	General Statistics				
45900	Number of Valid Data		18	Number of Detected Data	0
45901	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
45902				Percent Non-Detects	100.00%
45903					
45904	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
45905	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
45906	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
45907					

	A	B	C	D	E
45908	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_nw_2005) was not processed!**				
45909					
45910					
45911					
45912	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_nw_2009)**				
45913					
45914	**General Statistics**				
45915	Number of Valid Data		0	Number of Detected Data	0
45916	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45917	Number of Missing Values		7	Percent Non-Detects	NaN%
45918					
45919	**Warning: This data set only has 0 observations!**				
45920	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45921	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_nw_2009) was not processed!**				
45922					
45923	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45924	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45925					
45926					
45927					
45928	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_nw_2010)**				
45929					
45930	**General Statistics**				
45931	Number of Valid Data		0	Number of Detected Data	0
45932	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45933	Number of Missing Values		4	Percent Non-Detects	NaN%
45934					
45935	**Warning: This data set only has 0 observations!**				
45936	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45937	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_nw_2010) was not processed!**				
45938					
45939	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45940	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45941					
45942					
45943					
45944	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_ref_2009)**				
45945					
45946	**General Statistics**				
45947	Number of Valid Data		0	Number of Detected Data	0
45948	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45949	Number of Missing Values		6	Percent Non-Detects	NaN%
45950					
45951	**Warning: This data set only has 0 observations!**				
45952	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45953	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_ref_2009) was not processed!**				
45954					
45955	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45956	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45957					

	A	B	C	D	E
45958					
45959					
45960	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_ref_2010)**				
45961					
45962	**General Statistics**				
45963	Number of Valid Data		0	Number of Detected Data	0
45964	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45965	Number of Missing Values		3	Percent Non-Detects	NaN%
45966					
45967	**Warning: This data set only has 0 observations!**				
45968	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
45969	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_ref_2010) was not processed!**				
45970					
45971	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
45972	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
45973					
45974					
45975					
45976	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_s_2005)**				
45977					
45978	**General Statistics**				
45979	Number of Valid Data		8	Number of Detected Data	0
45980	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
45981				Percent Non-Detects	100.00%
45982					
45983	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
45984	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
45985	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
45986					
45987	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_s_2005) was not processed!**				
45988					
45989					
45990					
45991	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_s_2010)**				
45992					
45993	**General Statistics**				
45994	Number of Valid Data		0	Number of Detected Data	0
45995	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
45996	Number of Missing Values		2	Percent Non-Detects	NaN%
45997					
45998	**Warning: This data set only has 0 observations!**				
45999	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
46000	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_s_2010) was not processed!**				
46001					
46002	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
46003	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
46004					
46005					
46006					
46007	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_stillwater_2005)**				
46008					

	A	B	C	D	E
46009	**General Statistics**				
46010	Number of Valid Data		4	Number of Detected Data	0
46011	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
46012				Percent Non-Detects	100.00%
46013					
46014	**Warning: This data set only has 4 observations!**				
46015	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
46016	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_stillwater_2005) was not processed!**				
46017					
46018	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
46019	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
46020					
46021					
46022					
46023	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_stillwater_2009)**				
46024					
46025	**General Statistics**				
46026	Number of Valid Data		0	Number of Detected Data	0
46027	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46028	Number of Missing Values		60	Percent Non-Detects	NaN%
46029					
46030	**Warning: This data set only has 0 observations!**				
46031	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
46032	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_stillwater_2009) was not processed!**				
46033					
46034	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
46035	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
46036					
46037					
46038					
46039	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_stillwater_2010)**				
46040					
46041	**General Statistics**				
46042	Number of Valid Data		0	Number of Detected Data	0
46043	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46044	Number of Missing Values		11	Percent Non-Detects	NaN%
46045					
46046	**Warning: This data set only has 0 observations!**				
46047	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
46048	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_sd_stillwater_2010) was not processed!**				
46049					
46050	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
46051	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
46052					
46053					
46054					
46055	**PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_ne_2005)**				
46056					
46057	**General Statistics**				
46058	Number of Valid Data		36	Number of Detected Data	9
46059	Number of Distinct Detected Data		9	Number of Non-Detect Data	27
46060				Percent Non-Detects	75.00%

	A	B	C	D	E
46061					
46062	**Raw Statistics**			**Log-transformed Statistics**	
46063	Minimum Detected		1.9	Minimum Detected	0.6418539
46064	Maximum Detected		66	Maximum Detected	4.1896547
46065	Mean of Detected		22.466667	Mean of Detected	2.4046968
46066	SD of Detected		24.932659	SD of Detected	1.3403162
46067	Minimum Non-Detect		1.7	Minimum Non-Detect	0.5306283
46068	Maximum Non-Detect		12	Maximum Non-Detect	2.4849066
46069					
46070	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	32
46071	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	4
46072	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	88.89%
46073					
46074	**Warning: There are only 9 Detected Values in this data**				
46075	**Note: It should be noted that even though bootstrap may be performed on this data set**				
46076	**the resulting calculations may not be reliable enough to draw conclusions**				
46077					
46078	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
46079					
46080					
46081	**UCL Statistics**				
46082	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
46083	Shapiro Wilk Test Statistic		0.789234	Shapiro Wilk Test Statistic	0.9133979
46084	5% Shapiro Wilk Critical Value		0.829	5% Shapiro Wilk Critical Value	0.829
46085	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
46086					
46087	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
46088	DL/2 Substitution Method			DL/2 Substitution Method	
46089	Mean		6.6118056	Mean	0.6995188
46090	SD		15.140174	SD	1.2494562
46091	95% DL/2 (t) UCL		10.875209	95% H-Stat (DL/2) UCL	7.7397803
46092					
46093	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
46094	**MLE yields a negative mean**			Mean in Log Scale	-1.002878
46095				SD in Log Scale	2.3957229
46096				Mean in Original Scale	5.7888168
46097				SD in Original Scale	15.410996
46098				95% t UCL	10.128483
46099				95% Percentile Bootstrap UCL	10.520815
46100				95% BCA Bootstrap UCL	11.858438
46101					
46102	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
46103	k star (bias corrected)		0.6303752	**Data appear Gamma Distributed at 5% Significance Level**	
46104	Theta Star		35.640149		
46105	nu star		11.346754		
46106					
46107	A-D Test Statistic		0.5142034	**Nonparametric Statistics**	
46108	5% A-D Critical Value		0.7487609	Kaplan-Meier (KM) Method	
46109	K-S Test Statistic		0.7487609	Mean	7.0622605
46110	5% K-S Critical Value		0.288476	SD	14.74287
46111	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	2.6068455
46112				95% KM (t) UCL	11.466715
46113	**Assuming Gamma Distribution**			95% KM (z) UCL	11.35014
46114	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	10.855094
46115	Minimum		1E-12	95% KM (bootstrap t) UCL	13.2454
46116	Maximum		66	95% KM (BCA) UCL	14.590741
46117	Mean		24.894274	95% KM (Percentile Bootstrap) UCL	12.316667
46118	Median		23.958591	95% KM (Chebyshev) UCL	18.425237
46119	SD		20.835129	97.5% KM (Chebyshev) UCL	23.342006
46120	k star		0.2022928	99% KM (Chebyshev) UCL	33.000046
46121	Theta star		123.0606		
46122	Nu star		14.565082	**Potential UCLs to Use**	
46123	AppChi2		6.9600222	95% KM (t) UCL	11.466715
46124	95% Gamma Approximate UCL		52.095687		
46125	95% Adjusted Gamma UCL		53.947129		
46126	**Note: DL/2 is not a recommended method.**				
46127					

	A	B	C	D	E
46128	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.				
46129	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).				
46130	For additional insight, the user may want to consult a statistician.				
46131					
46132					
46133	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_ne_2009)				
46134					
46135	General Statistics				
46136	Number of Valid Data		0	Number of Detected Data	0
46137	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46138	Number of Missing Values		20	Percent Non-Detects	NaN%
46139					
46140	Warning: This data set only has 0 observations!				
46141	Data set is too small to compute reliable and meaningful statistics and estimates!				
46142	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_ne_2009) was not processed!				
46143					
46144	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46145	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46146					
46147					
46148					
46149	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_ne_2010)				
46150					
46151	General Statistics				
46152	Number of Valid Data		0	Number of Detected Data	0
46153	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46154	Number of Missing Values		16	Percent Non-Detects	NaN%
46155					
46156	Warning: This data set only has 0 observations!				
46157	Data set is too small to compute reliable and meaningful statistics and estimates!				
46158	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_ne_2010) was not processed!				
46159					
46160	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46161	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46162					
46163					
46164					
46165	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_nw_2005)				
46166					
46167	General Statistics				
46168	Number of Valid Data		18	Number of Detected Data	0
46169	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
46170				Percent Non-Detects	100.00%
46171					
46172	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
46173	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
46174	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
46175					

	A	B	C	D	E
46176	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_nw_2005) was not processed!				
46177					
46178					
46179					
46180	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_nw_2009)				
46181					
46182	General Statistics				
46183	Number of Valid Data		0	Number of Detected Data	0
46184	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46185	Number of Missing Values		7	Percent Non-Detects	NaN%
46186					
46187	Warning: This data set only has 0 observations!				
46188	Data set is too small to compute reliable and meaningful statistics and estimates!				
46189	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_nw_2009) was not processed!				
46190					
46191	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46192	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46193					
46194					
46195					
46196	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_nw_2010)				
46197					
46198	General Statistics				
46199	Number of Valid Data		0	Number of Detected Data	0
46200	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46201	Number of Missing Values		4	Percent Non-Detects	NaN%
46202					
46203	Warning: This data set only has 0 observations!				
46204	Data set is too small to compute reliable and meaningful statistics and estimates!				
46205	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_nw_2010) was not processed!				
46206					
46207	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46208	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46209					
46210					
46211					
46212	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_ref_2009)				
46213					
46214	General Statistics				
46215	Number of Valid Data		0	Number of Detected Data	0
46216	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46217	Number of Missing Values		6	Percent Non-Detects	NaN%
46218					
46219	Warning: This data set only has 0 observations!				
46220	Data set is too small to compute reliable and meaningful statistics and estimates!				
46221	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_ref_2009) was not processed!				
46222					
46223	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46224	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46225					

	A	B	C	D	E
46226					
46227					
46228	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_ref_2010)				
46229					
46230	General Statistics				
46231	Number of Valid Data		0	Number of Detected Data	0
46232	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46233	Number of Missing Values		3	Percent Non-Detects	NaN%
46234					
46235	Warning: This data set only has 0 observations!				
46236	Data set is too small to compute reliable and meaningful statistics and estimates!				
46237	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_ref_2010) was not processed!				
46238					
46239	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46240	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46241					
46242					
46243					
46244	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_s_2005)				
46245					
46246	General Statistics				
46247	Number of Valid Data		8	Number of Detected Data	1
46248	Number of Distinct Detected Data		1	Number of Non-Detect Data	7
46249				Percent Non-Detects	87.50%
46250					
46251	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
46252	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
46253					
46254	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_s_2005) was not processed!				
46255					
46256					
46257					
46258	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_s_2010)				
46259					
46260	General Statistics				
46261	Number of Valid Data		0	Number of Detected Data	0
46262	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46263	Number of Missing Values		2	Percent Non-Detects	NaN%
46264					
46265	Warning: This data set only has 0 observations!				
46266	Data set is too small to compute reliable and meaningful statistics and estimates!				
46267	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_s_2010) was not processed!				
46268					
46269	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46270	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46271					
46272					
46273					
46274	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_stillwater_2005)				
46275					
46276	General Statistics				
46277	Number of Valid Data		4	Number of Detected Data	3

	A	B	C	D	E
46278	Number of Distinct Detected Data		3	Number of Non-Detect Data	1
46279				Percent Non-Detects	25.00%
46280					
46281	**Warning: This data set only has 4 observations!**				
46282	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
46283	**The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_stillwater_2005) was not processed!**				
46284					
46285	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
46286	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
46287					
46288					
46289					
46290	**PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_stillwater_2009)**				
46291					
46292	**General Statistics**				
46293	Number of Valid Data		0	Number of Detected Data	0
46294	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46295	Number of Missing Values		60	Percent Non-Detects	NaN%
46296					
46297	**Warning: This data set only has 0 observations!**				
46298	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
46299	**The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_stillwater_2009) was not processed!**				
46300					
46301	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
46302	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
46303					
46304					
46305					
46306	**PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_stillwater_2010)**				
46307					
46308	**General Statistics**				
46309	Number of Valid Data		0	Number of Detected Data	0
46310	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46311	Number of Missing Values		11	Percent Non-Detects	NaN%
46312					
46313	**Warning: This data set only has 0 observations!**				
46314	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
46315	**The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_sd_stillwater_2010) was not processed!**				
46316					
46317	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
46318	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
46319					
46320					
46321					
46322	**PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_ne_2005)**				
46323					
46324	**General Statistics**				
46325	Number of Valid Data		36	Number of Detected Data	1
46326	Number of Distinct Detected Data		1	Number of Non-Detect Data	35
46327				Percent Non-Detects	97.22%
46328					

	A	B	C	D	E
46329	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
46330	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
46331					
46332	The data set for variable PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_ne_2005) was not processed!				
46333					
46334					
46335					
46336	PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_ne_2009)				
46337					
46338	General Statistics				
46339	Number of Valid Data		0	Number of Detected Data	0
46340	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46341	Number of Missing Values		20	Percent Non-Detects	NaN%
46342					
46343	Warning: This data set only has 0 observations!				
46344	Data set is too small to compute reliable and meaningful statistics and estimates!				
46345	The data set for variable PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_ne_2009) was not processed!				
46346					
46347	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46348	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46349					
46350					
46351					
46352	PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_ne_2010)				
46353					
46354	General Statistics				
46355	Number of Valid Data		0	Number of Detected Data	0
46356	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46357	Number of Missing Values		16	Percent Non-Detects	NaN%
46358					
46359	Warning: This data set only has 0 observations!				
46360	Data set is too small to compute reliable and meaningful statistics and estimates!				
46361	The data set for variable PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_ne_2010) was not processed!				
46362					
46363	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46364	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46365					
46366					
46367					
46368	PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_nw_2005)				
46369					
46370	General Statistics				
46371	Number of Valid Data		18	Number of Detected Data	1
46372	Number of Distinct Detected Data		1	Number of Non-Detect Data	17
46373				Percent Non-Detects	94.44%
46374					
46375	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
46376	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				

	A	B	C	D	E
46377					
46378	The data set for variable PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_nw_2005) was not processed!				
46379					
46380					
46381					
46382	PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_nw_2009)				
46383					
46384	General Statistics				
46385	Number of Valid Data		0	Number of Detected Data	0
46386	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46387	Number of Missing Values		7	Percent Non-Detects	NaN%
46388					
46389	Warning: This data set only has 0 observations!				
46390	Data set is too small to compute reliable and meaningful statistics and estimates!				
46391	The data set for variable PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_nw_2009) was not processed!				
46392					
46393	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46394	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46395					
46396					
46397					
46398	PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_nw_2010)				
46399					
46400	General Statistics				
46401	Number of Valid Data		0	Number of Detected Data	0
46402	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46403	Number of Missing Values		4	Percent Non-Detects	NaN%
46404					
46405	Warning: This data set only has 0 observations!				
46406	Data set is too small to compute reliable and meaningful statistics and estimates!				
46407	The data set for variable PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_nw_2010) was not processed!				
46408					
46409	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46410	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46411					
46412					
46413					
46414	PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_ref_2009)				
46415					
46416	General Statistics				
46417	Number of Valid Data		0	Number of Detected Data	0
46418	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46419	Number of Missing Values		6	Percent Non-Detects	NaN%
46420					
46421	Warning: This data set only has 0 observations!				
46422	Data set is too small to compute reliable and meaningful statistics and estimates!				
46423	The data set for variable PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_ref_2009) was not processed!				
46424					
46425	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46426	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				

	A	B	C	D	E
46427					
46428					
46429					
46430	PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_ref_2010)				
46431					
46432	General Statistics				
46433	Number of Valid Data		0	Number of Detected Data	0
46434	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46435	Number of Missing Values		3	Percent Non-Detects	NaN%
46436					
46437	Warning: This data set only has 0 observations!				
46438	Data set is too small to compute reliable and meaningful statistics and estimates!				
46439	The data set for variable PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_ref_2010) was not processed!				
46440					
46441	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46442	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46443					
46444					
46445					
46446	PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_s_2005)				
46447					
46448	General Statistics				
46449	Number of Valid Data		8	Number of Detected Data	0
46450	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
46451				Percent Non-Detects	100.00%
46452					
46453	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
46454	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
46455	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
46456					
46457	The data set for variable PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_s_2005) was not processed!				
46458					
46459					
46460					
46461	PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_s_2010)				
46462					
46463	General Statistics				
46464	Number of Valid Data		0	Number of Detected Data	0
46465	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46466	Number of Missing Values		2	Percent Non-Detects	NaN%
46467					
46468	Warning: This data set only has 0 observations!				
46469	Data set is too small to compute reliable and meaningful statistics and estimates!				
46470	The data set for variable PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_s_2010) was not processed!				
46471					
46472	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46473	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46474					
46475					
46476					
46477	PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_stillwater_2005)				

	A	B	C	D	E
46478					
46479	**General Statistics**				
46480	Number of Valid Data		4	Number of Detected Data	0
46481	Number of Distinct Detected Data		0	Number of Non-Detect Data	4
46482				Percent Non-Detects	100.00%
46483					
46484	**Warning: This data set only has 4 observations!**				
46485	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
46486	**The data set for variable PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_stillwater_2005) was not processed!**				
46487					
46488	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
46489	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
46490					
46491					
46492					
46493	**PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_stillwater_2009)**				
46494					
46495	**General Statistics**				
46496	Number of Valid Data		0	Number of Detected Data	0
46497	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46498	Number of Missing Values		60	Percent Non-Detects	NaN%
46499					
46500	**Warning: This data set only has 0 observations!**				
46501	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
46502	**The data set for variable PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_stillwater_2009) was not processed!**				
46503					
46504	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
46505	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
46506					
46507					
46508					
46509	**PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_stillwater_2010)**				
46510					
46511	**General Statistics**				
46512	Number of Valid Data		0	Number of Detected Data	0
46513	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46514	Number of Missing Values		11	Percent Non-Detects	NaN%
46515					
46516	**Warning: This data set only has 0 observations!**				
46517	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
46518	**The data set for variable PEST/PCB|UG/KG|METHOXYCHLOR (gi_sd_stillwater_2010) was not processed!**				
46519					
46520	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
46521	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
46522					
46523					
46524					
46525	**PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_ne_2005)**				
46526					
46527	**General Statistics**				
46528	Number of Valid Data		36	Number of Detected Data	23
46529	Number of Distinct Detected Data		20	Number of Non-Detect Data	13

	A	B	C	D	E
46530				Percent Non-Detects	36.11%
46531					
46532	**Raw Statistics**			**Log-transformed Statistics**	
46533	Minimum Detected		41	Minimum Detected	3.7135721
46534	Maximum Detected		3800	Maximum Detected	8.2427563
46535	Mean of Detected		803.54783	Mean of Detected	5.7952936
46536	SD of Detected		1187.9797	SD of Detected	1.3566241
46537	Minimum Non-Detect		33	Minimum Non-Detect	3.4965076
46538	Maximum Non-Detect		52	Maximum Non-Detect	3.9512437
46539					
46540	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	16
46541	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	20
46542	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	44.44%
46543					
46544	**UCL Statistics**				
46545	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
46546	Shapiro Wilk Test Statistic		0.6365074	Shapiro Wilk Test Statistic	0.9427124
46547	5% Shapiro Wilk Critical Value		0.914	5% Shapiro Wilk Critical Value	0.914
46548	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
46549					
46550	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
46551	DL/2 Substitution Method			DL/2 Substitution Method	
46552	Mean		520.79444	Mean	4.7907593
46553	SD		1016.166	SD	1.7319894
46554	95% DL/2 (t) UCL		806.94213	95% H-Stat (DL/2) UCL	1429.8679
46555					
46556	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
46557	**MLE yields a negative mean**			Mean in Log Scale	4.636003
46558				SD in Log Scale	1.9253743
46559				Mean in Original Scale	518.83822
46560				SD in Original Scale	1017.1679
46561				95% t UCL	805.26802
46562				95% Percentile Bootstrap UCL	814.32632
46563				95% BCA Bootstrap UCL	894.11197
46564					
46565	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
46566	k star (bias corrected)		0.6194905	**Data appear Lognormal at 5% Significance Level**	
46567	Theta Star		1297.1107		
46568	nu star		28.496565		
46569					
46570	A-D Test Statistic		1.239708	**Nonparametric Statistics**	
46571	5% A-D Critical Value		0.7887107	Kaplan-Meier (KM) Method	
46572	K-S Test Statistic		0.7887107	Mean	528.22852
46573	5% K-S Critical Value		0.1895519	SD	998.28242
46574	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	170.11978
46575				95% KM (t) UCL	815.65821
46576	**Assuming Gamma Distribution**			95% KM (z) UCL	808.05065
46577	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	812.06745
46578	Minimum		1E-12	95% KM (bootstrap t) UCL	972.88716
46579	Maximum		3800	95% KM (BCA) UCL	865.23889
46580	Mean		557.88288	95% KM (Percentile Bootstrap) UCL	824.43889
46581	Median		225	95% KM (Chebyshev) UCL	1269.7634
46582	SD		1002.4592	97.5% KM (Chebyshev) UCL	1590.6262
46583	k star		0.1221132	99% KM (Chebyshev) UCL	2220.8989
46584	Theta star		4568.571		
46585	Nu star		8.7921513	**Potential UCLs to Use**	
46586	AppChi2		3.2019048	97.5% KM (Chebyshev) UCL	1590.6262
46587	95% Gamma Approximate UCL		1531.8978		
46588	95% Adjusted Gamma UCL		1608.2203		
46589	**Note: DL/2 is not a recommended method.**				
46590					
46591	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
46592	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
46593	**For additional insight, the user may want to consult a statistician.**				
46594					
46595					

	A	B	C	D	E
46596	**PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_ne_2009)**				
46597					
46598	**General Statistics**				
46599	Number of Valid Data		20	Number of Detected Data	11
46600	Number of Distinct Detected Data		10	Number of Non-Detect Data	9
46601				Percent Non-Detects	45.00%
46602					
46603	**Raw Statistics**			**Log-transformed Statistics**	
46604	Minimum Detected		42	Minimum Detected	3.7376696
46605	Maximum Detected		890	Maximum Detected	6.7912215
46606	Mean of Detected		282.45455	Mean of Detected	5.364613
46607	SD of Detected		232.20739	SD of Detected	0.811307
46608	Minimum Non-Detect		33	Minimum Non-Detect	3.4965076
46609	Maximum Non-Detect		33	Maximum Non-Detect	3.4965076
46610					
46611					
46612	**UCL Statistics**				
46613	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
46614	Shapiro Wilk Test Statistic		0.8033559	Shapiro Wilk Test Statistic	0.96793
46615	5% Shapiro Wilk Critical Value		0.85	5% Shapiro Wilk Critical Value	0.85
46616	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
46617					
46618	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
46619	DL/2 Substitution Method			DL/2 Substitution Method	
46620	Mean		162.775	Mean	4.2120493
46621	SD		216.34831	SD	1.4336972
46622	95% DL/2 (t) UCL		246.42518	95% H-Stat (DL/2) UCL	561.07107
46623					
46624	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
46625	Mean		57.779673	Mean in Log Scale	4.3889558
46626	SD		324.1367	SD in Log Scale	1.3302176
46627	95% MLE (t) UCL		183.10578	Mean in Original Scale	168.55951
46628	95% MLE (Tiku) UCL		204.75226	SD in Original Scale	212.57822
46629				95% t UCL	250.752
46630				95% Percentile Bootstrap UCL	254.10008
46631				95% BCA Bootstrap UCL	267.9244
46632					
46633	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
46634	k star (bias corrected)		1.4735911	**Data appear Gamma Distributed at 5% Significance Level**	
46635	Theta Star		191.6777		
46636	nu star		32.419004		
46637					
46638	A-D Test Statistic		0.2882271	**Nonparametric Statistics**	
46639	5% A-D Critical Value		0.739286	Kaplan-Meier (KM) Method	
46640	K-S Test Statistic		0.739286	Mean	174.25
46641	5% K-S Critical Value		0.2586471	SD	203.15065
46642	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	47.643051
46643				95% KM (t) UCL	256.63116
46644	**Assuming Gamma Distribution**			95% KM (z) UCL	252.61585
46645	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	246.21889
46646	Minimum		1E-12	95% KM (bootstrap t) UCL	304.01683
46647	Maximum		890	95% KM (BCA) UCL	302.05
46648	Mean		256.93167	95% KM (Percentile Bootstrap) UCL	271.9
46649	Median		209.74769	95% KM (Chebyshev) UCL	381.92124
46650	SD		197.88886	97.5% KM (Chebyshev) UCL	471.78076
46651	k star		0.3416567	99% KM (Chebyshev) UCL	648.29237
46652	Theta star		752.01704		
46653	Nu star		13.666269	**Potential UCLs to Use**	
46654	AppChi2		6.3435019	95% KM (t) UCL	256.63116
46655	95% Gamma Approximate UCL		553.52664		
46656	95% Adjusted Gamma UCL		589.94074		
46657	**Note: DL/2 is not a recommended method.**				
46658					
46659	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
46660	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
46661	**For additional insight, the user may want to consult a statistician.**				
46662					

	A	B	C	D	E
46663					
46664	**PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_ne_2010)**				
46665					
46666	**General Statistics**				
46667	Number of Valid Data		0	Number of Detected Data	0
46668	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46669	Number of Missing Values		16	Percent Non-Detects	NaN%
46670					
46671	**Warning: This data set only has 0 observations!**				
46672	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
46673	**The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_ne_2010) was not processed!**				
46674					
46675	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
46676	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
46677					
46678					
46679					
46680	**PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_nw_2005)**				
46681					
46682	**General Statistics**				
46683	Number of Valid Data		18	Number of Detected Data	2
46684	Number of Distinct Detected Data		2	Number of Non-Detect Data	16
46685				Percent Non-Detects	88.89%
46686					
46687	**Raw Statistics**			**Log-transformed Statistics**	
46688	Minimum Detected		33	Minimum Detected	3.4965076
46689	Maximum Detected		46	Maximum Detected	3.8286414
46690	Mean of Detected		39.5	Mean of Detected	3.6625745
46691	SD of Detected		9.1923882	SD of Detected	0.2348541
46692	Minimum Non-Detect		33	Minimum Non-Detect	3.4965076
46693	Maximum Non-Detect		33	Maximum Non-Detect	3.4965076
46694					
46695					
46696	**Warning: Data set has only 2 Distinct Detected Values.**				
46697	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**				
46698	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
46699					
46700	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**				
46701					
46702	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
46703	**Those methods will return a 'N/A' value on your output display!**				
46704					
46705	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
46706	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
46707	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
46708					
46709					
46710	**UCL Statistics**				
46711	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
46712	Shapiro Wilk Test Statistic		N/A	Shapiro Wilk Test Statistic	N/A
46713	5% Shapiro Wilk Critical Value		N/A	5% Shapiro Wilk Critical Value	N/A
46714	**Data not Normal at 5% Significance Level**			**Data not Lognormal at 5% Significance Level**	
46715					

	A	B	C	D	E
46716	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
46717	DL/2 Substitution Method			DL/2 Substitution Method	
46718	Mean		19.055556	Mean	2.8988286
46719	SD		7.7647183	SD	0.2836318
46720	95% DL/2 (t) UCL		22.239317	95% H-Stat (DL/2) UCL	21.44994
46721					
46722	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
46723	**MLE method failed to converge properly**			Mean in Log Scale	N/A
46724				SD in Log Scale	N/A
46725				Mean in Original Scale	N/A
46726				SD in Original Scale	N/A
46727				95% t UCL	N/A
46728				95% Percentile Bootstrap UCL	N/A
46729				95% BCA Bootstrap UCL	N/A
46730					
46731	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
46732	k star (bias corrected)		N/A	**Data do not follow a Discernable Distribution (0.05)**	
46733	Theta Star		N/A		
46734	nu star		N/A		
46735					
46736	A-D Test Statistic		N/A	**Nonparametric Statistics**	
46737	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
46738	K-S Test Statistic		N/A	Mean	33.722222
46739	5% K-S Critical Value		N/A	SD	2.9777985
46740	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	0.9925995
46741				95% KM (t) UCL	35.448955
46742	**Assuming Gamma Distribution**			95% KM (z) UCL	35.354903
46743	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	N/A
46744	Minimum		N/A	95% KM (bootstrap t) UCL	N/A
46745	Maximum		N/A	95% KM (BCA) UCL	N/A
46746	Mean		N/A	95% KM (Percentile Bootstrap) UCL	N/A
46747	Median		N/A	95% KM (Chebyshev) UCL	38.048863
46748	SD		N/A	97.5% KM (Chebyshev) UCL	39.921004
46749	k star		N/A	99% KM (Chebyshev) UCL	43.598463
46750	Theta star		N/A		
46751	Nu star		N/A	**Potential UCLs to Use**	
46752	AppChi2		N/A	95% KM (t) UCL	35.448955
46753	95% Gamma Approximate UCL		N/A	95% KM (% Bootstrap) UCL	N/A
46754	95% Adjusted Gamma UCL		N/A		
46755	**Note: DL/2 is not a recommended method.**				
46756					
46757	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
46758	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
46759	**For additional insight, the user may want to consult a statistician.**				
46760					
46761					
46762	**PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_nw_2009)**				
46763					
46764	**General Statistics**				
46765	Number of Valid Data		7	Number of Detected Data	0
46766	Number of Distinct Detected Data		0	Number of Non-Detect Data	7
46767				Percent Non-Detects	100.00%
46768					
46769	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
46770	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
46771	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
46772					
46773	**The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_nw_2009) was not processed!**				
46774					
46775					
46776					

	A	B	C	D	E
46777	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_nw_2010)				
46778					
46779	General Statistics				
46780	Number of Valid Data		0	Number of Detected Data	0
46781	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46782	Number of Missing Values		4	Percent Non-Detects	NaN%
46783					
46784	Warning: This data set only has 0 observations!				
46785	Data set is too small to compute reliable and meaningful statistics and estimates!				
46786	The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_nw_2010) was not processed!				
46787					
46788	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46789	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46790					
46791					
46792					
46793	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_ref_2009)				
46794					
46795	General Statistics				
46796	Number of Valid Data		6	Number of Detected Data	0
46797	Number of Distinct Detected Data		0	Number of Non-Detect Data	6
46798				Percent Non-Detects	100.00%
46799					
46800	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!				
46801	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!				
46802	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).				
46803					
46804	The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_ref_2009) was not processed!				
46805					
46806					
46807					
46808	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_ref_2010)				
46809					
46810	General Statistics				
46811	Number of Valid Data		0	Number of Detected Data	0
46812	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46813	Number of Missing Values		3	Percent Non-Detects	NaN%
46814					
46815	Warning: This data set only has 0 observations!				
46816	Data set is too small to compute reliable and meaningful statistics and estimates!				
46817	The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_ref_2010) was not processed!				
46818					
46819	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
46820	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
46821					
46822					
46823					
46824	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_s_2005)				
46825					
46826	General Statistics				
46827	Number of Valid Data		8	Number of Detected Data	3

	A	B	C	D	E
46828	Number of Distinct Detected Data		3	Number of Non-Detect Data	5
46829				Percent Non-Detects	62.50%
46830					
46831	**Raw Statistics**			**Log-transformed Statistics**	
46832	Minimum Detected		85	Minimum Detected	4.4426513
46833	Maximum Detected		230	Maximum Detected	5.4380793
46834	Mean of Detected		145	Mean of Detected	4.8894074
46835	SD of Detected		75.66373	SD of Detected	0.5054793
46836	Minimum Non-Detect		33	Minimum Non-Detect	3.4965076
46837	Maximum Non-Detect		33	Maximum Non-Detect	3.4965076
46838					
46839					
46840	**Warning: There are only 3 Distinct Detected Values in this data set**				
46841	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**				
46842	**Those methods will return a 'N/A' value on your output display!**				
46843					
46844	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**				
46845	**However, results obtained using 4 to 9 distinct values may not be reliable.**				
46846	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**				
46847					
46848					
46849	**UCL Statistics**				
46850	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
46851	Shapiro Wilk Test Statistic		0.9181047	Shapiro Wilk Test Statistic	0.9694929
46852	5% Shapiro Wilk Critical Value		0.767	5% Shapiro Wilk Critical Value	0.767
46853	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
46854					
46855	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
46856	DL/2 Substitution Method			DL/2 Substitution Method	
46857	Mean		64.6875	Mean	3.585628
46858	SD		77.837256	SD	1.1129276
46859	95% DL/2 (t) UCL		116.82559	95% H-Stat (DL/2) UCL	319.03546
46860					
46861	Maximum Likelihood Estimate(MLE) Method			Log ROS Method	
46862	Mean		149.83482	Mean in Log Scale	3.6407505
46863	SD		61.779177	SD in Log Scale	1.1912512
46864	95% MLE (t) UCL		191.21665	Mean in Original Scale	67.816999
46865	95% MLE (Tiku) UCL		216.5377	SD in Original Scale	76.299279
46866				95% t UCL	118.9249
46867				95% Percentile Bootstrap UCL	112.32126
46868				95% BCA Bootstrap UCL	127.53275
46869					
46870	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
46871	k star (bias corrected)		N/A	**Data appear Normal at 5% Significance Level**	
46872	Theta Star		N/A		
46873	nu star		N/A		
46874					
46875	A-D Test Statistic		N/A	**Nonparametric Statistics**	
46876	5% A-D Critical Value		N/A	Kaplan-Meier (KM) Method	
46877	K-S Test Statistic		N/A	Mean	107.5
46878	5% K-S Critical Value		N/A	SD	47.69696
46879	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	20.65339
46880				95% KM (t) UCL	146.62947
46881	**Assuming Gamma Distribution**			95% KM (z) UCL	141.4718
46882	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	143.83947
46883	Minimum		N/A	95% KM (bootstrap t) UCL	155.88154
46884	Maximum		N/A	95% KM (BCA) UCL	230
46885	Mean		N/A	95% KM (Percentile Bootstrap) UCL	230
46886	Median		N/A	95% KM (Chebyshev) UCL	197.52604
46887	SD		N/A	97.5% KM (Chebyshev) UCL	236.48038
46888	k star		N/A	99% KM (Chebyshev) UCL	312.99863
46889	Theta star		N/A		
46890	Nu star		N/A	**Potential UCLs to Use**	
46891	AppChi2		N/A	95% KM (t) UCL	146.62947
46892	95% Gamma Approximate UCL		N/A	95% KM (Percentile Bootstrap) UCL	230

	A	B	C	D	E
46893	95% Adjusted Gamma UCL		N/A		
46894	**Note: DL/2 is not a recommended method.**				
46895					
46896	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
46897	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
46898	**For additional insight, the user may want to consult a statistician.**				
46899					
46900					
46901	**PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_s_2010)**				
46902					
46903	**General Statistics**				
46904	Number of Valid Data		0	Number of Detected Data	0
46905	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
46906	Number of Missing Values		2	Percent Non-Detects	NaN%
46907					
46908	**Warning: This data set only has 0 observations!**				
46909	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
46910	**The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_s_2010) was not processed!**				
46911					
46912	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
46913	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
46914					
46915					
46916					
46917	**PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_stillwater_2005)**				
46918					
46919	**General Statistics**				
46920	Number of Valid Observations		4	Number of Distinct Observations	3
46921					
46922					
46923	**Warning: This data set only has 4 observations!**				
46924	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
46925	**The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_stillwater_2005) was not processed!**				
46926					
46927	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
46928	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
46929					
46930					
46931					
46932	**PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_stillwater_2009)**				
46933					
46934	**General Statistics**				
46935	Number of Valid Data		60	Number of Detected Data	41
46936	Number of Distinct Detected Data		40	Number of Non-Detect Data	19
46937				Percent Non-Detects	31.67%
46938					
46939	**Raw Statistics**			**Log-transformed Statistics**	
46940	Minimum Detected		34	Minimum Detected	3.5263605
46941	Maximum Detected		55000	Maximum Detected	10.915088
46942	Mean of Detected		3183.7756	Mean of Detected	6.2608684
46943	SD of Detected		9016.4391	SD of Detected	1.9432049
46944	Minimum Non-Detect		33	Minimum Non-Detect	3.4965076
46945	Maximum Non-Detect		33	Maximum Non-Detect	3.4965076
46946					
46947					

	A	B	C	D	E
46948	**UCL Statistics**				
46949	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
46950	Shapiro Wilk Test Statistic		0.3718357	Shapiro Wilk Test Statistic	0.9421531
46951	5% Shapiro Wilk Critical Value		0.941	5% Shapiro Wilk Critical Value	0.941
46952	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
46953					
46954	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
46955	DL/2 Substitution Method			DL/2 Substitution Method	
46956	Mean		2180.805	Mean	5.1659908
46957	SD		7571.2335	SD	2.2783033
46958	95% DL/2 (t) UCL		3814.2015	95% H-Stat (DL/2) UCL	8688.7685
46959					
46960	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
46961	**MLE yields a negative mean**			Mean in Log Scale	4.7673191
46962				SD in Log Scale	2.8308115
46963				Mean in Original Scale	2178.3055
46964				SD in Original Scale	7571.9622
46965				95% t UCL	3811.8593
46966				95% Percentile Bootstrap UCL	4033.8693
46967				95% BCA Bootstrap UCL	5256.9542
46968					
46969	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
46970	k star (bias corrected)		0.3585485	**Data appear Lognormal at 5% Significance Level**	
46971	Theta Star		8879.6234		
46972	nu star		29.400977		
46973					
46974	A-D Test Statistic		2.0118405	**Nonparametric Statistics**	
46975	5% A-D Critical Value		0.8428111	Kaplan-Meier (KM) Method	
46976	K-S Test Statistic		0.8428111	Mean	2186.3467
46977	5% K-S Critical Value		0.1484506	SD	7506.2815
46978	**Data not Gamma Distributed at 5% Significance Level**			SE of Mean	981.09521
46979				95% KM (t) UCL	3825.848
46980	**Assuming Gamma Distribution**			95% KM (z) UCL	3800.1047
46981	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	3819.0997
46982	Minimum		1E-12	95% KM (bootstrap t) UCL	8208.2324
46983	Maximum		55000	95% KM (BCA) UCL	3871.8767
46984	Mean		2175.58	95% KM (Percentile Bootstrap) UCL	4002.4333
46985	Median		110.5	95% KM (Chebyshev) UCL	6462.8415
46986	SD		7572.7562	97.5% KM (Chebyshev) UCL	8313.2843
46987	k star		0.077302	99% KM (Chebyshev) UCL	11948.121
46988	Theta star		28143.915		
46989	Nu star		9.276236	**Potential UCLs to Use**	
46990	AppChi2		3.4946621	97.5% KM (Chebyshev) UCL	8313.2843
46991	95% Gamma Approximate UCL		5774.8627		
46992	95% Adjusted Gamma UCL		5922.5415		
46993	**Note: DL/2 is not a recommended method.**				
46994					
46995	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
46996	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
46997	**For additional insight, the user may want to consult a statistician.**				
46998					
46999					
47000	**PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_stillwater_2010)**				
47001					
47002	**General Statistics**				
47003	Number of Valid Data		0	Number of Detected Data	0
47004	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47005	Number of Missing Values		11	Percent Non-Detects	NaN%
47006					
47007	**Warning: This data set only has 0 observations!**				
47008	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47009	**The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_sd_stillwater_2010) was not processed!**				
47010					

	A	B	C	D	E
47011	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47012	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47013					
47014					
47015					
47016	**PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_ne_2005)**				
47017					
47018	**General Statistics**				
47019	Number of Valid Data		36	Number of Detected Data	9
47020	Number of Distinct Detected Data		9	Number of Non-Detect Data	27
47021				Percent Non-Detects	75.00%
47022					
47023	**Raw Statistics**			**Log-transformed Statistics**	
47024	Minimum Detected		1.9	Minimum Detected	0.6418539
47025	Maximum Detected		66	Maximum Detected	4.1896547
47026	Mean of Detected		22.466667	Mean of Detected	2.4046968
47027	SD of Detected		24.932659	SD of Detected	1.3403162
47028	Minimum Non-Detect		1.7	Minimum Non-Detect	0.5306283
47029	Maximum Non-Detect		8.5	Maximum Non-Detect	2.1400662
47030					
47031	Note: Data have multiple DLs - Use of KM Method is recommended			Number treated as Non-Detect	31
47032	For all methods (except KM, DL/2, and ROS Methods),			Number treated as Detected	5
47033	Observations < Largest ND are treated as NDs			Single DL Non-Detect Percentage	86.11%
47034					
47035	**Warning: There are only 9 Detected Values in this data**				
47036	**Note: It should be noted that even though bootstrap may be performed on this data set**				
47037	**the resulting calculations may not be reliable enough to draw conclusions**				
47038					
47039	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**				
47040					
47041					
47042	**UCL Statistics**				
47043	**Normal Distribution Test with Detected Values Only**			**Lognormal Distribution Test with Detected Values Only**	
47044	Shapiro Wilk Test Statistic		0.789234	Shapiro Wilk Test Statistic	0.9133979
47045	5% Shapiro Wilk Critical Value		0.829	5% Shapiro Wilk Critical Value	0.829
47046	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
47047					
47048	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
47049	DL/2 Substitution Method			DL/2 Substitution Method	
47050	Mean		6.5375	Mean	0.6649699
47051	SD		15.1545	SD	1.2558362
47052	95% DL/2 (t) UCL		10.804938	95% H-Stat (DL/2) UCL	7.5715973
47053					
47054	Maximum Likelihood Estimate(MLE) Method		N/A	Log ROS Method	
47055	**MLE yields a negative mean**			Mean in Log Scale	-1.139603
47056				SD in Log Scale	2.5233314
47057				Mean in Original Scale	5.7784148
47058				SD in Original Scale	15.414961
47059				95% t UCL	10.119197
47060				95% Percentile Bootstrap UCL	10.184074
47061				95% BCA Bootstrap UCL	12.198877
47062					
47063	**Gamma Distribution Test with Detected Values Only**			**Data Distribution Test with Detected Values Only**	
47064	k star (bias corrected)		0.6303752	**Data appear Gamma Distributed at 5% Significance Level**	
47065	Theta Star		35.640149		
47066	nu star		11.346754		
47067					
47068	A-D Test Statistic		0.5142034	**Nonparametric Statistics**	
47069	5% A-D Critical Value		0.7487609	Kaplan-Meier (KM) Method	
47070	K-S Test Statistic		0.7487609	Mean	7.0543103
47071	5% K-S Critical Value		0.288476	SD	14.743156
47072	**Data appear Gamma Distributed at 5% Significance Level**			SE of Mean	2.6064777

	A	B	C	D	E
47073				95% KM (t) UCL	11.458143
47074	**Assuming Gamma Distribution**			95% KM (z) UCL	11.341585
47075	Gamma ROS Statistics using Extrapolated Data			95% KM (jackknife) UCL	10.845999
47076	Minimum		1E-12	95% KM (bootstrap t) UCL	13.596827
47077	Maximum		101.8197	95% KM (BCA) UCL	14.77094
47078	Mean		36.592279	95% KM (Percentile Bootstrap) UCL	12.499222
47079	Median		38.584833	95% KM (Chebyshev) UCL	18.415683
47080	SD		29.962242	97.5% KM (Chebyshev) UCL	23.331759
47081	k star		0.3104111	99% KM (Chebyshev) UCL	32.988436
47082	Theta star		117.88327		
47083	Nu star		22.349602	**Potential UCLs to Use**	
47084	AppChi2		12.600711	95% KM (t) UCL	11.458143
47085	95% Gamma Approximate UCL		64.902913		
47086	95% Adjusted Gamma UCL		66.665569		
47087	**Note: DL/2 is not a recommended method.**				
47088					
47089	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
47090	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**				
47091	**For additional insight, the user may want to consult a statistician.**				
47092					
47093					
47094	**PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_ne_2009)**				
47095					
47096	**General Statistics**				
47097	Number of Valid Data		0	Number of Detected Data	0
47098	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47099	Number of Missing Values		20	Percent Non-Detects	NaN%
47100					
47101	**Warning: This data set only has 0 observations!**				
47102	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47103	**The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_ne_2009) was not processed!**				
47104					
47105	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47106	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47107					
47108					
47109					
47110	**PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_ne_2010)**				
47111					
47112	**General Statistics**				
47113	Number of Valid Data		0	Number of Detected Data	0
47114	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47115	Number of Missing Values		16	Percent Non-Detects	NaN%
47116					
47117	**Warning: This data set only has 0 observations!**				
47118	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47119	**The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_ne_2010) was not processed!**				
47120					
47121	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47122	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47123					
47124					
47125					
47126	**PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_nw_2005)**				
47127					

	A	B	C	D	E
47128	**General Statistics**				
47129	Number of Valid Data		18	Number of Detected Data	0
47130	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
47131				Percent Non-Detects	100.00%
47132					
47133	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
47134	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
47135	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
47136					
47137	**The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_nw_2005) was not processed!**				
47138					
47139					
47140					
47141	**PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_nw_2009)**				
47142					
47143	**General Statistics**				
47144	Number of Valid Data		0	Number of Detected Data	0
47145	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47146	Number of Missing Values		7	Percent Non-Detects	NaN%
47147					
47148	**Warning: This data set only has 0 observations!**				
47149	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47150	**The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_nw_2009) was not processed!**				
47151					
47152	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47153	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47154					
47155					
47156					
47157	**PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_nw_2010)**				
47158					
47159	**General Statistics**				
47160	Number of Valid Data		0	Number of Detected Data	0
47161	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47162	Number of Missing Values		4	Percent Non-Detects	NaN%
47163					
47164	**Warning: This data set only has 0 observations!**				
47165	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47166	**The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_nw_2010) was not processed!**				
47167					
47168	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47169	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47170					
47171					
47172					
47173	**PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_ref_2009)**				
47174					
47175	**General Statistics**				
47176	Number of Valid Data		0	Number of Detected Data	0
47177	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47178	Number of Missing Values		6	Percent Non-Detects	NaN%
47179					

	A	B	C	D	E
47180	Warning: This data set only has 0 observations!				
47181	Data set is too small to compute reliable and meaningful statistics and estimates!				
47182	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_ref_2009) was not processed!				
47183					
47184	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
47185	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47186					
47187					
47188					
47189	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_ref_2010)				
47190					
47191	General Statistics				
47192	Number of Valid Data		0	Number of Detected Data	0
47193	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47194	Number of Missing Values		3	Percent Non-Detects	NaN%
47195					
47196	Warning: This data set only has 0 observations!				
47197	Data set is too small to compute reliable and meaningful statistics and estimates!				
47198	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_ref_2010) was not processed!				
47199					
47200	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
47201	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47202					
47203					
47204					
47205	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_s_2005)				
47206					
47207	General Statistics				
47208	Number of Valid Data		8	Number of Detected Data	1
47209	Number of Distinct Detected Data		1	Number of Non-Detect Data	7
47210				Percent Non-Detects	87.50%
47211					
47212	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
47213	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
47214					
47215	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_s_2005) was not processed!				
47216					
47217					
47218					
47219	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_s_2010)				
47220					
47221	General Statistics				
47222	Number of Valid Data		0	Number of Detected Data	0
47223	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47224	Number of Missing Values		2	Percent Non-Detects	NaN%
47225					
47226	Warning: This data set only has 0 observations!				
47227	Data set is too small to compute reliable and meaningful statistics and estimates!				
47228	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_s_2010) was not processed!				

	A	B	C	D	E
47229					
47230	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
47231	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47232					
47233					
47234					
47235	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_stillwater_2005)				
47236					
47237	General Statistics				
47238	Number of Valid Data		4	Number of Detected Data	3
47239	Number of Distinct Detected Data		3	Number of Non-Detect Data	1
47240				Percent Non-Detects	25.00%
47241					
47242	Warning: This data set only has 4 observations!				
47243	Data set is too small to compute reliable and meaningful statistics and estimates!				
47244	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_stillwater_2005) was not processed!				
47245					
47246	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
47247	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47248					
47249					
47250					
47251	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_stillwater_2009)				
47252					
47253	General Statistics				
47254	Number of Valid Data		0	Number of Detected Data	0
47255	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47256	Number of Missing Values		60	Percent Non-Detects	NaN%
47257					
47258	Warning: This data set only has 0 observations!				
47259	Data set is too small to compute reliable and meaningful statistics and estimates!				
47260	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_stillwater_2009) was not processed!				
47261					
47262	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
47263	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47264					
47265					
47266					
47267	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_stillwater_2010)				
47268					
47269	General Statistics				
47270	Number of Valid Data		0	Number of Detected Data	0
47271	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47272	Number of Missing Values		11	Percent Non-Detects	NaN%
47273					
47274	Warning: This data set only has 0 observations!				
47275	Data set is too small to compute reliable and meaningful statistics and estimates!				
47276	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_sd_stillwater_2010) was not processed!				
47277					
47278	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
47279	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47280					
47281					
47282					
47283	PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_ne_2005)				
47284					
47285	General Statistics				
47286	Number of Valid Data		36	Number of Detected Data	1
47287	Number of Distinct Detected Data		1	Number of Non-Detect Data	35
47288				Percent Non-Detects	97.22%
47289					
47290	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!				
47291	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).				
47292					
47293	The data set for variable PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_ne_2005) was not processed!				
47294					
47295					
47296					
47297	PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_ne_2009)				
47298					
47299	General Statistics				
47300	Number of Valid Data		0	Number of Detected Data	0
47301	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47302	Number of Missing Values		20	Percent Non-Detects	NaN%
47303					
47304	Warning: This data set only has 0 observations!				
47305	Data set is too small to compute reliable and meaningful statistics and estimates!				
47306	The data set for variable PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_ne_2009) was not processed!				
47307					
47308	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
47309	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47310					
47311					
47312					
47313	PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_ne_2010)				
47314					
47315	General Statistics				
47316	Number of Valid Data		0	Number of Detected Data	0
47317	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47318	Number of Missing Values		16	Percent Non-Detects	NaN%
47319					
47320	Warning: This data set only has 0 observations!				
47321	Data set is too small to compute reliable and meaningful statistics and estimates!				
47322	The data set for variable PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_ne_2010) was not processed!				
47323					
47324	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
47325	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47326					
47327					
47328					

	A	B	C	D	E
47329	**PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_nw_2005)**				
47330					
47331	**General Statistics**				
47332	Number of Valid Data		18	Number of Detected Data	0
47333	Number of Distinct Detected Data		0	Number of Non-Detect Data	18
47334				Percent Non-Detects	100.00%
47335					
47336	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
47337	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
47338	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
47339					
47340	**The data set for variable PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_nw_2005) was not processed!**				
47341					
47342					
47343					
47344	**PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_nw_2009)**				
47345					
47346	**General Statistics**				
47347	Number of Valid Data		0	Number of Detected Data	0
47348	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47349	Number of Missing Values		7	Percent Non-Detects	NaN%
47350					
47351	**Warning: This data set only has 0 observations!**				
47352	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47353	**The data set for variable PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_nw_2009) was not processed!**				
47354					
47355	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47356	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47357					
47358					
47359					
47360	**PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_nw_2010)**				
47361					
47362	**General Statistics**				
47363	Number of Valid Data		0	Number of Detected Data	0
47364	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47365	Number of Missing Values		4	Percent Non-Detects	NaN%
47366					
47367	**Warning: This data set only has 0 observations!**				
47368	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47369	**The data set for variable PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_nw_2010) was not processed!**				
47370					
47371	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47372	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47373					
47374					
47375					
47376	**PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_ref_2009)**				
47377					
47378	**General Statistics**				
47379	Number of Valid Data		0	Number of Detected Data	0

	A	B	C	D	E
47380	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47381	Number of Missing Values		6	Percent Non-Detects	NaN%
47382					
47383	**Warning: This data set only has 0 observations!**				
47384	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47385	**The data set for variable PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_ref_2009) was not processed!**				
47386					
47387	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47388	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47389					
47390					
47391					
47392	**PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_ref_2010)**				
47393					
47394	**General Statistics**				
47395	Number of Valid Data		0	Number of Detected Data	0
47396	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47397	Number of Missing Values		3	Percent Non-Detects	NaN%
47398					
47399	**Warning: This data set only has 0 observations!**				
47400	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47401	**The data set for variable PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_ref_2010) was not processed!**				
47402					
47403	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47404	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47405					
47406					
47407					
47408	**PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_s_2005)**				
47409					
47410	**General Statistics**				
47411	Number of Valid Data		8	Number of Detected Data	0
47412	Number of Distinct Detected Data		0	Number of Non-Detect Data	8
47413				Percent Non-Detects	100.00%
47414					
47415	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**				
47416	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**				
47417	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**				
47418					
47419	**The data set for variable PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_s_2005) was not processed!**				
47420					
47421					
47422					
47423	**PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_s_2010)**				
47424					
47425	**General Statistics**				
47426	Number of Valid Data		0	Number of Detected Data	0
47427	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47428	Number of Missing Values		2	Percent Non-Detects	NaN%
47429					
47430	**Warning: This data set only has 0 observations!**				

	A	B	C	D	E
47431	Data set is too small to compute reliable and meaningful statistics and estimates!				
47432	The data set for variable PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_s_2010) was not processed!				
47433					
47434	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
47435	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47436					
47437					
47438					
47439	PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_stillwater_2005)				
47440					
47441	General Statistics				
47442	Number of Valid Data		4	Number of Detected Data	3
47443	Number of Distinct Detected Data		3	Number of Non-Detect Data	1
47444				Percent Non-Detects	25.00%
47445					
47446	Warning: This data set only has 4 observations!				
47447	Data set is too small to compute reliable and meaningful statistics and estimates!				
47448	The data set for variable PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_stillwater_2005) was not processed!				
47449					
47450	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
47451	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47452					
47453					
47454					
47455	PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_stillwater_2009)				
47456					
47457	General Statistics				
47458	Number of Valid Data		0	Number of Detected Data	0
47459	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47460	Number of Missing Values		60	Percent Non-Detects	NaN%
47461					
47462	Warning: This data set only has 0 observations!				
47463	Data set is too small to compute reliable and meaningful statistics and estimates!				
47464	The data set for variable PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_stillwater_2009) was not processed!				
47465					
47466	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
47467	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47468					
47469					
47470					
47471	PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_stillwater_2010)				
47472					
47473	General Statistics				
47474	Number of Valid Data		0	Number of Detected Data	0
47475	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47476	Number of Missing Values		11	Percent Non-Detects	NaN%
47477					
47478	Warning: This data set only has 0 observations!				
47479	Data set is too small to compute reliable and meaningful statistics and estimates!				

	A	B	C	D	E
47480	**The data set for variable PEST/PCB|UG/KG|TOTAL DDD/DDE/DDT (gi_sd_stillwater_2010) was not processed!**				
47481					
47482	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47483	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47484					
47485					
47486					
47487	**PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_ne_2005)**				
47488					
47489	**General Statistics**				
47490	Number of Valid Observations		36	Number of Distinct Observations	25
47491					
47492	**Raw Statistics**			**Log-transformed Statistics**	
47493	Minimum		21	Minimum of Log Data	3.0445224
47494	Maximum		69	Maximum of Log Data	4.2341065
47495	Mean		35.555556	Mean of log Data	3.5368112
47496	Median		33.5	SD of log Data	0.2599405
47497	SD		10.00484		
47498	Coefficient of Variation		0.2813861		
47499	Skewness		1.3197017		
47500					
47501	**Relevant UCL Statistics**				
47502	**Normal Distribution Test**			**Lognormal Distribution Test**	
47503	Shapiro Wilk Test Statistic		0.9069542	Shapiro Wilk Test Statistic	0.9743543
47504	Shapiro Wilk Critical Value		0.935	Shapiro Wilk Critical Value	0.935
47505	**Data not Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
47506					
47507	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
47508	95% Student's-t UCL		38.372873	95% H-UCL	38.398634
47509	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	42.295844
47510	95% Adjusted-CLT UCL (Chen-1995)		38.690195	97.5% Chebyshev (MVUE) UCL	45.234944
47511	95% Modified-t UCL (Johnson-1978)		38.433999	99% Chebyshev (MVUE) UCL	51.008237
47512					
47513	**Gamma Distribution Test**			**Data Distribution**	
47514	k star (bias corrected)		13.537768	**Data appear Gamma Distributed at 5% Significance Level**	
47515	Theta Star		2.6263971		
47516	MLE of Mean		35.555556		
47517	MLE of Standard Deviation		9.6634885		
47518	nu star		974.71931		
47519	Approximate Chi Square Value (.05)		903.24967	**Nonparametric Statistics**	
47520	Adjusted Level of Significance		0.0428	95% CLT UCL	38.298305
47521	Adjusted Chi Square Value		900.13859	95% Jackknife UCL	38.372873
47522				95% Standard Bootstrap UCL	38.225722
47523	Anderson-Darling Test Statistic		0.5151611	95% Bootstrap-t UCL	38.665678
47524	Anderson-Darling 5% Critical Value		0.7475098	95% Hall's Bootstrap UCL	39.150085
47525	Kolmogorov-Smirnov Test Statistic		0.1131105	95% Percentile Bootstrap UCL	38.375
47526	Kolmogorov-Smirnov 5% Critical Value		0.1466642	95% BCA Bootstrap UCL	38.583333
47527	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	42.823903
47528				97.5% Chebyshev(Mean, Sd) UCL	45.968923
47529	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	52.146706
47530	95% Approximate Gamma UCL		38.368889		
47531	95% Adjusted Gamma UCL		38.501501		
47532					
47533	**Potential UCL to Use**			Use 95% Approximate Gamma UCL	38.368889
47534					
47535	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
47536	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
47537	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
47538					
47539					
47540	**PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_ne_2009)**				

	A	B	C	D	E
47541					
47542	**General Statistics**				
47543	Number of Valid Data		0	Number of Detected Data	0
47544	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47545	Number of Missing Values		20	Percent Non-Detects	NaN%
47546					
47547	**Warning: This data set only has 0 observations!**				
47548	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47549	**The data set for variable PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_ne_2009) was not processed!**				
47550					
47551	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47552	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47553					
47554					
47555					
47556	**PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_ne_2010)**				
47557					
47558	**General Statistics**				
47559	Number of Valid Data		0	Number of Detected Data	0
47560	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47561	Number of Missing Values		16	Percent Non-Detects	NaN%
47562					
47563	**Warning: This data set only has 0 observations!**				
47564	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47565	**The data set for variable PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_ne_2010) was not processed!**				
47566					
47567	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47568	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47569					
47570					
47571					
47572	**PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_nw_2005)**				
47573					
47574	**General Statistics**				
47575	Number of Valid Observations		18	Number of Distinct Observations	16
47576					
47577	**Raw Statistics**			**Log-transformed Statistics**	
47578	Minimum		15	Minimum of Log Data	2.7080502
47579	Maximum		68	Maximum of Log Data	4.2195077
47580	Mean		32.916667	Mean of log Data	3.4349235
47581	Median		32.25	SD of log Data	0.3538756
47582	SD		12.03457		
47583	Coefficient of Variation		0.3656072		
47584	Skewness		1.2946216		
47585					
47586	**Relevant UCL Statistics**				
47587	**Normal Distribution Test**			**Lognormal Distribution Test**	
47588	Shapiro Wilk Test Statistic		0.9079546	Shapiro Wilk Test Statistic	0.9740556
47589	Shapiro Wilk Critical Value		0.897	Shapiro Wilk Critical Value	0.897
47590	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
47591					
47592	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
47593	95% Student's-t UCL		37.851192	95% H-UCL	38.863462
47594	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	45.094122
47595	95% Adjusted-CLT UCL (Chen-1995)		38.507289	97.5% Chebyshev (MVUE) UCL	50.364782
47596	95% Modified-t UCL (Johnson-1978)		37.995454	99% Chebyshev (MVUE) UCL	60.717972
47597					

	A	B	C	D	E
47598	**Gamma Distribution Test**			**Data Distribution**	
47599	k star (bias corrected)		7.2286143	**Data appear Normal at 5% Significance Level**	
47600	Theta Star		4.5536621		
47601	MLE of Mean		32.916667		
47602	MLE of Standard Deviation		12.243013		
47603	nu star		260.23011		
47604	Approximate Chi Square Value (.05)		223.87603	**Nonparametric Statistics**	
47605	Adjusted Level of Significance		0.03574	95% CLT UCL	37.582418
47606	Adjusted Chi Square Value		220.64183	95% Jackknife UCL	37.851192
47607				95% Standard Bootstrap UCL	37.43563
47608	Anderson-Darling Test Statistic		0.2625092	95% Bootstrap-t UCL	39.104967
47609	Anderson-Darling 5% Critical Value		0.7402195	95% Hall's Bootstrap UCL	41.697131
47610	Kolmogorov-Smirnov Test Statistic		0.1048803	95% Percentile Bootstrap UCL	37.277778
47611	Kolmogorov-Smirnov 5% Critical Value		0.2036254	95% BCA Bootstrap UCL	38.444444
47612	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	45.281012
47613				97.5% Chebyshev(Mean, Sd) UCL	50.631075
47614	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	61.140236
47615	95% Approximate Gamma UCL		38.261836		
47616	95% Adjusted Gamma UCL		38.822683		
47617					
47618	**Potential UCL to Use**			Use 95% Student's-t UCL	37.851192
47619					
47620	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
47621	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
47622	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
47623					
47624					
47625	**PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_nw_2009)**				
47626					
47627	**General Statistics**				
47628	Number of Valid Data		0	Number of Detected Data	0
47629	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47630	Number of Missing Values		7	Percent Non-Detects	NaN%
47631					
47632	**Warning: This data set only has 0 observations!**				
47633	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47634	**The data set for variable PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_nw_2009) was not processed!**				
47635					
47636	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47637	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47638					
47639					
47640					
47641	**PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_nw_2010)**				
47642					
47643	**General Statistics**				
47644	Number of Valid Data		0	Number of Detected Data	0
47645	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47646	Number of Missing Values		4	Percent Non-Detects	NaN%
47647					
47648	**Warning: This data set only has 0 observations!**				
47649	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47650	**The data set for variable PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_nw_2010) was not processed!**				
47651					

	A	B	C	D	E
47652	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47653	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47654					
47655					
47656					
47657	**PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_ref_2009)**				
47658					
47659	**General Statistics**				
47660	Number of Valid Data		0	Number of Detected Data	0
47661	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47662	Number of Missing Values		6	Percent Non-Detects	NaN%
47663					
47664	**Warning: This data set only has 0 observations!**				
47665	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47666	**The data set for variable PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_ref_2009) was not processed!**				
47667					
47668	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47669	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47670					
47671					
47672					
47673	**PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_ref_2010)**				
47674					
47675	**General Statistics**				
47676	Number of Valid Data		0	Number of Detected Data	0
47677	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47678	Number of Missing Values		3	Percent Non-Detects	NaN%
47679					
47680	**Warning: This data set only has 0 observations!**				
47681	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47682	**The data set for variable PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_ref_2010) was not processed!**				
47683					
47684	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				
47685	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47686					
47687					
47688					
47689	**PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_s_2005)**				
47690					
47691	**General Statistics**				
47692	Number of Valid Observations		8	Number of Distinct Observations	7
47693					
47694	**Raw Statistics**			**Log-transformed Statistics**	
47695	Minimum		14	Minimum of Log Data	2.6390573
47696	Maximum		33	Maximum of Log Data	3.4965076
47697	Mean		25.375	Mean of log Data	3.1901718
47698	Median		27.5	SD of log Data	0.3274692
47699	SD		7.4438373		
47700	Coefficient of Variation		0.2933532		
47701	Skewness		-0.52727		
47702					
47703					
47704	**Warning: There are only 8 Values in this data**				

	A	B	C	D	E
47705	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**				
47706	**the resulting calculations may not be reliable enough to draw conclusions**				
47707					
47708	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**				
47709					
47710	**Relevant UCL Statistics**				
47711	**Normal Distribution Test**			**Lognormal Distribution Test**	
47712	Shapiro Wilk Test Statistic		0.8828203	Shapiro Wilk Test Statistic	0.8678065
47713	Shapiro Wilk Critical Value		0.818	Shapiro Wilk Critical Value	0.818
47714	**Data appear Normal at 5% Significance Level**			**Data appear Lognormal at 5% Significance Level**	
47715					
47716	**Assuming Normal Distribution**			**Assuming Lognormal Distribution**	
47717	95% Student's-t UCL		30.36114	95% H-UCL	33.211584
47718	**95% UCLs (Adjusted for Skewness)**			95% Chebyshev (MVUE) UCL	38.360332
47719	95% Adjusted-CLT UCL (Chen-1995)		29.179688	97.5% Chebyshev (MVUE) UCL	43.945211
47720	95% Modified-t UCL (Johnson-1978)		30.279371	99% Chebyshev (MVUE) UCL	54.915624
47721					
47722	**Gamma Distribution Test**			**Data Distribution**	
47723	k star (bias corrected)		7.3546018	**Data appear Normal at 5% Significance Level**	
47724	Theta Star		3.4502208		
47725	MLE of Mean		25.375		
47726	MLE of Standard Deviation		9.3567811		
47727	nu star		117.67363		
47728	Approximate Chi Square Value (.05)		93.626961	**Nonparametric Statistics**	
47729	Adjusted Level of Significance		0.01946	95% CLT UCL	29.703916
47730	Adjusted Chi Square Value		88.208001	95% Jackknife UCL	30.36114
47731				95% Standard Bootstrap UCL	29.432727
47732	Anderson-Darling Test Statistic		0.5170633	95% Bootstrap-t UCL	29.775787
47733	Anderson-Darling 5% Critical Value		0.7151775	95% Hall's Bootstrap UCL	28.619973
47734	Kolmogorov-Smirnov Test Statistic		0.2131601	95% Percentile Bootstrap UCL	29.25
47735	Kolmogorov-Smirnov 5% Critical Value		0.2942114	95% BCA Bootstrap UCL	28.875
47736	**Data appear Gamma Distributed at 5% Significance Level**			95% Chebyshev(Mean, Sd) UCL	36.846724
47737				97.5% Chebyshev(Mean, Sd) UCL	41.810548
47738	**Assuming Gamma Distribution**			99% Chebyshev(Mean, Sd) UCL	51.561019
47739	95% Approximate Gamma UCL		31.892185		
47740	95% Adjusted Gamma UCL		33.851446		
47741					
47742	**Potential UCL to Use**			Use 95% Student's-t UCL	30.36114
47743					
47744	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**				
47745	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**				
47746	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**				
47747					
47748					
47749	**PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_s_2010)**				
47750					
47751	**General Statistics**				
47752	Number of Valid Data		0	Number of Detected Data	0
47753	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47754	Number of Missing Values		2	Percent Non-Detects	NaN%
47755					
47756	**Warning: This data set only has 0 observations!**				
47757	**Data set is too small to compute reliable and meaningful statistics and estimates!**				
47758	**The data set for variable PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_s_2010) was not processed!**				
47759					
47760	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**				

	A	B	C	D	E
47761	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47762					
47763					
47764					
47765	PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_stillwater_2005)				
47766					
47767	General Statistics				
47768	Number of Valid Observations		4	Number of Distinct Observations	4
47769					
47770					
47771	Warning: This data set only has 4 observations!				
47772	Data set is too small to compute reliable and meaningful statistics and estimates!				
47773	The data set for variable PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_stillwater_2005) was not processed!				
47774					
47775	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
47776	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47777					
47778					
47779					
47780	PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_stillwater_2009)				
47781					
47782	General Statistics				
47783	Number of Valid Data		0	Number of Detected Data	0
47784	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47785	Number of Missing Values		60	Percent Non-Detects	NaN%
47786					
47787	Warning: This data set only has 0 observations!				
47788	Data set is too small to compute reliable and meaningful statistics and estimates!				
47789	The data set for variable PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_stillwater_2009) was not processed!				
47790					
47791	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				
47792	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.				
47793					
47794					
47795					
47796	PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_stillwater_2010)				
47797					
47798	General Statistics				
47799	Number of Valid Data		0	Number of Detected Data	0
47800	Number of Distinct Detected Data		0	Number of Non-Detect Data	0
47801	Number of Missing Values		11	Percent Non-Detects	NaN%
47802					
47803	Warning: This data set only has 0 observations!				
47804	Data set is too small to compute reliable and meaningful statistics and estimates!				
47805	The data set for variable PET|MG/KG|EXTRACTABLE PETROLEUM HYDROCARBONS (gi_sd_stillwater_2010) was not processed!				
47806					
47807	It is suggested to collect at least 8 to 10 observations before using these statistical methods!				

	A	B	C	D	E
47808	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**				
47809					
47810					

1				General UCL Statistics for Data Sets with Non-Detects								
2		User Selected Options										
3			From File	et.wst								
4			Full Precision	ON								
5			Confidence Coefficient	95%								
6			Number of Bootstrap	2000								
7												
8												
9	M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_ne_2005)											
10												
11					General Statistics							
12				Number of Valid Data	11			Number of Detected Data	0			
13				Number of Distinct Detected Data	0			Number of Non-Detect Data	11			
14								Percent Non-Detects	100.00%			
15												
16	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
17	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
18	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
19												
20	The data set for variable M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_ne_2005) was not processed!											
21												
22												
23												
24	M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_ne_2010)											
25												
26					General Statistics							
27				Number of Valid Observations	5			Number of Distinct Observations	5			
28												
29				Raw Statistics				Log-transformed Statistics				
30				Minimum	13.1			Minimum of Log Data	2.5726122			
31				Maximum	42.6			Maximum of Log Data	3.7518543			
32				Mean	29.74			Mean of log Data	3.2961886			
33				Median	35.5			SD of log Data	0.5177597			
34				SD	13.032766							
35				Coefficient of Variation	0.4382235							
36				Skewness	-0.544246							
37												
38												
39	Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!											
40												
41	It is suggested to collect at least 8 to 10 observations using these statistical methods!											
42	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
43												
44												
45	Warning: There are only 5 Values in this data											
46	Note: It should be noted that even though bootstrap methods may be performed on this data set,											
47	the resulting calculations may not be reliable enough to draw conclusions											
48												
49	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.											
50												
51					Relevant UCL Statistics							
52				Normal Distribution Test				Lognormal Distribution Test				
53				Shapiro Wilk Test Statistic	0.8803018			Shapiro Wilk Test Statistic	0.8591892			
54				Shapiro Wilk Critical Value	0.762			Shapiro Wilk Critical Value	0.762			
55				Data appear Normal at 5% Significance Level				Data appear Lognormal at 5% Significance Level				
56												
57				Assuming Normal Distribution				Assuming Lognormal Distribution				
58				95% Student's-t UCL	42.165321			95% H-UCL	67.21827			
59				95% UCLs (Adjusted for Skewness)				95% Chebyshev (MVUE) UCL	60.006296			
60				95% Adjusted-CLT UCL (Chen-1995)	37.811114			97.5% Chebyshev (MVUE) UCL	72.985233			
61				95% Modified-t UCL (Johnson-1978)	41.928886			99% Chebyshev (MVUE) UCL	98.479842			
62												
63				Gamma Distribution Test				Data Distribution				
64				k star (bias corrected)	2.274521			Data appear Normal at 5% Significance Level				
65				Theta Star	13.07528							
66				MLE of Mean	29.74							
67				MLE of Standard Deviation	19.719504							
68				nu star	22.74521							
69				Approximate Chi Square Value (.05)	12.898507			Nonparametric Statistics				
70				Adjusted Level of Significance	0.0086			95% CLT UCL	39.326915			
71				Adjusted Chi Square Value	9.8155883			95% Jackknife UCL	42.165321			
72								95% Standard Bootstrap UCL	38.357344			
73				Anderson-Darling Test Statistic	0.4704162			95% Bootstrap-t UCL	40.438379			
74				Anderson-Darling 5% Critical Value	0.6805808			95% Hall's Bootstrap UCL	34.923476			

75					Kolmogorov-Smirnov Test Statistic	0.3138166				95% Percentile Bootstrap UCL		38.24
76					Kolmogorov-Smirnov 5% Critical Value	0.3582592				95% BCA Bootstrap UCL		38.24
77					**Data appear Gamma Distributed at 5% Significance Level**					95% Chebyshev(Mean, Sd) UCL		55.145539
78										97.5% Chebyshev(Mean, Sd) UCL		66.138536
79					**Assuming Gamma Distribution**					99% Chebyshev(Mean, Sd) UCL		87.732149
80					95% Approximate Gamma UCL	52.443477						
81					95% Adjusted Gamma UCL	68.915131						
82												
83					**Potential UCL to Use**					Use 95% Student's-t UCL		42.165321
84												
85	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
86	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
87	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
88												
89												
90	**M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_nw_2005)**											
91												
92	**General Statistics**											
93					Number of Valid Data	6				Number of Detected Data		0
94					Number of Distinct Detected Data	0				Number of Non-Detect Data		6
95										Percent Non-Detects		100.00%
96												
97	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**											
98	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**											
99	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
100												
101	**The data set for variable M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_nw_2005) was not processed!**											
102												
103												
104												
105	**M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_nw_2010)**											
106												
107	**General Statistics**											
108					Number of Valid Observations	1				Number of Distinct Observations		1
109												
110												
111	**Warning: This data set only has 1 observations!**											
112	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
113	**The data set for variable M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_nw_2010) was not processed!**											
114												
115	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
116	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
117												
118												
119												
120	**M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_ref_2010)**											
121												
122	**General Statistics**											
123					Number of Valid Observations	3				Number of Distinct Observations		3
124												
125												
126	**Warning: This data set only has 3 observations!**											
127	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
128	**The data set for variable M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_ref_2010) was not processed!**											
129												
130	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
131	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
132												
133												
134												
135	**M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_s_2005)**											
136												
137	**General Statistics**											
138					Number of Valid Data	3				Number of Detected Data		0
139					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
140										Percent Non-Detects		100.00%
141												
142	**Warning: This data set only has 3 observations!**											
143	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
144	**The data set for variable M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_s_2005) was not processed!**											
145												
146	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
147	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
148												

	A	B	C	D	E	F	G	H	I	J	K	L
149												
150												
151	**M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_s_2010)**											
152												
153	**General Statistics**											
154	Number of Valid Observations					1	Number of Distinct Observations					1
155												
156												
157	**Warning: This data set only has 1 observations!**											
158	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
159	**The data set for variable M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_s_2010) was not processed!**											
160												
161	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
162	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
163												
164												
165												
166	**M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_stillwater_2005)**											
167												
168	**General Statistics**											
169	Number of Valid Data					1	Number of Detected Data					0
170	Number of Distinct Detected Data					0	Number of Non-Detect Data					1
171							Percent Non-Detects					100.00%
172												
173	**Warning: This data set only has 1 observations!**											
174	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
175	**The data set for variable M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_stillwater_2005) was not processed!**											
176												
177	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
178	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
179												
180												
181												
182	**M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_stillwater_2010)**											
183												
184	**General Statistics**											
185	Number of Valid Observations					3	Number of Distinct Observations					3
186												
187												
188	**Warning: This data set only has 3 observations!**											
189	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
190	**The data set for variable M|MG/KG|ALUMINUM (gi_et_clams_and_mussels_stillwater_2010) was not processed!**											
191												
192	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
193	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
194												
195												
196												
197	**M|MG/KG|ALUMINUM (gi_et_crabs_ne_2010)**											
198												
199	**General Statistics**											
200	Number of Valid Observations					2	Number of Distinct Observations					2
201												
202												
203	**Warning: This data set only has 2 observations!**											
204	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
205	**The data set for variable M|MG/KG|ALUMINUM (gi_et_crabs_ne_2010) was not processed!**											
206												
207	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
208	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
209												
210												
211												
212	**M|MG/KG|ALUMINUM (gi_et_crabs_nw_2010)**											
213												
214	**General Statistics**											
215	Number of Valid Observations					1	Number of Distinct Observations					1
216												
217												
218	**Warning: This data set only has 1 observations!**											
219	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
220	**The data set for variable M|MG/KG|ALUMINUM (gi_et_crabs_nw_2010) was not processed!**											
221												
222	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											

	A	B	C	D	E	F	G	H	I	J	K	L
223	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
224												
225												
226												
227	**M|MG/KG|ALUMINUM (gi_et_crabs_ref_2010)**											
228												
229	**General Statistics**											
230	Number of Valid Observations					3	Number of Distinct Observations					3
231												
232												
233	**Warning: This data set only has 3 observations!**											
234	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
235	**The data set for variable M|MG/KG|ALUMINUM (gi_et_crabs_ref_2010) was not processed!**											
236												
237	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
238	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
239												
240												
241												
242	**M|MG/KG|ALUMINUM (gi_et_crabs_stillwater_2010)**											
243												
244	**General Statistics**											
245	Number of Valid Observations					3	Number of Distinct Observations					3
246												
247												
248	**Warning: This data set only has 3 observations!**											
249	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
250	**The data set for variable M|MG/KG|ALUMINUM (gi_et_crabs_stillwater_2010) was not processed!**											
251												
252	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
253	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
254												
255												
256												
257	**M|MG/KG|ARSENIC (gi_et_clams_and_mussels_ne_2005)**											
258												
259	**General Statistics**											
260	Number of Valid Observations					11	Number of Distinct Observations					9
261												
262	**Raw Statistics**						**Log-transformed Statistics**					
263	Minimum					1.1	Minimum of Log Data					0.0953102
264	Maximum					3.9	Maximum of Log Data					1.3609766
265	Mean					2.0454545	Mean of log Data					0.6519371
266	Median					1.7	SD of log Data					0.3662747
267	SD					0.8116202						
268	Coefficient of Variation					0.3967921						
269	Skewness					1.2865387						
270												
271												
272	**Relevant UCL Statistics**											
273	**Normal Distribution Test**						**Lognormal Distribution Test**					
274	Shapiro Wilk Test Statistic					0.8929388	Shapiro Wilk Test Statistic					0.9698695
275	Shapiro Wilk Critical Value					0.85	Shapiro Wilk Critical Value					0.85
276	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
277												
278	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
279	95% Student's-t UCL					2.4889868	95% H-UCL					2.5924774
280	**95% UCLs (Adjusted for Skewness)**						95% Chebyshev (MVUE) UCL					3.0326834
281	95% Adjusted-CLT UCL (Chen-1995)					2.5494004	97.5% Chebyshev (MVUE) UCL					3.4625171
282	95% Modified-t UCL (Johnson-1978)					2.5048077	99% Chebyshev (MVUE) UCL					4.3068422
283												
284	**Gamma Distribution Test**						**Data Distribution**					
285	k star (bias corrected)					5.8892714	**Data appear Normal at 5% Significance Level**					
286	Theta Star					0.3473188						
287	MLE of Mean					2.0454545						
288	MLE of Standard Deviation					0.842867						
289	nu star					129.56397						
290	Approximate Chi Square Value (.05)					104.2708	**Nonparametric Statistics**					
291	Adjusted Level of Significance					0.02783	95% CLT UCL					2.4479711
292	Adjusted Chi Square Value					100.57534	95% Jackknife UCL					2.4889868
293							95% Standard Bootstrap UCL					2.4220653
294	Anderson-Darling Test Statistic					0.3084672	95% Bootstrap-t UCL					2.6945174
295	Anderson-Darling 5% Critical Value					0.7301801	95% Hall's Bootstrap UCL					2.9062566
296	Kolmogorov-Smirnov Test Statistic					0.1965371	95% Percentile Bootstrap UCL					2.4545455

297			Kolmogorov-Smirnov 5% Critical Value	0.2556262				95% BCA Bootstrap UCL	2.5272727			
298			**Data appear Gamma Distributed at 5% Significance Level**					95% Chebyshev(Mean, Sd) UCL	3.1121324			
299								97.5% Chebyshev(Mean, Sd) UCL	3.5736848			
300			**Assuming Gamma Distribution**					99% Chebyshev(Mean, Sd) UCL	4.480315			
301			95% Approximate Gamma UCL	2.5416243								
302			95% Adjusted Gamma UCL	2.6350119								
303												
304			**Potential UCL to Use**					Use 95% Student's-t UCL	2.4889868			
305												
306	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
307	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
308	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
309												
310												
311	**M|MG/KG|ARSENIC (gi_et_clams_and_mussels_ne_2010)**											
312												
313	**General Statistics**											
314			Number of Valid Observations	5				Number of Distinct Observations	5			
315												
316			**Raw Statistics**					**Log-transformed Statistics**				
317			Minimum	2.4				Minimum of Log Data	0.8754687			
318			Maximum	3.7				Maximum of Log Data	1.3083328			
319			Mean	2.95				Mean of log Data	1.065483			
320			Median	2.65				SD of log Data	0.2004249			
321			SD	0.6041523								
322			Coefficient of Variation	0.2047974								
323			Skewness	0.573939								
324												
325												
326	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
327												
328	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
329	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
330												
331												
332	**Warning: There are only 5 Values in this data**											
333	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
334	**the resulting calculations may not be reliable enough to draw conclusions**											
335												
336	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
337												
338	**Relevant UCL Statistics**											
339			**Normal Distribution Test**					**Lognormal Distribution Test**				
340			Shapiro Wilk Test Statistic	0.8367424				Shapiro Wilk Test Statistic	0.8468147			
341			Shapiro Wilk Critical Value	0.762				Shapiro Wilk Critical Value	0.762			
342			**Data appear Normal at 5% Significance Level**					**Data appear Lognormal at 5% Significance Level**				
343												
344			**Assuming Normal Distribution**					**Assuming Lognormal Distribution**				
345			95% Student's-t UCL	3.5259933				95% H-UCL	3.6910584			
346			**95% UCLs (Adjusted for Skewness)**					95% Chebyshev (MVUE) UCL	4.0997813			
347			95% Adjusted-CLT UCL (Chen-1995)	3.4685157				97.5% Chebyshev (MVUE) UCL	4.5976716			
348			95% Modified-t UCL (Johnson-1978)	3.5375515				99% Chebyshev (MVUE) UCL	5.5756806			
349												
350			**Gamma Distribution Test**					**Data Distribution**				
351			k star (bias corrected)	12.452891				**Data appear Normal at 5% Significance Level**				
352			Theta Star	0.2368928								
353			MLE of Mean	2.95								
354			MLE of Standard Deviation	0.8359627								
355			nu star	124.52891								
356			Approximate Chi Square Value (.05)	99.756265				**Nonparametric Statistics**				
357			Adjusted Level of Significance	0.0086				95% CLT UCL	3.394415			
358			Adjusted Chi Square Value	90.065185				95% Jackknife UCL	3.5259933			
359								95% Standard Bootstrap UCL	3.3379375			
360			Anderson-Darling Test Statistic	0.5237623				95% Bootstrap-t UCL	5.2351323			
361			Anderson-Darling 5% Critical Value	0.6785352				95% Hall's Bootstrap UCL	8.7205749			
362			Kolmogorov-Smirnov Test Statistic	0.2998932				95% Percentile Bootstrap UCL	3.4			
363			Kolmogorov-Smirnov 5% Critical Value	0.357052				95% BCA Bootstrap UCL	3.4			
364			**Data appear Gamma Distributed at 5% Significance Level**					95% Chebyshev(Mean, Sd) UCL	4.1277096			
365								97.5% Chebyshev(Mean, Sd) UCL	4.6373055			
366			**Assuming Gamma Distribution**					99% Chebyshev(Mean, Sd) UCL	5.638308			
367			95% Approximate Gamma UCL	3.6825787								
368			95% Adjusted Gamma UCL	4.0788268								
369												
370			**Potential UCL to Use**					Use 95% Student's-t UCL	3.5259933			

371												
372	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
373	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
374	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
375												
376												
377	M|MG/KG|ARSENIC (gi_et_clams_and_mussels_nw_2005)											
378												
379	General Statistics											
380	Number of Valid Observations					6		Number of Distinct Observations				5
381												
382	Raw Statistics							Log-transformed Statistics				
383	Minimum					0.75		Minimum of Log Data				-0.287682
384	Maximum					4.2		Maximum of Log Data				1.4350845
385	Mean					2.1583333		Mean of log Data				0.6490609
386	Median					1.9		SD of log Data				0.5568554
387	SD					1.1377243						
388	Coefficient of Variation					0.527131						
389	Skewness					1.1511225						
390												
391												
392	Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!											
393												
394	It is suggested to collect at least 8 to 10 observations using these statistical methods!											
395	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
396												
397												
398	Warning: There are only 6 Values in this data											
399	Note: It should be noted that even though bootstrap methods may be performed on this data set,											
400	the resulting calculations may not be reliable enough to draw conclusions											
401												
402	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.											
403												
404	Relevant UCL Statistics											
405	Normal Distribution Test							Lognormal Distribution Test				
406	Shapiro Wilk Test Statistic					0.8804015		Shapiro Wilk Test Statistic				0.9112595
407	Shapiro Wilk Critical Value					0.788		Shapiro Wilk Critical Value				0.788
408	Data appear Normal at 5% Significance Level							Data appear Lognormal at 5% Significance Level				
409												
410	Assuming Normal Distribution							Assuming Lognormal Distribution				
411	95% Student's-t UCL					3.0942709		95% H-UCL				4.4641168
412	95% UCLs (Adjusted for Skewness)							95% Chebyshev (MVUE) UCL				4.3212984
413	95% Adjusted-CLT UCL (Chen-1995)					3.1555569		97.5% Chebyshev (MVUE) UCL				5.2510024
414	95% Modified-t UCL (Johnson-1978)					3.1306504		99% Chebyshev (MVUE) UCL				7.0772258
415												
416	Gamma Distribution Test							Data Distribution				
417	k star (bias corrected)					2.2695054		Data appear Normal at 5% Significance Level				
418	Theta Star					0.9510148						
419	MLE of Mean					2.1583333						
420	MLE of Standard Deviation					1.4326922						
421	nu star					27.234065						
422	Approximate Chi Square Value (.05)					16.332942		Nonparametric Statistics				
423	Adjusted Level of Significance					0.01222		95% CLT UCL				2.9223251
424	Adjusted Chi Square Value					13.381836		95% Jackknife UCL				3.0942709
425								95% Standard Bootstrap UCL				2.8667028
426	Anderson-Darling Test Statistic					0.4110137		95% Bootstrap-t UCL				3.4447541
427	Anderson-Darling 5% Critical Value					0.6993686		95% Hall's Bootstrap UCL				8.0888573
428	Kolmogorov-Smirnov Test Statistic					0.2530465		95% Percentile Bootstrap UCL				2.9416667
429	Kolmogorov-Smirnov 5% Critical Value					0.3333024		95% BCA Bootstrap UCL				3.1
430	Data appear Gamma Distributed at 5% Significance Level							95% Chebyshev(Mean, Sd) UCL				4.1829286
431								97.5% Chebyshev(Mean, Sd) UCL				5.0589726
432	Assuming Gamma Distribution							99% Chebyshev(Mean, Sd) UCL				6.7797914
433	95% Approximate Gamma UCL					3.5988734						
434	95% Adjusted Gamma UCL					4.3925356						
435												
436	Potential UCL to Use							Use 95% Student's-t UCL				3.0942709
437												
438	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
439	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
440	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
441												
442												
443	M|MG/KG|ARSENIC (gi_et_clams_and_mussels_nw_2010)											
444												

	A	B	C	D	E	F	G	H	I	J	K	L
445	General Statistics											
446	Number of Valid Observations	1					Number of Distinct Observations	1				
447												
448												
449	Warning: This data set only has 1 observations!											
450	Data set is too small to compute reliable and meaningful statistics and estimates!											
451	The data set for variable M|MG/KG|ARSENIC (gi_et_clams_and_mussels_nw_2010) was not processed!											
452												
453	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
454	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
455												
456												
457												
458	M|MG/KG|ARSENIC (gi_et_clams_and_mussels_ref_2010)											
459												
460	General Statistics											
461	Number of Valid Observations	3					Number of Distinct Observations	3				
462												
463												
464	Warning: This data set only has 3 observations!											
465	Data set is too small to compute reliable and meaningful statistics and estimates!											
466	The data set for variable M|MG/KG|ARSENIC (gi_et_clams_and_mussels_ref_2010) was not processed!											
467												
468	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
469	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
470												
471												
472												
473	M|MG/KG|ARSENIC (gi_et_clams_and_mussels_s_2005)											
474												
475	General Statistics											
476	Number of Valid Observations	3					Number of Distinct Observations	3				
477												
478												
479	Warning: This data set only has 3 observations!											
480	Data set is too small to compute reliable and meaningful statistics and estimates!											
481	The data set for variable M|MG/KG|ARSENIC (gi_et_clams_and_mussels_s_2005) was not processed!											
482												
483	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
484	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
485												
486												
487												
488	M|MG/KG|ARSENIC (gi_et_clams_and_mussels_s_2010)											
489												
490	General Statistics											
491	Number of Valid Observations	1					Number of Distinct Observations	1				
492												
493												
494	Warning: This data set only has 1 observations!											
495	Data set is too small to compute reliable and meaningful statistics and estimates!											
496	The data set for variable M|MG/KG|ARSENIC (gi_et_clams_and_mussels_s_2010) was not processed!											
497												
498	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
499	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
500												
501												
502												
503	M|MG/KG|ARSENIC (gi_et_clams_and_mussels_stillwater_2005)											
504												
505	General Statistics											
506	Number of Valid Observations	1					Number of Distinct Observations	1				
507												
508												
509	Warning: This data set only has 1 observations!											
510	Data set is too small to compute reliable and meaningful statistics and estimates!											
511	The data set for variable M|MG/KG|ARSENIC (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
512												
513	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
514	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
515												
516												
517												
518	M|MG/KG|ARSENIC (gi_et_clams_and_mussels_stillwater_2010)											

	A	B	C	D	E	F	G	H	I	J	K	L
519												
520						General Statistics						
521					Number of Valid Observations	3			Number of Distinct Observations	3		
522												
523												
524						Warning: This data set only has 3 observations!						
525						Data set is too small to compute reliable and meaningful statistics and estimates!						
526						The data set for variable M|MG/KG|ARSENIC (gi_et_clams_and_mussels_stillwater_2010) was not processed!						
527												
528						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
529						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
530												
531												
532												
533	M|MG/KG|ARSENIC (gi_et_crabs_ne_2010)											
534												
535						General Statistics						
536					Number of Valid Observations	2			Number of Distinct Observations	2		
537												
538												
539						Warning: This data set only has 2 observations!						
540						Data set is too small to compute reliable and meaningful statistics and estimates!						
541						The data set for variable M|MG/KG|ARSENIC (gi_et_crabs_ne_2010) was not processed!						
542												
543						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
544						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
545												
546												
547												
548	M|MG/KG|ARSENIC (gi_et_crabs_nw_2010)											
549												
550						General Statistics						
551					Number of Valid Observations	1			Number of Distinct Observations	1		
552												
553												
554						Warning: This data set only has 1 observations!						
555						Data set is too small to compute reliable and meaningful statistics and estimates!						
556						The data set for variable M|MG/KG|ARSENIC (gi_et_crabs_nw_2010) was not processed!						
557												
558						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
559						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
560												
561												
562												
563	M|MG/KG|ARSENIC (gi_et_crabs_ref_2010)											
564												
565						General Statistics						
566					Number of Valid Observations	3			Number of Distinct Observations	3		
567												
568												
569						Warning: This data set only has 3 observations!						
570						Data set is too small to compute reliable and meaningful statistics and estimates!						
571						The data set for variable M|MG/KG|ARSENIC (gi_et_crabs_ref_2010) was not processed!						
572												
573						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
574						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
575												
576												
577												
578	M|MG/KG|ARSENIC (gi_et_crabs_stillwater_2010)											
579												
580						General Statistics						
581					Number of Valid Observations	3			Number of Distinct Observations	3		
582												
583												
584						Warning: This data set only has 3 observations!						
585						Data set is too small to compute reliable and meaningful statistics and estimates!						
586						The data set for variable M|MG/KG|ARSENIC (gi_et_crabs_stillwater_2010) was not processed!						
587												
588						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
589						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
590												
591												
592												

593	**M|MG/KG|BARIUM (gi_et_clams_and_mussels_ne_2005)**											
594												
595	**General Statistics**											
596						Number of Valid Data	11			Number of Detected Data		0
597						Number of Distinct Detected Data	0			Number of Non-Detect Data		11
598										Percent Non-Detects		100.00%
599												
600	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**											
601	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**											
602	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
603												
604	**The data set for variable M|MG/KG|BARIUM (gi_et_clams_and_mussels_ne_2005) was not processed!**											
605												
606												
607												
608	**M|MG/KG|BARIUM (gi_et_clams_and_mussels_ne_2010)**											
609												
610	**General Statistics**											
611						Number of Valid Data	5			Number of Detected Data		3
612						Number of Distinct Detected Data	3			Number of Non-Detect Data		2
613										Percent Non-Detects		40.00%
614												
615	**Raw Statistics**								**Log-transformed Statistics**			
616						Minimum Detected	0.29			Minimum Detected		-1.237874
617						Maximum Detected	0.754			Maximum Detected		-0.282363
618						Mean of Detected	0.4946667			Mean of Detected		-0.780406
619						SD of Detected	0.2367812			SD of Detected		0.4790462
620						Minimum Non-Detect	0.086			Minimum Non-Detect		-2.453408
621						Maximum Non-Detect	0.181			Maximum Non-Detect		-1.709258
622												
623	Note: Data have multiple DLs - Use of KM Method is									Number treated as Non-Detect		2
624	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected		3
625	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage		40.00%
626												
627	**Warning: There are only 3 Distinct Detected Values in this data set**											
628	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
629	**Those methods will return a 'N/A' value on your output display!**											
630												
631	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
632	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
633	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
634												
635												
636	**UCL Statistics**											
637	**Normal Distribution Test with Detected Values Only**								**Lognormal Distribution Test with Detected Values Only**			
638						Shapiro Wilk Test Statistic	0.9600044			Shapiro Wilk Test Statistic		0.9946005
639						5% Shapiro Wilk Critical Value	0.767			5% Shapiro Wilk Critical Value		0.767
640	**Data appear Normal at 5% Significance Level**								**Data appear Lognormal at 5% Significance Level**			
641												
642	**Assuming Normal Distribution**								**Assuming Lognormal Distribution**			
643						DL/2 Substitution Method				DL/2 Substitution Method		
644						Mean	0.3235			Mean		-1.578036
645						SD	0.2885282			SD		1.1733977
646						95% DL/2 (t) UCL	0.5985801			95% H-Stat (DL/2) UCL		11.377177
647												
648						Maximum Likelihood Estimate(MLE) Method				Log ROS Method		
649						Mean	0.2787123			Mean in Log Scale		-1.369576
650						SD	0.3242138			SD in Log Scale		0.8749834
651						95% MLE (t) UCL	0.5878148			Mean in Original Scale		0.3388195
652						95% MLE (Tiku) UCL	0.6283999			SD in Original Scale		0.271244
653										95% t UCL		0.597421
654										95% Percentile Bootstrap UCL		0.5314097
655										95% BCA Bootstrap UCL		0.5056
656												
657	**Gamma Distribution Test with Detected Values Only**								**Data Distribution Test with Detected Values Only**			
658						k star (bias corrected)	N/A		**Data appear Normal at 5% Significance Level**			
659						Theta Star	N/A					
660						nu star	N/A					
661												
662						A-D Test Statistic	N/A		**Nonparametric Statistics**			
663						5% A-D Critical Value	N/A			Kaplan-Meier (KM) Method		
664						K-S Test Statistic	N/A			Mean		0.4128
665						5% K-S Critical Value	N/A			SD		0.1802203
666	**Data not Gamma Distributed at 5% Significance Level**									SE of Mean		0.0987107

667										95% KM (t) UCL		0.6232362
668	**Assuming Gamma Distribution**									95% KM (z) UCL		0.5751647
669	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL		0.6173882
670					Minimum	N/A				95% KM (bootstrap t) UCL		0.5815163
671					Maximum	N/A				95% KM (BCA) UCL		0.754
672					Mean	N/A				95% KM (Percentile Bootstrap) UCL		0.754
673					Median	N/A				95% KM (Chebyshev) UCL		0.8430701
674					SD	N/A				97.5% KM (Chebyshev) UCL		1.0292483
675					k star	N/A				99% KM (Chebyshev) UCL		1.3949594
676					Theta star	N/A						
677					Nu star	N/A				**Potential UCLs to Use**		
678					AppChi2	N/A				95% KM (t) UCL		0.6232362
679				95% Gamma Approximate UCL		N/A				95% KM (Percentile Bootstrap) UCL		0.754
680				95% Adjusted Gamma UCL		N/A						
681	**Note: DL/2 is not a recommended method.**											
682												
683	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
684	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
685	**For additional insight, the user may want to consult a statistician.**											
686												
687												
688	**M|MG/KG|BARIUM (gi_et_clams_and_mussels_nw_2005)**											
689												
690	**General Statistics**											
691					Number of Valid Data	6				Number of Detected Data		0
692					Number of Distinct Detected Data	0				Number of Non-Detect Data		6
693										Percent Non-Detects		100.00%
694												
695	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**											
696	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**											
697	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
698												
699	**The data set for variable M|MG/KG|BARIUM (gi_et_clams_and_mussels_nw_2005) was not processed!**											
700												
701												
702												
703	**M|MG/KG|BARIUM (gi_et_clams_and_mussels_nw_2010)**											
704												
705	**General Statistics**											
706					Number of Valid Observations	1				Number of Distinct Observations		1
707												
708												
709	**Warning: This data set only has 1 observations!**											
710	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
711	**The data set for variable M|MG/KG|BARIUM (gi_et_clams_and_mussels_nw_2010) was not processed!**											
712												
713	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
714	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
715												
716												
717												
718	**M|MG/KG|BARIUM (gi_et_clams_and_mussels_ref_2010)**											
719												
720	**General Statistics**											
721					Number of Valid Observations	3				Number of Distinct Observations		3
722												
723												
724	**Warning: This data set only has 3 observations!**											
725	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
726	**The data set for variable M|MG/KG|BARIUM (gi_et_clams_and_mussels_ref_2010) was not processed!**											
727												
728	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
729	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
730												
731												
732												
733	**M|MG/KG|BARIUM (gi_et_clams_and_mussels_s_2005)**											
734												
735	**General Statistics**											
736					Number of Valid Data	3				Number of Detected Data		0
737					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
738										Percent Non-Detects		100.00%
739												
740	**Warning: This data set only has 3 observations!**											

	A	B	C	D	E	F	G	H	I	J	K	L
741	Data set is too small to compute reliable and meaningful statistics and estimates!											
742	The data set for variable M|MG/KG|BARIUM (gi_et_clams_and_mussels_s_2005) was not processed!											
743												
744	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
745	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
746												
747												
748												
749	M|MG/KG|BARIUM (gi_et_clams_and_mussels_s_2010)											
750												
751	General Statistics											
752	Number of Valid Observations	1				Number of Distinct Observations	1					
753												
754												
755	Warning: This data set only has 1 observations!											
756	Data set is too small to compute reliable and meaningful statistics and estimates!											
757	The data set for variable M|MG/KG|BARIUM (gi_et_clams_and_mussels_s_2010) was not processed!											
758												
759	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
760	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
761												
762												
763												
764	M|MG/KG|BARIUM (gi_et_clams_and_mussels_stillwater_2005)											
765												
766	General Statistics											
767	Number of Valid Data	1				Number of Detected Data	0					
768	Number of Distinct Detected Data	0				Number of Non-Detect Data	1					
769						Percent Non-Detects	100.00%					
770												
771	Warning: This data set only has 1 observations!											
772	Data set is too small to compute reliable and meaningful statistics and estimates!											
773	The data set for variable M|MG/KG|BARIUM (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
774												
775	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
776	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
777												
778												
779												
780	M|MG/KG|BARIUM (gi_et_clams_and_mussels_stillwater_2010)											
781												
782	General Statistics											
783	Number of Valid Data	3				Number of Detected Data	2					
784	Number of Distinct Detected Data	2				Number of Non-Detect Data	1					
785						Percent Non-Detects	33.33%					
786												
787	Warning: This data set only has 3 observations!											
788	Data set is too small to compute reliable and meaningful statistics and estimates!											
789	The data set for variable M|MG/KG|BARIUM (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
790												
791	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
792	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
793												
794												
795												
796	M|MG/KG|BARIUM (gi_et_crabs_ne_2010)											
797												
798	General Statistics											
799	Number of Valid Observations	2				Number of Distinct Observations	2					
800												
801												
802	Warning: This data set only has 2 observations!											
803	Data set is too small to compute reliable and meaningful statistics and estimates!											
804	The data set for variable M|MG/KG|BARIUM (gi_et_crabs_ne_2010) was not processed!											
805												
806	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
807	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
808												
809												
810												
811	M|MG/KG|BARIUM (gi_et_crabs_nw_2010)											
812												
813	General Statistics											
814	Number of Valid Observations	1				Number of Distinct Observations	1					

	A	B	C	D	E	F	G	H	I	J	K	L
815												
816												
817						Warning: This data set only has 1 observations!							
818						Data set is too small to compute reliable and meaningful statistics and estimates!							
819						The data set for variable M|MG/KG|BARIUM (gi_et_crabs_nw_2010) was not processed!							
820												
821						It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
822						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
823												
824												
825												
826	M|MG/KG|BARIUM (gi_et_crabs_ref_2010)											
827												
828						General Statistics						
829					Number of Valid Observations	3			Number of Distinct Observations	3		
830												
831												
832						Warning: This data set only has 3 observations!							
833						Data set is too small to compute reliable and meaningful statistics and estimates!							
834						The data set for variable M|MG/KG|BARIUM (gi_et_crabs_ref_2010) was not processed!							
835												
836						It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
837						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
838												
839												
840												
841	M|MG/KG|BARIUM (gi_et_crabs_stillwater_2010)											
842												
843						General Statistics						
844					Number of Valid Observations	3			Number of Distinct Observations	3		
845												
846												
847						Warning: This data set only has 3 observations!							
848						Data set is too small to compute reliable and meaningful statistics and estimates!							
849						The data set for variable M|MG/KG|BARIUM (gi_et_crabs_stillwater_2010) was not processed!							
850												
851						It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
852						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
853												
854												
855												
856	M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_ne_2005)											
857												
858						General Statistics						
859					Number of Valid Data	11			Number of Detected Data	5		
860					Number of Distinct Detected Data	5			Number of Non-Detect Data	6		
861									Percent Non-Detects	54.55%		
862												
863					Raw Statistics				Log-transformed Statistics			
864					Minimum Detected	0.0055			Minimum Detected	-5.203007		
865					Maximum Detected	0.012			Maximum Detected	-4.422849		
866					Mean of Detected	0.00744			Mean of Detected	-4.945657		
867					SD of Detected	0.0026987			SD of Detected	0.3209616		
868					Minimum Non-Detect	0.005			Minimum Non-Detect	-5.298317		
869					Maximum Non-Detect	0.0058			Maximum Non-Detect	-5.149897		
870												
871	Note: Data have multiple DLs - Use of KM Method is								Number treated as Non-Detect	7		
872	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected	4		
873	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage	63.64%		
874												
875						Warning: There are only 5 Detected Values in this data						
876						Note: It should be noted that even though bootstrap may be performed on this data set						
877						the resulting calculations may not be reliable enough to draw conclusions						
878												
879						It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.						
880												
881												
882						UCL Statistics						
883					Normal Distribution Test with Detected Values Only				Lognormal Distribution Test with Detected Values Only			
884					Shapiro Wilk Test Statistic	0.7837711			Shapiro Wilk Test Statistic	0.8329479		
885					5% Shapiro Wilk Critical Value	0.762			5% Shapiro Wilk Critical Value	0.762		
886					Data appear Normal at 5% Significance Level				Data appear Lognormal at 5% Significance Level			
887												
888					Assuming Normal Distribution				Assuming Lognormal Distribution			

889				DL/2 Substitution Method						DL/2 Substitution Method		
890				Mean	0.00485					Mean	-5.476599	
891				SD	0.0030125					SD	0.5489617	
892				95% DL/2 (t) UCL	0.0064962					95% H-Stat (DL/2) UCL	0.0071776	
893												
894				Maximum Likelihood Estimate(MLE) Method						Log ROS Method		
895				Mean	0.0042895					Mean in Log Scale	-5.41481	
896				SD	0.0037192					SD in Log Scale	0.4947029	
897				95% MLE (t) UCL	0.006322					Mean in Original Scale	0.0050262	
898				95% MLE (Tiku) UCL	0.007393					SD in Original Scale	0.0028759	
899										95% t UCL	0.0065978	
900										95% Percentile Bootstrap UCL	0.0065858	
901										95% BCA Bootstrap UCL	0.0068262	
902												
903	**Gamma Distribution Test with Detected Values Only**									**Data Distribution Test with Detected Values Only**		
904				k star (bias corrected)	4.6659823					**Data appear Normal at 5% Significance Level**		
905				Theta Star	0.0015945							
906				nu star	46.659823							
907												
908				A-D Test Statistic	0.5659364					**Nonparametric Statistics**		
909				5% A-D Critical Value	0.6788547					Kaplan-Meier (KM) Method		
910				K-S Test Statistic	0.6788547					Mean	0.0063818	
911				5% K-S Critical Value	0.3575327					SD	0.0018925	
912	**Data appear Gamma Distributed at 5% Significance Level**									SE of Mean	0.000638	
913										95% KM (t) UCL	0.0075381	
914				**Assuming Gamma Distribution**						95% KM (z) UCL	0.0074312	
915				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	0.0073717	
916				Minimum	0.0055					95% KM (bootstrap t) UCL	0.0129881	
917				Maximum	0.012					95% KM (BCA) UCL	0.0081818	
918				Mean	0.0070716					95% KM (Percentile Bootstrap) UCL	0.0078	
919				Median	0.0063					95% KM (Chebyshev) UCL	0.0091626	
920				SD	0.0018157					97.5% KM (Chebyshev) UCL	0.0103658	
921				k star	15.364541					99% KM (Chebyshev) UCL	0.0127294	
922				Theta star	0.0004603							
923				Nu star	338.0199					**Potential UCLs to Use**		
924				AppChi2	296.41929					95% KM (t) UCL	0.0075381	
925				95% Gamma Approximate UCL	0.0080641					95% KM (Percentile Bootstrap) UCL	0.0078	
926				95% Adjusted Gamma UCL	0.0082408							
927	**Note: DL/2 is not a recommended method.**											
928												
929	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
930	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
931	**For additional insight, the user may want to consult a statistician.**											
932												
933												
934	**M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_ne_2010)**											
935												
936	**General Statistics**											
937				Number of Valid Data	5					Number of Detected Data	0	
938				Number of Distinct Detected Data	0					Number of Non-Detect Data	5	
939										Percent Non-Detects	100.00%	
940												
941	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**											
942	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**											
943	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
944												
945	**The data set for variable M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_ne_2010) was not processed!**											
946												
947												
948												
949	**M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_nw_2005)**											
950												
951	**General Statistics**											
952				Number of Valid Data	6					Number of Detected Data	2	
953				Number of Distinct Detected Data	2					Number of Non-Detect Data	4	
954										Percent Non-Detects	66.67%	
955												
956				**Raw Statistics**						**Log-transformed Statistics**		
957				Minimum Detected	0.0056					Minimum Detected	-5.184989	
958				Maximum Detected	0.0081					Maximum Detected	-4.815891	
959				Mean of Detected	0.00685					Mean of Detected	-5.00044	
960				SD of Detected	0.0017678					SD of Detected	0.2609913	
961				Minimum Non-Detect	0.0051					Minimum Non-Detect	-5.278515	
962				Maximum Non-Detect	0.0058					Maximum Non-Detect	-5.149897	

963												
964	Note: Data have multiple DLs - Use of KM Method is									Number treated as Non-Detect		5
965	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected		1
966	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage		83.33%
967												
968	**Warning: Data set has only 2 Distinct Detected Values.**											
969	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**											
970	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
971												
972	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**											
973												
974	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
975	**Those methods will return a 'N/A' value on your output display!**											
976												
977	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
978	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
979	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
980												
981												
982	**UCL Statistics**											
983	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
984	Shapiro Wilk Test Statistic				N/A		Shapiro Wilk Test Statistic					N/A
985	5% Shapiro Wilk Critical Value				N/A		5% Shapiro Wilk Critical Value					N/A
986	**Data not Normal at 5% Significance Level**						**Data not Lognormal at 5% Significance Level**					
987												
988	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
989	DL/2 Substitution Method						DL/2 Substitution Method					
990	Mean				0.0041		Mean					-5.604711
991	SD				0.0022762		SD					0.4849812
992	95% DL/2 (t) UCL				0.0059725		95% H-Stat (DL/2) UCL					0.0072796
993												
994	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
995	**MLE method failed to converge properly**						Mean in Log Scale					N/A
996							SD in Log Scale					N/A
997							Mean in Original Scale					N/A
998							SD in Original Scale					N/A
999							95% t UCL					N/A
1000							95% Percentile Bootstrap UCL					N/A
1001							95% BCA Bootstrap UCL					N/A
1002												
1003	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
1004	k star (bias corrected)				N/A		**Data do not follow a Discernable Distribution (0.05)**					
1005	Theta Star				N/A							
1006	nu star				N/A							
1007												
1008	A-D Test Statistic				N/A		**Nonparametric Statistics**					
1009	5% A-D Critical Value				N/A		Kaplan-Meier (KM) Method					
1010	K-S Test Statistic				N/A		Mean					0.0060167
1011	5% K-S Critical Value				N/A		SD					0.0009317
1012	**Data not Gamma Distributed at 5% Significance Level**						SE of Mean					0.0005379
1013							95% KM (t) UCL					0.0071006
1014	**Assuming Gamma Distribution**						95% KM (z) UCL					0.0069015
1015	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.007971
1016	Minimum				N/A		95% KM (bootstrap t) UCL					N/A
1017	Maximum				N/A		95% KM (BCA) UCL					N/A
1018	Mean				N/A		95% KM (Percentile Bootstrap) UCL					0.0081
1019	Median				N/A		95% KM (Chebyshev) UCL					0.0083614
1020	SD				N/A		97.5% KM (Chebyshev) UCL					0.0093759
1021	k star				N/A		99% KM (Chebyshev) UCL					0.0113688
1022	Theta star				N/A							
1023	Nu star				N/A		**Potential UCLs to Use**					
1024	AppChi2				N/A		95% KM (t) UCL					0.0071006
1025	95% Gamma Approximate UCL				N/A		95% KM (% Bootstrap) UCL					0.0081
1026	95% Adjusted Gamma UCL				N/A							
1027	**Note: DL/2 is not a recommended method.**											
1028												
1029	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
1030	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
1031	**For additional insight, the user may want to consult a statistician.**											
1032												
1033												
1034	**M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_nw_2010)**											
1035												
1036	**General Statistics**											

1037					Number of Valid Data	1				Number of Detected Data		0
1038					Number of Distinct Detected Data	0				Number of Non-Detect Data		1
1039										Percent Non-Detects		100.00%
1040												
1041	Warning: This data set only has 1 observations!											
1042	Data set is too small to compute reliable and meaningful statistics and estimates!											
1043	The data set for variable M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_nw_2010) was not processed!											
1044												
1045	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1046	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1047												
1048												
1049												
1050	M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_ref_2010)											
1051												
1052	General Statistics											
1053					Number of Valid Data	3				Number of Detected Data		0
1054					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
1055										Percent Non-Detects		100.00%
1056												
1057	Warning: This data set only has 3 observations!											
1058	Data set is too small to compute reliable and meaningful statistics and estimates!											
1059	The data set for variable M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_ref_2010) was not processed!											
1060												
1061	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1062	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1063												
1064												
1065												
1066	M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_s_2005)											
1067												
1068	General Statistics											
1069					Number of Valid Data	3				Number of Detected Data		1
1070					Number of Distinct Detected Data	1				Number of Non-Detect Data		2
1071										Percent Non-Detects		66.67%
1072												
1073	Warning: This data set only has 3 observations!											
1074	Data set is too small to compute reliable and meaningful statistics and estimates!											
1075	The data set for variable M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_s_2005) was not processed!											
1076												
1077	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1078	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1079												
1080												
1081												
1082	M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_s_2010)											
1083												
1084	General Statistics											
1085					Number of Valid Data	1				Number of Detected Data		0
1086					Number of Distinct Detected Data	0				Number of Non-Detect Data		1
1087										Percent Non-Detects		100.00%
1088												
1089	Warning: This data set only has 1 observations!											
1090	Data set is too small to compute reliable and meaningful statistics and estimates!											
1091	The data set for variable M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_s_2010) was not processed!											
1092												
1093	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1094	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1095												
1096												
1097												
1098	M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_stillwater_2005)											
1099												
1100	General Statistics											
1101					Number of Valid Data	1				Number of Detected Data		0
1102					Number of Distinct Detected Data	0				Number of Non-Detect Data		1
1103										Percent Non-Detects		100.00%
1104												
1105	Warning: This data set only has 1 observations!											
1106	Data set is too small to compute reliable and meaningful statistics and estimates!											
1107	The data set for variable M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
1108												
1109	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1110	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											

	A	B	C	D	E	F	G	H	I	J	K	L
1111												
1112												
1113												
1114	**M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_stillwater_2010)**											
1115												
1116						**General Statistics**						
1117						Number of Valid Data	3			Number of Detected Data		0
1118						Number of Distinct Detected Data	0			Number of Non-Detect Data		3
1119										Percent Non-Detects		100.00%
1120												
1121						**Warning: This data set only has 3 observations!**						
1122						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
1123						**The data set for variable M|MG/KG|BERYLLIUM (gi_et_clams_and_mussels_stillwater_2010) was not processed!**						
1124												
1125						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
1126						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
1127												
1128												
1129												
1130	**M|MG/KG|BERYLLIUM (gi_et_crabs_ne_2010)**											
1131												
1132						**General Statistics**						
1133						Number of Valid Data	2			Number of Detected Data		0
1134						Number of Distinct Detected Data	0			Number of Non-Detect Data		2
1135										Percent Non-Detects		100.00%
1136												
1137						**Warning: This data set only has 2 observations!**						
1138						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
1139						**The data set for variable M|MG/KG|BERYLLIUM (gi_et_crabs_ne_2010) was not processed!**						
1140												
1141						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
1142						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
1143												
1144												
1145												
1146	**M|MG/KG|BERYLLIUM (gi_et_crabs_nw_2010)**											
1147												
1148						**General Statistics**						
1149						Number of Valid Data	1			Number of Detected Data		0
1150						Number of Distinct Detected Data	0			Number of Non-Detect Data		1
1151										Percent Non-Detects		100.00%
1152												
1153						**Warning: This data set only has 1 observations!**						
1154						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
1155						**The data set for variable M|MG/KG|BERYLLIUM (gi_et_crabs_nw_2010) was not processed!**						
1156												
1157						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
1158						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
1159												
1160												
1161												
1162	**M|MG/KG|BERYLLIUM (gi_et_crabs_ref_2010)**											
1163												
1164						**General Statistics**						
1165						Number of Valid Data	3			Number of Detected Data		2
1166						Number of Distinct Detected Data	2			Number of Non-Detect Data		1
1167										Percent Non-Detects		33.33%
1168												
1169						**Warning: This data set only has 3 observations!**						
1170						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
1171						**The data set for variable M|MG/KG|BERYLLIUM (gi_et_crabs_ref_2010) was not processed!**						
1172												
1173						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
1174						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
1175												
1176												
1177												
1178	**M|MG/KG|BERYLLIUM (gi_et_crabs_stillwater_2010)**											
1179												
1180						**General Statistics**						
1181						Number of Valid Data	3			Number of Detected Data		1
1182						Number of Distinct Detected Data	1			Number of Non-Detect Data		2
1183										Percent Non-Detects		66.67%
1184												

	A	B	C	D	E	F	G	H	I	J	K	L
1185	**Warning: This data set only has 3 observations!**											
1186	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
1187	**The data set for variable M|MG/KG|BERYLLIUM (gi_et_crabs_stillwater_2010) was not processed!**											
1188												
1189	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
1190	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
1191												
1192												
1193												
1194	**M|MG/KG|CADMIUM (gi_et_clams_and_mussels_ne_2005)**											
1195												
1196	**General Statistics**											
1197						Number of Valid Data	11			Number of Detected Data	8	
1198						Number of Distinct Detected Data	8			Number of Non-Detect Data	3	
1199										Percent Non-Detects	27.27%	
1200												
1201	**Raw Statistics**							**Log-transformed Statistics**				
1202						Minimum Detected	0.062			Minimum Detected	-2.780621	
1203						Maximum Detected	0.73			Maximum Detected	-0.314711	
1204						Mean of Detected	0.205125			Mean of Detected	-1.890613	
1205						SD of Detected	0.2178587			SD of Detected	0.7511155	
1206						Minimum Non-Detect	0.026			Minimum Non-Detect	-3.649659	
1207						Maximum Non-Detect	0.043			Maximum Non-Detect	-3.146555	
1208												
1209	Note: Data have multiple DLs - Use of KM Method is									Number treated as Non-Detect	3	
1210	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected	8	
1211	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage	27.27%	
1212												
1213	**Warning: There are only 8 Detected Values in this data**											
1214	**Note: It should be noted that even though bootstrap may be performed on this data set**											
1215	**the resulting calculations may not be reliable enough to draw conclusions**											
1216												
1217	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**											
1218												
1219												
1220	**UCL Statistics**											
1221	**Normal Distribution Test with Detected Values Only**									**Lognormal Distribution Test with Detected Values Only**		
1222						Shapiro Wilk Test Statistic	0.6351218			Shapiro Wilk Test Statistic	0.9004317	
1223						5% Shapiro Wilk Critical Value	0.818			5% Shapiro Wilk Critical Value	0.818	
1224	**Data not Normal at 5% Significance Level**									**Data appear Lognormal at 5% Significance Level**		
1225												
1226	**Assuming Normal Distribution**									**Assuming Lognormal Distribution**		
1227						DL/2 Substitution Method				DL/2 Substitution Method		
1228						Mean	0.1536818			Mean	-2.500647	
1229						SD	0.2024609			SD	1.2247356	
1230						95% DL/2 (t) UCL	0.2643222			95% H-Stat (DL/2) UCL	0.65996	
1231												
1232						Maximum Likelihood Estimate(MLE) Method				Log ROS Method		
1233						Mean	0.1160298			Mean in Log Scale	-2.382465	
1234						SD	0.2365886			SD in Log Scale	1.0509758	
1235						95% MLE (t) UCL	0.2453202			Mean in Original Scale	0.1559647	
1236						95% MLE (Tiku) UCL	0.2489455			SD in Original Scale	0.2007804	
1237										95% t UCL	0.2656867	
1238										95% Percentile Bootstrap UCL	0.263431	
1239										95% BCA Bootstrap UCL	0.3233166	
1240												
1241	**Gamma Distribution Test with Detected Values Only**									**Data Distribution Test with Detected Values Only**		
1242						k star (bias corrected)	1.1958006			**Data appear Gamma Distributed at 5% Significance Level**		
1243						Theta Star	0.1715378					
1244						nu star	19.132809					
1245												
1246						A-D Test Statistic	0.7010092			**Nonparametric Statistics**		
1247						5% A-D Critical Value	0.7259285			Kaplan-Meier (KM) Method		
1248						K-S Test Statistic	0.7259285			Mean	0.1660909	
1249						5% K-S Critical Value	0.2980938			SD	0.185112	
1250	**Data appear Gamma Distributed at 5% Significance Level**									SE of Mean	0.059667	
1251										95% KM (t) UCL	0.274235	
1252	**Assuming Gamma Distribution**									95% KM (z) UCL	0.2642344	
1253	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	0.2682478	
1254						Minimum	0.0341963			95% KM (bootstrap t) UCL	0.5191117	
1255						Maximum	0.73			95% KM (BCA) UCL	0.2943636	
1256						Mean	0.1585081			95% KM (Percentile Bootstrap) UCL	0.2763636	
1257						Median	0.097			95% KM (Chebyshev) UCL	0.4261733	
1258						SD	0.198993			97.5% KM (Chebyshev) UCL	0.5387112	

1259					k star	0.9641101				99% KM (Chebyshev) UCL		0.75977
1260					Theta star	0.1644087						
1261					Nu star	21.210422				**Potential UCLs to Use**		
1262					AppChi2	11.748218				95% KM (Percentile Bootstrap) UCL		0.2763636
1263				95% Gamma Approximate UCL		0.286173						
1264				95% Adjusted Gamma UCL		0.3166731						
1265	**Note: DL/2 is not a recommended method.**											
1266												
1267	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
1268	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
1269	**For additional insight, the user may want to consult a statistician.**											
1270												
1271												
1272	**M|MG/KG|CADMIUM (gi_et_clams_and_mussels_ne_2010)**											
1273												
1274	**General Statistics**											
1275	Number of Valid Observations					5				Number of Distinct Observations		5
1276												
1277	**Raw Statistics**									**Log-transformed Statistics**		
1278	Minimum					0.123				Minimum of Log Data		-2.095571
1279	Maximum					0.2				Maximum of Log Data		-1.609438
1280	Mean					0.1774				Mean of log Data		-1.745069
1281	Median					0.195				SD of log Data		0.2059301
1282	SD					0.0325776						
1283	Coefficient of Variation					0.1836392						
1284	Skewness					-1.633118						
1285												
1286												
1287	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
1288												
1289	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
1290	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
1291												
1292												
1293	**Warning: There are only 5 Values in this data**											
1294	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
1295	**the resulting calculations may not be reliable enough to draw conclusions**											
1296												
1297	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
1298												
1299	**Relevant UCL Statistics**											
1300	**Normal Distribution Test**									**Lognormal Distribution Test**		
1301	Shapiro Wilk Test Statistic					0.7839573				Shapiro Wilk Test Statistic		0.7574957
1302	Shapiro Wilk Critical Value					0.762				Shapiro Wilk Critical Value		0.762
1303	**Data appear Normal at 5% Significance Level**									**Data not Lognormal at 5% Significance Level**		
1304												
1305	**Assuming Normal Distribution**									**Assuming Lognormal Distribution**		
1306	95% Student's-t UCL					0.2084592				95% H-UCL		0.2239304
1307	**95% UCLs (Adjusted for Skewness)**									95% Chebyshev (MVUE) UCL		0.2488087
1308	95% Adjusted-CLT UCL (Chen-1995)					0.1899945				97.5% Chebyshev (MVUE) UCL		0.2796156
1309	95% Modified-t UCL (Johnson-1978)					0.2066858				99% Chebyshev (MVUE) UCL		0.3401298
1310												
1311	**Gamma Distribution Test**									**Data Distribution**		
1312	k star (bias corrected)					12.921731				**Data appear Normal at 5% Significance Level**		
1313	Theta Star					0.0137288						
1314	MLE of Mean					0.1774						
1315	MLE of Standard Deviation					0.0493507						
1316	nu star					129.21731						
1317	Approximate Chi Square Value (.05)					103.95965				**Nonparametric Statistics**		
1318	Adjusted Level of Significance					0.0086				95% CLT UCL		0.2013641
1319	Adjusted Chi Square Value					94.052136				95% Jackknife UCL		0.2084592
1320										95% Standard Bootstrap UCL		0.199329
1321	Anderson-Darling Test Statistic					0.6781186				95% Bootstrap-t UCL		0.1984443
1322	Anderson-Darling 5% Critical Value					0.6785184				95% Hall's Bootstrap UCL		0.1913798
1323	Kolmogorov-Smirnov Test Statistic					0.3263945				95% Percentile Bootstrap UCL		0.1972
1324	Kolmogorov-Smirnov 5% Critical Value					0.3570403				95% BCA Bootstrap UCL		0.1926
1325	**Data appear Gamma Distributed at 5% Significance Level**									95% Chebyshev(Mean, Sd) UCL		0.2409054
1326										97.5% Chebyshev(Mean, Sd) UCL		0.2683843
1327	**Assuming Gamma Distribution**									99% Chebyshev(Mean, Sd) UCL		0.3223612
1328	95% Approximate Gamma UCL					0.2205005						
1329	95% Adjusted Gamma UCL					0.2437281						
1330												
1331	**Potential UCL to Use**									Use 95% Student's-t UCL		0.2084592
1332	**Recommended UCL exceeds the maximum observation**											

	A	B	C	D	E	F	G	H	I	J	K	L
1333												
1334	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
1335	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
1336	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
1337												
1338												
1339	**M|MG/KG|CADMIUM (gi_et_clams_and_mussels_nw_2005)**											
1340												
1341	**General Statistics**											
1342					Number of Valid Data	6			Number of Detected Data			5
1343					Number of Distinct Detected Data	5			Number of Non-Detect Data			1
1344									Percent Non-Detects			16.67%
1345												
1346	**Raw Statistics**						**Log-transformed Statistics**					
1347					Minimum Detected	0.08			Minimum Detected			-2.525729
1348					Maximum Detected	0.22			Maximum Detected			-1.514128
1349					Mean of Detected	0.166			Mean of Detected			-1.866041
1350					SD of Detected	0.0622896			SD of Detected			0.4423715
1351					Minimum Non-Detect	0.06			Minimum Non-Detect			-2.813411
1352					Maximum Non-Detect	0.06			Maximum Non-Detect			-2.813411
1353												
1354												
1355	**Warning: There are only 5 Detected Values in this data**											
1356	**Note: It should be noted that even though bootstrap may be performed on this data set**											
1357	**the resulting calculations may not be reliable enough to draw conclusions**											
1358												
1359	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**											
1360												
1361												
1362	**UCL Statistics**											
1363	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
1364					Shapiro Wilk Test Statistic	0.8485881			Shapiro Wilk Test Statistic			0.832692
1365					5% Shapiro Wilk Critical Value	0.762			5% Shapiro Wilk Critical Value			0.762
1366	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
1367												
1368	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
1369					DL/2 Substitution Method				DL/2 Substitution Method			
1370					Mean	0.1433333			Mean			-2.139461
1371					SD	0.0786554			SD			0.7778838
1372					95% DL/2 (t) UCL	0.2080384			95% H-Stat (DL/2) UCL			0.5212401
1373												
1374					Maximum Likelihood Estimate(MLE) Method				Log ROS Method			
1375					Mean	0.141974			Mean in Log Scale			-2.039989
1376					SD	0.0751715			SD in Log Scale			0.5814645
1377					95% MLE (t) UCL	0.2038131			Mean in Original Scale			0.1474151
1378					95% MLE (Tiku) UCL	0.2059077			SD in Original Scale			0.0719471
1379									95% t UCL			0.2066017
1380									95% Percentile Bootstrap UCL			0.1916667
1381									95% BCA Bootstrap UCL			0.19
1382												
1383	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
1384					k star (bias corrected)	3.0444062	**Data appear Normal at 5% Significance Level**					
1385					Theta Star	0.0545262						
1386					nu star	30.444062						
1387												
1388					A-D Test Statistic	0.531807	**Nonparametric Statistics**					
1389					5% A-D Critical Value	0.6798764			Kaplan-Meier (KM) Method			
1390					K-S Test Statistic	0.6798764			Mean			0.1516667
1391					5% K-S Critical Value	0.357982			SD			0.0601156
1392	**Data appear Gamma Distributed at 5% Significance Level**								SE of Mean			0.0274389
1393									95% KM (t) UCL			0.2069574
1394	**Assuming Gamma Distribution**								95% KM (z) UCL			0.1967996
1395					Gamma ROS Statistics using Extrapolated Data				95% KM (jackknife) UCL			0.2073798
1396					Minimum	0.0744267			95% KM (bootstrap t) UCL			0.2002396
1397					Maximum	0.22			95% KM (BCA) UCL			0.2066667
1398					Mean	0.1507378			95% KM (Percentile Bootstrap) UCL			0.2066667
1399					Median	0.16			95% KM (Chebyshev) UCL			0.2712701
1400					SD	0.067094			97.5% KM (Chebyshev) UCL			0.3230226
1401					k star	2.8009815			99% KM (Chebyshev) UCL			0.4246803
1402					Theta star	0.0538161						
1403					Nu star	33.611778			**Potential UCLs to Use**			
1404					AppChi2	21.354325			95% KM (t) UCL			0.2069574
1405					95% Gamma Approximate UCL	0.2372618			95% KM (Percentile Bootstrap) UCL			0.2066667
1406					95% Adjusted Gamma UCL	0.282816						

	A	B	C	D	E	F	G	H	I	J	K	L
1407	Note: DL/2 is not a recommended method.											
1408												
1409	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
1410	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
1411	For additional insight, the user may want to consult a statistician.											
1412												
1413												
1414	M|MG/KG|CADMIUM (gi_et_clams_and_mussels_nw_2010)											
1415												
1416	General Statistics											
1417	Number of Valid Observations	1				Number of Distinct Observations	1					
1418												
1419												
1420	Warning: This data set only has 1 observations!											
1421	Data set is too small to compute reliable and meaningful statistics and estimates!											
1422	The data set for variable M|MG/KG|CADMIUM (gi_et_clams_and_mussels_nw_2010) was not processed!											
1423												
1424	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1425	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1426												
1427												
1428												
1429	M|MG/KG|CADMIUM (gi_et_clams_and_mussels_ref_2010)											
1430												
1431	General Statistics											
1432	Number of Valid Observations	3				Number of Distinct Observations	3					
1433												
1434												
1435	Warning: This data set only has 3 observations!											
1436	Data set is too small to compute reliable and meaningful statistics and estimates!											
1437	The data set for variable M|MG/KG|CADMIUM (gi_et_clams_and_mussels_ref_2010) was not processed!											
1438												
1439	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1440	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1441												
1442												
1443												
1444	M|MG/KG|CADMIUM (gi_et_clams_and_mussels_s_2005)											
1445												
1446	General Statistics											
1447	Number of Valid Data	3				Number of Detected Data	2					
1448	Number of Distinct Detected Data	2				Number of Non-Detect Data	1					
1449						Percent Non-Detects	33.33%					
1450												
1451	Warning: This data set only has 3 observations!											
1452	Data set is too small to compute reliable and meaningful statistics and estimates!											
1453	The data set for variable M|MG/KG|CADMIUM (gi_et_clams_and_mussels_s_2005) was not processed!											
1454												
1455	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1456	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1457												
1458												
1459												
1460	M|MG/KG|CADMIUM (gi_et_clams_and_mussels_s_2010)											
1461												
1462	General Statistics											
1463	Number of Valid Observations	1				Number of Distinct Observations	1					
1464												
1465												
1466	Warning: This data set only has 1 observations!											
1467	Data set is too small to compute reliable and meaningful statistics and estimates!											
1468	The data set for variable M|MG/KG|CADMIUM (gi_et_clams_and_mussels_s_2010) was not processed!											
1469												
1470	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1471	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1472												
1473												
1474												
1475	M|MG/KG|CADMIUM (gi_et_clams_and_mussels_stillwater_2005)											
1476												
1477	General Statistics											
1478	Number of Valid Data	1				Number of Detected Data	0					
1479	Number of Distinct Detected Data	0				Number of Non-Detect Data	1					
1480						Percent Non-Detects	100.00%					

	A	B	C	D	E	F	G	H	I	J	K	L
1481												
1482	Warning: This data set only has 1 observations!											
1483	Data set is too small to compute reliable and meaningful statistics and estimates!											
1484	The data set for variable M|MG/KG|CADMIUM (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
1485												
1486	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1487	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1488												
1489												
1490												
1491	M|MG/KG|CADMIUM (gi_et_clams_and_mussels_stillwater_2010)											
1492												
1493	General Statistics											
1494	Number of Valid Observations	3			Number of Distinct Observations	3						
1495												
1496												
1497	Warning: This data set only has 3 observations!											
1498	Data set is too small to compute reliable and meaningful statistics and estimates!											
1499	The data set for variable M|MG/KG|CADMIUM (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
1500												
1501	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1502	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1503												
1504												
1505												
1506	M|MG/KG|CADMIUM (gi_et_crabs_ne_2010)											
1507												
1508	General Statistics											
1509	Number of Valid Observations	2			Number of Distinct Observations	2						
1510												
1511												
1512	Warning: This data set only has 2 observations!											
1513	Data set is too small to compute reliable and meaningful statistics and estimates!											
1514	The data set for variable M|MG/KG|CADMIUM (gi_et_crabs_ne_2010) was not processed!											
1515												
1516	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1517	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1518												
1519												
1520												
1521	M|MG/KG|CADMIUM (gi_et_crabs_nw_2010)											
1522												
1523	General Statistics											
1524	Number of Valid Observations	1			Number of Distinct Observations	1						
1525												
1526												
1527	Warning: This data set only has 1 observations!											
1528	Data set is too small to compute reliable and meaningful statistics and estimates!											
1529	The data set for variable M|MG/KG|CADMIUM (gi_et_crabs_nw_2010) was not processed!											
1530												
1531	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1532	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1533												
1534												
1535												
1536	M|MG/KG|CADMIUM (gi_et_crabs_ref_2010)											
1537												
1538	General Statistics											
1539	Number of Valid Observations	3			Number of Distinct Observations	3						
1540												
1541												
1542	Warning: This data set only has 3 observations!											
1543	Data set is too small to compute reliable and meaningful statistics and estimates!											
1544	The data set for variable M|MG/KG|CADMIUM (gi_et_crabs_ref_2010) was not processed!											
1545												
1546	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1547	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1548												
1549												
1550												
1551	M|MG/KG|CADMIUM (gi_et_crabs_stillwater_2010)											
1552												
1553	General Statistics											
1554	Number of Valid Observations	3			Number of Distinct Observations	2						

1555												
1556												
1557	**Warning: This data set only has 3 observations!**											
1558	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
1559	**The data set for variable M|MG/KG|CADMIUM (gi_et_crabs_stillwater_2010) was not processed!**											
1560												
1561	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
1562	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
1563												
1564												
1565												
1566	**M|MG/KG|CALCIUM (gi_et_clams_and_mussels_ne_2005)**											
1567												
1568	**General Statistics**											
1569	Number of Valid Observations	11				Number of Distinct Observations	11					
1570												
1571	**Raw Statistics**					**Log-transformed Statistics**						
1572	Minimum	188				Minimum of Log Data	5.236442					
1573	Maximum	8140				Maximum of Log Data	9.0045455					
1574	Mean	1318.3636				Mean of log Data	6.3223998					
1575	Median	328				SD of log Data	1.1918044					
1576	SD	2365.0398										
1577	Coefficient of Variation	1.7939207										
1578	Skewness	2.8602966										
1579												
1580	**Relevant UCL Statistics**											
1581	**Normal Distribution Test**					**Lognormal Distribution Test**						
1582	Shapiro Wilk Test Statistic	0.5325335				Shapiro Wilk Test Statistic	0.7655277					
1583	Shapiro Wilk Critical Value	0.85				Shapiro Wilk Critical Value	0.85					
1584	**Data not Normal at 5% Significance Level**					**Data not Lognormal at 5% Significance Level**						
1585												
1586	**Assuming Normal Distribution**					**Assuming Lognormal Distribution**						
1587	95% Student's-t UCL	2610.8049				95% H-UCL	4048.5121					
1588	**95% UCLs (Adjusted for Skewness)**					95% Chebyshev (MVUE) UCL	2755.7567					
1589	95% Adjusted-CLT UCL (Chen-1995)	3148.3951				97.5% Chebyshev (MVUE) UCL	3502.6329					
1590	95% Modified-t UCL (Johnson-1978)	2713.3006				99% Chebyshev (MVUE) UCL	4969.7265					
1591												
1592	**Gamma Distribution Test**					**Data Distribution**						
1593	k star (bias corrected)	0.5705274				**Data do not follow a Discernable Distribution (0.05)**						
1594	Theta Star	2310.7808										
1595	MLE of Mean	1318.3636										
1596	MLE of Standard Deviation	1745.4081										
1597	nu star	12.551602										
1598	Approximate Chi Square Value (.05)	5.592506				**Nonparametric Statistics**						
1599	Adjusted Level of Significance	0.02783				95% CLT UCL	2491.2863					
1600	Adjusted Chi Square Value	4.8563493				95% Jackknife UCL	2610.8049					
1601						95% Standard Bootstrap UCL	2456.524					
1602	Anderson-Darling Test Statistic	1.6178998				95% Bootstrap-t UCL	5872.9862					
1603	Anderson-Darling 5% Critical Value	0.7661492				95% Hall's Bootstrap UCL	6250.2006					
1604	Kolmogorov-Smirnov Test Statistic	0.4043779				95% Percentile Bootstrap UCL	2609.7273					
1605	Kolmogorov-Smirnov 5% Critical Value	0.2657452				95% BCA Bootstrap UCL	3278.4545					
1606	**Data not Gamma Distributed at 5% Significance Level**					95% Chebyshev(Mean, Sd) UCL	4426.6349					
1607						97.5% Chebyshev(Mean, Sd) UCL	5771.5864					
1608	**Assuming Gamma Distribution**					99% Chebyshev(Mean, Sd) UCL	8413.4832					
1609	95% Approximate Gamma UCL	2958.8838										
1610	95% Adjusted Gamma UCL	3407.4104										
1611												
1612	**Potential UCL to Use**					Use 95% Chebyshev (Mean, Sd) UCL	4426.6349					
1613												
1614	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
1615	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
1616	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
1617												
1618												
1619	**M|MG/KG|CALCIUM (gi_et_clams_and_mussels_ne_2010)**											
1620												
1621	**General Statistics**											
1622	Number of Valid Observations	5				Number of Distinct Observations	5					
1623												
1624	**Raw Statistics**					**Log-transformed Statistics**						
1625	Minimum	751				Minimum of Log Data	6.6214057					
1626	Maximum	3580				Maximum of Log Data	8.1831181					
1627	Mean	2032.2				Mean of log Data	7.4437158					
1628	Median	1350				SD of log Data	0.669064					

1629					SD	1283.4443						
1630					Coefficient of Variation	0.6315541						
1631					Skewness	0.5030125						
1632												
1633												
1634	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
1635												
1636	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
1637	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
1638												
1639												
1640	**Warning: There are only 5 Values in this data**											
1641	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
1642	**the resulting calculations may not be reliable enough to draw conclusions**											
1643												
1644	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
1645												
1646	**Relevant UCL Statistics**											
1647	**Normal Distribution Test**						**Lognormal Distribution Test**					
1648	Shapiro Wilk Test Statistic					0.8472718	Shapiro Wilk Test Statistic					0.9003033
1649	Shapiro Wilk Critical Value					0.762	Shapiro Wilk Critical Value					0.762
1650	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
1651												
1652	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
1653	95% Student's-s UCL					3255.8241					95% H-UCL	6992.0939
1654	**95% UCLs (Adjusted for Skewness)**										95% Chebyshev (MVUE) UCL	4641.6453
1655	95% Adjusted-CLT UCL (Chen-1995)					3114.2669					97.5% Chebyshev (MVUE) UCL	5770.0029
1656	95% Modified-t UCL (Johnson-1978)					3277.3437					99% Chebyshev (MVUE) UCL	7986.4428
1657												
1658	**Gamma Distribution Test**						**Data Distribution**					
1659	k star (bias corrected)					1.3509338	**Data appear Normal at 5% Significance Level**					
1660	Theta Star					1504.2928						
1661	MLE of Mean					2032.2						
1662	MLE of Standard Deviation					1748.4347						
1663	nu star					13.509338						
1664	Approximate Chi Square Value (.05)					6.2368252	**Nonparametric Statistics**					
1665	Adjusted Level of Significance					0.0086					95% CLT UCL	2976.3028
1666	Adjusted Chi Square Value					4.2572407					95% Jackknife UCL	3255.8241
1667											95% Standard Bootstrap UCL	2871.5343
1668	Anderson-Darling Test Statistic					0.4345798					95% Bootstrap-t UCL	6285.968
1669	Anderson-Darling 5% Critical Value					0.6825688					95% Hall's Bootstrap UCL	18412.697
1670	Kolmogorov-Smirnov Test Statistic					0.2808494					95% Percentile Bootstrap UCL	2946.2
1671	Kolmogorov-Smirnov 5% Critical Value					0.3593773					95% BCA Bootstrap UCL	2976
1672	**Data appear Gamma Distributed at 5% Significance Level**										95% Chebyshev(Mean, Sd) UCL	4534.0935
1673											97.5% Chebyshev(Mean, Sd) UCL	5616.6648
1674	**Assuming Gamma Distribution**										99% Chebyshev(Mean, Sd) UCL	7743.1665
1675	95% Approximate Gamma UCL					4401.8672						
1676	95% Adjusted Gamma UCL					6448.7019						
1677												
1678	**Potential UCL to Use**										Use 95% Student's-s-t UCL	3255.8241
1679												
1680	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
1681	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
1682	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
1683												
1684												
1685	**M|MG/KG|CALCIUM (gi_et_clams_and_mussels_nw_2005)**											
1686												
1687	**General Statistics**											
1688	Number of Valid Observations					6	Number of Distinct Observations					6
1689												
1690	**Raw Statistics**						**Log-transformed Statistics**					
1691	Minimum					291	Minimum of Log Data					5.6733233
1692	Maximum					3450	Maximum of Log Data					8.1461295
1693	Mean					1391.8333	Mean of log Data					6.864179
1694	Median					1145	SD of log Data					0.9847714
1695	SD					1223.7223						
1696	Coefficient of Variation					0.8792161						
1697	Skewness					0.9874652						
1698												
1699												
1700	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
1701												
1702	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											

	A	B	C	D	E	F	G	H	I	J	K	L
1703	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1704												
1705												
1706	Warning: There are only 6 Values in this data											
1707	Note: It should be noted that even though bootstrap methods may be performed on this data set,											
1708	the resulting calculations may not be reliable enough to draw conclusions											
1709												
1710	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.											
1711												
1712	Relevant UCL Statistics											
1713	Normal Distribution Test						Lognormal Distribution Test					
1714	Shapiro Wilk Test Statistic	0.8571836					Shapiro Wilk Test Statistic	0.8996347				
1715	Shapiro Wilk Critical Value	0.788					Shapiro Wilk Critical Value	0.788				
1716	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1717												
1718	Assuming Normal Distribution						Assuming Lognormal Distribution					
1719	95% Student's-t UCL	2398.5163					95% H-UCL	9327.5144				
1720	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL	3826.5912				
1721	95% Adjusted-CLT UCL (Chen-1995)	2428.7693					97.5% Chebyshev (MVUE) UCL	4874.6737				
1722	95% Modified-t UCL (Johnson-1978)	2432.0825					99% Chebyshev (MVUE) UCL	6933.4289				
1723												
1724	Gamma Distribution Test						Data Distribution					
1725	k star (bias corrected)	0.8515057					Data appear Normal at 5% Significance Level					
1726	Theta Star	1634.5555										
1727	MLE of Mean	1391.8333										
1728	MLE of Standard Deviation	1508.3199										
1729	nu star	10.218068										
1730	Approximate Chi Square Value (.05)	4.0785145					Nonparametric Statistics					
1731	Adjusted Level of Significance	0.01222					95% CLT UCL	2213.5735				
1732	Adjusted Chi Square Value	2.8043508					95% Jackknife UCL	2398.5163				
1733							95% Standard Bootstrap UCL	2153.9576				
1734	Anderson-Darling Test Statistic	0.4420753					95% Bootstrap-t UCL	2945.7906				
1735	Anderson-Darling 5% Critical Value	0.7080709					95% Hall's Bootstrap UCL	2278.4186				
1736	Kolmogorov-Smirnov Test Statistic	0.2850828					95% Percentile Bootstrap UCL	2151.8333				
1737	Kolmogorov-Smirnov 5% Critical Value	0.3375806					95% BCA Bootstrap UCL	2375				
1738	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL	3569.4631				
1739							97.5% Chebyshev(Mean, Sd) UCL	4511.7252				
1740	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL	6362.6166				
1741	95% Approximate Gamma UCL	3487.0167										
1742	95% Adjusted Gamma UCL	5071.3512										
1743												
1744	Potential UCL to Use						Use 95% Student's-t UCL	2398.5163				
1745												
1746	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
1747	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
1748	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
1749												
1750												
1751	M|MG/KG|CALCIUM (gi_et_clams_and_mussels_nw_2010)											
1752												
1753	General Statistics											
1754	Number of Valid Observations	1					Number of Distinct Observations	1				
1755												
1756												
1757	Warning: This data set only has 1 observations!											
1758	Data set is too small to compute reliable and meaningful statistics and estimates!											
1759	The data set for variable M|MG/KG|CALCIUM (gi_et_clams_and_mussels_nw_2010) was not processed!											
1760												
1761	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1762	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1763												
1764												
1765												
1766	M|MG/KG|CALCIUM (gi_et_clams_and_mussels_ref_2010)											
1767												
1768	General Statistics											
1769	Number of Valid Observations	3					Number of Distinct Observations	3				
1770												
1771												
1772	Warning: This data set only has 3 observations!											
1773	Data set is too small to compute reliable and meaningful statistics and estimates!											
1774	The data set for variable M|MG/KG|CALCIUM (gi_et_clams_and_mussels_ref_2010) was not processed!											
1775												
1776	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											

	A	B	C	D	E	F	G	H	I	J	K	L
1777	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1778												
1779												
1780												
1781	M|MG/KG|CALCIUM (gi_et_clams_and_mussels_s_2005)											
1782												
1783	General Statistics											
1784	Number of Valid Observations	3					Number of Distinct Observations	3				
1785												
1786												
1787	Warning: This data set only has 3 observations!											
1788	Data set is too small to compute reliable and meaningful statistics and estimates!											
1789	The data set for variable M|MG/KG|CALCIUM (gi_et_clams_and_mussels_s_2005) was not processed!											
1790												
1791	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1792	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1793												
1794												
1795												
1796	M|MG/KG|CALCIUM (gi_et_clams_and_mussels_s_2010)											
1797												
1798	General Statistics											
1799	Number of Valid Observations	1					Number of Distinct Observations	1				
1800												
1801												
1802	Warning: This data set only has 1 observations!											
1803	Data set is too small to compute reliable and meaningful statistics and estimates!											
1804	The data set for variable M|MG/KG|CALCIUM (gi_et_clams_and_mussels_s_2010) was not processed!											
1805												
1806	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1807	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1808												
1809												
1810												
1811	M|MG/KG|CALCIUM (gi_et_clams_and_mussels_stillwater_2005)											
1812												
1813	General Statistics											
1814	Number of Valid Observations	1					Number of Distinct Observations	1				
1815												
1816												
1817	Warning: This data set only has 1 observations!											
1818	Data set is too small to compute reliable and meaningful statistics and estimates!											
1819	The data set for variable M|MG/KG|CALCIUM (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
1820												
1821	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1822	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1823												
1824												
1825												
1826	M|MG/KG|CALCIUM (gi_et_clams_and_mussels_stillwater_2010)											
1827												
1828	General Statistics											
1829	Number of Valid Observations	3					Number of Distinct Observations	3				
1830												
1831												
1832	Warning: This data set only has 3 observations!											
1833	Data set is too small to compute reliable and meaningful statistics and estimates!											
1834	The data set for variable M|MG/KG|CALCIUM (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
1835												
1836	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
1837	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
1838												
1839												
1840												
1841	M|MG/KG|CALCIUM (gi_et_crabs_ne_2010)											
1842												
1843	General Statistics											
1844	Number of Valid Observations	2					Number of Distinct Observations	2				
1845												
1846												
1847	Warning: This data set only has 2 observations!											
1848	Data set is too small to compute reliable and meaningful statistics and estimates!											
1849	The data set for variable M|MG/KG|CALCIUM (gi_et_crabs_ne_2010) was not processed!											
1850												

	A	B	C	D	E	F	G	H	I	J	K	L
1851	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
1852	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
1853												
1854												
1855												
1856	**M|MG/KG|CALCIUM (gi_et_crabs_nw_2010)**											
1857												
1858	**General Statistics**											
1859	Number of Valid Observations	1				Number of Distinct Observations	1					
1860												
1861												
1862	**Warning: This data set only has 1 observations!**											
1863	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
1864	**The data set for variable M|MG/KG|CALCIUM (gi_et_crabs_nw_2010) was not processed!**											
1865												
1866	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
1867	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
1868												
1869												
1870												
1871	**M|MG/KG|CALCIUM (gi_et_crabs_ref_2010)**											
1872												
1873	**General Statistics**											
1874	Number of Valid Observations	3				Number of Distinct Observations	3					
1875												
1876												
1877	**Warning: This data set only has 3 observations!**											
1878	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
1879	**The data set for variable M|MG/KG|CALCIUM (gi_et_crabs_ref_2010) was not processed!**											
1880												
1881	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
1882	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
1883												
1884												
1885												
1886	**M|MG/KG|CALCIUM (gi_et_crabs_stillwater_2010)**											
1887												
1888	**General Statistics**											
1889	Number of Valid Observations	3				Number of Distinct Observations	3					
1890												
1891												
1892	**Warning: This data set only has 3 observations!**											
1893	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
1894	**The data set for variable M|MG/KG|CALCIUM (gi_et_crabs_stillwater_2010) was not processed!**											
1895												
1896	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
1897	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
1898												
1899												
1900												
1901	**M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_ne_2005)**											
1902												
1903	**General Statistics**											
1904	Number of Valid Data	11				Number of Detected Data	4					
1905	Number of Distinct Detected Data	4				Number of Non-Detect Data	7					
1906						Percent Non-Detects	63.64%					
1907												
1908	**Raw Statistics**					**Log-transformed Statistics**						
1909	Minimum Detected	0.14				Minimum Detected	-1.966113					
1910	Maximum Detected	2.9				Maximum Detected	1.0647107					
1911	Mean of Detected	0.95125				Mean of Detected	-0.720929					
1912	SD of Detected	1.3063714				SD of Detected	1.2918691					
1913	Minimum Non-Detect	0.14				Minimum Non-Detect	-1.966113					
1914	Maximum Non-Detect	0.35				Maximum Non-Detect	-1.049822					
1915												
1916	Note: Data have multiple DLs - Use of KM Method is					Number treated as Non-Detect	9					
1917	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected	2					
1918	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage	81.82%					
1919												
1920	**Warning: There are only 4 Distinct Detected Values in this data**											
1921	**Note: It should be noted that even though bootstrap may be performed on this data set**											
1922	**the resulting calculations may not be reliable enough to draw conclusions**											
1923												
1924	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**											

1925												
1926												
1927	**UCL Statistics**											
1928	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
1929	Shapiro Wilk Test Statistic					0.7258096	Shapiro Wilk Test Statistic					0.9366352
1930	5% Shapiro Wilk Critical Value					0.748	5% Shapiro Wilk Critical Value					0.748
1931	**Data not Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
1932												
1933	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
1934	DL/2 Substitution Method						DL/2 Substitution Method					
1935	Mean					0.41	Mean					-1.752142
1936	SD					0.8348144	SD					1.1079651
1937	95% DL/2 (t) UCL					0.8662073	95% H-Stat (DL/2) UCL					0.9861487
1938												
1939	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1940	**MLE method failed to converge properly**						Mean in Log Scale					-2.329031
1941							SD in Log Scale					1.5458249
1942							Mean in Original Scale					0.3753416
1943							SD in Original Scale					0.8490627
1944							95% t UCL					0.8393353
1945							95% Percentile Bootstrap UCL					0.874458
1946							95% BCA Bootstrap UCL					1.1191857
1947												
1948	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
1949	k star (bias corrected)					0.385282	**Data appear Gamma Distributed at 5% Significance Level**					
1950	Theta Star					2.4689709						
1951	nu star					3.0822558						
1952												
1953	A-D Test Statistic					0.4422858	**Nonparametric Statistics**					
1954	5% A-D Critical Value					0.668463	Kaplan-Meier (KM) Method					
1955	K-S Test Statistic					0.668463	Mean					0.4367045
1956	5% K-S Critical Value					0.4037255	SD					0.7854801
1957	**Data appear Gamma Distributed at 5% Significance Level**						SE of Mean					0.2735248
1958							95% KM (t) UCL					0.9324577
1959	**Assuming Gamma Distribution**						95% KM (z) UCL					0.8866128
1960	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.8430978
1961	Minimum					0.14	95% KM (bootstrap t) UCL					2.4183347
1962	Maximum					2.9	95% KM (BCA) UCL					2.9
1963	Mean					0.8815874	95% KM (Percentile Bootstrap) UCL					1.0354545
1964	Median					0.5793578	95% KM (Chebyshev) UCL					1.6289716
1965	SD					0.7548357	97.5% KM (Chebyshev) UCL					2.1448665
1966	k star					1.4607647	99% KM (Chebyshev) UCL					3.1582422
1967	Theta star					0.6035109						
1968	Nu star					32.136823	**Potential UCLs to Use**					
1969	AppChi2					20.180566	95% KM (t) UCL					0.9324577
1970	95% Gamma Approximate UCL					1.4038962						
1971	95% Adjusted Gamma UCL					N/A						
1972	**Note: DL/2 is not a recommended method.**											
1973												
1974	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
1975	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
1976	**For additional insight, the user may want to consult a statistician.**											
1977												
1978												
1979	**M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_ne_2010)**											
1980												
1981	**General Statistics**											
1982	Number of Valid Observations					5	Number of Distinct Observations					5
1983												
1984	**Raw Statistics**						**Log-transformed Statistics**					
1985	Minimum					0.174	Minimum of Log Data					-1.7487
1986	Maximum					0.533	Maximum of Log Data					-0.629234
1987	Mean					0.3826	Mean of log Data					-1.02919
1988	Median					0.428	SD of log Data					0.4422416
1989	SD					0.1392167						
1990	Coefficient of Variation					0.3638702						
1991	Skewness					-0.834395						
1992												
1993												
1994	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
1995												
1996	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
1997	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
1998												

Warning: There are only 5 Values in this data

Note: It should be noted that even though bootstrap methods may be performed on this data set, the resulting calculations may not be reliable enough to draw conclusions

The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.9501738	Shapiro Wilk Test Statistic	0.8789733
Shapiro Wilk Critical Value	0.762	Shapiro Wilk Critical Value	0.762
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% Student's-t UCL	0.515328	95% H-UCL	0.7269989
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL	0.7164233
95% Adjusted-CLT UCL (Chen-1995)	0.4601839	97.5% Chebyshev (MVUE) UCL	0.8594037
95% Modified-t UCL (Johnson-1978)	0.5114559	99% Chebyshev (MVUE) UCL	1.140261
Gamma Distribution Test		**Data Distribution**	
k star (bias corrected)	3.1213327	**Data appear Normal at 5% Significance Level**	
Theta Star	0.1225758		
MLE of Mean	0.3826		
MLE of Standard Deviation	0.2165584		
nu star	31.213327		
Approximate Chi Square Value (.05)	19.449229	**Nonparametric Statistics**	
Adjusted Level of Significance	0.0086	95% CLT UCL	0.485008
Adjusted Chi Square Value	15.52977	95% Jackknife UCL	0.515328
		95% Standard Bootstrap UCL	0.4742483
Anderson-Darling Test Statistic	0.3628591	95% Bootstrap-t UCL	0.4896732
Anderson-Darling 5% Critical Value	0.679806	95% Hall's Bootstrap UCL	0.4557904
Kolmogorov-Smirnov Test Statistic	0.2676713	95% Percentile Bootstrap UCL	0.47
Kolmogorov-Smirnov 5% Critical Value	0.3579543	95% BCA Bootstrap UCL	0.4602
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL	0.6539834
		97.5% Chebyshev(Mean, Sd) UCL	0.7714112
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	1.0020754
95% Approximate Gamma UCL	0.6140202		
95% Adjusted Gamma UCL	0.7689888		
Potential UCL to Use		Use 95% Student's-t UCL	0.515328

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_nw_2005)

General Statistics

Number of Valid Data	6	Number of Detected Data	3
Number of Distinct Detected Data	3	Number of Non-Detect Data	3
		Percent Non-Detects	50.00%

Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	0.28	Minimum Detected	-1.272966
Maximum Detected	6.1	Maximum Detected	1.8082888
Mean of Detected	2.2233333	Mean of Detected	-0.234184
SD of Detected	3.3572955	SD of Detected	1.7689201
Minimum Non-Detect	0.11	Minimum Non-Detect	-2.207275
Maximum Non-Detect	0.17	Maximum Non-Detect	-1.771957
Note: Data have multiple DLs - Use of KM Method is		Number treated as Non-Detect	3
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected	3
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	50.00%

Warning: There are only 3 Distinct Detected Values in this data set
The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.
Those methods will return a 'N/A' value on your output display!

It is necessary to have 4 or more Distinct Values for bootstrap methods.
However, results obtained using 4 to 9 distinct values may not be reliable.
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.

2073	**UCL Statistics**											
2074	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
2075	Shapiro Wilk Test Statistic				0.7512742		Shapiro Wilk Test Statistic					0.7585258
2076	5% Shapiro Wilk Critical Value				0.767		5% Shapiro Wilk Critical Value					0.767
2077	**Data not Normal at 5% Significance Level**						**Data not Lognormal at 5% Significance Level**					
2078												
2079	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
2080	DL/2 Substitution Method						DL/2 Substitution Method					
2081	Mean				1.145		Mean					-1.480248
2082	SD				2.429823		SD					1.7708949
2083	95% DL/2 (t) UCL				3.1438697		95% H-Stat (DL/2) UCL					250.22891
2084												
2085	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
2086	**MLE yields a negative mean**						Mean in Log Scale					-2.909445
2087							SD in Log Scale					3.1368872
2088							Mean in Original Scale					1.1135441
2089							SD in Original Scale					2.446739
2090							95% t UCL					3.1263296
2091							95% Percentile Bootstrap UCL					3.0979183
2092							95% BCA Bootstrap UCL					3.1456258
2093												
2094	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
2095	k star (bias corrected)				N/A		**Data do not follow a Discernable Distribution (0.05)**					
2096	Theta Star				N/A							
2097	nu star				N/A							
2098												
2099	A-D Test Statistic				N/A		**Nonparametric Statistics**					
2100	5% A-D Critical Value				N/A		Kaplan-Meier (KM) Method					
2101	K-S Test Statistic				N/A		Mean					1.2516667
2102	5% K-S Critical Value				N/A		SD					2.1682437
2103	**Data not Gamma Distributed at 5% Significance Level**						SE of Mean					1.0841218
2104							95% KM (t) UCL					3.4362246
2105	**Assuming Gamma Distribution**						95% KM (z) UCL					3.0348884
2106	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3.2026388
2107	Minimum				N/A		95% KM (bootstrap t) UCL					599.83184
2108	Maximum				N/A		95% KM (BCA) UCL					6.1
2109	Mean				N/A		95% KM (Percentile Bootstrap) UCL					6.1
2110	Median				N/A		95% KM (Chebyshev) UCL					5.9772442
2111	SD				N/A		97.5% KM (Chebyshev) UCL					8.0220053
2112	k star				N/A		99% KM (Chebyshev) UCL					12.038543
2113	Theta star				N/A							
2114	Nu star				N/A		**Potential UCLs to Use**					
2115	AppChi2				N/A		99% KM (Chebyshev) UCL					12.038543
2116	95% Gamma Approximate UCL				N/A							
2117	95% Adjusted Gamma UCL				N/A							
2118	**Warning: Recommended UCL exceeds the maximum observation**											
2119	**Note: DL/2 is not a recommended method.**											
2120												
2121	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
2122	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
2123	**For additional insight, the user may want to consult a statistician.**											
2124												
2125												
2126	**M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_nw_2010)**											
2127												
2128	**General Statistics**											
2129	Number of Valid Observations				1		Number of Distinct Observations					1
2130												
2131												
2132	**Warning: This data set only has 1 observations!**											
2133	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
2134	**The data set for variable M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_nw_2010) was not processed!**											
2135												
2136	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
2137	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
2138												
2139												
2140												
2141	**M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_ref_2010)**											
2142												
2143	**General Statistics**											
2144	Number of Valid Observations				3		Number of Distinct Observations					3
2145												
2146												

	A	B	C	D	E	F	G	H	I	J	K	L
2147	Warning: This data set only has 3 observations!											
2148	Data set is too small to compute reliable and meaningful statistics and estimates!											
2149	The data set for variable M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_ref_2010) was not processed!											
2150												
2151	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2152	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2153												
2154												
2155												
2156	M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_s_2005)											
2157												
2158	General Statistics											
2159					Number of Valid Data	3			Number of Detected Data	1		
2160					Number of Distinct Detected Data	1			Number of Non-Detect Data	2		
2161									Percent Non-Detects	66.67%		
2162												
2163	Warning: This data set only has 3 observations!											
2164	Data set is too small to compute reliable and meaningful statistics and estimates!											
2165	The data set for variable M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_s_2005) was not processed!											
2166												
2167	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2168	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2169												
2170												
2171												
2172	M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_s_2010)											
2173												
2174	General Statistics											
2175					Number of Valid Observations	1			Number of Distinct Observations	1		
2176												
2177												
2178	Warning: This data set only has 1 observations!											
2179	Data set is too small to compute reliable and meaningful statistics and estimates!											
2180	The data set for variable M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_s_2010) was not processed!											
2181												
2182	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2183	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2184												
2185												
2186												
2187	M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_stillwater_2005)											
2188												
2189	General Statistics											
2190					Number of Valid Observations	1			Number of Distinct Observations	1		
2191												
2192												
2193	Warning: This data set only has 1 observations!											
2194	Data set is too small to compute reliable and meaningful statistics and estimates!											
2195	The data set for variable M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
2196												
2197	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2198	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2199												
2200												
2201												
2202	M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_stillwater_2010)											
2203												
2204	General Statistics											
2205					Number of Valid Observations	3			Number of Distinct Observations	3		
2206												
2207												
2208	Warning: This data set only has 3 observations!											
2209	Data set is too small to compute reliable and meaningful statistics and estimates!											
2210	The data set for variable M|MG/KG|CHROMIUM (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
2211												
2212	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2213	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2214												
2215												
2216												
2217	M|MG/KG|CHROMIUM (gi_et_crabs_ne_2010)											
2218												
2219	General Statistics											
2220						Number of Valid Observations	2			Number of Distinct Observations	2	

	A	B	C	D	E	F	G	H	I	J	K	L
2221												
2222												
2223	**Warning: This data set only has 2 observations!**											
2224	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
2225	**The data set for variable M|MG/KG|CHROMIUM (gi_et_crabs_ne_2010) was not processed!**											
2226												
2227	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
2228	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
2229												
2230												
2231												
2232	**M|MG/KG|CHROMIUM (gi_et_crabs_nw_2010)**											
2233												
2234	**General Statistics**											
2235					Number of Valid Data	1			Number of Detected Data			0
2236					Number of Distinct Detected Data	0			Number of Non-Detect Data			1
2237									Percent Non-Detects			100.00%
2238												
2239	**Warning: This data set only has 1 observations!**											
2240	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
2241	**The data set for variable M|MG/KG|CHROMIUM (gi_et_crabs_nw_2010) was not processed!**											
2242												
2243	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
2244	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
2245												
2246												
2247												
2248	**M|MG/KG|CHROMIUM (gi_et_crabs_ref_2010)**											
2249												
2250	**General Statistics**											
2251					Number of Valid Data	3			Number of Detected Data			2
2252					Number of Distinct Detected Data	2			Number of Non-Detect Data			1
2253									Percent Non-Detects			33.33%
2254												
2255	**Warning: This data set only has 3 observations!**											
2256	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
2257	**The data set for variable M|MG/KG|CHROMIUM (gi_et_crabs_ref_2010) was not processed!**											
2258												
2259	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
2260	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
2261												
2262												
2263												
2264	**M|MG/KG|CHROMIUM (gi_et_crabs_stillwater_2010)**											
2265												
2266	**General Statistics**											
2267					Number of Valid Observations	3			Number of Distinct Observations			3
2268												
2269												
2270	**Warning: This data set only has 3 observations!**											
2271	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
2272	**The data set for variable M|MG/KG|CHROMIUM (gi_et_crabs_stillwater_2010) was not processed!**											
2273												
2274	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
2275	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
2276												
2277												
2278												
2279	**M|MG/KG|COBALT (gi_et_clams_and_mussels_ne_2005)**											
2280												
2281	**General Statistics**											
2282					Number of Valid Data	11			Number of Detected Data			2
2283					Number of Distinct Detected Data	2			Number of Non-Detect Data			9
2284									Percent Non-Detects			81.82%
2285												
2286	**Raw Statistics**							**Log-transformed Statistics**				
2287					Minimum Detected	0.141			Minimum Detected			-1.958995
2288					Maximum Detected	0.17			Maximum Detected			-1.771957
2289					Mean of Detected	0.1555			Mean of Detected			-1.865476
2290					SD of Detected	0.0205061			SD of Detected			0.1322562
2291					Minimum Non-Detect	0.056			Minimum Non-Detect			-2.882404
2292					Maximum Non-Detect	0.21			Maximum Non-Detect			-1.560648
2293												
2294	Note: Data have multiple DLs - Use of KM Method is								Number treated as Non-Detect			11

2295	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected		0
2296	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage		100.00%
2297												
2298	**Warning: Data set has only 2 Distinct Detected Values.**											
2299	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**											
2300	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
2301												
2302	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**											
2303												
2304	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
2305	**Those methods will return a 'N/A' value on your output display!**											
2306												
2307	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
2308	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
2309	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
2310												
2311												
2312	**UCL Statistics**											
2313	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
2314	Shapiro Wilk Test Statistic				N/A		Shapiro Wilk Test Statistic					N/A
2315	5% Shapiro Wilk Critical Value				N/A		5% Shapiro Wilk Critical Value					N/A
2316	**Data not Normal at 5% Significance Level**						**Data not Lognormal at 5% Significance Level**					
2317												
2318	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
2319	DL/2 Substitution Method						DL/2 Substitution Method					
2320	Mean				0.0787727		Mean					-2.690744
2321	SD				0.0456428		SD					0.5755191
2322	95% DL/2 (t) UCL				0.1037155		95% H-Stat (DL/2) UCL					0.1211878
2323												
2324	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
2325	**MLE method failed to converge properly**						Mean in Log Scale					N/A
2326							SD in Log Scale					N/A
2327							Mean in Original Scale					N/A
2328							SD in Original Scale					N/A
2329							95% t UCL					N/A
2330							95% Percentile Bootstrap UCL					N/A
2331							95% BCA Bootstrap UCL					N/A
2332												
2333	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
2334	k star (bias corrected)				N/A		**Data do not follow a Discernable Distribution (0.05)**					
2335	Theta Star				N/A							
2336	nu star				N/A							
2337												
2338	A-D Test Statistic				N/A		**Nonparametric Statistics**					
2339	5% A-D Critical Value				N/A		Kaplan-Meier (KM) Method					
2340	K-S Test Statistic				N/A		Mean					0.1442222
2341	5% K-S Critical Value				N/A		SD					0.0091138
2342	**Data not Gamma Distributed at 5% Significance Level**						SE of Mean					0.0042963
2343							95% KM (t) UCL					0.1520091
2344	**Assuming Gamma Distribution**						95% KM (z) UCL					0.151289
2345	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.1640961
2346	Minimum				N/A		95% KM (bootstrap t) UCL					N/A
2347	Maximum				N/A		95% KM (BCA) UCL					0.17
2348	Mean				N/A		95% KM (Percentile Bootstrap) UCL					N/A
2349	Median				N/A		95% KM (Chebyshev) UCL					0.1629493
2350	SD				N/A		97.5% KM (Chebyshev) UCL					0.1710526
2351	k star				N/A		99% KM (Chebyshev) UCL					0.1869698
2352	Theta star				N/A							
2353	Nu star				N/A		**Potential UCLs to Use**					
2354	AppChi2				N/A		95% KM (t) UCL					0.1520091
2355	95% Gamma Approximate UCL				N/A		95% KM (% Bootstrap) UCL					N/A
2356	95% Adjusted Gamma UCL				N/A							
2357	**Note: DL/2 is not a recommended method.**											
2358												
2359	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
2360	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
2361	**For additional insight, the user may want to consult a statistician.**											
2362												
2363												
2364	**M|MG/KG|COBALT (gi_et_clams_and_mussels_ne_2010)**											
2365												
2366	**General Statistics**											
2367	Number of Valid Observations				5		Number of Distinct Observations					5
2368												

2369	**Raw Statistics**						**Log-transformed Statistics**					
2370					Minimum	0.091					Minimum of Log Data	-2.396896
2371					Maximum	0.176					Maximum of Log Data	-1.737271
2372					Mean	0.1324					Mean of log Data	-2.052254
2373					Median	0.124					SD of log Data	0.2766099
2374					SD	0.0361151						
2375					Coefficient of Variation	0.2727726						
2376					Skewness	0.2251803						
2377												
2378												
2379	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
2380												
2381	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
2382	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
2383												
2384												
2385	**Warning: There are only 5 Values in this data**											
2386	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
2387	**the resulting calculations may not be reliable enough to draw conclusions**											
2388												
2389	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
2390												
2391	**Relevant UCL Statistics**											
2392	**Normal Distribution Test**						**Lognormal Distribution Test**					
2393					Shapiro Wilk Test Statistic	0.9328388					Shapiro Wilk Test Statistic	0.9447151
2394					Shapiro Wilk Critical Value	0.762					Shapiro Wilk Critical Value	0.762
2395	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
2396												
2397	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
2398					95% Student's-t UCL	0.1668318					95% H-UCL	0.1847233
2399	**95% UCLs (Adjusted for Skewness)**										95% Chebyshev (MVUE) UCL	0.2036298
2400					95% Adjusted-CLT UCL (Chen-1995)	0.1607042					97.5% Chebyshev (MVUE) UCL	0.2344438
2401					95% Modified-t UCL (Johnson-1978)	0.1671029					99% Chebyshev (MVUE) UCL	0.2949721
2402												
2403	**Gamma Distribution Test**						**Data Distribution**					
2404					k star (bias corrected)	6.7942419	**Data appear Normal at 5% Significance Level**					
2405					Theta Star	0.0194871						
2406					MLE of Mean	0.1324						
2407					MLE of Standard Deviation	0.0507946						
2408					nu star	67.942419						
2409					Approximate Chi Square Value (.05)	49.970828	**Nonparametric Statistics**					
2410					Adjusted Level of Significance	0.0086					95% CLT UCL	0.1589663
2411					Adjusted Chi Square Value	43.308557					95% Jackknife UCL	0.1668318
2412											95% Standard Bootstrap UCL	0.1562714
2413					Anderson-Darling Test Statistic	0.2797461					95% Bootstrap-t UCL	0.1886175
2414					Anderson-Darling 5% Critical Value	0.6787536					95% Hall's Bootstrap UCL	0.1957994
2415					Kolmogorov-Smirnov Test Statistic	0.2312867					95% Percentile Bootstrap UCL	0.1572
2416					Kolmogorov-Smirnov 5% Critical Value	0.357304					95% BCA Bootstrap UCL	0.1564
2417	**Data appear Gamma Distributed at 5% Significance Level**										95% Chebyshev(Mean, Sd) UCL	0.2028013
2418											97.5% Chebyshev(Mean, Sd) UCL	0.233264
2419	**Assuming Gamma Distribution**										99% Chebyshev(Mean, Sd) UCL	0.293102
2420					95% Approximate Gamma UCL	0.1800166						
2421					95% Adjusted Gamma UCL	0.207709						
2422												
2423	**Potential UCL to Use**										Use 95% Student's-t UCL	0.1668318
2424												
2425	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
2426	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
2427	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
2428												
2429												
2430	**M|MG/KG|COBALT (gi_et_clams_and_mussels_nw_2005)**											
2431												
2432	**General Statistics**											
2433					Number of Valid Data	6					Number of Detected Data	3
2434					Number of Distinct Detected Data	3					Number of Non-Detect Data	3
2435											Percent Non-Detects	50.00%
2436												
2437	**Raw Statistics**						**Log-transformed Statistics**					
2438					Minimum Detected	0.11					Minimum Detected	-2.207275
2439					Maximum Detected	0.21					Maximum Detected	-1.560648
2440					Mean of Detected	0.1466667					Mean of Detected	-1.962729
2441					SD of Detected	0.0550757					SD of Detected	0.3509196
2442					Minimum Non-Detect	0.055					Minimum Non-Detect	-2.900422

2443					Maximum Non-Detect	0.082					Maximum Non-Detect	-2.501036
2444												
2445	Note: Data have multiple DLs - Use of KM Method is										Number treated as Non-Detect	3
2446	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	3
2447	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	50.00%
2448												
2449	**Warning: There are only 3 Distinct Detected Values in this data set**											
2450	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
2451	**Those methods will return a 'N/A' value on your output display!**											
2452												
2453	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
2454	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
2455	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
2456												
2457												
2458	**UCL Statistics**											
2459	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
2460					Shapiro Wilk Test Statistic	0.82416					Shapiro Wilk Test Statistic	0.8488369
2461					5% Shapiro Wilk Critical Value	0.767					5% Shapiro Wilk Critical Value	0.767
2462	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
2463												
2464	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
2465					DL/2 Substitution Method						DL/2 Substitution Method	
2466					Mean	0.09					Mean	-2.688951
2467					SD	0.0713155					SD	0.8358419
2468					95% DL/2 (t) UCL	0.148667					95% H-Stat (DL/2) UCL	0.3677864
2469												
2470					Maximum Likelihood Estimate(MLE) Method						Log ROS Method	
2471					Mean	0.0833902					Mean in Log Scale	-2.517801
2472					SD	0.0781927					SD in Log Scale	0.6472902
2473					95% MLE (t) UCL	0.1477147					Mean in Original Scale	0.0964773
2474					95% MLE (Tiku) UCL	0.1625757					SD in Original Scale	0.0650853
2475											95% t UCL	0.1500191
2476											95% Percentile Bootstrap UCL	0.1387626
2477											95% BCA Bootstrap UCL	0.151048
2478												
2479	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
2480					k star (bias corrected)	N/A	**Data appear Normal at 5% Significance Level**					
2481					Theta Star	N/A						
2482					nu star	N/A						
2483												
2484					A-D Test Statistic	N/A	**Nonparametric Statistics**					
2485					5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method					
2486					K-S Test Statistic	N/A					Mean	0.1283333
2487					5% K-S Critical Value	N/A					SD	0.0367045
2488	**Data not Gamma Distributed at 5% Significance Level**										SE of Mean	0.0183523
2489											95% KM (t) UCL	0.165314
2490	**Assuming Gamma Distribution**										95% KM (z) UCL	0.1585201
2491	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.1600001
2492					Minimum	N/A					95% KM (bootstrap t) UCL	0.3024382
2493					Maximum	N/A					95% KM (BCA) UCL	0.21
2494					Mean	N/A					95% KM (Percentile Bootstrap) UCL	0.21
2495					Median	N/A					95% KM (Chebyshev) UCL	0.208329
2496					SD	N/A					97.5% KM (Chebyshev) UCL	0.2429432
2497					k star	N/A					99% KM (Chebyshev) UCL	0.310936
2498					Theta star	N/A						
2499					Nu star	N/A	**Potential UCLs to Use**					
2500					AppChi2	N/A					95% KM (t) UCL	0.165314
2501					95% Gamma Approximate UCL	N/A					95% KM (Percentile Bootstrap) UCL	0.21
2502					95% Adjusted Gamma UCL	N/A						
2503	**Note: DL/2 is not a recommended method.**											
2504												
2505	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
2506	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
2507	**For additional insight, the user may want to consult a statistician.**											
2508												
2509												
2510	**M|MG/KG|COBALT (gi_et_clams_and_mussels_nw_2010)**											
2511												
2512	**General Statistics**											
2513					Number of Valid Observations	1					Number of Distinct Observations	1
2514												
2515												
2516	**Warning: This data set only has 1 observations!**											

	A	B	C	D	E	F	G	H	I	J	K	L
2517	Data set is too small to compute reliable and meaningful statistics and estimates!											
2518	The data set for variable M|MG/KG|COBALT (gi_et_clams_and_mussels_nw_2010) was not processed!											
2519												
2520	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2521	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2522												
2523												
2524												
2525	M|MG/KG|COBALT (gi_et_clams_and_mussels_ref_2010)											
2526												
2527	General Statistics											
2528	Number of Valid Observations	3				Number of Distinct Observations	3					
2529												
2530												
2531	Warning: This data set only has 3 observations!											
2532	Data set is too small to compute reliable and meaningful statistics and estimates!											
2533	The data set for variable M|MG/KG|COBALT (gi_et_clams_and_mussels_ref_2010) was not processed!											
2534												
2535	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2536	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2537												
2538												
2539												
2540	M|MG/KG|COBALT (gi_et_clams_and_mussels_s_2005)											
2541												
2542	General Statistics											
2543	Number of Valid Data	3				Number of Detected Data	0					
2544	Number of Distinct Detected Data	0				Number of Non-Detect Data	3					
2545						Percent Non-Detects	100.00%					
2546												
2547	Warning: This data set only has 3 observations!											
2548	Data set is too small to compute reliable and meaningful statistics and estimates!											
2549	The data set for variable M|MG/KG|COBALT (gi_et_clams_and_mussels_s_2005) was not processed!											
2550												
2551	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2552	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2553												
2554												
2555												
2556	M|MG/KG|COBALT (gi_et_clams_and_mussels_s_2010)											
2557												
2558	General Statistics											
2559	Number of Valid Observations	1				Number of Distinct Observations	1					
2560												
2561												
2562	Warning: This data set only has 1 observations!											
2563	Data set is too small to compute reliable and meaningful statistics and estimates!											
2564	The data set for variable M|MG/KG|COBALT (gi_et_clams_and_mussels_s_2010) was not processed!											
2565												
2566	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2567	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2568												
2569												
2570												
2571	M|MG/KG|COBALT (gi_et_clams_and_mussels_stillwater_2005)											
2572												
2573	General Statistics											
2574	Number of Valid Observations	1				Number of Distinct Observations	1					
2575												
2576												
2577	Warning: This data set only has 1 observations!											
2578	Data set is too small to compute reliable and meaningful statistics and estimates!											
2579	The data set for variable M|MG/KG|COBALT (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
2580												
2581	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2582	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2583												
2584												
2585												
2586	M|MG/KG|COBALT (gi_et_clams_and_mussels_stillwater_2010)											
2587												
2588	General Statistics											
2589	Number of Valid Observations	3				Number of Distinct Observations	3					
2590												

	A	B	C	D	E	F	G	H	I	J	K	L
2591												
2592	Warning: This data set only has 3 observations!											
2593	Data set is too small to compute reliable and meaningful statistics and estimates!											
2594	The data set for variable M|MG/KG|COBALT (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
2595												
2596	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2597	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2598												
2599												
2600												
2601	M|MG/KG|COBALT (gi_et_crabs_ne_2010)											
2602												
2603	General Statistics											
2604	Number of Valid Observations	2				Number of Distinct Observations	2					
2605												
2606												
2607	Warning: This data set only has 2 observations!											
2608	Data set is too small to compute reliable and meaningful statistics and estimates!											
2609	The data set for variable M|MG/KG|COBALT (gi_et_crabs_ne_2010) was not processed!											
2610												
2611	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2612	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2613												
2614												
2615												
2616	M|MG/KG|COBALT (gi_et_crabs_nw_2010)											
2617												
2618	General Statistics											
2619	Number of Valid Observations	1				Number of Distinct Observations	1					
2620												
2621												
2622	Warning: This data set only has 1 observations!											
2623	Data set is too small to compute reliable and meaningful statistics and estimates!											
2624	The data set for variable M|MG/KG|COBALT (gi_et_crabs_nw_2010) was not processed!											
2625												
2626	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2627	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2628												
2629												
2630												
2631	M|MG/KG|COBALT (gi_et_crabs_ref_2010)											
2632												
2633	General Statistics											
2634	Number of Valid Observations	3				Number of Distinct Observations	3					
2635												
2636												
2637	Warning: This data set only has 3 observations!											
2638	Data set is too small to compute reliable and meaningful statistics and estimates!											
2639	The data set for variable M|MG/KG|COBALT (gi_et_crabs_ref_2010) was not processed!											
2640												
2641	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2642	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2643												
2644												
2645												
2646	M|MG/KG|COBALT (gi_et_crabs_stillwater_2010)											
2647												
2648	General Statistics											
2649	Number of Valid Observations	3				Number of Distinct Observations	3					
2650												
2651												
2652	Warning: This data set only has 3 observations!											
2653	Data set is too small to compute reliable and meaningful statistics and estimates!											
2654	The data set for variable M|MG/KG|COBALT (gi_et_crabs_stillwater_2010) was not processed!											
2655												
2656	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2657	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2658												
2659												
2660												
2661	M|MG/KG|COPPER (gi_et_clams_and_mussels_ne_2005)											
2662												
2663	General Statistics											
2664	Number of Valid Data	11				Number of Detected Data	2					

2665	Number of Distinct Detected Data					2	Number of Non-Detect Data					9
2666							Percent Non-Detects					81.82%
2667												
2668	**Raw Statistics**						**Log-transformed Statistics**					
2669	Minimum Detected					1.2	Minimum Detected					0.1823216
2670	Maximum Detected					1.93	Maximum Detected					0.65752
2671	Mean of Detected					1.565	Mean of Detected					0.4199208
2672	SD of Detected					0.516188	SD of Detected					0.336016
2673	Minimum Non-Detect					0.68	Minimum Non-Detect					-0.385662
2674	Maximum Non-Detect					6.8	Maximum Non-Detect					1.9169226
2675												
2676	Note: Data have multiple DLs - Use of KM Method is						Number treated as Non-Detect					11
2677	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
2678	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
2679												
2680	**Warning: Data set has only 2 Distinct Detected Values.**											
2681	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**											
2682	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
2683												
2684	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**											
2685												
2686	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
2687	**Those methods will return a 'N/A' value on your output display!**											
2688												
2689	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
2690	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
2691	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
2692												
2693												
2694	**UCL Statistics**											
2695	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
2696	Shapiro Wilk Test Statistic					N/A	Shapiro Wilk Test Statistic					N/A
2697	5% Shapiro Wilk Critical Value					N/A	5% Shapiro Wilk Critical Value					N/A
2698	**Data not Normal at 5% Significance Level**						**Data not Lognormal at 5% Significance Level**					
2699												
2700	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
2701	DL/2 Substitution Method						DL/2 Substitution Method					
2702	Mean					1.0013636	Mean					-0.268264
2703	SD					0.9199051	SD					0.7121145
2704	95% DL/2 (t) UCL					1.5040712	95% H-Stat (DL/2) UCL					1.724557
2705												
2706	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2707	**MLE method failed to converge properly**						Mean in Log Scale					N/A
2708							SD in Log Scale					N/A
2709							Mean in Original Scale					N/A
2710							SD in Original Scale					N/A
2711							95% t UCL					N/A
2712							95% Percentile Bootstrap UCL					N/A
2713							95% BCA Bootstrap UCL					N/A
2714												
2715	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
2716	k star (bias corrected)					N/A	**Data do not follow a Discernable Distribution (0.05)**					
2717	Theta Star					N/A						
2718	nu star					N/A						
2719												
2720	A-D Test Statistic					N/A	**Nonparametric Statistics**					
2721	5% A-D Critical Value					N/A	Kaplan-Meier (KM) Method					
2722	K-S Test Statistic					N/A	Mean					1.273
2723	5% K-S Critical Value					N/A	SD					0.219
2724	**Data not Gamma Distributed at 5% Significance Level**						SE of Mean					0.0979398
2725							95% KM (t) UCL					1.450512
2726	**Assuming Gamma Distribution**						95% KM (z) UCL					1.4340966
2727	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.7749988
2728	Minimum					N/A	95% KM (bootstrap t) UCL					N/A
2729	Maximum					N/A	95% KM (BCA) UCL					1.93
2730	Mean					N/A	95% KM (Percentile Bootstrap) UCL					1.93
2731	Median					N/A	95% KM (Chebyshev) UCL					1.6999096
2732	SD					N/A	97.5% KM (Chebyshev) UCL					1.8846337
2733	k star					N/A	99% KM (Chebyshev) UCL					2.2474885
2734	Theta star					N/A						
2735	Nu star					N/A	**Potential UCLs to Use**					
2736	AppChi2					N/A	95% KM (t) UCL					1.450512
2737	95% Gamma Approximate UCL					N/A	95% KM (% Bootstrap) UCL					1.93
2738	95% Adjusted Gamma UCL					N/A						

2739	Note: DL/2 is not a recommended method.											
2740												
2741	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
2742	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
2743	For additional insight, the user may want to consult a statistician.											
2744												
2745												
2746	M|MG/KG|COPPER (gi_et_clams_and_mussels_ne_2010)											
2747												
2748	General Statistics											
2749	Number of Valid Observations	5				Number of Distinct Observations	5					
2750												
2751	Raw Statistics					Log-transformed Statistics						
2752	Minimum	1.4				Minimum of Log Data	0.3364722					
2753	Maximum	2.3				Maximum of Log Data	0.8329091					
2754	Mean	1.85				Mean of log Data	0.6003125					
2755	Median	1.75				SD of log Data	0.1938315					
2756	SD	0.3535534										
2757	Coefficient of Variation	0.1911099										
2758	Skewness	0.106066										
2759												
2760												
2761	Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!											
2762												
2763	It is suggested to collect at least 8 to 10 observations using these statistical methods!											
2764	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2765												
2766												
2767	Warning: There are only 5 Values in this data											
2768	Note: It should be noted that even though bootstrap methods may be performed on this data set,											
2769	the resulting calculations may not be reliable enough to draw conclusions											
2770												
2771	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.											
2772												
2773	Relevant UCL Statistics											
2774	Normal Distribution Test					Lognormal Distribution Test						
2775	Shapiro Wilk Test Statistic	0.965105				Shapiro Wilk Test Statistic	0.9655189					
2776	Shapiro Wilk Critical Value	0.762				Shapiro Wilk Critical Value	0.762					
2777	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
2778												
2779	Assuming Normal Distribution					Assuming Lognormal Distribution						
2780	95% Student's-t UCL	2.1870746				95% H-UCL	2.2956803					
2781	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL	2.5484294					
2782	95% Adjusted-CLT UCL (Chen-1995)	2.1180881				97.5% Chebyshev (MVUE) UCL	2.8505461					
2783	95% Modified-t UCL (Johnson-1978)	2.1883246				99% Chebyshev (MVUE) UCL	3.4439959					
2784												
2785	Gamma Distribution Test					Data Distribution						
2786	k star (bias corrected)	13.646771				Data appear Normal at 5% Significance Level						
2787	Theta Star	0.1355632										
2788	MLE of Mean	1.85										
2789	MLE of Standard Deviation	0.5007913										
2790	nu star	136.46771										
2791	Approximate Chi Square Value (.05)	110.47707				Nonparametric Statistics						
2792	Adjusted Level of Significance	0.0086				95% CLT UCL	2.1100742					
2793	Adjusted Chi Square Value	100.2424				95% Jackknife UCL	2.1870746					
2794						95% Standard Bootstrap UCL	2.0842755					
2795	Anderson-Darling Test Statistic	0.2416374				95% Bootstrap-t UCL	2.3311252					
2796	Anderson-Darling 5% Critical Value	0.6784924				95% Hall's Bootstrap UCL	2.5130387					
2797	Kolmogorov-Smirnov Test Statistic	0.2034847				95% Percentile Bootstrap UCL	2.08					
2798	Kolmogorov-Smirnov 5% Critical Value	0.3570222				95% BCA Bootstrap UCL	2.07					
2799	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL	2.5392024					
2800						97.5% Chebyshev(Mean, Sd) UCL	2.8374209					
2801	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL	3.4232133					
2802	95% Approximate Gamma UCL	2.2852277										
2803	95% Adjusted Gamma UCL	2.5185478										
2804												
2805	Potential UCL to Use					Use 95% Student's-t UCL	2.1870746					
2806												
2807	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
2808	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
2809	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
2810												
2811												
2812	M|MG/KG|COPPER (gi_et_clams_and_mussels_nw_2005)											

2813												
2814	**General Statistics**											
2815					Number of Valid Data	6				Number of Detected Data		3
2816					Number of Distinct Detected Data	3				Number of Non-Detect Data		3
2817										Percent Non-Detects		50.00%
2818												
2819	**Raw Statistics**							**Log-transformed Statistics**				
2820					Minimum Detected	0.59				Minimum Detected		-0.527633
2821					Maximum Detected	2.1				Maximum Detected		0.7419373
2822					Mean of Detected	1.4633333				Mean of Detected		0.248311
2823					SD of Detected	0.7823256				SD of Detected		0.6802421
2824					Minimum Non-Detect	1.2				Minimum Non-Detect		0.1823216
2825					Maximum Non-Detect	2.4				Maximum Non-Detect		0.8754687
2826												
2827	Note: Data have multiple DLs - Use of KM Method is									Number treated as Non-Detect		6
2828	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected		0
2829	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage		100.00%
2830												
2831	**Warning: There are only 3 Distinct Detected Values in this data set**											
2832	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
2833	**Those methods will return a 'N/A' value on your output display!**											
2834												
2835	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
2836	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
2837	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
2838												
2839												
2840	**UCL Statistics**											
2841	**Normal Distribution Test with Detected Values Only**							**Lognormal Distribution Test with Detected Values Only**				
2842					Shapiro Wilk Test Statistic	0.9313448				Shapiro Wilk Test Statistic		0.8707992
2843					5% Shapiro Wilk Critical Value	0.767				5% Shapiro Wilk Critical Value		0.767
2844	**Data appear Normal at 5% Significance Level**							**Data appear Lognormal at 5% Significance Level**				
2845												
2846	**Assuming Normal Distribution**							**Assuming Lognormal Distribution**				
2847					DL/2 Substitution Method					DL/2 Substitution Method		
2848					Mean	1.1483333				Mean		0.009959
2849					SD	0.6365663				SD		0.5533967
2850					95% DL/2 (t) UCL	1.6719983				95% H-Stat (DL/2) UCL		2.3362891
2851												
2852					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method		
2853	**MLE method failed to converge properly**									Mean in Log Scale		-0.053722
2854										SD in Log Scale		0.5640707
2855										Mean in Original Scale		1.0892407
2856										SD in Original Scale		0.6529045
2857										95% t UCL		1.6263461
2858										95% Percentile Bootstrap UCL		1.522751
2859										95% BCA Bootstrap UCL		1.5363128
2860												
2861	**Gamma Distribution Test with Detected Values Only**							**Data Distribution Test with Detected Values Only**				
2862					k star (bias corrected)	N/A		**Data appear Normal at 5% Significance Level**				
2863					Theta Star	N/A						
2864					nu star	N/A						
2865												
2866					A-D Test Statistic	N/A		**Nonparametric Statistics**				
2867					5% A-D Critical Value	N/A				Kaplan-Meier (KM) Method		
2868					K-S Test Statistic	N/A				Mean		1.114
2869					5% K-S Critical Value	N/A				SD		0.6541131
2870	**Data not Gamma Distributed at 5% Significance Level**									SE of Mean		0.3582725
2871										95% KM (t) UCL		1.8359365
2872	**Assuming Gamma Distribution**									95% KM (z) UCL		1.7033059
2873	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL		1.9979748
2874					Minimum	N/A				95% KM (bootstrap t) UCL		1.4817984
2875					Maximum	N/A				95% KM (BCA) UCL		2.1
2876					Mean	N/A				95% KM (Percentile Bootstrap) UCL		2.1
2877					Median	N/A				95% KM (Chebyshev) UCL		2.6756737
2878					SD	N/A				97.5% KM (Chebyshev) UCL		3.3514112
2879					k star	N/A				99% KM (Chebyshev) UCL		4.6787666
2880					Theta star	N/A						
2881					Nu star	N/A		**Potential UCLs to Use**				
2882					AppChi2	N/A				95% KM (t) UCL		1.8359365
2883					95% Gamma Approximate UCL	N/A				95% KM (Percentile Bootstrap) UCL		2.1
2884					95% Adjusted Gamma UCL	N/A						
2885	**Note: DL/2 is not a recommended method.**											
2886												

	A	B	C	D	E	F	G	H	I	J	K	L
2887	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
2888	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
2889	For additional insight, the user may want to consult a statistician.											
2890												
2891												
2892	M|MG/KG|COPPER (gi_et_clams_and_mussels_nw_2010)											
2893												
2894	General Statistics											
2895	Number of Valid Observations	1				Number of Distinct Observations	1					
2896												
2897												
2898	Warning: This data set only has 1 observations!											
2899	Data set is too small to compute reliable and meaningful statistics and estimates!											
2900	The data set for variable M|MG/KG|COPPER (gi_et_clams_and_mussels_nw_2010) was not processed!											
2901												
2902	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2903	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2904												
2905												
2906												
2907	M|MG/KG|COPPER (gi_et_clams_and_mussels_ref_2010)											
2908												
2909	General Statistics											
2910	Number of Valid Observations	3				Number of Distinct Observations	3					
2911												
2912												
2913	Warning: This data set only has 3 observations!											
2914	Data set is too small to compute reliable and meaningful statistics and estimates!											
2915	The data set for variable M|MG/KG|COPPER (gi_et_clams_and_mussels_ref_2010) was not processed!											
2916												
2917	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2918	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2919												
2920												
2921												
2922	M|MG/KG|COPPER (gi_et_clams_and_mussels_s_2005)											
2923												
2924	General Statistics											
2925	Number of Valid Data	3				Number of Detected Data	0					
2926	Number of Distinct Detected Data	0				Number of Non-Detect Data	3					
2927						Percent Non-Detects	100.00%					
2928												
2929	Warning: This data set only has 3 observations!											
2930	Data set is too small to compute reliable and meaningful statistics and estimates!											
2931	The data set for variable M|MG/KG|COPPER (gi_et_clams_and_mussels_s_2005) was not processed!											
2932												
2933	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2934	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2935												
2936												
2937												
2938	M|MG/KG|COPPER (gi_et_clams_and_mussels_s_2010)											
2939												
2940	General Statistics											
2941	Number of Valid Observations	1				Number of Distinct Observations	1					
2942												
2943												
2944	Warning: This data set only has 1 observations!											
2945	Data set is too small to compute reliable and meaningful statistics and estimates!											
2946	The data set for variable M|MG/KG|COPPER (gi_et_clams_and_mussels_s_2010) was not processed!											
2947												
2948	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2949	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2950												
2951												
2952												
2953	M|MG/KG|COPPER (gi_et_clams_and_mussels_stillwater_2005)											
2954												
2955	General Statistics											
2956	Number of Valid Observations	1				Number of Distinct Observations	1					
2957												
2958												
2959	Warning: This data set only has 1 observations!											
2960	Data set is too small to compute reliable and meaningful statistics and estimates!											

	A	B	C	D	E	F	G	H	I	J	K	L
2961	The data set for variable M|MG/KG|COPPER (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
2962												
2963	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2964	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2965												
2966												
2967												
2968	M|MG/KG|COPPER (gi_et_clams_and_mussels_stillwater_2010)											
2969												
2970	General Statistics											
2971	Number of Valid Observations	3				Number of Distinct Observations	3					
2972												
2973												
2974	Warning: This data set only has 3 observations!											
2975	Data set is too small to compute reliable and meaningful statistics and estimates!											
2976	The data set for variable M|MG/KG|COPPER (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
2977												
2978	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2979	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2980												
2981												
2982												
2983	M|MG/KG|COPPER (gi_et_crabs_ne_2010)											
2984												
2985	General Statistics											
2986	Number of Valid Observations	2				Number of Distinct Observations	2					
2987												
2988												
2989	Warning: This data set only has 2 observations!											
2990	Data set is too small to compute reliable and meaningful statistics and estimates!											
2991	The data set for variable M|MG/KG|COPPER (gi_et_crabs_ne_2010) was not processed!											
2992												
2993	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
2994	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
2995												
2996												
2997												
2998	M|MG/KG|COPPER (gi_et_crabs_nw_2010)											
2999												
3000	General Statistics											
3001	Number of Valid Observations	1				Number of Distinct Observations	1					
3002												
3003												
3004	Warning: This data set only has 1 observations!											
3005	Data set is too small to compute reliable and meaningful statistics and estimates!											
3006	The data set for variable M|MG/KG|COPPER (gi_et_crabs_nw_2010) was not processed!											
3007												
3008	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
3009	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
3010												
3011												
3012												
3013	M|MG/KG|COPPER (gi_et_crabs_ref_2010)											
3014												
3015	General Statistics											
3016	Number of Valid Observations	3				Number of Distinct Observations	3					
3017												
3018												
3019	Warning: This data set only has 3 observations!											
3020	Data set is too small to compute reliable and meaningful statistics and estimates!											
3021	The data set for variable M|MG/KG|COPPER (gi_et_crabs_ref_2010) was not processed!											
3022												
3023	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
3024	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
3025												
3026												
3027												
3028	M|MG/KG|COPPER (gi_et_crabs_stillwater_2010)											
3029												
3030	General Statistics											
3031	Number of Valid Observations	3				Number of Distinct Observations	2					
3032												
3033												
3034	Warning: This data set only has 3 observations!											

	A	B	C	D	E	F	G	H	I	J	K	L
3035	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3036	**The data set for variable M|MG/KG|COPPER (gi_et_crabs_stillwater_2010) was not processed!**											
3037												
3038	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3039	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3040												
3041												
3042												
3043	**M|MG/KG|IRON (gi_et_clams_and_mussels_ne_2005)**											
3044												
3045	**General Statistics**											
3046					Number of Valid Data	11			Number of Detected Data	4		
3047					Number of Distinct Detected Data	4			Number of Non-Detect Data	7		
3048									Percent Non-Detects	63.64%		
3049												
3050	**Raw Statistics**						**Log-transformed Statistics**					
3051					Minimum Detected	23.3			Minimum Detected	3.1484534		
3052					Maximum Detected	73.7			Maximum Detected	4.3000028		
3053					Mean of Detected	52.975			Mean of Detected	3.8794841		
3054					SD of Detected	22.805756			SD of Detected	0.5242456		
3055					Minimum Non-Detect	12.8			Minimum Non-Detect	2.5494452		
3056					Maximum Non-Detect	35.9			Maximum Non-Detect	3.5807373		
3057												
3058	Note: Data have multiple DLs - Use of KM Method is								Number treated as Non-Detect	8		
3059	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected	3		
3060	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage	72.73%		
3061												
3062	**Warning: There are only 4 Distinct Detected Values in this data**											
3063	**Note: It should be noted that even though bootstrap may be performed on this data set**											
3064	**the resulting calculations may not be reliable enough to draw conclusions**											
3065												
3066	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**											
3067												
3068												
3069	**UCL Statistics**											
3070	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
3071					Shapiro Wilk Test Statistic	0.9290046			Shapiro Wilk Test Statistic	0.8800716		
3072					5% Shapiro Wilk Critical Value	0.748			5% Shapiro Wilk Critical Value	0.748		
3073	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
3074												
3075	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
3076					DL/2 Substitution Method				DL/2 Substitution Method			
3077					Mean	27.918182			Mean	3.0397386		
3078					SD	23.688544			SD	0.7776967		
3079					95% DL/2 (t) UCL	40.863441			95% H-Stat (DL/2) UCL	53.518485		
3080												
3081					Maximum Likelihood Estimate(MLE) Method				Log ROS Method			
3082					Mean	63.323202			Mean in Log Scale	3.0207111		
3083					SD	11.345582			SD in Log Scale	0.7503339		
3084					95% MLE (t) UCL	69.523309			Mean in Original Scale	27.344602		
3085					95% MLE (Tiku) UCL	75.153317			SD in Original Scale	23.901508		
3086									95% t UCL	40.406241		
3087									95% Percentile Bootstrap UCL	38.998602		
3088									95% BCA Bootstrap UCL	41.62471		
3089												
3090	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
3091					k star (bias corrected)	1.5907517	**Data appear Normal at 5% Significance Level**					
3092					Theta Star	33.301867						
3093					nu star	12.726013						
3094												
3095					A-D Test Statistic	0.3632663	**Nonparametric Statistics**					
3096					5% A-D Critical Value	0.6587612			Kaplan-Meier (KM) Method			
3097					K-S Test Statistic	0.6587612			Mean	34.090909		
3098					5% K-S Critical Value	0.3957563			SD	18.590929		
3099	**Data appear Gamma Distributed at 5% Significance Level**								SE of Mean	6.4725307		
3100									95% KM (t) UCL	45.82212		
3101	**Assuming Gamma Distribution**								95% KM (z) UCL	44.737275		
3102	Gamma ROS Statistics using Extrapolated Data								95% KM (jackknife) UCL	50.206616		
3103					Minimum	23.3			95% KM (bootstrap t) UCL	41.798343		
3104					Maximum	73.7			95% KM (BCA) UCL	69.881818		
3105					Mean	51.252161			95% KM (Percentile Bootstrap) UCL	68.790909		
3106					Median	53.733668			95% KM (Chebyshev) UCL	62.304016		
3107					SD	13.376073			97.5% KM (Chebyshev) UCL	74.51185		
3108					k star	9.9394849			99% KM (Chebyshev) UCL	98.491777		

3109					Theta star	5.1564202						
3110					Nu star	218.66867	**Potential UCLs to Use**					
3111					AppChi2	185.44446				95% KM (t) UCL		45.82212
3112				95% Gamma Approximate UCL		60.434493				95% KM (Percentile Bootstrap) UCL		68.790909
3113				95% Adjusted Gamma UCL		N/A						
3114	**Note: DL/2 is not a recommended method.**											
3115												
3116	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
3117	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
3118	**For additional insight, the user may want to consult a statistician.**											
3119												
3120												
3121	**M|MG/KG|IRON (gi_et_clams_and_mussels_ne_2010)**											
3122												
3123	**General Statistics**											
3124	Number of Valid Observations					5	Number of Distinct Observations					5
3125												
3126	**Raw Statistics**						**Log-transformed Statistics**					
3127	Minimum					38.8	Minimum of Log Data					3.6584202
3128	Maximum					102	Maximum of Log Data					4.6249728
3129	Mean					83.46	Mean of log Data					4.3695262
3130	Median					92.2	SD of log Data					0.4041263
3131	SD					25.868282						
3132	Coefficient of Variation					0.3099483						
3133	Skewness					-1.87337						
3134												
3135												
3136	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
3137												
3138	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
3139	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3140												
3141												
3142	**Warning: There are only 5 Values in this data**											
3143	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
3144	**the resulting calculations may not be reliable enough to draw conclusions**											
3145												
3146	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
3147												
3148	**Relevant UCL Statistics**											
3149	**Normal Distribution Test**						**Lognormal Distribution Test**					
3150	Shapiro Wilk Test Statistic					0.7767802	Shapiro Wilk Test Statistic					0.7108903
3151	Shapiro Wilk Critical Value					0.762	Shapiro Wilk Critical Value					0.762
3152	**Data appear Normal at 5% Significance Level**						**Data not Lognormal at 5% Significance Level**					
3153												
3154	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
3155	95% Student's-t UCL					108.12258				95% H-UCL		146.80936
3156	**95% UCLs (Adjusted for Skewness)**						95% Chebyshev (MVUE) UCL					150.29431
3157	95% Adjusted-CLT UCL (Chen-1995)					92.132507	97.5% Chebyshev (MVUE) UCL					178.85829
3158	95% Modified-t UCL (Johnson-1978)					106.50722	99% Chebyshev (MVUE) UCL					234.96671
3159												
3160	**Gamma Distribution Test**						**Data Distribution**					
3161	k star (bias corrected)					3.8456373	**Data appear Normal at 5% Significance Level**					
3162	Theta Star					21.702515						
3163	MLE of Mean					83.46						
3164	MLE of Standard Deviation					42.559275						
3165	nu star					38.456373						
3166	Approximate Chi Square Value (.05)					25.25402	**Nonparametric Statistics**					
3167	Adjusted Level of Significance					0.0086	95% CLT UCL					102.48873
3168	Adjusted Chi Square Value					20.702547	95% Jackknife UCL					108.12258
3169							95% Standard Bootstrap UCL					100.63821
3170	Anderson-Darling Test Statistic					0.7750102	95% Bootstrap-t UCL					98.601364
3171	Anderson-Darling 5% Critical Value					0.6791432	95% Hall's Bootstrap UCL					93.803453
3172	Kolmogorov-Smirnov Test Statistic					0.361429	95% Percentile Bootstrap UCL					98.06
3173	Kolmogorov-Smirnov 5% Critical Value					0.3576936	95% BCA Bootstrap UCL					95.62
3174	**Data not Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL					133.88656
3175							97.5% Chebyshev(Mean, Sd) UCL					155.70618
3176	**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL					198.56659
3177	95% Approximate Gamma UCL					127.0914						
3178	95% Adjusted Gamma UCL					155.03256						
3179												
3180	**Potential UCL to Use**						Use 95% Student's-t UCL					108.12258
3181	**Recommended UCL exceeds the maximum observation**											
3182												

	A	B	C	D	E	F	G	H	I	J	K	L
3183	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
3184	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
3185	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
3186												
3187												
3188	**M|MG/KG|IRON (gi_et_clams_and_mussels_nw_2005)**											
3189												
3190	**General Statistics**											
3191	Number of Valid Data					6	Number of Detected Data					3
3192	Number of Distinct Detected Data					3	Number of Non-Detect Data					3
3193							Percent Non-Detects					50.00%
3194												
3195	**Raw Statistics**						**Log-transformed Statistics**					
3196	Minimum Detected					19.9	Minimum Detected					2.9907197
3197	Maximum Detected					51.9	Maximum Detected					3.9493188
3198	Mean of Detected					38.366667	Mean of Detected					3.5693971
3199	SD of Detected					16.560596	SD of Detected					0.5092699
3200	Minimum Non-Detect					15.8	Minimum Non-Detect					2.7600099
3201	Maximum Non-Detect					31.8	Maximum Non-Detect					3.4594663
3202												
3203	Note: Data have multiple DLs - Use of KM Method is						Number treated as Non-Detect					4
3204	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					2
3205	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					66.67%
3206												
3207	**Warning: There are only 3 Distinct Detected Values in this data set**											
3208	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
3209	**Those methods will return a 'N/A' value on your output display!**											
3210												
3211	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
3212	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
3213	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
3214												
3215												
3216	**UCL Statistics**											
3217	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
3218	Shapiro Wilk Test Statistic					0.9334256	Shapiro Wilk Test Statistic					0.8857468
3219	5% Shapiro Wilk Critical Value					0.767	5% Shapiro Wilk Critical Value					0.767
3220	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
3221												
3222	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
3223	DL/2 Substitution Method						DL/2 Substitution Method					
3224	Mean					25.6	Mean					3.0382034
3225	SD					17.68423	SD					0.7078679
3226	95% DL/2 (t) UCL					40.147756	95% H-Stat (DL/2) UCL					73.714973
3227												
3228	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
3229	**MLE method failed to converge properly**						Mean in Log Scale					3.0549514
3230							SD in Log Scale					0.6681908
3231							Mean in Original Scale					25.653571
3232							SD in Original Scale					17.527301
3233							95% t UCL					40.072231
3234							95% Percentile Bootstrap UCL					36.620766
3235							95% BCA Bootstrap UCL					37.193188
3236												
3237	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
3238	k star (bias corrected)					N/A	**Data appear Normal at 5% Significance Level**					
3239	Theta Star					N/A						
3240	nu star					N/A						
3241												
3242	A-D Test Statistic					N/A	**Nonparametric Statistics**					
3243	5% A-D Critical Value					N/A	Kaplan-Meier (KM) Method					
3244	K-S Test Statistic					N/A	Mean					29.133333
3245	5% K-S Critical Value					N/A	SD					13.29181
3246	**Data not Gamma Distributed at 5% Significance Level**						SE of Mean					6.6459052
3247							95% KM (t) UCL					42.525154
3248	**Assuming Gamma Distribution**						95% KM (z) UCL					40.064875
3249	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					47.009716
3250	Minimum					N/A	95% KM (bootstrap t) UCL					37.755363
3251	Maximum					N/A	95% KM (BCA) UCL					N/A
3252	Mean					N/A	95% KM (Percentile Bootstrap) UCL					N/A
3253	Median					N/A	95% KM (Chebyshev) UCL					58.102162
3254	SD					N/A	97.5% KM (Chebyshev) UCL					70.636998
3255	k star					N/A	99% KM (Chebyshev) UCL					95.259255
3256	Theta star					N/A						

					Nu star	N/A	**Potential UCLs to Use**					
					AppChi2	N/A				95% KM (t) UCL		42.525154
				95% Gamma Approximate UCL		N/A				95% KM (Percentile Bootstrap) UCL		N/A
				95% Adjusted Gamma UCL		N/A						
Note: DL/2 is not a recommended method.												
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).												
For additional insight, the user may want to consult a statistician.												
M|MG/KG|IRON (gi_et_clams_and_mussels_nw_2010)												
General Statistics												
Number of Valid Observations	1						Number of Distinct Observations	1				
Warning: This data set only has 1 observations!												
Data set is too small to compute reliable and meaningful statistics and estimates!												
The data set for variable M|MG/KG|IRON (gi_et_clams_and_mussels_nw_2010) was not processed!												
It is suggested to collect at least 8 to 10 observations before using these statistical methods!												
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
M|MG/KG|IRON (gi_et_clams_and_mussels_ref_2010)												
General Statistics												
Number of Valid Observations	3						Number of Distinct Observations	3				
Warning: This data set only has 3 observations!												
Data set is too small to compute reliable and meaningful statistics and estimates!												
The data set for variable M|MG/KG|IRON (gi_et_clams_and_mussels_ref_2010) was not processed!												
It is suggested to collect at least 8 to 10 observations before using these statistical methods!												
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
M|MG/KG|IRON (gi_et_clams_and_mussels_s_2005)												
General Statistics												
Number of Valid Data	3						Number of Detected Data	0				
Number of Distinct Detected Data	0						Number of Non-Detect Data	3				
							Percent Non-Detects	100.00%				
Warning: This data set only has 3 observations!												
Data set is too small to compute reliable and meaningful statistics and estimates!												
The data set for variable M|MG/KG|IRON (gi_et_clams_and_mussels_s_2005) was not processed!												
It is suggested to collect at least 8 to 10 observations before using these statistical methods!												
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
M|MG/KG|IRON (gi_et_clams_and_mussels_s_2010)												
General Statistics												
Number of Valid Observations	1						Number of Distinct Observations	1				
Warning: This data set only has 1 observations!												
Data set is too small to compute reliable and meaningful statistics and estimates!												
The data set for variable M|MG/KG|IRON (gi_et_clams_and_mussels_s_2010) was not processed!												
It is suggested to collect at least 8 to 10 observations before using these statistical methods!												
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.												
M|MG/KG|IRON (gi_et_clams_and_mussels_stillwater_2005)												

	A	B	C	D	E	F	G	H	I	J	K	L
3331	**General Statistics**											
3332					Number of Valid Data	1			Number of Detected Data			0
3333					Number of Distinct Detected Data	0			Number of Non-Detect Data			1
3334									Percent Non-Detects			100.00%
3335												
3336	**Warning: This data set only has 1 observations!**											
3337	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3338	**The data set for variable M|MG/KG|IRON (gi_et_clams_and_mussels_stillwater_2005) was not processed!**											
3339												
3340	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3341	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3342												
3343												
3344												
3345	**M|MG/KG|IRON (gi_et_clams_and_mussels_stillwater_2010)**											
3346												
3347	**General Statistics**											
3348					Number of Valid Observations	3			Number of Distinct Observations			3
3349												
3350												
3351	**Warning: This data set only has 3 observations!**											
3352	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3353	**The data set for variable M|MG/KG|IRON (gi_et_clams_and_mussels_stillwater_2010) was not processed!**											
3354												
3355	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3356	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3357												
3358												
3359												
3360	**M|MG/KG|IRON (gi_et_crabs_ne_2010)**											
3361												
3362	**General Statistics**											
3363					Number of Valid Observations	2			Number of Distinct Observations			2
3364												
3365												
3366	**Warning: This data set only has 2 observations!**											
3367	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3368	**The data set for variable M|MG/KG|IRON (gi_et_crabs_ne_2010) was not processed!**											
3369												
3370	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3371	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3372												
3373												
3374												
3375	**M|MG/KG|IRON (gi_et_crabs_nw_2010)**											
3376												
3377	**General Statistics**											
3378					Number of Valid Observations	1			Number of Distinct Observations			1
3379												
3380												
3381	**Warning: This data set only has 1 observations!**											
3382	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3383	**The data set for variable M|MG/KG|IRON (gi_et_crabs_nw_2010) was not processed!**											
3384												
3385	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3386	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3387												
3388												
3389												
3390	**M|MG/KG|IRON (gi_et_crabs_ref_2010)**											
3391												
3392	**General Statistics**											
3393					Number of Valid Observations	3			Number of Distinct Observations			3
3394												
3395												
3396	**Warning: This data set only has 3 observations!**											
3397	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3398	**The data set for variable M|MG/KG|IRON (gi_et_crabs_ref_2010) was not processed!**											
3399												
3400	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3401	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3402												
3403												
3404												

	A	B	C	D	E	F	G	H	I	J	K	L
3405	**M|MG/KG|IRON (gi_et_crabs_stillwater_2010)**											
3406												
3407						**General Statistics**						
3408					Number of Valid Observations	3			Number of Distinct Observations	3		
3409												
3410												
3411						**Warning: This data set only has 3 observations!**						
3412						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
3413						**The data set for variable M|MG/KG|IRON (gi_et_crabs_stillwater_2010) was not processed!**						
3414												
3415						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
3416						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
3417												
3418												
3419												
3420	**M|MG/KG|LEAD (gi_et_clams_and_mussels_ne_2005)**											
3421												
3422						**General Statistics**						
3423					Number of Valid Data	11			Number of Detected Data	2		
3424					Number of Distinct Detected Data	2			Number of Non-Detect Data	9		
3425									Percent Non-Detects	81.82%		
3426												
3427					**Raw Statistics**				**Log-transformed Statistics**			
3428					Minimum Detected	0.218			Minimum Detected	-1.52326		
3429					Maximum Detected	1.1			Maximum Detected	0.0953102		
3430					Mean of Detected	0.659			Mean of Detected	-0.713975		
3431					SD of Detected	0.6236682			SD of Detected	1.1445021		
3432					Minimum Non-Detect	0.034			Minimum Non-Detect	-3.381395		
3433					Maximum Non-Detect	0.44			Maximum Non-Detect	-0.820981		
3434												
3435	Note: Data have multiple DLs - Use of KM Method is								Number treated as Non-Detect	10		
3436	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected	1		
3437	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage	90.91%		
3438												
3439						**Warning: Data set has only 2 Distinct Detected Values.**						
3440						**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**						
3441						**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**						
3442												
3443						**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**						
3444												
3445						**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**						
3446						**Those methods will return a 'N/A' value on your output display!**						
3447												
3448						**It is necessary to have 4 or more Distinct Values for bootstrap methods.**						
3449						**However, results obtained using 4 to 9 distinct values may not be reliable.**						
3450						**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**						
3451												
3452												
3453						**UCL Statistics**						
3454					**Normal Distribution Test with Detected Values Only**				**Lognormal Distribution Test with Detected Values Only**			
3455					Shapiro Wilk Test Statistic	N/A			Shapiro Wilk Test Statistic	N/A		
3456					5% Shapiro Wilk Critical Value	N/A			5% Shapiro Wilk Critical Value	N/A		
3457					**Data not Normal at 5% Significance Level**				**Data not Lognormal at 5% Significance Level**			
3458												
3459					**Assuming Normal Distribution**				**Assuming Lognormal Distribution**			
3460					DL/2 Substitution Method				DL/2 Substitution Method			
3461					Mean	0.2031364			Mean	-2.308981		
3462					SD	0.3081192			SD	1.246162		
3463					95% DL/2 (t) UCL	0.3715166			95% H-Stat (DL/2) UCL	0.8551781		
3464												
3465					Maximum Likelihood Estimate(MLE) Method	N/A			Log ROS Method			
3466					**MLE method failed to converge properly**				Mean in Log Scale	N/A		
3467									SD in Log Scale	N/A		
3468									Mean in Original Scale	N/A		
3469									SD in Original Scale	N/A		
3470									95% t UCL	N/A		
3471									95% Percentile Bootstrap UCL	N/A		
3472									95% BCA Bootstrap UCL	N/A		
3473												
3474					**Gamma Distribution Test with Detected Values Only**				**Data Distribution Test with Detected Values Only**			
3475					k star (bias corrected)	N/A			**Data do not follow a Discernable Distribution (0.05)**			
3476					Theta Star	N/A						
3477					nu star	N/A						
3478												

3479	A-D Test Statistic	N/A	**Nonparametric Statistics**									
3480	5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method									
3481	K-S Test Statistic	N/A	Mean	0.2981818								
3482	5% K-S Critical Value	N/A	SD	0.2535572								
3483	**Data not Gamma Distributed at 5% Significance Level**		SE of Mean	0.1081171								
3484			95% KM (t) UCL	0.4941399								
3485	**Assuming Gamma Distribution**		95% KM (z) UCL	0.4760187								
3486	Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	0.9068976								
3487	Minimum	N/A	95% KM (bootstrap t) UCL	N/A								
3488	Maximum	N/A	95% KM (BCA) UCL	N/A								
3489	Mean	N/A	95% KM (Percentile Bootstrap) UCL	1.1								
3490	Median	N/A	95% KM (Chebyshev) UCL	0.7694535								
3491	SD	N/A	97.5% KM (Chebyshev) UCL	0.9733732								
3492	k star	N/A	99% KM (Chebyshev) UCL	1.3739338								
3493	Theta star	N/A										
3494	Nu star	N/A	**Potential UCLs to Use**									
3495	AppChi2	N/A	95% KM (BCA) UCL	N/A								
3496	95% Gamma Approximate UCL	N/A										
3497	95% Adjusted Gamma UCL	N/A										
3498	**Note: DL/2 is not a recommended method.**											
3499												
3500	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
3501	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
3502	**For additional insight, the user may want to consult a statistician.**											
3503												
3504												
3505	**M|MG/KG|LEAD (gi_et_clams_and_mussels_ne_2010)**											
3506												
3507	**General Statistics**											
3508	Number of Valid Observations	5	Number of Distinct Observations	5								
3509												
3510	**Raw Statistics**		**Log-transformed Statistics**									
3511	Minimum	0.251	Minimum of Log Data	-1.382302								
3512	Maximum	0.705	Maximum of Log Data	-0.349557								
3513	Mean	0.4388	Mean of log Data	-0.89745								
3514	Median	0.398	SD of log Data	0.4295564								
3515	SD	0.1882716										
3516	Coefficient of Variation	0.4290602										
3517	Skewness	0.6419521										
3518												
3519												
3520	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
3521												
3522	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
3523	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3524												
3525												
3526	**Warning: There are only 5 Values in this data**											
3527	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
3528	**the resulting calculations may not be reliable enough to draw conclusions**											
3529												
3530	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
3531												
3532	**Relevant UCL Statistics**											
3533	**Normal Distribution Test**		**Lognormal Distribution Test**									
3534	Shapiro Wilk Test Statistic	0.9344035	Shapiro Wilk Test Statistic	0.9549393								
3535	Shapiro Wilk Critical Value	0.762	Shapiro Wilk Critical Value	0.762								
3536	**Data appear Normal at 5% Significance Level**		**Data appear Lognormal at 5% Significance Level**									
3537												
3538	**Assuming Normal Distribution**		**Assuming Lognormal Distribution**									
3539	95% Student's-t UCL	0.6182964	95% H-UCL	0.8040653								
3540	**95% UCLs (Adjusted for Skewness)**		95% Chebyshev (MVUE) UCL	0.8031707								
3541	95% Adjusted-CLT UCL (Chen-1995)	0.6031212	97.5% Chebyshev (MVUE) UCL	0.9609893								
3542	95% Modified-t UCL (Johnson-1978)	0.6223251	99% Chebyshev (MVUE) UCL	1.2709935								
3543												
3544	**Gamma Distribution Test**		**Data Distribution**									
3545	k star (bias corrected)	2.9105815	**Data appear Normal at 5% Significance Level**									
3546	Theta Star	0.1507603										
3547	MLE of Mean	0.4388										
3548	MLE of Standard Deviation	0.2572034										
3549	nu star	29.105815										
3550	Approximate Chi Square Value (.05)	17.791328	**Nonparametric Statistics**									
3551	Adjusted Level of Significance	0.0086	95% CLT UCL	0.5772928								
3552	Adjusted Chi Square Value	14.068752	95% Jackknife UCL	0.6182964								

3553											95% Standard Bootstrap UCL	0.5589232
3554					Anderson-Darling Test Statistic	0.2512955					95% Bootstrap-t UCL	0.752114
3555					Anderson-Darling 5% Critical Value	0.6799988					95% Hall's Bootstrap UCL	0.6269204
3556					Kolmogorov-Smirnov Test Statistic	0.2111495					95% Percentile Bootstrap UCL	0.5598
3557					Kolmogorov-Smirnov 5% Critical Value	0.3580302					95% BCA Bootstrap UCL	0.5812
3558					**Data appear Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL	0.8058089
3559											97.5% Chebyshev(Mean, Sd) UCL	0.964614
3560					**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL	1.2765558
3561					95% Approximate Gamma UCL	0.7178571						
3562					95% Adjusted Gamma UCL	0.9078013						
3563												
3564					**Potential UCL to Use**						Use 95% Student's-t UCL	0.6182964
3565												
3566	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
3567	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
3568	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
3569												
3570												
3571	**M|MG/KG|LEAD (gi_et_clams_and_mussels_nw_2005)**											
3572												
3573	**General Statistics**											
3574					Number of Valid Data	6					Number of Detected Data	0
3575					Number of Distinct Detected Data	0					Number of Non-Detect Data	6
3576											Percent Non-Detects	100.00%
3577												
3578	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**											
3579	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**											
3580	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
3581												
3582	**The data set for variable M|MG/KG|LEAD (gi_et_clams_and_mussels_nw_2005) was not processed!**											
3583												
3584												
3585												
3586	**M|MG/KG|LEAD (gi_et_clams_and_mussels_nw_2010)**											
3587												
3588	**General Statistics**											
3589					Number of Valid Observations	1					Number of Distinct Observations	1
3590												
3591												
3592	**Warning: This data set only has 1 observations!**											
3593	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3594	**The data set for variable M|MG/KG|LEAD (gi_et_clams_and_mussels_nw_2010) was not processed!**											
3595												
3596	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3597	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3598												
3599												
3600												
3601	**M|MG/KG|LEAD (gi_et_clams_and_mussels_ref_2010)**											
3602												
3603	**General Statistics**											
3604					Number of Valid Observations	3					Number of Distinct Observations	3
3605												
3606												
3607	**Warning: This data set only has 3 observations!**											
3608	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3609	**The data set for variable M|MG/KG|LEAD (gi_et_clams_and_mussels_ref_2010) was not processed!**											
3610												
3611	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3612	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3613												
3614												
3615												
3616	**M|MG/KG|LEAD (gi_et_clams_and_mussels_s_2005)**											
3617												
3618	**General Statistics**											
3619					Number of Valid Data	3					Number of Detected Data	0
3620					Number of Distinct Detected Data	0					Number of Non-Detect Data	3
3621											Percent Non-Detects	100.00%
3622												
3623	**Warning: This data set only has 3 observations!**											
3624	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3625	**The data set for variable M|MG/KG|LEAD (gi_et_clams_and_mussels_s_2005) was not processed!**											
3626												

	A	B	C	D	E	F	G	H	I	J	K	L
3627	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
3628	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
3629												
3630												
3631												
3632	M|MG/KG|LEAD (gi_et_clams_and_mussels_s_2010)											
3633												
3634	General Statistics											
3635	Number of Valid Observations	1				Number of Distinct Observations	1					
3636												
3637												
3638	Warning: This data set only has 1 observations!											
3639	Data set is too small to compute reliable and meaningful statistics and estimates!											
3640	The data set for variable M|MG/KG|LEAD (gi_et_clams_and_mussels_s_2010) was not processed!											
3641												
3642	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
3643	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
3644												
3645												
3646												
3647	M|MG/KG|LEAD (gi_et_clams_and_mussels_stillwater_2005)											
3648												
3649	General Statistics											
3650	Number of Valid Data	1				Number of Detected Data	0					
3651	Number of Distinct Detected Data	0				Number of Non-Detect Data	1					
3652						Percent Non-Detects	100.00%					
3653												
3654	Warning: This data set only has 1 observations!											
3655	Data set is too small to compute reliable and meaningful statistics and estimates!											
3656	The data set for variable M|MG/KG|LEAD (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
3657												
3658	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
3659	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
3660												
3661												
3662												
3663	M|MG/KG|LEAD (gi_et_clams_and_mussels_stillwater_2010)											
3664												
3665	General Statistics											
3666	Number of Valid Observations	3				Number of Distinct Observations	3					
3667												
3668												
3669	Warning: This data set only has 3 observations!											
3670	Data set is too small to compute reliable and meaningful statistics and estimates!											
3671	The data set for variable M|MG/KG|LEAD (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
3672												
3673	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
3674	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
3675												
3676												
3677												
3678	M|MG/KG|LEAD (gi_et_crabs_ne_2010)											
3679												
3680	General Statistics											
3681	Number of Valid Observations	2				Number of Distinct Observations	2					
3682												
3683												
3684	Warning: This data set only has 2 observations!											
3685	Data set is too small to compute reliable and meaningful statistics and estimates!											
3686	The data set for variable M|MG/KG|LEAD (gi_et_crabs_ne_2010) was not processed!											
3687												
3688	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
3689	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
3690												
3691												
3692												
3693	M|MG/KG|LEAD (gi_et_crabs_nw_2010)											
3694												
3695	General Statistics											
3696	Number of Valid Observations	1				Number of Distinct Observations	1					
3697												
3698												
3699	Warning: This data set only has 1 observations!											
3700	Data set is too small to compute reliable and meaningful statistics and estimates!											

3701	**The data set for variable M|MG/KG|LEAD (gi_et_crabs_nw_2010) was not processed!**											
3702												
3703	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3704	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3705												
3706												
3707												
3708	**M|MG/KG|LEAD (gi_et_crabs_ref_2010)**											
3709												
3710	**General Statistics**											
3711	Number of Valid Observations	3				Number of Distinct Observations	3					
3712												
3713												
3714	**Warning: This data set only has 3 observations!**											
3715	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3716	**The data set for variable M|MG/KG|LEAD (gi_et_crabs_ref_2010) was not processed!**											
3717												
3718	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3719	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3720												
3721												
3722												
3723	**M|MG/KG|LEAD (gi_et_crabs_stillwater_2010)**											
3724												
3725	**General Statistics**											
3726	Number of Valid Observations	3				Number of Distinct Observations	3					
3727												
3728												
3729	**Warning: This data set only has 3 observations!**											
3730	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3731	**The data set for variable M|MG/KG|LEAD (gi_et_crabs_stillwater_2010) was not processed!**											
3732												
3733	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3734	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3735												
3736												
3737												
3738	**M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_ne_2005)**											
3739												
3740	**General Statistics**											
3741	Number of Valid Observations	11				Number of Distinct Observations	11					
3742												
3743	**Raw Statistics**					**Log-transformed Statistics**						
3744	Minimum	464				Minimum of Log Data	6.1398846					
3745	Maximum	778				Maximum of Log Data	6.6567265					
3746	Mean	643.72727				Mean of log Data	6.4534459					
3747	Median	678				SD of log Data	0.1781638					
3748	SD	107.70802										
3749	Coefficient of Variation	0.1673193										
3750	Skewness	-0.627407										
3751												
3752	**Relevant UCL Statistics**											
3753	**Normal Distribution Test**					**Lognormal Distribution Test**						
3754	Shapiro Wilk Test Statistic	0.9162764				Shapiro Wilk Test Statistic	0.8908501					
3755	Shapiro Wilk Critical Value	0.85				Shapiro Wilk Critical Value	0.85					
3756	**Data appear Normal at 5% Significance Level**					**Data appear Lognormal at 5% Significance Level**						
3757												
3758	**Assuming Normal Distribution**					**Assuming Lognormal Distribution**						
3759	95% Student's-t UCL	702.58729				95% H-UCL	715.60985					
3760	**95% UCLs (Adjusted for Skewness)**					95% Chebyshev (MVUE) UCL	795.36682					
3761	95% Adjusted-CLT UCL (Chen-1995)	690.57996				97.5% Chebyshev (MVUE) UCL	860.81926					
3762	95% Modified-t UCL (Johnson-1978)	701.5634				99% Chebyshev (MVUE) UCL	989.38791					
3763												
3764	**Gamma Distribution Test**					**Data Distribution**						
3765	k star (bias corrected)	26.476063				**Data appear Normal at 5% Significance Level**						
3766	Theta Star	24.313557										
3767	MLE of Mean	643.72727										
3768	MLE of Standard Deviation	125.10515										
3769	nu star	582.47339										
3770	Approximate Chi Square Value (.05)	527.49218				**Nonparametric Statistics**						
3771	Adjusted Level of Significance	0.02783				95% CLT UCL	697.14421					
3772	Adjusted Chi Square Value	518.95185				95% Jackknife UCL	702.58729					
3773						95% Standard Bootstrap UCL	694.44927					
3774	Anderson-Darling Test Statistic	0.5123245				95% Bootstrap-t UCL	694.89181					

3775					Anderson-Darling 5% Critical Value	0.7285368				95% Hall's Bootstrap UCL		689.54053
3776					Kolmogorov-Smirnov Test Statistic	0.1899307				95% Percentile Bootstrap UCL		691.90909
3777					Kolmogorov-Smirnov 5% Critical Value	0.2548233				95% BCA Bootstrap UCL		689.90909
3778					**Data appear Gamma Distributed at 5% Significance Level**					95% Chebyshev(Mean, Sd) UCL		785.28335
3779										97.5% Chebyshev(Mean, Sd) UCL		846.53477
3780					**Assuming Gamma Distribution**					99% Chebyshev(Mean, Sd) UCL		966.85134
3781					95% Approximate Gamma UCL	710.82382						
3782					95% Adjusted Gamma UCL	722.52176						
3783												
3784					**Potential UCL to Use**					Use 95% Student's-t UCL		702.58729
3785												
3786	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
3787	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
3788	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
3789												
3790												
3791	**M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_ne_2010)**											
3792												
3793					**General Statistics**							
3794					Number of Valid Observations	5				Number of Distinct Observations		5
3795												
3796					**Raw Statistics**					**Log-transformed Statistics**		
3797					Minimum	614				Minimum of Log Data		6.4199949
3798					Maximum	784				Maximum of Log Data		6.664409
3799					Mean	691.2				Mean of log Data		6.5353027
3800					Median	694				SD of log Data		0.0881456
3801					SD	61.523979						
3802					Coefficient of Variation	0.0890104						
3803					Skewness	0.5845709						
3804												
3805												
3806	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
3807												
3808	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
3809	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3810												
3811												
3812	**Warning: There are only 5 Values in this data**											
3813	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
3814	**the resulting calculations may not be reliable enough to draw conclusions**											
3815												
3816	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
3817												
3818					**Relevant UCL Statistics**							
3819					**Normal Distribution Test**					**Lognormal Distribution Test**		
3820					Shapiro Wilk Test Statistic	0.9469304				Shapiro Wilk Test Statistic		0.9557409
3821					Shapiro Wilk Critical Value	0.762				Shapiro Wilk Critical Value		0.762
3822					**Data appear Normal at 5% Significance Level**					**Data appear Lognormal at 5% Significance Level**		
3823												
3824					**Assuming Normal Distribution**					**Assuming Lognormal Distribution**		
3825					95% Student's-t UCL	749.8564				95% H-UCL		N/A
3826					**95% UCLs (Adjusted for Skewness)**					95% Chebyshev (MVUE) UCL		809.91983
3827					95% Adjusted-CLT UCL (Chen-1995)	744.14295				97.5% Chebyshev (MVUE) UCL		861.29605
3828					95% Modified-t UCL (Johnson-1978)	751.05524				99% Chebyshev (MVUE) UCL		962.21467
3829												
3830					**Gamma Distribution Test**					**Data Distribution**		
3831					k star (bias corrected)	64.169861				**Data appear Normal at 5% Significance Level**		
3832					Theta Star	10.771412						
3833					MLE of Mean	691.2						
3834					MLE of Standard Deviation	86.285571						
3835					nu star	641.69861						
3836					Approximate Chi Square Value (.05)	583.93124				**Nonparametric Statistics**		
3837					Adjusted Level of Significance	0.0086				95% CLT UCL		736.45709
3838					Adjusted Chi Square Value	559.47615				95% Jackknife UCL		749.8564
3839										95% Standard Bootstrap UCL		732.74173
3840					Anderson-Darling Test Statistic	0.2944252				95% Bootstrap-t UCL		757.23171
3841					Anderson-Darling 5% Critical Value	0.67808				95% Hall's Bootstrap UCL		778.18175
3842					Kolmogorov-Smirnov Test Statistic	0.2546201				95% Percentile Bootstrap UCL		730.8
3843					Kolmogorov-Smirnov 5% Critical Value	0.35682				95% BCA Bootstrap UCL		730.8
3844					**Data appear Gamma Distributed at 5% Significance Level**					95% Chebyshev(Mean, Sd) UCL		811.13231
3845										97.5% Chebyshev(Mean, Sd) UCL		863.02712
3846					**Assuming Gamma Distribution**					99% Chebyshev(Mean, Sd) UCL		964.96442
3847					95% Approximate Gamma UCL	759.5793						
3848					95% Adjusted Gamma UCL	792.78103						

3849												
3850					**Potential UCL to Use**						Use 95% Student's-t UCL	749.8564
3851												
3852	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
3853	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
3854	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
3855												
3856												
3857	**M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_nw_2005)**											
3858												
3859						**General Statistics**							
3860					Number of Valid Observations	6					Number of Distinct Observations	6
3861												
3862					**Raw Statistics**						**Log-transformed Statistics**	
3863					Minimum	620					Minimum of Log Data	6.4297195
3864					Maximum	799					Maximum of Log Data	6.6833609
3865					Mean	686.83333					Mean of log Data	6.528551
3866					Median	664.5					SD of log Data	0.091216
3867					SD	64.682043						
3868					Coefficient of Variation	0.0941743						
3869					Skewness	1.2011997						
3870												
3871												
3872	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
3873												
3874	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
3875	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3876												
3877												
3878	**Warning: There are only 6 Values in this data**											
3879	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
3880	**the resulting calculations may not be reliable enough to draw conclusions**											
3881												
3882	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
3883												
3884						**Relevant UCL Statistics**							
3885					**Normal Distribution Test**						**Lognormal Distribution Test**	
3886					Shapiro Wilk Test Statistic	0.8988337					Shapiro Wilk Test Statistic	0.9163811
3887					Shapiro Wilk Critical Value	0.788					Shapiro Wilk Critical Value	0.788
3888					**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**	
3889												
3890					**Assuming Normal Distribution**						**Assuming Lognormal Distribution**	
3891					95% Student's-t UCL	740.04337					95% H-UCL	N/A
3892					**95% UCLs (Adjusted for Skewness)**						95% Chebyshev (MVUE) UCL	798.25963
3893					95% Adjusted-CLT UCL (Chen-1995)	744.10445					97.5% Chebyshev (MVUE) UCL	846.49634
3894					95% Modified-t UCL (Johnson-1978)	742.2016					99% Chebyshev (MVUE) UCL	941.24803
3895												
3896					**Gamma Distribution Test**						**Data Distribution**	
3897					k star (bias corrected)	70.801877					**Data appear Normal at 5% Significance Level**	
3898					Theta Star	9.7007787						
3899					MLE of Mean	686.83333						
3900					MLE of Standard Deviation	81.626087						
3901					nu star	849.62252						
3902					Approximate Chi Square Value (.05)	782.97445					**Nonparametric Statistics**	
3903					Adjusted Level of Significance	0.01222					95% CLT UCL	730.26789
3904					Adjusted Chi Square Value	759.58736					95% Jackknife UCL	740.04337
3905											95% Standard Bootstrap UCL	727.62219
3906					Anderson-Darling Test Statistic	0.3763498					95% Bootstrap-t UCL	812.13815
3907					Anderson-Darling 5% Critical Value	0.69621					95% Hall's Bootstrap UCL	1069.1704
3908					Kolmogorov-Smirnov Test Statistic	0.2714455					95% Percentile Bootstrap UCL	727.5
3909					Kolmogorov-Smirnov 5% Critical Value	0.33154					95% BCA Bootstrap UCL	738.16667
3910					**Data appear Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL	801.93587
3911											97.5% Chebyshev(Mean, Sd) UCL	851.74083
3912					**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL	949.57303
3913					95% Approximate Gamma UCL	745.29771						
3914					95% Adjusted Gamma UCL	768.24483						
3915												
3916					**Potential UCL to Use**						Use 95% Student's-t UCL	740.04337
3917												
3918	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
3919	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
3920	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
3921												
3922												

	A	B	C	D	E	F	G	H	I	J	K	L
3923	**M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_nw_2010)**											
3924												
3925	**General Statistics**											
3926	Number of Valid Observations	1					Number of Distinct Observations	1				
3927												
3928												
3929	**Warning: This data set only has 1 observations!**											
3930	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3931	**The data set for variable M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_nw_2010) was not processed!**											
3932												
3933	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3934	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3935												
3936												
3937												
3938	**M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_ref_2010)**											
3939												
3940	**General Statistics**											
3941	Number of Valid Observations	3					Number of Distinct Observations	3				
3942												
3943												
3944	**Warning: This data set only has 3 observations!**											
3945	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3946	**The data set for variable M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_ref_2010) was not processed!**											
3947												
3948	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3949	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3950												
3951												
3952												
3953	**M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_s_2005)**											
3954												
3955	**General Statistics**											
3956	Number of Valid Observations	3					Number of Distinct Observations	3				
3957												
3958												
3959	**Warning: This data set only has 3 observations!**											
3960	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3961	**The data set for variable M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_s_2005) was not processed!**											
3962												
3963	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3964	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3965												
3966												
3967												
3968	**M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_s_2010)**											
3969												
3970	**General Statistics**											
3971	Number of Valid Observations	1					Number of Distinct Observations	1				
3972												
3973												
3974	**Warning: This data set only has 1 observations!**											
3975	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3976	**The data set for variable M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_s_2010) was not processed!**											
3977												
3978	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3979	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3980												
3981												
3982												
3983	**M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_stillwater_2005)**											
3984												
3985	**General Statistics**											
3986	Number of Valid Observations	1					Number of Distinct Observations	1				
3987												
3988												
3989	**Warning: This data set only has 1 observations!**											
3990	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
3991	**The data set for variable M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_stillwater_2005) was not processed!**											
3992												
3993	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
3994	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
3995												
3996												

	A	B	C	D	E	F	G	H	I	J	K	L
3997												
3998	**M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_stillwater_2010)**											
3999												
4000	**General Statistics**											
4001	Number of Valid Observations	3					Number of Distinct Observations	3				
4002												
4003												
4004	**Warning: This data set only has 3 observations!**											
4005	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4006	**The data set for variable M|MG/KG|MAGNESIUM (gi_et_clams_and_mussels_stillwater_2010) was not processed!**											
4007												
4008	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4009	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4010												
4011												
4012												
4013	**M|MG/KG|MAGNESIUM (gi_et_crabs_ne_2010)**											
4014												
4015	**General Statistics**											
4016	Number of Valid Observations	2					Number of Distinct Observations	2				
4017												
4018												
4019	**Warning: This data set only has 2 observations!**											
4020	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4021	**The data set for variable M|MG/KG|MAGNESIUM (gi_et_crabs_ne_2010) was not processed!**											
4022												
4023	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4024	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4025												
4026												
4027												
4028	**M|MG/KG|MAGNESIUM (gi_et_crabs_nw_2010)**											
4029												
4030	**General Statistics**											
4031	Number of Valid Observations	1					Number of Distinct Observations	1				
4032												
4033												
4034	**Warning: This data set only has 1 observations!**											
4035	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4036	**The data set for variable M|MG/KG|MAGNESIUM (gi_et_crabs_nw_2010) was not processed!**											
4037												
4038	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4039	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4040												
4041												
4042												
4043	**M|MG/KG|MAGNESIUM (gi_et_crabs_ref_2010)**											
4044												
4045	**General Statistics**											
4046	Number of Valid Observations	3					Number of Distinct Observations	3				
4047												
4048												
4049	**Warning: This data set only has 3 observations!**											
4050	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4051	**The data set for variable M|MG/KG|MAGNESIUM (gi_et_crabs_ref_2010) was not processed!**											
4052												
4053	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4054	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4055												
4056												
4057												
4058	**M|MG/KG|MAGNESIUM (gi_et_crabs_stillwater_2010)**											
4059												
4060	**General Statistics**											
4061	Number of Valid Observations	3					Number of Distinct Observations	3				
4062												
4063												
4064	**Warning: This data set only has 3 observations!**											
4065	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4066	**The data set for variable M|MG/KG|MAGNESIUM (gi_et_crabs_stillwater_2010) was not processed!**											
4067												
4068	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4069	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4070												

	A	B	C	D	E	F	G	H	I	J	K	L
4071												
4072												
4073	**M|MG/KG|MANGANESE (gi_et_clams_and_mussels_ne_2005)**											
4074												
4075	**General Statistics**											
4076					Number of Valid Data	11			Number of Detected Data			2
4077					Number of Distinct Detected Data	2			Number of Non-Detect Data			9
4078									Percent Non-Detects			81.82%
4079												
4080	**Raw Statistics**						**Log-transformed Statistics**					
4081					Minimum Detected	9.25			Minimum Detected			2.2246236
4082					Maximum Detected	12.5			Maximum Detected			2.5257286
4083					Mean of Detected	10.875			Mean of Detected			2.3751761
4084					SD of Detected	2.298097			SD of Detected			0.2129135
4085					Minimum Non-Detect	0.82			Minimum Non-Detect			-0.198451
4086					Maximum Non-Detect	6.3			Maximum Non-Detect			1.8405496
4087												
4088	Note: Data have multiple DLs - Use of KM Method is								Number treated as Non-Detect			9
4089	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected			2
4090	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage			81.82%
4091												
4092	**Warning: Data set has only 2 Distinct Detected Values.**											
4093	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**											
4094	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
4095												
4096	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**											
4097												
4098	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
4099	**Those methods will return a 'N/A' value on your output display!**											
4100												
4101	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
4102	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
4103	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
4104												
4105												
4106	**UCL Statistics**											
4107	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
4108					Shapiro Wilk Test Statistic	N/A			Shapiro Wilk Test Statistic			N/A
4109					5% Shapiro Wilk Critical Value	N/A			5% Shapiro Wilk Critical Value			N/A
4110	**Data not Normal at 5% Significance Level**						**Data not Lognormal at 5% Significance Level**					
4111												
4112	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
4113					DL/2 Substitution Method				DL/2 Substitution Method			
4114					Mean	3.3509091			Mean			0.7456891
4115					SD	3.8596773			SD			0.9712202
4116					95% DL/2 (t) UCL	5.4601363			95% H-Stat (DL/2) UCL			8.3407856
4117												
4118					Maximum Likelihood Estimate(MLE) Method	N/A			Log ROS Method			
4119	**MLE method failed to converge properly**								Mean in Log Scale			N/A
4120									SD in Log Scale			N/A
4121									Mean in Original Scale			N/A
4122									SD in Original Scale			N/A
4123									95% t UCL			N/A
4124									95% Percentile Bootstrap UCL			N/A
4125									95% BCA Bootstrap UCL			N/A
4126												
4127	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
4128					k star (bias corrected)	N/A	**Data do not follow a Discernable Distribution (0.05)**					
4129					Theta Star	N/A						
4130					nu star	N/A						
4131												
4132					A-D Test Statistic	N/A	**Nonparametric Statistics**					
4133					5% A-D Critical Value	N/A			Kaplan-Meier (KM) Method			
4134					K-S Test Statistic	N/A			Mean			9.5454545
4135					5% K-S Critical Value	N/A			SD			0.9343093
4136	**Data not Gamma Distributed at 5% Significance Level**								SE of Mean			0.3983908
4137									95% KM (t) UCL			10.267522
4138	**Assuming Gamma Distribution**								95% KM (z) UCL			10.200749
4139					Gamma ROS Statistics using Extrapolated Data				95% KM (jackknife) UCL			11.788455
4140					Minimum	N/A			95% KM (bootstrap t) UCL			N/A
4141					Maximum	N/A			95% KM (BCA) UCL			12.5
4142					Mean	N/A			95% KM (Percentile Bootstrap) UCL			12.5
4143					Median	N/A			95% KM (Chebyshev) UCL			11.282
4144					SD	N/A			97.5% KM (Chebyshev) UCL			12.033404

4145					k star	N/A				99% KM (Chebyshev) UCL		13.509393
4146					Theta star	N/A						
4147					Nu star	N/A				**Potential UCLs to Use**		
4148					AppChi2	N/A				95% KM (t) UCL		10.267522
4149				95% Gamma Approximate UCL		N/A				95% KM (% Bootstrap) UCL		12.5
4150				95% Adjusted Gamma UCL		N/A						
4151	**Note: DL/2 is not a recommended method.**											
4152												
4153	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
4154	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
4155	**For additional insight, the user may want to consult a statistician.**											
4156												
4157												
4158	**M|MG/KG|MANGANESE (gi_et_clams_and_mussels_ne_2010)**											
4159												
4160	**General Statistics**											
4161	Number of Valid Observations					5	Number of Distinct Observations					5
4162												
4163	**Raw Statistics**						**Log-transformed Statistics**					
4164	Minimum					3	Minimum of Log Data					1.0986123
4165	Maximum					9.3	Maximum of Log Data					2.2300144
4166	Mean					5.35	Mean of log Data					1.5833108
4167	Median					3.85	SD of log Data					0.4757516
4168	SD					2.6692696						
4169	Coefficient of Variation					0.4989289						
4170	Skewness					0.9751173						
4171												
4172												
4173	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
4174												
4175	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
4176	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4177												
4178												
4179	**Warning: There are only 5 Values in this data**											
4180	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
4181	**the resulting calculations may not be reliable enough to draw conclusions**											
4182												
4183	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
4184												
4185	**Relevant UCL Statistics**											
4186	**Normal Distribution Test**						**Lognormal Distribution Test**					
4187	Shapiro Wilk Test Statistic					0.8629147	Shapiro Wilk Test Statistic					0.8992623
4188	Shapiro Wilk Critical Value					0.762	Shapiro Wilk Critical Value					0.762
4189	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
4190												
4191	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
4192	95% Student's-t UCL					7.8948572	95% H-UCL					10.798425
4193	**95% UCLs (Adjusted for Skewness)**						95% Chebyshev (MVUE) UCL					10.224414
4194	95% Adjusted-CLT UCL (Chen-1995)					7.8697539	97.5% Chebyshev (MVUE) UCL					12.344147
4195	95% Modified-t UCL (Johnson-1978)					7.9816189	99% Chebyshev (MVUE) UCL					16.50795
4196												
4197	**Gamma Distribution Test**						**Data Distribution**					
4198	k star (bias corrected)					2.3303518	**Data appear Normal at 5% Significance Level**					
4199	Theta Star					2.2957907						
4200	MLE of Mean					5.35						
4201	MLE of Standard Deviation					3.5046369						
4202	nu star					23.303518						
4203	Approximate Chi Square Value (.05)					13.320236	**Nonparametric Statistics**					
4204	Adjusted Level of Significance					0.0086	95% CLT UCL					7.3135171
4205	Adjusted Chi Square Value					10.178031	95% Jackknife UCL					7.8948572
4206							95% Standard Bootstrap UCL					7.1411558
4207	Anderson-Darling Test Statistic					0.4288772	95% Bootstrap-t UCL					17.643431
4208	Anderson-Darling 5% Critical Value					0.6805297	95% Hall's Bootstrap UCL					29.252417
4209	Kolmogorov-Smirnov Test Statistic					0.3206178	95% Percentile Bootstrap UCL					7.22
4210	Kolmogorov-Smirnov 5% Critical Value					0.3582391	95% BCA Bootstrap UCL					7.7
4211	**Data appear Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL					10.553364
4212							97.5% Chebyshev(Mean, Sd) UCL					12.804864
4213	**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL					17.2275
4214	95% Approximate Gamma UCL					9.359731						
4215	95% Adjusted Gamma UCL					12.249307						
4216												
4217	**Potential UCL to Use**						Use 95% Student's-t UCL					7.8948572
4218												

	A	B	C	D	E	F	G	H	I	J	K	L
4219	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
4220	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
4221	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
4222												
4223												
4224	M|MG/KG|MANGANESE (gi_et_clams_and_mussels_nw_2005)											
4225												
4226	General Statistics											
4227	Number of Valid Data					6	Number of Detected Data					3
4228	Number of Distinct Detected Data					3	Number of Non-Detect Data					3
4229							Percent Non-Detects					50.00%
4230												
4231	Raw Statistics						Log-transformed Statistics					
4232	Minimum Detected					4.4	Minimum Detected					1.4816045
4233	Maximum Detected					6.2	Maximum Detected					1.8245493
4234	Mean of Detected					5.1333333	Mean of Detected					1.6249233
4235	SD of Detected					0.9451631	SD of Detected					0.1782713
4236	Minimum Non-Detect					2.9	Minimum Non-Detect					1.0647107
4237	Maximum Non-Detect					5.3	Maximum Non-Detect					1.6677068
4238												
4239	Note: Data have multiple DLs - Use of KM Method is						Number treated as Non-Detect					5
4240	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
4241	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					83.33%
4242												
4243	Warning: There are only 3 Distinct Detected Values in this data set											
4244	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
4245	Those methods will return a 'N/A' value on your output display!											
4246												
4247	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
4248	However, results obtained using 4 to 9 distinct values may not be reliable.											
4249	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
4250												
4251												
4252	UCL Statistics											
4253	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
4254	Shapiro Wilk Test Statistic					0.906699	Shapiro Wilk Test Statistic					0.9251604
4255	5% Shapiro Wilk Critical Value					0.767	5% Shapiro Wilk Critical Value					0.767
4256	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
4257												
4258	Assuming Normal Distribution						Assuming Lognormal Distribution					
4259	DL/2 Substitution Method						DL/2 Substitution Method					
4260	Mean					3.6333333	Mean					1.1756337
4261	SD					1.7915543	SD					0.5428746
4262	95% DL/2 (t) UCL					5.1071376	95% H-Stat (DL/2) UCL					7.3079568
4263												
4264	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
4265	MLE method failed to converge properly						Mean in Log Scale					1.4820011
4266							SD in Log Scale					0.2022718
4267							Mean in Original Scale					4.4802464
4268							SD in Original Scale					0.9599967
4269							95% t UCL					5.2699781
4270							95% Percentile Bootstrap UCL					5.1333333
4271							95% BCA Bootstrap UCL					5.2405715
4272												
4273	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
4274	k star (bias corrected)					N/A	Data appear Normal at 5% Significance Level					
4275	Theta Star					N/A						
4276	nu star					N/A						
4277												
4278	A-D Test Statistic					N/A	Nonparametric Statistics					
4279	5% A-D Critical Value					N/A	Kaplan-Meier (KM) Method					
4280	K-S Test Statistic					N/A	Mean					4.7833333
4281	5% K-S Critical Value					N/A	SD					0.6529846
4282	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.3288765
4283							95% KM (t) UCL					5.4460353
4284	Assuming Gamma Distribution						95% KM (z) UCL					5.324287
4285	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					5.3823912
4286	Minimum					N/A	95% KM (bootstrap t) UCL					5.7583321
4287	Maximum					N/A	95% KM (BCA) UCL					N/A
4288	Mean					N/A	95% KM (Percentile Bootstrap) UCL					6.2
4289	Median					N/A	95% KM (Chebyshev) UCL					6.2168726
4290	SD					N/A	97.5% KM (Chebyshev) UCL					6.8371661
4291	k star					N/A	99% KM (Chebyshev) UCL					8.0556127
4292	Theta star					N/A						

4293					Nu star	N/A	**Potential UCLs to Use**					
4294					AppChi2	N/A				95% KM (t) UCL		5.4460353
4295				95% Gamma Approximate UCL		N/A				95% KM (Percentile Bootstrap) UCL		6.2
4296				95% Adjusted Gamma UCL		N/A						
4297	**Note: DL/2 is not a recommended method.**											
4298												
4299	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
4300	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
4301	**For additional insight, the user may want to consult a statistician.**											
4302												
4303												
4304	**M|MG/KG|MANGANESE (gi_et_clams_and_mussels_nw_2010)**											
4305												
4306	**General Statistics**											
4307	Number of Valid Observations	1					Number of Distinct Observations	1				
4308												
4309												
4310	**Warning: This data set only has 1 observations!**											
4311	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4312	**The data set for variable M|MG/KG|MANGANESE (gi_et_clams_and_mussels_nw_2010) was not processed!**											
4313												
4314	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4315	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4316												
4317												
4318												
4319	**M|MG/KG|MANGANESE (gi_et_clams_and_mussels_ref_2010)**											
4320												
4321	**General Statistics**											
4322	Number of Valid Observations	3					Number of Distinct Observations	3				
4323												
4324												
4325	**Warning: This data set only has 3 observations!**											
4326	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4327	**The data set for variable M|MG/KG|MANGANESE (gi_et_clams_and_mussels_ref_2010) was not processed!**											
4328												
4329	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4330	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4331												
4332												
4333												
4334	**M|MG/KG|MANGANESE (gi_et_clams_and_mussels_s_2005)**											
4335												
4336	**General Statistics**											
4337	Number of Valid Data	3					Number of Detected Data	2				
4338	Number of Distinct Detected Data	2					Number of Non-Detect Data	1				
4339							Percent Non-Detects	33.33%				
4340												
4341	**Warning: This data set only has 3 observations!**											
4342	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4343	**The data set for variable M|MG/KG|MANGANESE (gi_et_clams_and_mussels_s_2005) was not processed!**											
4344												
4345	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4346	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4347												
4348												
4349												
4350	**M|MG/KG|MANGANESE (gi_et_clams_and_mussels_s_2010)**											
4351												
4352	**General Statistics**											
4353	Number of Valid Observations	1					Number of Distinct Observations	1				
4354												
4355												
4356	**Warning: This data set only has 1 observations!**											
4357	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4358	**The data set for variable M|MG/KG|MANGANESE (gi_et_clams_and_mussels_s_2010) was not processed!**											
4359												
4360	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4361	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4362												
4363												
4364												
4365	**M|MG/KG|MANGANESE (gi_et_clams_and_mussels_stillwater_2005)**											
4366												

	A	B	C	D	E	F	G	H	I	J	K	L
4367	General Statistics											
4368	Number of Valid Observations	1					Number of Distinct Observations	1				
4369												
4370												
4371	Warning: This data set only has 1 observations!											
4372	Data set is too small to compute reliable and meaningful statistics and estimates!											
4373	The data set for variable M|MG/KG|MANGANESE (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
4374												
4375	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
4376	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
4377												
4378												
4379												
4380	M|MG/KG|MANGANESE (gi_et_clams_and_mussels_stillwater_2010)											
4381												
4382	General Statistics											
4383	Number of Valid Observations	3					Number of Distinct Observations	3				
4384												
4385												
4386	Warning: This data set only has 3 observations!											
4387	Data set is too small to compute reliable and meaningful statistics and estimates!											
4388	The data set for variable M|MG/KG|MANGANESE (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
4389												
4390	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
4391	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
4392												
4393												
4394												
4395	M|MG/KG|MANGANESE (gi_et_crabs_ne_2010)											
4396												
4397	General Statistics											
4398	Number of Valid Observations	2					Number of Distinct Observations	2				
4399												
4400												
4401	Warning: This data set only has 2 observations!											
4402	Data set is too small to compute reliable and meaningful statistics and estimates!											
4403	The data set for variable M|MG/KG|MANGANESE (gi_et_crabs_ne_2010) was not processed!											
4404												
4405	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
4406	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
4407												
4408												
4409												
4410	M|MG/KG|MANGANESE (gi_et_crabs_nw_2010)											
4411												
4412	General Statistics											
4413	Number of Valid Observations	1					Number of Distinct Observations	1				
4414												
4415												
4416	Warning: This data set only has 1 observations!											
4417	Data set is too small to compute reliable and meaningful statistics and estimates!											
4418	The data set for variable M|MG/KG|MANGANESE (gi_et_crabs_nw_2010) was not processed!											
4419												
4420	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
4421	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
4422												
4423												
4424												
4425	M|MG/KG|MANGANESE (gi_et_crabs_ref_2010)											
4426												
4427	General Statistics											
4428	Number of Valid Observations	3					Number of Distinct Observations	3				
4429												
4430												
4431	Warning: This data set only has 3 observations!											
4432	Data set is too small to compute reliable and meaningful statistics and estimates!											
4433	The data set for variable M|MG/KG|MANGANESE (gi_et_crabs_ref_2010) was not processed!											
4434												
4435	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
4436	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
4437												
4438												
4439												
4440	M|MG/KG|MANGANESE (gi_et_crabs_stillwater_2010)											

4441												
4442	**General Statistics**											
4443	Number of Valid Observations				3		Number of Distinct Observations				3	
4444												
4445												
4446	**Warning: This data set only has 3 observations!**											
4447	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4448	**The data set for variable M|MG/KG|MANGANESE (gi_et_crabs_stillwater_2010) was not processed!**											
4449												
4450	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4451	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4452												
4453												
4454												
4455	**M|MG/KG|MERCURY (gi_et_clams_and_mussels_ne_2005)**											
4456												
4457	**General Statistics**											
4458	Number of Valid Data				11		Number of Detected Data				2	
4459	Number of Distinct Detected Data				2		Number of Non-Detect Data				9	
4460							Percent Non-Detects				81.82%	
4461												
4462	**Raw Statistics**						**Log-transformed Statistics**					
4463	Minimum Detected				0.0051		Minimum Detected				-5.278515	
4464	Maximum Detected				0.0088		Maximum Detected				-4.733004	
4465	Mean of Detected				0.00695		Mean of Detected				-5.005759	
4466	SD of Detected				0.0026163		SD of Detected				0.3857347	
4467	Minimum Non-Detect				0.0068		Minimum Non-Detect				-4.990833	
4468	Maximum Non-Detect				0.023		Maximum Non-Detect				-3.772261	
4469												
4470	Note: Data have multiple DLs - Use of KM Method is						Number treated as Non-Detect				11	
4471	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				0	
4472	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				100.00%	
4473												
4474	**Warning: Data set has only 2 Distinct Detected Values.**											
4475	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**											
4476	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
4477												
4478	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**											
4479												
4480	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
4481	**Those methods will return a 'N/A' value on your output display!**											
4482												
4483	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
4484	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
4485	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
4486												
4487												
4488	**UCL Statistics**											
4489	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
4490	Shapiro Wilk Test Statistic				N/A		Shapiro Wilk Test Statistic				N/A	
4491	5% Shapiro Wilk Critical Value				N/A		5% Shapiro Wilk Critical Value				N/A	
4492	**Data not Normal at 5% Significance Level**						**Data not Lognormal at 5% Significance Level**					
4493												
4494	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
4495	DL/2 Substitution Method						DL/2 Substitution Method					
4496	Mean				0.0069955		Mean				-5.037087	
4497	SD				0.0027699		SD				0.4108459	
4498	95% DL/2 (t) UCL				0.0085091		95% H-Stat (DL/2) UCL				0.0092399	
4499												
4500	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
4501	**MLE method failed to converge properly**						Mean in Log Scale				N/A	
4502							SD in Log Scale				N/A	
4503							Mean in Original Scale				N/A	
4504							SD in Original Scale				N/A	
4505							95% t UCL				N/A	
4506							95% Percentile Bootstrap UCL				N/A	
4507							95% BCA Bootstrap UCL				N/A	
4508												
4509	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
4510	k star (bias corrected)				N/A		**Data do not follow a Discernable Distribution (0.05)**					
4511	Theta Star				N/A							
4512	nu star				N/A							
4513												
4514	A-D Test Statistic				N/A		**Nonparametric Statistics**					

4515				5% A-D Critical Value	N/A				Kaplan-Meier (KM) Method			
4516				K-S Test Statistic	N/A						Mean	0.006025
4517				5% K-S Critical Value	N/A						SD	0.0016021
4518				**Data not Gamma Distributed at 5% Significance Level**							SE of Mean	0.0011329
4519											95% KM (t) UCL	0.0080783
4520				**Assuming Gamma Distribution**							95% KM (z) UCL	0.0078884
4521				Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL	0.0087291
4522				Minimum	N/A						95% KM (bootstrap t) UCL	N/A
4523				Maximum	N/A						95% KM (BCA) UCL	0.0088
4524				Mean	N/A						95% KM (Percentile Bootstrap) UCL	0.0088
4525				Median	N/A						95% KM (Chebyshev) UCL	0.0109631
4526				SD	N/A						97.5% KM (Chebyshev) UCL	0.0130999
4527				k star	N/A						99% KM (Chebyshev) UCL	0.0172971
4528				Theta star	N/A							
4529				Nu star	N/A				**Potential UCLs to Use**			
4530				AppChi2	N/A						95% KM (t) UCL	0.0080783
4531				95% Gamma Approximate UCL	N/A						95% KM (% Bootstrap) UCL	0.0088
4532				95% Adjusted Gamma UCL	N/A							
4533	**Note: DL/2 is not a recommended method.**											
4534												
4535	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
4536	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
4537	**For additional insight, the user may want to consult a statistician.**											
4538												
4539												
4540	**M|MG/KG|MERCURY (gi_et_clams_and_mussels_ne_2010)**											
4541												
4542	**General Statistics**											
4543	Number of Valid Observations				5				Number of Distinct Observations			5
4544												
4545	**Raw Statistics**								**Log-transformed Statistics**			
4546	Minimum				0.006				Minimum of Log Data			-5.115996
4547	Maximum				0.016				Maximum of Log Data			-4.135167
4548	Mean				0.0124				Mean of log Data			-4.443304
4549	Median				0.013				SD of log Data			0.3928491
4550	SD				0.0039115							
4551	Coefficient of Variation				0.3154453							
4552	Skewness				-1.376861							
4553												
4554												
4555	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
4556												
4557	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
4558	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4559												
4560												
4561	**Warning: There are only 5 Values in this data**											
4562	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
4563	**the resulting calculations may not be reliable enough to draw conclusions**											
4564												
4565	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
4566												
4567	**Relevant UCL Statistics**											
4568	**Normal Distribution Test**								**Lognormal Distribution Test**			
4569	Shapiro Wilk Test Statistic				0.887507				Shapiro Wilk Test Statistic			0.8067393
4570	Shapiro Wilk Critical Value				0.762				Shapiro Wilk Critical Value			0.762
4571	**Data appear Normal at 5% Significance Level**								**Data appear Lognormal at 5% Significance Level**			
4572												
4573	**Assuming Normal Distribution**								**Assuming Lognormal Distribution**			
4574	95% Student's-t UCL				0.0161292				95% H-UCL			0.0212966
4575	**95% UCLs (Adjusted for Skewness)**								95% Chebyshev (MVUE) UCL			0.0220169
4576	95% Adjusted-CLT UCL (Chen-1995)				0.0141264				97.5% Chebyshev (MVUE) UCL			0.0261358
4577	95% Modified-t UCL (Johnson-1978)				0.0159497				99% Chebyshev (MVUE) UCL			0.0342265
4578												
4579	**Gamma Distribution Test**								**Data Distribution**			
4580	k star (bias corrected)				3.9549662				**Data appear Normal at 5% Significance Level**			
4581	Theta Star				0.0031353							
4582	MLE of Mean				0.0124							
4583	MLE of Standard Deviation				0.0062352							
4584	nu star				39.549662							
4585	Approximate Chi Square Value (.05)				26.142551				**Nonparametric Statistics**			
4586	Adjusted Level of Significance				0.0086				95% CLT UCL			0.0152773
4587	Adjusted Chi Square Value				21.500871				95% Jackknife UCL			0.0161292
4588									95% Standard Bootstrap UCL			0.0150169

4589					Anderson-Darling Test Statistic	0.5160946					95% Bootstrap-t UCL	0.014955
4590					Anderson-Darling 5% Critical Value	0.6790432					95% Hall's Bootstrap UCL	0.0141768
4591					Kolmogorov-Smirnov Test Statistic	0.3030267					95% Percentile Bootstrap UCL	0.0148
4592					Kolmogorov-Smirnov 5% Critical Value	0.3576542					95% BCA Bootstrap UCL	0.0144
4593					**Data appear Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL	0.020025
4594											97.5% Chebyshev(Mean, Sd) UCL	0.0233243
4595					**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL	0.0298052
4596					95% Approximate Gamma UCL	0.0187593						
4597					95% Adjusted Gamma UCL	0.0228091						
4598												
4599					**Potential UCL to Use**						Use 95% Student's-t UCL	0.0161292
4600					**Recommended UCL exceeds the maximum observation**							
4601												
4602	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
4603	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
4604	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
4605												
4606												
4607	**M|MG/KG|MERCURY (gi_et_clams_and_mussels_nw_2005)**											
4608												
4609					**General Statistics**							
4610					Number of Valid Data	6					Number of Detected Data	2
4611					Number of Distinct Detected Data	2					Number of Non-Detect Data	4
4612											Percent Non-Detects	66.67%
4613												
4614					**Raw Statistics**						**Log-transformed Statistics**	
4615					Minimum Detected	0.01					Minimum Detected	-4.60517
4616					Maximum Detected	0.011					Maximum Detected	-4.50986
4617					Mean of Detected	0.0105					Mean of Detected	-4.557515
4618					SD of Detected	0.0007071					SD of Detected	0.0673945
4619					Minimum Non-Detect	0.0059					Minimum Non-Detect	-5.132803
4620					Maximum Non-Detect	0.014					Maximum Non-Detect	-4.268698
4621												
4622	Note: Data have multiple DLs - Use of KM Method is										Number treated as Non-Detect	6
4623	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	0
4624	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	100.00%
4625												
4626	**Warning: Data set has only 2 Distinct Detected Values.**											
4627	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**											
4628	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
4629												
4630	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**											
4631												
4632	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
4633	**Those methods will return a 'N/A' value on your output display!**											
4634												
4635	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
4636	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
4637	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
4638												
4639												
4640					**UCL Statistics**							
4641					**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**	
4642					Shapiro Wilk Test Statistic	N/A					Shapiro Wilk Test Statistic	N/A
4643					5% Shapiro Wilk Critical Value	N/A					5% Shapiro Wilk Critical Value	N/A
4644					**Data not Normal at 5% Significance Level**						**Data not Lognormal at 5% Significance Level**	
4645												
4646					**Assuming Normal Distribution**						**Assuming Lognormal Distribution**	
4647					DL/2 Substitution Method						DL/2 Substitution Method	
4648					Mean	0.0072417					Mean	-5.009129
4649					SD	0.0029087					SD	0.4677659
4650					95% DL/2 (t) UCL	0.0096345					95% H-Stat (DL/2) UCL	0.0127313
4651												
4652					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
4653					**MLE method failed to converge properly**						Mean in Log Scale	N/A
4654											SD in Log Scale	N/A
4655											Mean in Original Scale	N/A
4656											SD in Original Scale	N/A
4657											95% t UCL	N/A
4658											95% Percentile Bootstrap UCL	N/A
4659											95% BCA Bootstrap UCL	N/A
4660												
4661					**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**	
4662					k star (bias corrected)	N/A					**Data do not follow a Discernable Distribution (0.05)**	

4663					Theta Star	N/A						
4664					nu star	N/A						
4665												
4666					A-D Test Statistic	N/A	**Nonparametric Statistics**					
4667					5% A-D Critical Value	N/A				Kaplan-Meier (KM) Method		
4668					K-S Test Statistic	N/A				Mean		0.0103333
4669					5% K-S Critical Value	N/A				SD		0.0004714
4670			**Data not Gamma Distributed at 5% Significance Level**							SE of Mean		0.0003849
4671										95% KM (t) UCL		0.0111089
4672			**Assuming Gamma Distribution**							95% KM (z) UCL		0.0109664
4673			Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL		0.0112705
4674					Minimum	N/A				95% KM (bootstrap t) UCL		0.0107182
4675					Maximum	N/A				95% KM (BCA) UCL		0.011
4676					Mean	N/A				95% KM (Percentile Bootstrap) UCL		0.011
4677					Median	N/A				95% KM (Chebyshev) UCL		0.0120111
4678					SD	N/A				97.5% KM (Chebyshev) UCL		0.012737
4679					k star	N/A				99% KM (Chebyshev) UCL		0.014163
4680					Theta star	N/A						
4681					Nu star	N/A	**Potential UCLs to Use**					
4682					AppChi2	N/A				95% KM (t) UCL		0.0111089
4683					95% Gamma Approximate UCL	N/A				95% KM (% Bootstrap) UCL		0.011
4684					95% Adjusted Gamma UCL	N/A						
4685					**Warning: Recommended UCL exceeds the maximum observation**							
4686	**Note: DL/2 is not a recommended method.**											
4687												
4688	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
4689	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
4690	**For additional insight, the user may want to consult a statistician.**											
4691												
4692												
4693	**M|MG/KG|MERCURY (gi_et_clams_and_mussels_nw_2010)**											
4694												
4695	**General Statistics**											
4696	Number of Valid Observations					1	Number of Distinct Observations					1
4697												
4698												
4699	**Warning: This data set only has 1 observations!**											
4700	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4701	**The data set for variable M|MG/KG|MERCURY (gi_et_clams_and_mussels_nw_2010) was not processed!**											
4702												
4703	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4704	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4705												
4706												
4707												
4708	**M|MG/KG|MERCURY (gi_et_clams_and_mussels_ref_2010)**											
4709												
4710	**General Statistics**											
4711	Number of Valid Observations					3	Number of Distinct Observations					3
4712												
4713												
4714	**Warning: This data set only has 3 observations!**											
4715	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4716	**The data set for variable M|MG/KG|MERCURY (gi_et_clams_and_mussels_ref_2010) was not processed!**											
4717												
4718	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4719	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4720												
4721												
4722												
4723	**M|MG/KG|MERCURY (gi_et_clams_and_mussels_s_2005)**											
4724												
4725	**General Statistics**											
4726	Number of Valid Data					3	Number of Detected Data					0
4727	Number of Distinct Detected Data					0	Number of Non-Detect Data					3
4728							Percent Non-Detects					100.00%
4729												
4730	**Warning: This data set only has 3 observations!**											
4731	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4732	**The data set for variable M|MG/KG|MERCURY (gi_et_clams_and_mussels_s_2005) was not processed!**											
4733												
4734	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4735	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4736												

	A	B	C	D	E	F	G	H	I	J	K	L
4737												
4738												
4739	**M|MG/KG|MERCURY (gi_et_clams_and_mussels_s_2010)**											
4740												
4741	**General Statistics**											
4742	Number of Valid Observations				1		Number of Distinct Observations				1	
4743												
4744												
4745	**Warning: This data set only has 1 observations!**											
4746	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4747	**The data set for variable M|MG/KG|MERCURY (gi_et_clams_and_mussels_s_2010) was not processed!**											
4748												
4749	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4750	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4751												
4752												
4753												
4754	**M|MG/KG|MERCURY (gi_et_clams_and_mussels_stillwater_2005)**											
4755												
4756	**General Statistics**											
4757	Number of Valid Observations				1		Number of Distinct Observations				1	
4758												
4759												
4760	**Warning: This data set only has 1 observations!**											
4761	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4762	**The data set for variable M|MG/KG|MERCURY (gi_et_clams_and_mussels_stillwater_2005) was not processed!**											
4763												
4764	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4765	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4766												
4767												
4768												
4769	**M|MG/KG|MERCURY (gi_et_clams_and_mussels_stillwater_2010)**											
4770												
4771	**General Statistics**											
4772	Number of Valid Observations				3		Number of Distinct Observations				2	
4773												
4774												
4775	**Warning: This data set only has 3 observations!**											
4776	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4777	**The data set for variable M|MG/KG|MERCURY (gi_et_clams_and_mussels_stillwater_2010) was not processed!**											
4778												
4779	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4780	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4781												
4782												
4783												
4784	**M|MG/KG|MERCURY (gi_et_crabs_ne_2010)**											
4785												
4786	**General Statistics**											
4787	Number of Valid Observations				2		Number of Distinct Observations				2	
4788												
4789												
4790	**Warning: This data set only has 2 observations!**											
4791	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4792	**The data set for variable M|MG/KG|MERCURY (gi_et_crabs_ne_2010) was not processed!**											
4793												
4794	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4795	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4796												
4797												
4798												
4799	**M|MG/KG|MERCURY (gi_et_crabs_nw_2010)**											
4800												
4801	**General Statistics**											
4802	Number of Valid Observations				1		Number of Distinct Observations				1	
4803												
4804												
4805	**Warning: This data set only has 1 observations!**											
4806	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
4807	**The data set for variable M|MG/KG|MERCURY (gi_et_crabs_nw_2010) was not processed!**											
4808												
4809	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
4810	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											

4811												
4812												
4813												
4814	**M|MG/KG|MERCURY (gi_et_crabs_ref_2010)**											
4815												
4816						**General Statistics**						
4817					Number of Valid Observations	3			Number of Distinct Observations	3		
4818												
4819												
4820						**Warning: This data set only has 3 observations!**						
4821						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
4822						**The data set for variable M|MG/KG|MERCURY (gi_et_crabs_ref_2010) was not processed!**						
4823												
4824						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
4825						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
4826												
4827												
4828												
4829	**M|MG/KG|MERCURY (gi_et_crabs_stillwater_2010)**											
4830												
4831						**General Statistics**						
4832					Number of Valid Observations	3			Number of Distinct Observations	3		
4833												
4834												
4835						**Warning: This data set only has 3 observations!**						
4836						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
4837						**The data set for variable M|MG/KG|MERCURY (gi_et_crabs_stillwater_2010) was not processed!**						
4838												
4839						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
4840						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
4841												
4842												
4843												
4844	**M|MG/KG|NICKEL (gi_et_clams_and_mussels_ne_2005)**											
4845												
4846						**General Statistics**						
4847						Number of Valid Data	11			Number of Detected Data	2	
4848						Number of Distinct Detected Data	2			Number of Non-Detect Data	9	
4849										Percent Non-Detects	81.82%	
4850												
4851						**Raw Statistics**				**Log-transformed Statistics**		
4852						Minimum Detected	0.405			Minimum Detected	-0.903868	
4853						Maximum Detected	0.42			Maximum Detected	-0.867501	
4854						Mean of Detected	0.4125			Mean of Detected	-0.885684	
4855						SD of Detected	0.0106066			SD of Detected	0.0257158	
4856						Minimum Non-Detect	0.28			Minimum Non-Detect	-1.272966	
4857						Maximum Non-Detect	0.52			Maximum Non-Detect	-0.653926	
4858												
4859	Note: Data have multiple DLs - Use of KM Method is									Number treated as Non-Detect	11	
4860	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected	0	
4861	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage	100.00%	
4862												
4863						**Warning: Data set has only 2 Distinct Detected Values.**						
4864						**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**						
4865						**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**						
4866												
4867						**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**						
4868												
4869						**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**						
4870						**Those methods will return a 'N/A' value on your output display!**						
4871												
4872						**It is necessary to have 4 or more Distinct Values for bootstrap methods.**						
4873						**However, results obtained using 4 to 9 distinct values may not be reliable.**						
4874						**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**						
4875												
4876												
4877						**UCL Statistics**						
4878						**Normal Distribution Test with Detected Values Only**				**Lognormal Distribution Test with Detected Values Only**		
4879						Shapiro Wilk Test Statistic	N/A			Shapiro Wilk Test Statistic	N/A	
4880						5% Shapiro Wilk Critical Value	N/A			5% Shapiro Wilk Critical Value	N/A	
4881						**Data not Normal at 5% Significance Level**				**Data not Lognormal at 5% Significance Level**		
4882												
4883						**Assuming Normal Distribution**				**Assuming Lognormal Distribution**		
4884						DL/2 Substitution Method				DL/2 Substitution Method		

4885					Mean	0.245					Mean	-1.465344
4886					SD	0.0925743					SD	0.3525764
4887					95% DL/2 (t) UCL	0.2955898					95% H-Stat (DL/2) UCL	0.307293
4888												
4889					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
4890					**MLE method failed to converge properly**						Mean in Log Scale	N/A
4891											SD in Log Scale	N/A
4892											Mean in Original Scale	N/A
4893											SD in Original Scale	N/A
4894											95% t UCL	N/A
4895											95% Percentile Bootstrap UCL	N/A
4896											95% BCA Bootstrap UCL	N/A
4897												
4898					**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**	
4899					k star (bias corrected)	N/A					**Data do not follow a Discernable Distribution (0.05)**	
4900					Theta Star	N/A						
4901					nu star	N/A						
4902												
4903					A-D Test Statistic	N/A					**Nonparametric Statistics**	
4904					5% A-D Critical Value	N/A					Kaplan-Meier (KM) Method	
4905					K-S Test Statistic	N/A					Mean	0.4071429
4906					5% K-S Critical Value	N/A					SD	0.0052489
4907					**Data not Gamma Distributed at 5% Significance Level**						SE of Mean	0.0028057
4908											95% KM (t) UCL	0.412228
4909					**Assuming Gamma Distribution**						95% KM (z) UCL	0.4117578
4910					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	0.4173863
4911					Minimum	N/A					95% KM (bootstrap t) UCL	N/A
4912					Maximum	N/A					95% KM (BCA) UCL	0.42
4913					Mean	N/A					95% KM (Percentile Bootstrap) UCL	N/A
4914					Median	N/A					95% KM (Chebyshev) UCL	0.4193724
4915					SD	N/A					97.5% KM (Chebyshev) UCL	0.4246642
4916					k star	N/A					99% KM (Chebyshev) UCL	0.4350588
4917					Theta star	N/A						
4918					Nu star	N/A					**Potential UCLs to Use**	
4919					AppChi2	N/A					95% KM (t) UCL	0.412228
4920					95% Gamma Approximate UCL	N/A					95% KM (% Bootstrap) UCL	N/A
4921					95% Adjusted Gamma UCL	N/A						
4922	**Note: DL/2 is not a recommended method.**											
4923												
4924	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
4925	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
4926	**For additional insight, the user may want to consult a statistician.**											
4927												
4928												
4929	**M|MG/KG|NICKEL (gi_et_clams_and_mussels_ne_2010)**											
4930												
4931	**General Statistics**											
4932	Number of Valid Observations					5	Number of Distinct Observations					5
4933												
4934	**Raw Statistics**						**Log-transformed Statistics**					
4935	Minimum					0.269	Minimum of Log Data					-1.313044
4936	Maximum					0.59	Maximum of Log Data					-0.527633
4937	Mean					0.4228	Mean of log Data					-0.904703
4938	Median					0.382	SD of log Data					0.3326588
4939	SD					0.1385305						
4940	Coefficient of Variation					0.3276502						
4941	Skewness					0.3014411						
4942												
4943												
4944	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
4945												
4946	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
4947	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
4948												
4949												
4950	**Warning: There are only 5 Values in this data**											
4951	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
4952	**the resulting calculations may not be reliable enough to draw conclusions**											
4953												
4954	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
4955												
4956	**Relevant UCL Statistics**											
4957	**Normal Distribution Test**						**Lognormal Distribution Test**					
4958	Shapiro Wilk Test Statistic					0.9163238	Shapiro Wilk Test Statistic					0.9350015

4959					Shapiro Wilk Critical Value	0.762					Shapiro Wilk Critical Value	0.762
4960					**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**	
4961												
4962					**Assuming Normal Distribution**						**Assuming Lognormal Distribution**	
4963					95% Student's-t UCL	0.5548737					95% H-UCL	0.6458772
4964					**95% UCLs (Adjusted for Skewness)**						95% Chebyshev (MVUE) UCL	0.6959885
4965					95% Adjusted-CLT UCL (Chen-1995)	0.5336271					97.5% Chebyshev (MVUE) UCL	0.8141799
4966					95% Modified-t UCL (Johnson-1978)	0.5562657					99% Chebyshev (MVUE) UCL	1.0463439
4967												
4968					**Gamma Distribution Test**						**Data Distribution**	
4969					k star (bias corrected)	4.7603256					**Data appear Normal at 5% Significance Level**	
4970					Theta Star	0.0888175						
4971					MLE of Mean	0.4228						
4972					MLE of Standard Deviation	0.1937834						
4973					nu star	47.603256						
4974					Approximate Chi Square Value (.05)	32.768437					**Nonparametric Statistics**	
4975					Adjusted Level of Significance	0.0086					95% CLT UCL	0.5247032
4976					Adjusted Chi Square Value	27.496512					95% Jackknife UCL	0.5548737
4977											95% Standard Bootstrap UCL	0.5148529
4978					Anderson-Darling Test Statistic	0.3091602					95% Bootstrap-t UCL	0.6727383
4979					Anderson-Darling 5% Critical Value	0.6788502					95% Hall's Bootstrap UCL	0.7350585
4980					Kolmogorov-Smirnov Test Statistic	0.2391302					95% Percentile Bootstrap UCL	0.5194
4981					Kolmogorov-Smirnov 5% Critical Value	0.3575226					95% BCA Bootstrap UCL	0.5166
4982					**Data appear Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL	0.6928457
4983											97.5% Chebyshev(Mean, Sd) UCL	0.8096946
4984					**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL	1.0392218
4985					95% Approximate Gamma UCL	0.6142086						
4986					95% Adjusted Gamma UCL	0.7319713						
4987												
4988					**Potential UCL to Use**						Use 95% Student's-t UCL	0.5548737
4989												
4990	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
4991	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
4992	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
4993												
4994												
4995	**M|MG/KG|NICKEL (gi_et_clams_and_mussels_nw_2005)**											
4996												
4997					**General Statistics**							
4998					Number of Valid Data	6					Number of Detected Data	3
4999					Number of Distinct Detected Data	3					Number of Non-Detect Data	3
5000											Percent Non-Detects	50.00%
5001												
5002					**Raw Statistics**						**Log-transformed Statistics**	
5003					Minimum Detected	0.46					Minimum Detected	-0.776529
5004					Maximum Detected	0.59					Maximum Detected	-0.527633
5005					Mean of Detected	0.5166667					Mean of Detected	-0.66577
5006					SD of Detected	0.0665833					SD of Detected	0.1266865
5007					Minimum Non-Detect	0.18					Minimum Non-Detect	-1.714798
5008					Maximum Non-Detect	0.3					Maximum Non-Detect	-1.203973
5009												
5010	Note: Data have multiple DLs - Use of KM Method is										Number treated as Non-Detect	3
5011	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	3
5012	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	50.00%
5013												
5014	**Warning: There are only 3 Distinct Detected Values in this data set**											
5015	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
5016	**Those methods will return a 'N/A' value on your output display!**											
5017												
5018	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
5019	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
5020	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
5021												
5022												
5023					**UCL Statistics**							
5024					**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**	
5025					Shapiro Wilk Test Statistic	0.9529892					Shapiro Wilk Test Statistic	0.9649554
5026					5% Shapiro Wilk Critical Value	0.767					5% Shapiro Wilk Critical Value	0.767
5027					**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**	
5028												
5029					**Assuming Normal Distribution**						**Assuming Lognormal Distribution**	
5030					DL/2 Substitution Method						DL/2 Substitution Method	
5031					Mean	0.32					Mean	-1.390433
5032					SD	0.2203633					SD	0.8150826

5033				95% DL/2 (t) UCL	0.5012797					95% H-Stat (DL/2) UCL	1.2529824	
5034												
5035			Maximum Likelihood Estimate(MLE) Method							Log ROS Method		
5036				Mean	0.330709					Mean in Log Scale	-0.875445	
5037				SD	0.2079576					SD in Log Scale	0.2432621	
5038				95% MLE (t) UCL	0.5017833					Mean in Original Scale	0.4272638	
5039				95% MLE (Tiku) UCL	0.5412703					SD in Original Scale	0.1066057	
5040										95% t UCL	0.5149619	
5041										95% Percentile Bootstrap UCL	0.4963102	
5042										95% BCA Bootstrap UCL	0.4896435	
5043												
5044			Gamma Distribution Test with Detected Values Only							Data Distribution Test with Detected Values Only		
5045				k star (bias corrected)	N/A					Data appear Normal at 5% Significance Level		
5046				Theta Star	N/A							
5047				nu star	N/A							
5048												
5049				A-D Test Statistic	N/A					Nonparametric Statistics		
5050				5% A-D Critical Value	N/A					Kaplan-Meier (KM) Method		
5051				K-S Test Statistic	N/A					Mean	0.4883333	
5052				5% K-S Critical Value	N/A					SD	0.0477552	
5053			Data not Gamma Distributed at 5% Significance Level							SE of Mean	0.0238776	
5054										95% KM (t) UCL	0.5364478	
5055				Assuming Gamma Distribution						95% KM (z) UCL	0.5276085	
5056			Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL	0.5346397	
5057				Minimum	N/A					95% KM (bootstrap t) UCL	0.5299482	
5058				Maximum	N/A					95% KM (BCA) UCL	0.59	
5059				Mean	N/A					95% KM (Percentile Bootstrap) UCL	0.59	
5060				Median	N/A					95% KM (Chebyshev) UCL	0.5924133	
5061				SD	N/A					97.5% KM (Chebyshev) UCL	0.6374488	
5062				k star	N/A					99% KM (Chebyshev) UCL	0.7259123	
5063				Theta star	N/A							
5064				Nu star	N/A					Potential UCLs to Use		
5065				AppChi2	N/A					95% KM (t) UCL	0.5364478	
5066				95% Gamma Approximate UCL	N/A					95% KM (Percentile Bootstrap) UCL	0.59	
5067				95% Adjusted Gamma UCL	N/A							
5068	Note: DL/2 is not a recommended method.											
5069												
5070	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
5071	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
5072	For additional insight, the user may want to consult a statistician.											
5073												
5074												
5075	M|MG/KG|NICKEL (gi_et_clams_and_mussels_nw_2010)											
5076												
5077	General Statistics											
5078	Number of Valid Observations	1				Number of Distinct Observations	1					
5079												
5080												
5081	Warning: This data set only has 1 observations!											
5082	Data set is too small to compute reliable and meaningful statistics and estimates!											
5083	The data set for variable M|MG/KG|NICKEL (gi_et_clams_and_mussels_nw_2010) was not processed!											
5084												
5085	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5086	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5087												
5088												
5089												
5090	M|MG/KG|NICKEL (gi_et_clams_and_mussels_ref_2010)											
5091												
5092	General Statistics											
5093	Number of Valid Observations	3				Number of Distinct Observations	3					
5094												
5095												
5096	Warning: This data set only has 3 observations!											
5097	Data set is too small to compute reliable and meaningful statistics and estimates!											
5098	The data set for variable M|MG/KG|NICKEL (gi_et_clams_and_mussels_ref_2010) was not processed!											
5099												
5100	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5101	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5102												
5103												
5104												
5105	M|MG/KG|NICKEL (gi_et_clams_and_mussels_s_2005)											
5106												

5107	**General Statistics**											
5108					Number of Valid Data	3			Number of Detected Data			0
5109					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
5110									Percent Non-Detects			100.00%
5111												
5112	**Warning: This data set only has 3 observations!**											
5113	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5114	**The data set for variable M|MG/KG|NICKEL (gi_et_clams_and_mussels_s_2005) was not processed!**											
5115												
5116	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5117	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5118												
5119												
5120												
5121	**M|MG/KG|NICKEL (gi_et_clams_and_mussels_s_2010)**											
5122												
5123	**General Statistics**											
5124					Number of Valid Observations	1			Number of Distinct Observations	1		
5125												
5126												
5127	**Warning: This data set only has 1 observations!**											
5128	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5129	**The data set for variable M|MG/KG|NICKEL (gi_et_clams_and_mussels_s_2010) was not processed!**											
5130												
5131	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5132	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5133												
5134												
5135												
5136	**M|MG/KG|NICKEL (gi_et_clams_and_mussels_stillwater_2005)**											
5137												
5138	**General Statistics**											
5139					Number of Valid Data	1			Number of Detected Data			0
5140					Number of Distinct Detected Data	0			Number of Non-Detect Data			1
5141									Percent Non-Detects			100.00%
5142												
5143	**Warning: This data set only has 1 observations!**											
5144	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5145	**The data set for variable M|MG/KG|NICKEL (gi_et_clams_and_mussels_stillwater_2005) was not processed!**											
5146												
5147	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5148	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5149												
5150												
5151												
5152	**M|MG/KG|NICKEL (gi_et_clams_and_mussels_stillwater_2010)**											
5153												
5154	**General Statistics**											
5155					Number of Valid Observations	3			Number of Distinct Observations	3		
5156												
5157												
5158	**Warning: This data set only has 3 observations!**											
5159	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5160	**The data set for variable M|MG/KG|NICKEL (gi_et_clams_and_mussels_stillwater_2010) was not processed!**											
5161												
5162	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5163	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5164												
5165												
5166												
5167	**M|MG/KG|NICKEL (gi_et_crabs_ne_2010)**											
5168												
5169	**General Statistics**											
5170					Number of Valid Observations	2			Number of Distinct Observations	2		
5171												
5172												
5173	**Warning: This data set only has 2 observations!**											
5174	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5175	**The data set for variable M|MG/KG|NICKEL (gi_et_crabs_ne_2010) was not processed!**											
5176												
5177	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5178	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5179												
5180												

5181												
5182	**M|MG/KG|NICKEL (gi_et_crabs_nw_2010)**											
5183												
5184	**General Statistics**											
5185	Number of Valid Observations			1			Number of Distinct Observations			1		
5186												
5187												
5188	**Warning: This data set only has 1 observations!**											
5189	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5190	**The data set for variable M|MG/KG|NICKEL (gi_et_crabs_nw_2010) was not processed!**											
5191												
5192	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5193	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5194												
5195												
5196												
5197	**M|MG/KG|NICKEL (gi_et_crabs_ref_2010)**											
5198												
5199	**General Statistics**											
5200	Number of Valid Observations			3			Number of Distinct Observations			3		
5201												
5202												
5203	**Warning: This data set only has 3 observations!**											
5204	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5205	**The data set for variable M|MG/KG|NICKEL (gi_et_crabs_ref_2010) was not processed!**											
5206												
5207	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5208	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5209												
5210												
5211												
5212	**M|MG/KG|NICKEL (gi_et_crabs_stillwater_2010)**											
5213												
5214	**General Statistics**											
5215	Number of Valid Observations			3			Number of Distinct Observations			3		
5216												
5217												
5218	**Warning: This data set only has 3 observations!**											
5219	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5220	**The data set for variable M|MG/KG|NICKEL (gi_et_crabs_stillwater_2010) was not processed!**											
5221												
5222	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5223	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5224												
5225												
5226												
5227	**M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_ne_2005)**											
5228												
5229	**General Statistics**											
5230	Number of Valid Observations			11			Number of Distinct Observations			10		
5231												
5232	**Raw Statistics**						**Log-transformed Statistics**					
5233	Minimum			2070			Minimum of Log Data			7.6353039		
5234	Maximum			2900			Maximum of Log Data			7.972466		
5235	Mean			2425.4545			Mean of log Data			7.7880359		
5236	Median			2470			SD of log Data			0.1118605		
5237	SD			275.1132								
5238	Coefficient of Variation			0.1134275								
5239	Skewness			0.482014								
5240												
5241	**Relevant UCL Statistics**											
5242	**Normal Distribution Test**						**Lognormal Distribution Test**					
5243	Shapiro Wilk Test Statistic			0.9372914			Shapiro Wilk Test Statistic			0.9462633		
5244	Shapiro Wilk Critical Value			0.85			Shapiro Wilk Critical Value			0.85		
5245	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
5246												
5247	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
5248	95% Student's-t UCL			2575.7977			95% H-UCL			2585.7769		
5249	**95% UCLs (Adjusted for Skewness)**						95% Chebyshev (MVUE) UCL			2782.3007		
5250	95% Adjusted-CLT UCL (Chen-1995)			2574.776			97.5% Chebyshev (MVUE) UCL			2936.7644		
5251	95% Modified-t UCL (Johnson-1978)			2577.807			99% Chebyshev (MVUE) UCL			3240.1783		
5252												
5253	**Gamma Distribution Test**						**Data Distribution**					
5254	k star (bias corrected)			63.551806			**Data appear Normal at 5% Significance Level**					

5255					Theta Star	38.164998						
5256					MLE of Mean	2425.4545						
5257					MLE of Standard Deviation	304.24902						
5258					nu star	1398.1397						
5259					Approximate Chi Square Value (.05)	1312.3119			**Nonparametric Statistics**			
5260					Adjusted Level of Significance	0.02783					95% CLT UCL	2561.8947
5261					Adjusted Chi Square Value	1298.7322					95% Jackknife UCL	2575.7977
5262											95% Standard Bootstrap UCL	2553.0006
5263					Anderson-Darling Test Statistic	0.3041219					95% Bootstrap-t UCL	2596.2486
5264					Anderson-Darling 5% Critical Value	0.7263634					95% Hall's Bootstrap UCL	2585.2728
5265					Kolmogorov-Smirnov Test Statistic	0.1456586					95% Percentile Bootstrap UCL	2561.8182
5266					Kolmogorov-Smirnov 5% Critical Value	0.2544859					95% BCA Bootstrap UCL	2565.4545
5267					**Data appear Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL	2787.0241
5268											97.5% Chebyshev(Mean, Sd) UCL	2943.4756
5269					**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL	3250.7941
5270					95% Approximate Gamma UCL	2584.0842						
5271					95% Adjusted Gamma UCL	2611.1036						
5272												
5273					**Potential UCL to Use**						Use 95% Student's-t UCL	2575.7977
5274												
5275	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
5276	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
5277	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
5278												
5279												
5280	**M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_ne_2010)**											
5281												
5282	**General Statistics**											
5283	Number of Valid Observations					5			Number of Distinct Observations			5
5284												
5285	**Raw Statistics**								**Log-transformed Statistics**			
5286	Minimum					2530			Minimum of Log Data			7.8359746
5287	Maximum					3120			Maximum of Log Data			8.0455883
5288	Mean					2732			Mean of log Data			7.9100679
5289	Median					2650			SD of log Data			0.0814829
5290	SD					230.91124						
5291	Coefficient of Variation					0.084521						
5292	Skewness					1.6178848						
5293												
5294												
5295	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
5296												
5297	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
5298	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5299												
5300												
5301	**Warning: There are only 5 Values in this data**											
5302	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
5303	**the resulting calculations may not be reliable enough to draw conclusions**											
5304												
5305	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
5306												
5307	**Relevant UCL Statistics**											
5308	**Normal Distribution Test**								**Lognormal Distribution Test**			
5309	Shapiro Wilk Test Statistic					0.8504661			Shapiro Wilk Test Statistic			0.8690038
5310	Shapiro Wilk Critical Value					0.762			Shapiro Wilk Critical Value			0.762
5311	**Data appear Normal at 5% Significance Level**								**Data appear Lognormal at 5% Significance Level**			
5312												
5313	**Assuming Normal Distribution**								**Assuming Lognormal Distribution**			
5314	95% Student's-t UCL					2952.1487					95% H-UCL	N/A
5315	**95% UCLs (Adjusted for Skewness)**										95% Chebyshev (MVUE) UCL	3165.6419
5316	95% Adjusted-CLT UCL (Chen-1995)					2981.6953					97.5% Chebyshev (MVUE) UCL	3353.3579
5317	95% Modified-t UCL (Johnson-1978)					2964.6016					99% Chebyshev (MVUE) UCL	3722.0897
5318												
5319	**Gamma Distribution Test**								**Data Distribution**			
5320	k star (bias corrected)					73.693518			**Data appear Normal at 5% Significance Level**			
5321	Theta Star					37.07246						
5322	MLE of Mean					2732						
5323	MLE of Standard Deviation					318.24827						
5324	nu star					736.93518						
5325	Approximate Chi Square Value (.05)					674.94487			**Nonparametric Statistics**			
5326	Adjusted Level of Significance					0.0086					95% CLT UCL	2901.8585
5327	Adjusted Chi Square Value					648.59778					95% Jackknife UCL	2952.1487
5328											95% Standard Bootstrap UCL	2880.9947

5329					Anderson-Darling Test Statistic	0.4569827					95% Bootstrap-t UCL	3257.2913
5330					Anderson-Darling 5% Critical Value	0.67808					95% Hall's Bootstrap UCL	3826.9064
5331					Kolmogorov-Smirnov Test Statistic	0.254729					95% Percentile Bootstrap UCL	2898
5332					Kolmogorov-Smirnov 5% Critical Value	0.35682					95% BCA Bootstrap UCL	2944
5333					**Data appear Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL	3182.1289
5334											97.5% Chebyshev(Mean, Sd) UCL	3376.9
5335					**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL	3759.4901
5336					95% Approximate Gamma UCL	2982.9205						
5337					95% Adjusted Gamma UCL	3104.0916						
5338												
5339					**Potential UCL to Use**						Use 95% Student's-t UCL	2952.1487
5340												
5341	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
5342	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
5343	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
5344												
5345												
5346	**M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_nw_2005)**											
5347												
5348					**General Statistics**							
5349					Number of Valid Observations	6					Number of Distinct Observations	6
5350												
5351					**Raw Statistics**						**Log-transformed Statistics**	
5352					Minimum	1760					Minimum of Log Data	7.4730691
5353					Maximum	2830					Maximum of Log Data	7.948032
5354					Mean	2185					Mean of log Data	7.673295
5355					Median	2070					SD of log Data	0.1949516
5356					SD	435.46527						
5357					Coefficient of Variation	0.1992976						
5358					Skewness	0.5979998						
5359												
5360												
5361	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
5362												
5363	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
5364	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5365												
5366												
5367	**Warning: There are only 6 Values in this data**											
5368	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
5369	**the resulting calculations may not be reliable enough to draw conclusions**											
5370												
5371	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
5372												
5373	**Relevant UCL Statistics**											
5374					**Normal Distribution Test**						**Lognormal Distribution Test**	
5375					Shapiro Wilk Test Statistic	0.8917875					Shapiro Wilk Test Statistic	0.8970428
5376					Shapiro Wilk Critical Value	0.788					Shapiro Wilk Critical Value	0.788
5377					**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**	
5378												
5379					**Assuming Normal Distribution**						**Assuming Lognormal Distribution**	
5380					95% Student's-t UCL	2543.2312					95% H-UCL	2622.969
5381					**95% UCLs (Adjusted for Skewness)**						95% Chebyshev (MVUE) UCL	2942.1803
5382					95% Adjusted-CLT UCL (Chen-1995)	2523.7937					97.5% Chebyshev (MVUE) UCL	3270.0736
5383					95% Modified-t UCL (Johnson-1978)	2550.4647					99% Chebyshev (MVUE) UCL	3914.1564
5384												
5385					**Gamma Distribution Test**						**Data Distribution**	
5386					k star (bias corrected)	15.74504					**Data appear Normal at 5% Significance Level**	
5387					Theta Star	138.77386						
5388					MLE of Mean	2185						
5389					MLE of Standard Deviation	550.65496						
5390					nu star	188.94048						
5391					Approximate Chi Square Value (.05)	158.14263					**Nonparametric Statistics**	
5392					Adjusted Level of Significance	0.01222					95% CLT UCL	2477.4187
5393					Adjusted Chi Square Value	147.93064					95% Jackknife UCL	2543.2312
5394											95% Standard Bootstrap UCL	2450.022
5395					Anderson-Darling Test Statistic	0.4087397					95% Bootstrap-t UCL	2585.6031
5396					Anderson-Darling 5% Critical Value	0.6970111					95% Hall's Bootstrap UCL	2500.6642
5397					Kolmogorov-Smirnov Test Statistic	0.2846794					95% Percentile Bootstrap UCL	2456.6667
5398					Kolmogorov-Smirnov 5% Critical Value	0.33176					95% BCA Bootstrap UCL	2498.3333
5399					**Data appear Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL	2959.9161
5400											97.5% Chebyshev(Mean, Sd) UCL	3295.223
5401					**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL	3953.8683
5402					95% Approximate Gamma UCL	2610.5229						

	A	B	C	D	E	F	G	H	I	J	K	L
5403				95% Adjusted Gamma UCL		2790.7332						
5404												
5405				**Potential UCL to Use**							Use 95% Student's-t UCL	2543.2312
5406												
5407	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
5408	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
5409	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
5410												
5411												
5412	**M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_nw_2010)**											
5413												
5414	**General Statistics**											
5415	Number of Valid Observations	1		Number of Distinct Observations	1							
5416												
5417												
5418	**Warning: This data set only has 1 observations!**											
5419	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5420	**The data set for variable M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_nw_2010) was not processed!**											
5421												
5422	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5423	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5424												
5425												
5426												
5427	**M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_ref_2010)**											
5428												
5429	**General Statistics**											
5430	Number of Valid Observations	3		Number of Distinct Observations	3							
5431												
5432												
5433	**Warning: This data set only has 3 observations!**											
5434	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5435	**The data set for variable M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_ref_2010) was not processed!**											
5436												
5437	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5438	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5439												
5440												
5441												
5442	**M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_s_2005)**											
5443												
5444	**General Statistics**											
5445	Number of Valid Observations	3		Number of Distinct Observations	3							
5446												
5447												
5448	**Warning: This data set only has 3 observations!**											
5449	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5450	**The data set for variable M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_s_2005) was not processed!**											
5451												
5452	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5453	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5454												
5455												
5456												
5457	**M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_s_2010)**											
5458												
5459	**General Statistics**											
5460	Number of Valid Observations	1		Number of Distinct Observations	1							
5461												
5462												
5463	**Warning: This data set only has 1 observations!**											
5464	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5465	**The data set for variable M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_s_2010) was not processed!**											
5466												
5467	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5468	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5469												
5470												
5471												
5472	**M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_stillwater_2005)**											
5473												
5474	**General Statistics**											
5475	Number of Valid Observations	1		Number of Distinct Observations	1							
5476												

	A	B	C	D	E	F	G	H	I	J	K	L
5477												
5478	Warning: This data set only has 1 observations!											
5479	Data set is too small to compute reliable and meaningful statistics and estimates!											
5480	The data set for variable M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
5481												
5482	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5483	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5484												
5485												
5486												
5487	M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_stillwater_2010)											
5488												
5489	General Statistics											
5490	Number of Valid Observations	3					Number of Distinct Observations	3				
5491												
5492												
5493	Warning: This data set only has 3 observations!											
5494	Data set is too small to compute reliable and meaningful statistics and estimates!											
5495	The data set for variable M|MG/KG|POTASSIUM (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
5496												
5497	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5498	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5499												
5500												
5501												
5502	M|MG/KG|POTASSIUM (gi_et_crabs_ne_2010)											
5503												
5504	General Statistics											
5505	Number of Valid Observations	2					Number of Distinct Observations	2				
5506												
5507												
5508	Warning: This data set only has 2 observations!											
5509	Data set is too small to compute reliable and meaningful statistics and estimates!											
5510	The data set for variable M|MG/KG|POTASSIUM (gi_et_crabs_ne_2010) was not processed!											
5511												
5512	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5513	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5514												
5515												
5516												
5517	M|MG/KG|POTASSIUM (gi_et_crabs_nw_2010)											
5518												
5519	General Statistics											
5520	Number of Valid Observations	1					Number of Distinct Observations	1				
5521												
5522												
5523	Warning: This data set only has 1 observations!											
5524	Data set is too small to compute reliable and meaningful statistics and estimates!											
5525	The data set for variable M|MG/KG|POTASSIUM (gi_et_crabs_nw_2010) was not processed!											
5526												
5527	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5528	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5529												
5530												
5531												
5532	M|MG/KG|POTASSIUM (gi_et_crabs_ref_2010)											
5533												
5534	General Statistics											
5535	Number of Valid Observations	3					Number of Distinct Observations	3				
5536												
5537												
5538	Warning: This data set only has 3 observations!											
5539	Data set is too small to compute reliable and meaningful statistics and estimates!											
5540	The data set for variable M|MG/KG|POTASSIUM (gi_et_crabs_ref_2010) was not processed!											
5541												
5542	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5543	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5544												
5545												
5546												
5547	M|MG/KG|POTASSIUM (gi_et_crabs_stillwater_2010)											
5548												
5549	General Statistics											
5550	Number of Valid Observations	3					Number of Distinct Observations	3				

5551												
5552												
5553	**Warning: This data set only has 3 observations!**											
5554	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5555	**The data set for variable M|MG/KG|POTASSIUM (gi_et_crabs_stillwater_2010) was not processed!**											
5556												
5557	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5558	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5559												
5560												
5561												
5562	**M|MG/KG|SELENIUM (gi_et_clams_and_mussels_ne_2005)**											
5563												
5564	**General Statistics**											
5565						Number of Valid Data	11			Number of Detected Data	0	
5566						Number of Distinct Detected Data	0			Number of Non-Detect Data	11	
5567										Percent Non-Detects	100.00%	
5568												
5569	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**											
5570	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**											
5571	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
5572												
5573	**The data set for variable M|MG/KG|SELENIUM (gi_et_clams_and_mussels_ne_2005) was not processed!**											
5574												
5575												
5576												
5577	**M|MG/KG|SELENIUM (gi_et_clams_and_mussels_ne_2010)**											
5578												
5579	**General Statistics**											
5580						Number of Valid Observations	5			Number of Distinct Observations	5	
5581												
5582	**Raw Statistics**									**Log-transformed Statistics**		
5583						Minimum	0.748			Minimum of Log Data	-0.290352	
5584						Maximum	0.884			Maximum of Log Data	-0.123298	
5585						Mean	0.8192			Mean of log Data	-0.201522	
5586						Median	0.806			SD of log Data	0.0723858	
5587						SD	0.0592723					
5588						Coefficient of Variation	0.0723538					
5589						Skewness	0.0812888					
5590												
5591												
5592	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
5593												
5594	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
5595	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5596												
5597												
5598	**Warning: There are only 5 Values in this data**											
5599	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
5600	**the resulting calculations may not be reliable enough to draw conclusions**											
5601												
5602	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
5603												
5604	**Relevant UCL Statistics**											
5605	**Normal Distribution Test**									**Lognormal Distribution Test**		
5606						Shapiro Wilk Test Statistic	0.9097352			Shapiro Wilk Test Statistic	0.9141059	
5607						Shapiro Wilk Critical Value	0.762			Shapiro Wilk Critical Value	0.762	
5608	**Data appear Normal at 5% Significance Level**									**Data appear Lognormal at 5% Significance Level**		
5609												
5610	**Assuming Normal Distribution**									**Assuming Lognormal Distribution**		
5611						95% Student's-t UCL	0.8757096			95% H-UCL	N/A	
5612	**95% UCLs (Adjusted for Skewness)**									95% Chebyshev (MVUE) UCL	0.9347735	
5613						95% Adjusted-CLT UCL (Chen-1995)	0.8638304			97.5% Chebyshev (MVUE) UCL	0.9847823	
5614						95% Modified-t UCL (Johnson-1978)	0.8758702			99% Chebyshev (MVUE) UCL	1.0830149	
5615												
5616	**Gamma Distribution Test**									**Data Distribution**		
5617						k star (bias corrected)	95.65025			**Data appear Normal at 5% Significance Level**		
5618						Theta Star	0.0085645					
5619						MLE of Mean	0.8192					
5620						MLE of Standard Deviation	0.083762					
5621						nu star	956.5025					
5622						Approximate Chi Square Value (.05)	885.71488			**Nonparametric Statistics**		
5623						Adjusted Level of Significance	0.0086			95% CLT UCL	0.8628007	
5624						Adjusted Chi Square Value	855.42572			95% Jackknife UCL	0.8757096	

5625											95% Standard Bootstrap UCL	0.8578216
5626					Anderson-Darling Test Statistic	0.3454495					95% Bootstrap-t UCL	0.922005
5627					Anderson-Darling 5% Critical Value	0.67808					95% Hall's Bootstrap UCL	0.9146751
5628					Kolmogorov-Smirnov Test Statistic	0.2574844					95% Percentile Bootstrap UCL	0.8604
5629					Kolmogorov-Smirnov 5% Critical Value	0.35682					95% BCA Bootstrap UCL	0.8552
5630					**Data appear Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL	0.9347429
5631											97.5% Chebyshev(Mean, Sd) UCL	0.9847384
5632					**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL	1.0829449
5633					95% Approximate Gamma UCL	0.8846717						
5634					95% Adjusted Gamma UCL	0.9159964						
5635												
5636					**Potential UCL to Use**						Use 95% Student's-t UCL	0.8757096
5637												
5638	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
5639	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
5640	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
5641												
5642												
5643	**M|MG/KG|SELENIUM (gi_et_clams_and_mussels_nw_2005)**											
5644												
5645	**General Statistics**											
5646					Number of Valid Data	6					Number of Detected Data	0
5647					Number of Distinct Detected Data	0					Number of Non-Detect Data	6
5648											Percent Non-Detects	100.00%
5649												
5650	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**											
5651	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**											
5652	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
5653												
5654	**The data set for variable M|MG/KG|SELENIUM (gi_et_clams_and_mussels_nw_2005) was not processed!**											
5655												
5656												
5657												
5658	**M|MG/KG|SELENIUM (gi_et_clams_and_mussels_nw_2010)**											
5659												
5660	**General Statistics**											
5661					Number of Valid Observations	1					Number of Distinct Observations	1
5662												
5663												
5664	**Warning: This data set only has 1 observations!**											
5665	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5666	**The data set for variable M|MG/KG|SELENIUM (gi_et_clams_and_mussels_nw_2010) was not processed!**											
5667												
5668	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5669	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5670												
5671												
5672												
5673	**M|MG/KG|SELENIUM (gi_et_clams_and_mussels_ref_2010)**											
5674												
5675	**General Statistics**											
5676					Number of Valid Observations	3					Number of Distinct Observations	3
5677												
5678												
5679	**Warning: This data set only has 3 observations!**											
5680	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5681	**The data set for variable M|MG/KG|SELENIUM (gi_et_clams_and_mussels_ref_2010) was not processed!**											
5682												
5683	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5684	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5685												
5686												
5687												
5688	**M|MG/KG|SELENIUM (gi_et_clams_and_mussels_s_2005)**											
5689												
5690	**General Statistics**											
5691					Number of Valid Data	3					Number of Detected Data	0
5692					Number of Distinct Detected Data	0					Number of Non-Detect Data	3
5693											Percent Non-Detects	100.00%
5694												
5695	**Warning: This data set only has 3 observations!**											
5696	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5697	**The data set for variable M|MG/KG|SELENIUM (gi_et_clams_and_mussels_s_2005) was not processed!**											
5698												

	A	B	C	D	E	F	G	H	I	J	K	L
5699	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5700	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5701												
5702												
5703												
5704	M|MG/KG|SELENIUM (gi_et_clams_and_mussels_s_2010)											
5705												
5706	General Statistics											
5707			Number of Valid Observations	1			Number of Distinct Observations	1				
5708												
5709												
5710	Warning: This data set only has 1 observations!											
5711	Data set is too small to compute reliable and meaningful statistics and estimates!											
5712	The data set for variable M|MG/KG|SELENIUM (gi_et_clams_and_mussels_s_2010) was not processed!											
5713												
5714	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5715	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5716												
5717												
5718												
5719	M|MG/KG|SELENIUM (gi_et_clams_and_mussels_stillwater_2005)											
5720												
5721	General Statistics											
5722			Number of Valid Data	1			Number of Detected Data	0				
5723			Number of Distinct Detected Data	0			Number of Non-Detect Data	1				
5724							Percent Non-Detects	100.00%				
5725												
5726	Warning: This data set only has 1 observations!											
5727	Data set is too small to compute reliable and meaningful statistics and estimates!											
5728	The data set for variable M|MG/KG|SELENIUM (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
5729												
5730	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5731	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5732												
5733												
5734												
5735	M|MG/KG|SELENIUM (gi_et_clams_and_mussels_stillwater_2010)											
5736												
5737	General Statistics											
5738			Number of Valid Observations	3			Number of Distinct Observations	3				
5739												
5740												
5741	Warning: This data set only has 3 observations!											
5742	Data set is too small to compute reliable and meaningful statistics and estimates!											
5743	The data set for variable M|MG/KG|SELENIUM (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
5744												
5745	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5746	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5747												
5748												
5749												
5750	M|MG/KG|SELENIUM (gi_et_crabs_ne_2010)											
5751												
5752	General Statistics											
5753			Number of Valid Observations	2			Number of Distinct Observations	2				
5754												
5755												
5756	Warning: This data set only has 2 observations!											
5757	Data set is too small to compute reliable and meaningful statistics and estimates!											
5758	The data set for variable M|MG/KG|SELENIUM (gi_et_crabs_ne_2010) was not processed!											
5759												
5760	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5761	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5762												
5763												
5764												
5765	M|MG/KG|SELENIUM (gi_et_crabs_nw_2010)											
5766												
5767	General Statistics											
5768			Number of Valid Observations	1			Number of Distinct Observations	1				
5769												
5770												
5771	Warning: This data set only has 1 observations!											
5772	Data set is too small to compute reliable and meaningful statistics and estimates!											

	A	B	C	D	E	F	G	H	I	J	K	L
5773	**The data set for variable M|MG/KG|SELENIUM (gi_et_crabs_nw_2010) was not processed!**											
5774												
5775	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5776	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5777												
5778												
5779												
5780	**M|MG/KG|SELENIUM (gi_et_crabs_ref_2010)**											
5781												
5782	**General Statistics**											
5783	Number of Valid Observations	3				Number of Distinct Observations	2					
5784												
5785												
5786	**Warning: This data set only has 3 observations!**											
5787	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5788	**The data set for variable M|MG/KG|SELENIUM (gi_et_crabs_ref_2010) was not processed!**											
5789												
5790	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5791	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5792												
5793												
5794												
5795	**M|MG/KG|SELENIUM (gi_et_crabs_stillwater_2010)**											
5796												
5797	**General Statistics**											
5798	Number of Valid Observations	3				Number of Distinct Observations	3					
5799												
5800												
5801	**Warning: This data set only has 3 observations!**											
5802	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
5803	**The data set for variable M|MG/KG|SELENIUM (gi_et_crabs_stillwater_2010) was not processed!**											
5804												
5805	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
5806	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5807												
5808												
5809												
5810	**M|MG/KG|SILVER (gi_et_clams_and_mussels_ne_2005)**											
5811												
5812	**General Statistics**											
5813	Number of Valid Data	11				Number of Detected Data	0					
5814	Number of Distinct Detected Data	0				Number of Non-Detect Data	11					
5815						Percent Non-Detects	100.00%					
5816												
5817	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**											
5818	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**											
5819	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
5820												
5821	**The data set for variable M|MG/KG|SILVER (gi_et_clams_and_mussels_ne_2005) was not processed!**											
5822												
5823												
5824												
5825	**M|MG/KG|SILVER (gi_et_clams_and_mussels_ne_2010)**											
5826												
5827	**General Statistics**											
5828	Number of Valid Observations	5				Number of Distinct Observations	5					
5829												
5830	**Raw Statistics**					**Log-transformed Statistics**						
5831	Minimum	0.012				Minimum of Log Data	-4.422849					
5832	Maximum	0.407				Maximum of Log Data	-0.898942					
5833	Mean	0.1387				Mean of log Data	-3.058784					
5834	Median	0.014				SD of log Data	1.7535452					
5835	SD	0.1809639										
5836	Coefficient of Variation	1.3047148										
5837	Skewness	1.0299093										
5838												
5839												
5840	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
5841												
5842	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
5843	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
5844												
5845												
5846	**Warning: There are only 5 Values in this data**											

5847	Note: It should be noted that even though bootstrap methods may be performed on this data set,											
5848	the resulting calculations may not be reliable enough to draw conclusions											
5849												
5850	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.											
5851												
5852	Relevant UCL Statistics											
5853	Normal Distribution Test						Lognormal Distribution Test					
5854	Shapiro Wilk Test Statistic				0.7761711		Shapiro Wilk Test Statistic					0.753038
5855	Shapiro Wilk Critical Value				0.762		Shapiro Wilk Critical Value					0.762
5856	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
5857												
5858	Assuming Normal Distribution						Assuming Lognormal Distribution					
5859	95% Student's-t UCL				0.3112294					95% H-UCL		306.78414
5860	95% UCLs (Adjusted for Skewness)									95% Chebyshev (MVUE) UCL		0.5290191
5861	95% Adjusted-CLT UCL (Chen-1995)				0.3116464					97.5% Chebyshev (MVUE) UCL		0.7000048
5862	95% Modified-t UCL (Johnson-1978)				0.3174419					99% Chebyshev (MVUE) UCL		1.0358731
5863												
5864	Gamma Distribution Test						Data Distribution					
5865	k star (bias corrected)				0.3629711		Data appear Normal at 5% Significance Level					
5866	Theta Star				0.3821241							
5867	MLE of Mean				0.1387							
5868	MLE of Standard Deviation				0.2302186							
5869	nu star				3.6297113							
5870	Approximate Chi Square Value (.05)				0.5811205		Nonparametric Statistics					
5871	Adjusted Level of Significance				0.0086					95% CLT UCL		0.2718172
5872	Adjusted Chi Square Value				0.2286162					95% Jackknife UCL		0.3112294
5873										95% Standard Bootstrap UCL		0.2576448
5874	Anderson-Darling Test Statistic				0.7265189					95% Bootstrap-t UCL		24.456446
5875	Anderson-Darling 5% Critical Value				0.707193					95% Hall's Bootstrap UCL		14.683416
5876	Kolmogorov-Smirnov Test Statistic				0.3857394					95% Percentile Bootstrap UCL		0.2643
5877	Kolmogorov-Smirnov 5% Critical Value				0.3701529					95% BCA Bootstrap UCL		0.2644
5878	Data not Gamma Distributed at 5% Significance Level									95% Chebyshev(Mean, Sd) UCL		0.4914637
5879										97.5% Chebyshev(Mean, Sd) UCL		0.6441048
5880	Assuming Gamma Distribution									99% Chebyshev(Mean, Sd) UCL		0.9439387
5881	95% Approximate Gamma UCL				0.866328							
5882	95% Adjusted Gamma UCL				2.202123							
5883												
5884	Potential UCL to Use									Use 95% Student's-t UCL		0.3112294
5885												
5886	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
5887	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
5888	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
5889												
5890												
5891	M|MG/KG|SILVER (gi_et_clams_and_mussels_nw_2005)											
5892												
5893	General Statistics											
5894	Number of Valid Data				6		Number of Detected Data					0
5895	Number of Distinct Detected Data				0		Number of Non-Detect Data					6
5896							Percent Non-Detects					100.00%
5897												
5898	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
5899	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
5900	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
5901												
5902	The data set for variable M|MG/KG|SILVER (gi_et_clams_and_mussels_nw_2005) was not processed!											
5903												
5904												
5905												
5906	M|MG/KG|SILVER (gi_et_clams_and_mussels_nw_2010)											
5907												
5908	General Statistics											
5909	Number of Valid Observations				1		Number of Distinct Observations					1
5910												
5911												
5912	Warning: This data set only has 1 observations!											
5913	Data set is too small to compute reliable and meaningful statistics and estimates!											
5914	The data set for variable M|MG/KG|SILVER (gi_et_clams_and_mussels_nw_2010) was not processed!											
5915												
5916	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5917	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5918												
5919												
5920												

	A	B	C	D	E	F	G	H	I	J	K	L
5921	M|MG/KG|SILVER (gi_et_clams_and_mussels_ref_2010)											
5922												
5923	General Statistics											
5924	Number of Valid Observations					3	Number of Distinct Observations					3
5925												
5926												
5927	Warning: This data set only has 3 observations!											
5928	Data set is too small to compute reliable and meaningful statistics and estimates!											
5929	The data set for variable M|MG/KG|SILVER (gi_et_clams_and_mussels_ref_2010) was not processed!											
5930												
5931	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5932	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5933												
5934												
5935												
5936	M|MG/KG|SILVER (gi_et_clams_and_mussels_s_2005)											
5937												
5938	General Statistics											
5939	Number of Valid Data					3	Number of Detected Data					0
5940	Number of Distinct Detected Data					0	Number of Non-Detect Data					3
5941							Percent Non-Detects					100.00%
5942												
5943	Warning: This data set only has 3 observations!											
5944	Data set is too small to compute reliable and meaningful statistics and estimates!											
5945	The data set for variable M|MG/KG|SILVER (gi_et_clams_and_mussels_s_2005) was not processed!											
5946												
5947	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5948	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5949												
5950												
5951												
5952	M|MG/KG|SILVER (gi_et_clams_and_mussels_s_2010)											
5953												
5954	General Statistics											
5955	Number of Valid Observations					1	Number of Distinct Observations					1
5956												
5957												
5958	Warning: This data set only has 1 observations!											
5959	Data set is too small to compute reliable and meaningful statistics and estimates!											
5960	The data set for variable M|MG/KG|SILVER (gi_et_clams_and_mussels_s_2010) was not processed!											
5961												
5962	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5963	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5964												
5965												
5966												
5967	M|MG/KG|SILVER (gi_et_clams_and_mussels_stillwater_2005)											
5968												
5969	General Statistics											
5970	Number of Valid Data					1	Number of Detected Data					0
5971	Number of Distinct Detected Data					0	Number of Non-Detect Data					1
5972							Percent Non-Detects					100.00%
5973												
5974	Warning: This data set only has 1 observations!											
5975	Data set is too small to compute reliable and meaningful statistics and estimates!											
5976	The data set for variable M|MG/KG|SILVER (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
5977												
5978	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5979	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
5980												
5981												
5982												
5983	M|MG/KG|SILVER (gi_et_clams_and_mussels_stillwater_2010)											
5984												
5985	General Statistics											
5986	Number of Valid Observations					3	Number of Distinct Observations					3
5987												
5988												
5989	Warning: This data set only has 3 observations!											
5990	Data set is too small to compute reliable and meaningful statistics and estimates!											
5991	The data set for variable M|MG/KG|SILVER (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
5992												
5993	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
5994	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											

	A	B	C	D	E	F	G	H	I	J	K	L
5995												
5996												
5997												
5998	**M|MG/KG|SILVER (gi_et_crabs_ne_2010)**											
5999												
6000	**General Statistics**											
6001	Number of Valid Observations	2					Number of Distinct Observations	2				
6002												
6003												
6004	**Warning: This data set only has 2 observations!**											
6005	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
6006	**The data set for variable M|MG/KG|SILVER (gi_et_crabs_ne_2010) was not processed!**											
6007												
6008	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
6009	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6010												
6011												
6012												
6013	**M|MG/KG|SILVER (gi_et_crabs_nw_2010)**											
6014												
6015	**General Statistics**											
6016	Number of Valid Observations	1					Number of Distinct Observations	1				
6017												
6018												
6019	**Warning: This data set only has 1 observations!**											
6020	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
6021	**The data set for variable M|MG/KG|SILVER (gi_et_crabs_nw_2010) was not processed!**											
6022												
6023	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
6024	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6025												
6026												
6027												
6028	**M|MG/KG|SILVER (gi_et_crabs_ref_2010)**											
6029												
6030	**General Statistics**											
6031	Number of Valid Observations	3					Number of Distinct Observations	3				
6032												
6033												
6034	**Warning: This data set only has 3 observations!**											
6035	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
6036	**The data set for variable M|MG/KG|SILVER (gi_et_crabs_ref_2010) was not processed!**											
6037												
6038	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
6039	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6040												
6041												
6042												
6043	**M|MG/KG|SILVER (gi_et_crabs_stillwater_2010)**											
6044												
6045	**General Statistics**											
6046	Number of Valid Observations	3					Number of Distinct Observations	3				
6047												
6048												
6049	**Warning: This data set only has 3 observations!**											
6050	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
6051	**The data set for variable M|MG/KG|SILVER (gi_et_crabs_stillwater_2010) was not processed!**											
6052												
6053	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
6054	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6055												
6056												
6057												
6058	**M|MG/KG|SODIUM (gi_et_clams_and_mussels_ne_2005)**											
6059												
6060	**General Statistics**											
6061	Number of Valid Observations	11					Number of Distinct Observations	11				
6062												
6063	**Raw Statistics**						**Log-transformed Statistics**					
6064	Minimum	2610					Minimum of Log Data	7.8671055				
6065	Maximum	4700					Maximum of Log Data	8.4553178				
6066	Mean	3738.1818					Mean of log Data	8.2068765				
6067	Median	4010					SD of log Data	0.2107264				
6068	SD	746.48266										

6069					Coefficient of Variation	0.1996914						
6070					Skewness	-0.388547						
6071												
6072	**Relevant UCL Statistics**											
6073	**Normal Distribution Test**						**Lognormal Distribution Test**					
6074					Shapiro Wilk Test Statistic	0.8985691					Shapiro Wilk Test Statistic	0.8823405
6075					Shapiro Wilk Critical Value	0.85					Shapiro Wilk Critical Value	0.85
6076	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
6077												
6078	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
6079					95% Student's-t UCL	4146.1179					95% H-UCL	4245.4804
6080	**95% UCLs (Adjusted for Skewness)**										95% Chebyshev (MVUE) UCL	4780.9416
6081					95% Adjusted-CLT UCL (Chen-1995)	4080.2198					97.5% Chebyshev (MVUE) UCL	5231.0565
6082					95% Modified-t UCL (Johnson-1978)	4141.7233					99% Chebyshev (MVUE) UCL	6115.2202
6083												
6084	**Gamma Distribution Test**						**Data Distribution**					
6085					k star (bias corrected)	18.849977	**Data appear Normal at 5% Significance Level**					
6086					Theta Star	198.31227						
6087					MLE of Mean	3738.1818						
6088					MLE of Standard Deviation	861.00367						
6089					nu star	414.6995						
6090					Approximate Chi Square Value (.05)	368.49287	**Nonparametric Statistics**					
6091					Adjusted Level of Significance	0.02783					95% CLT UCL	4108.3939
6092					Adjusted Chi Square Value	361.38547					95% Jackknife UCL	4146.1179
6093											95% Standard Bootstrap UCL	4086.7417
6094					Anderson-Darling Test Statistic	0.6218647					95% Bootstrap-t UCL	4127.8485
6095					Anderson-Darling 5% Critical Value	0.7286416					95% Hall's Bootstrap UCL	4041.9969
6096					Kolmogorov-Smirnov Test Statistic	0.2104921					95% Percentile Bootstrap UCL	4077.2727
6097					Kolmogorov-Smirnov 5% Critical Value	0.2549561					95% BCA Bootstrap UCL	4046.3636
6098	**Data appear Gamma Distributed at 5% Significance Level**										95% Chebyshev(Mean, Sd) UCL	4719.2522
6099											97.5% Chebyshev(Mean, Sd) UCL	5143.7622
6100	**Assuming Gamma Distribution**										99% Chebyshev(Mean, Sd) UCL	5977.6298
6101					95% Approximate Gamma UCL	4206.9258						
6102					95% Adjusted Gamma UCL	4289.6637						
6103												
6104	**Potential UCL to Use**										Use 95% Student's-t UCL	4146.1179
6105												
6106	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
6107	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
6108	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
6109												
6110												
6111	**M|MG/KG|SODIUM (gi_et_clams_and_mussels_ne_2010)**											
6112												
6113	**General Statistics**											
6114					Number of Valid Observations	5					Number of Distinct Observations	5
6115												
6116	**Raw Statistics**						**Log-transformed Statistics**					
6117					Minimum	3790					Minimum of Log Data	8.2401213
6118					Maximum	4450					Maximum of Log Data	8.4006594
6119					Mean	4142					Mean of log Data	8.327365
6120					Median	4190					SD of log Data	0.0628153
6121					SD	257.91471						
6122					Coefficient of Variation	0.0622682						
6123					Skewness	-0.353499						
6124												
6125												
6126	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
6127												
6128	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
6129	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6130												
6131												
6132	**Warning: There are only 5 Values in this data**											
6133	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
6134	**the resulting calculations may not be reliable enough to draw conclusions**											
6135												
6136	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
6137												
6138	**Relevant UCL Statistics**											
6139	**Normal Distribution Test**						**Lognormal Distribution Test**					
6140					Shapiro Wilk Test Statistic	0.9814626					Shapiro Wilk Test Statistic	0.9771453
6141					Shapiro Wilk Critical Value	0.762					Shapiro Wilk Critical Value	0.762
6142	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					

6143												
6144	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
6145				95% Student's-t UCL	4387.8935						95% H-UCL	N/A
6146	**95% UCLs (Adjusted for Skewness)**										95% Chebyshev (MVUE) UCL	4649.161
6147			95% Adjusted-CLT UCL (Chen-1995)		4312.2385						97.5% Chebyshev (MVUE) UCL	4868.594
6148			95% Modified-t UCL (Johnson-1978)		4384.8544						99% Chebyshev (MVUE) UCL	5299.6277
6149												
6150	**Gamma Distribution Test**						**Data Distribution**					
6151				k star (bias corrected)	127.66966		**Data appear Normal at 5% Significance Level**					
6152				Theta Star	32.443103							
6153				MLE of Mean	4142							
6154				MLE of Standard Deviation	366.57787							
6155				nu star	1276.6966							
6156				Approximate Chi Square Value (.05)	1194.7328		**Nonparametric Statistics**					
6157				Adjusted Level of Significance	0.0086						95% CLT UCL	4331.7223
6158				Adjusted Chi Square Value	1159.4348						95% Jackknife UCL	4387.8935
6159											95% Standard Bootstrap UCL	4309.3563
6160				Anderson-Darling Test Statistic	0.2018133						95% Bootstrap-t UCL	4391.5694
6161				Anderson-Darling 5% Critical Value	0.67808						95% Hall's Bootstrap UCL	4301.7793
6162				Kolmogorov-Smirnov Test Statistic	0.1889266						95% Percentile Bootstrap UCL	4306
6163				Kolmogorov-Smirnov 5% Critical Value	0.35682						95% BCA Bootstrap UCL	4294
6164	**Data appear Gamma Distributed at 5% Significance Level**										95% Chebyshev(Mean, Sd) UCL	4644.7683
6165											97.5% Chebyshev(Mean, Sd) UCL	4862.3166
6166	**Assuming Gamma Distribution**										99% Chebyshev(Mean, Sd) UCL	5289.648
6167				95% Approximate Gamma UCL	4426.1591							
6168				95% Adjusted Gamma UCL	4560.9098							
6169												
6170	**Potential UCL to Use**										Use 95% Student's-t UCL	4387.8935
6171												
6172	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
6173	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
6174	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
6175												
6176												
6177	**M|MG/KG|SODIUM (gi_et_clams_and_mussels_nw_2005)**											
6178												
6179	**General Statistics**											
6180	Number of Valid Observations	6					Number of Distinct Observations	6				
6181												
6182	**Raw Statistics**						**Log-transformed Statistics**					
6183	Minimum	3650					Minimum of Log Data	8.2024824				
6184	Maximum	4840					Maximum of Log Data	8.48467				
6185	Mean	4101.6667					Mean of log Data	8.3149834				
6186	Median	4070					SD of log Data	0.0990033				
6187	SD	418.5889										
6188	Coefficient of Variation	0.1020534										
6189	Skewness	1.1239017										
6190												
6191												
6192	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
6193												
6194	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
6195	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6196												
6197												
6198	**Warning: There are only 6 Values in this data**											
6199	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
6200	**the resulting calculations may not be reliable enough to draw conclusions**											
6201												
6202	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
6203												
6204	**Relevant UCL Statistics**											
6205	**Normal Distribution Test**						**Lognormal Distribution Test**					
6206	Shapiro Wilk Test Statistic	0.9158643					Shapiro Wilk Test Statistic	0.9359362				
6207	Shapiro Wilk Critical Value	0.788					Shapiro Wilk Critical Value	0.788				
6208	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
6209												
6210	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
6211				95% Student's-t UCL	4446.0147						95% H-UCL	N/A
6212	**95% UCLs (Adjusted for Skewness)**										95% Chebyshev (MVUE) UCL	4823.8837
6213			95% Adjusted-CLT UCL (Chen-1995)		4466.5337						97.5% Chebyshev (MVUE) UCL	5136.5359
6214			95% Modified-t UCL (Johnson-1978)		4459.0828						99% Chebyshev (MVUE) UCL	5750.6807
6215												
6216	**Gamma Distribution Test**						**Data Distribution**					

6217					k star (bias corrected)	60.214906	**Data appear Normal at 5% Significance Level**					
6218					Theta Star	68.117132						
6219					MLE of Mean	4101.6667						
6220					MLE of Standard Deviation	528.57712						
6221					nu star	722.57887						
6222					Approximate Chi Square Value (.05)	661.20688	**Nonparametric Statistics**					
6223					Adjusted Level of Significance	0.01222					95% CLT UCL	4382.7527
6224					Adjusted Chi Square Value	639.76006					95% Jackknife UCL	4446.0147
6225											95% Standard Bootstrap UCL	4359.6561
6226					Anderson-Darling Test Statistic	0.3028725					95% Bootstrap-t UCL	4571.1177
6227					Anderson-Darling 5% Critical Value	0.69621					95% Hall's Bootstrap UCL	5765.0874
6228					Kolmogorov-Smirnov Test Statistic	0.2087992					95% Percentile Bootstrap UCL	4361.6667
6229					Kolmogorov-Smirnov 5% Critical Value	0.33154					95% BCA Bootstrap UCL	4421.6667
6230					**Data appear Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL	4846.5511
6231											97.5% Chebyshev(Mean, Sd) UCL	5168.8631
6232					**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL	5801.9828
6233					95% Approximate Gamma UCL	4482.3757						
6234					95% Adjusted Gamma UCL	4632.6394						
6235												
6236					**Potential UCL to Use**						Use 95% Student's-t UCL	4446.0147
6237												
6238	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
6239	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
6240	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
6241												
6242												
6243	**M|MG/KG|SODIUM (gi_et_clams_and_mussels_nw_2010)**											
6244												
6245	**General Statistics**											
6246	Number of Valid Observations	1					Number of Distinct Observations	1				
6247												
6248												
6249	**Warning: This data set only has 1 observations!**											
6250	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
6251	**The data set for variable M|MG/KG|SODIUM (gi_et_clams_and_mussels_nw_2010) was not processed!**											
6252												
6253	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
6254	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6255												
6256												
6257												
6258	**M|MG/KG|SODIUM (gi_et_clams_and_mussels_ref_2010)**											
6259												
6260	**General Statistics**											
6261	Number of Valid Observations	3					Number of Distinct Observations	3				
6262												
6263												
6264	**Warning: This data set only has 3 observations!**											
6265	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
6266	**The data set for variable M|MG/KG|SODIUM (gi_et_clams_and_mussels_ref_2010) was not processed!**											
6267												
6268	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
6269	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6270												
6271												
6272												
6273	**M|MG/KG|SODIUM (gi_et_clams_and_mussels_s_2005)**											
6274												
6275	**General Statistics**											
6276	Number of Valid Observations	3					Number of Distinct Observations	3				
6277												
6278												
6279	**Warning: This data set only has 3 observations!**											
6280	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
6281	**The data set for variable M|MG/KG|SODIUM (gi_et_clams_and_mussels_s_2005) was not processed!**											
6282												
6283	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
6284	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6285												
6286												
6287												
6288	**M|MG/KG|SODIUM (gi_et_clams_and_mussels_s_2010)**											
6289												
6290	**General Statistics**											

	A	B	C	D	E	F	G	H	I	J	K	L
6291	Number of Valid Observations	1					Number of Distinct Observations	1				
6292												
6293												
6294	Warning: This data set only has 1 observations!											
6295	Data set is too small to compute reliable and meaningful statistics and estimates!											
6296	The data set for variable M|MG/KG|SODIUM (gi_et_clams_and_mussels_s_2010) was not processed!											
6297												
6298	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6299	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6300												
6301												
6302												
6303	M|MG/KG|SODIUM (gi_et_clams_and_mussels_stillwater_2005)											
6304												
6305	General Statistics											
6306	Number of Valid Observations	1					Number of Distinct Observations	1				
6307												
6308												
6309	Warning: This data set only has 1 observations!											
6310	Data set is too small to compute reliable and meaningful statistics and estimates!											
6311	The data set for variable M|MG/KG|SODIUM (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
6312												
6313	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6314	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6315												
6316												
6317												
6318	M|MG/KG|SODIUM (gi_et_clams_and_mussels_stillwater_2010)											
6319												
6320	General Statistics											
6321	Number of Valid Observations	3					Number of Distinct Observations	3				
6322												
6323												
6324	Warning: This data set only has 3 observations!											
6325	Data set is too small to compute reliable and meaningful statistics and estimates!											
6326	The data set for variable M|MG/KG|SODIUM (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
6327												
6328	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6329	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6330												
6331												
6332												
6333	M|MG/KG|SODIUM (gi_et_crabs_ne_2010)											
6334												
6335	General Statistics											
6336	Number of Valid Observations	2					Number of Distinct Observations	2				
6337												
6338												
6339	Warning: This data set only has 2 observations!											
6340	Data set is too small to compute reliable and meaningful statistics and estimates!											
6341	The data set for variable M|MG/KG|SODIUM (gi_et_crabs_ne_2010) was not processed!											
6342												
6343	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6344	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6345												
6346												
6347												
6348	M|MG/KG|SODIUM (gi_et_crabs_nw_2010)											
6349												
6350	General Statistics											
6351	Number of Valid Observations	1					Number of Distinct Observations	1				
6352												
6353												
6354	Warning: This data set only has 1 observations!											
6355	Data set is too small to compute reliable and meaningful statistics and estimates!											
6356	The data set for variable M|MG/KG|SODIUM (gi_et_crabs_nw_2010) was not processed!											
6357												
6358	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6359	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6360												
6361												
6362												
6363	M|MG/KG|SODIUM (gi_et_crabs_ref_2010)											
6364												

6365	**General Statistics**											
6366	Number of Valid Observations	3				Number of Distinct Observations	3					
6367												
6368												
6369	**Warning: This data set only has 3 observations!**											
6370	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
6371	**The data set for variable M|MG/KG|SODIUM (gi_et_crabs_ref_2010) was not processed!**											
6372												
6373	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
6374	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6375												
6376												
6377												
6378	**M|MG/KG|SODIUM (gi_et_crabs_stillwater_2010)**											
6379												
6380	**General Statistics**											
6381	Number of Valid Observations	3				Number of Distinct Observations	3					
6382												
6383												
6384	**Warning: This data set only has 3 observations!**											
6385	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
6386	**The data set for variable M|MG/KG|SODIUM (gi_et_crabs_stillwater_2010) was not processed!**											
6387												
6388	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
6389	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6390												
6391												
6392												
6393	**M|MG/KG|THALLIUM (gi_et_clams_and_mussels_ne_2005)**											
6394												
6395	**General Statistics**											
6396	Number of Valid Data	11				Number of Detected Data	1					
6397	Number of Distinct Detected Data	1				Number of Non-Detect Data	10					
6398						Percent Non-Detects	90.91%					
6399												
6400	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
6401	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters**											
6402												
6403	**The data set for variable M|MG/KG|THALLIUM (gi_et_clams_and_mussels_ne_2005) was not processed!**											
6404												
6405												
6406												
6407	**M|MG/KG|THALLIUM (gi_et_clams_and_mussels_ne_2010)**											
6408												
6409	**General Statistics**											
6410	Number of Valid Data	5				Number of Detected Data	1					
6411	Number of Distinct Detected Data	1				Number of Non-Detect Data	4					
6412						Percent Non-Detects	80.00%					
6413												
6414	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
6415	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters**											
6416												
6417	**The data set for variable M|MG/KG|THALLIUM (gi_et_clams_and_mussels_ne_2010) was not processed!**											
6418												
6419												
6420												
6421	**M|MG/KG|THALLIUM (gi_et_clams_and_mussels_nw_2005)**											
6422												
6423	**General Statistics**											
6424	Number of Valid Data	6				Number of Detected Data	1					
6425	Number of Distinct Detected Data	1				Number of Non-Detect Data	5					
6426						Percent Non-Detects	83.33%					
6427												
6428	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
6429	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters**											
6430												
6431	**The data set for variable M|MG/KG|THALLIUM (gi_et_clams_and_mussels_nw_2005) was not processed!**											
6432												
6433												
6434												
6435	**M|MG/KG|THALLIUM (gi_et_clams_and_mussels_nw_2010)**											
6436												
6437	**General Statistics**											
6438	Number of Valid Data	1				Number of Detected Data	0					

6439					Number of Distinct Detected Data	0				Number of Non-Detect Data		1
6440										Percent Non-Detects		100.00%
6441												
6442						**Warning: This data set only has 1 observations!**							
6443						**Data set is too small to compute reliable and meaningful statistics and estimates!**							
6444						**The data set for variable M|MG/KG|THALLIUM (gi_et_clams_and_mussels_nw_2010) was not processed!**							
6445												
6446						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**							
6447						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**							
6448												
6449												
6450												
6451	**M|MG/KG|THALLIUM (gi_et_clams_and_mussels_ref_2010)**											
6452												
6453						**General Statistics**							
6454					Number of Valid Data	3				Number of Detected Data		0
6455					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
6456										Percent Non-Detects		100.00%
6457												
6458						**Warning: This data set only has 3 observations!**							
6459						**Data set is too small to compute reliable and meaningful statistics and estimates!**							
6460						**The data set for variable M|MG/KG|THALLIUM (gi_et_clams_and_mussels_ref_2010) was not processed!**							
6461												
6462						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**							
6463						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**							
6464												
6465												
6466												
6467	**M|MG/KG|THALLIUM (gi_et_clams_and_mussels_s_2005)**											
6468												
6469						**General Statistics**							
6470					Number of Valid Data	3				Number of Detected Data		0
6471					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
6472										Percent Non-Detects		100.00%
6473												
6474						**Warning: This data set only has 3 observations!**							
6475						**Data set is too small to compute reliable and meaningful statistics and estimates!**							
6476						**The data set for variable M|MG/KG|THALLIUM (gi_et_clams_and_mussels_s_2005) was not processed!**							
6477												
6478						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**							
6479						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**							
6480												
6481												
6482												
6483	**M|MG/KG|THALLIUM (gi_et_clams_and_mussels_s_2010)**											
6484												
6485						**General Statistics**							
6486					Number of Valid Data	1				Number of Detected Data		0
6487					Number of Distinct Detected Data	0				Number of Non-Detect Data		1
6488										Percent Non-Detects		100.00%
6489												
6490						**Warning: This data set only has 1 observations!**							
6491						**Data set is too small to compute reliable and meaningful statistics and estimates!**							
6492						**The data set for variable M|MG/KG|THALLIUM (gi_et_clams_and_mussels_s_2010) was not processed!**							
6493												
6494						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**							
6495						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**							
6496												
6497												
6498												
6499	**M|MG/KG|THALLIUM (gi_et_clams_and_mussels_stillwater_2005)**											
6500												
6501						**General Statistics**							
6502					Number of Valid Data	1				Number of Detected Data		0
6503					Number of Distinct Detected Data	0				Number of Non-Detect Data		1
6504										Percent Non-Detects		100.00%
6505												
6506						**Warning: This data set only has 1 observations!**							
6507						**Data set is too small to compute reliable and meaningful statistics and estimates!**							
6508						**The data set for variable M|MG/KG|THALLIUM (gi_et_clams_and_mussels_stillwater_2005) was not processed!**							
6509												
6510						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**							
6511						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**							
6512												

	A	B	C	D	E	F	G	H	I	J	K	L
6513												
6514												
6515	M|MG/KG|THALLIUM (gi_et_clams_and_mussels_stillwater_2010)											
6516												
6517	General Statistics											
6518					Number of Valid Data	3			Number of Detected Data			0
6519					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
6520									Percent Non-Detects			100.00%
6521												
6522	Warning: This data set only has 3 observations!											
6523	Data set is too small to compute reliable and meaningful statistics and estimates!											
6524	The data set for variable M|MG/KG|THALLIUM (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
6525												
6526	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6527	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6528												
6529												
6530												
6531	M|MG/KG|THALLIUM (gi_et_crabs_ne_2010)											
6532												
6533	General Statistics											
6534					Number of Valid Data	2			Number of Detected Data			1
6535					Number of Distinct Detected Data	1			Number of Non-Detect Data			1
6536									Percent Non-Detects			50.00%
6537												
6538	Warning: This data set only has 2 observations!											
6539	Data set is too small to compute reliable and meaningful statistics and estimates!											
6540	The data set for variable M|MG/KG|THALLIUM (gi_et_crabs_ne_2010) was not processed!											
6541												
6542	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6543	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6544												
6545												
6546												
6547	M|MG/KG|THALLIUM (gi_et_crabs_nw_2010)											
6548												
6549	General Statistics											
6550					Number of Valid Data	1			Number of Detected Data			0
6551					Number of Distinct Detected Data	0			Number of Non-Detect Data			1
6552									Percent Non-Detects			100.00%
6553												
6554	Warning: This data set only has 1 observations!											
6555	Data set is too small to compute reliable and meaningful statistics and estimates!											
6556	The data set for variable M|MG/KG|THALLIUM (gi_et_crabs_nw_2010) was not processed!											
6557												
6558	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6559	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6560												
6561												
6562												
6563	M|MG/KG|THALLIUM (gi_et_crabs_ref_2010)											
6564												
6565	General Statistics											
6566					Number of Valid Data	3			Number of Detected Data			2
6567					Number of Distinct Detected Data	2			Number of Non-Detect Data			1
6568									Percent Non-Detects			33.33%
6569												
6570	Warning: This data set only has 3 observations!											
6571	Data set is too small to compute reliable and meaningful statistics and estimates!											
6572	The data set for variable M|MG/KG|THALLIUM (gi_et_crabs_ref_2010) was not processed!											
6573												
6574	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6575	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6576												
6577												
6578												
6579	M|MG/KG|THALLIUM (gi_et_crabs_stillwater_2010)											
6580												
6581	General Statistics											
6582					Number of Valid Data	3			Number of Detected Data			0
6583					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
6584									Percent Non-Detects			100.00%
6585												
6586	Warning: This data set only has 3 observations!											

	A	B	C	D	E	F	G	H	I	J	K	L
6587	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
6588	**The data set for variable M|MG/KG|THALLIUM (gi_et_crabs_stillwater_2010) was not processed!**											
6589												
6590	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
6591	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6592												
6593												
6594												
6595	**M|MG/KG|VANADIUM (gi_et_clams_and_mussels_ne_2005)**											
6596												
6597	**General Statistics**											
6598					Number of Valid Data	11			Number of Detected Data	9		
6599					Number of Distinct Detected Data	9			Number of Non-Detect Data	2		
6600									Percent Non-Detects	18.18%		
6601												
6602	**Raw Statistics**						**Log-transformed Statistics**					
6603					Minimum Detected	0.11			Minimum Detected	-2.207275		
6604					Maximum Detected	0.65			Maximum Detected	-0.430783		
6605					Mean of Detected	0.2688889			Mean of Detected	-1.461111		
6606					SD of Detected	0.1677382			SD of Detected	0.5619879		
6607					Minimum Non-Detect	0.12			Minimum Non-Detect	-2.120264		
6608					Maximum Non-Detect	0.14			Maximum Non-Detect	-1.966113		
6609												
6610	Note: Data have multiple DLs - Use of KM Method is								Number treated as Non-Detect	4		
6611	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected	7		
6612	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage	36.36%		
6613												
6614	**Warning: There are only 9 Detected Values in this data**											
6615	**Note: It should be noted that even though bootstrap may be performed on this data set**											
6616	**the resulting calculations may not be reliable enough to draw conclusions**											
6617												
6618	**It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.**											
6619												
6620												
6621	**UCL Statistics**											
6622	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
6623					Shapiro Wilk Test Statistic	0.8452582			Shapiro Wilk Test Statistic	0.9656284		
6624					5% Shapiro Wilk Critical Value	0.829			5% Shapiro Wilk Critical Value	0.829		
6625	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
6626												
6627	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
6628					DL/2 Substitution Method				DL/2 Substitution Method			
6629					Mean	0.2318182			Mean	-1.69297		
6630					SD	0.1712202			SD	0.7210807		
6631					95% DL/2 (t) UCL	0.3253862			95% H-Stat (DL/2) UCL	0.4219088		
6632												
6633					Maximum Likelihood Estimate(MLE) Method				Log ROS Method			
6634					Mean	0.1949897			Mean in Log Scale	-1.620737		
6635					SD	0.2096297			SD in Log Scale	0.6167777		
6636					95% MLE (t) UCL	0.3095477			Mean in Original Scale	0.2376018		
6637					95% MLE (Tiku) UCL	0.3205389			SD in Original Scale	0.1654372		
6638									95% t UCL	0.3280096		
6639									95% Percentile Bootstrap UCL	0.3214754		
6640									95% BCA Bootstrap UCL	0.3480104		
6641												
6642	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
6643					k star (bias corrected)	2.4369426	**Data appear Normal at 5% Significance Level**					
6644					Theta Star	0.1103386						
6645					nu star	43.864966						
6646												
6647					A-D Test Statistic	0.2784693	**Nonparametric Statistics**					
6648					5% A-D Critical Value	0.7257985	Kaplan-Meier (KM) Method					
6649					K-S Test Statistic	0.7257985			Mean	0.2406061		
6650					5% K-S Critical Value	0.2808447			SD	0.1551527		
6651	**Data appear Gamma Distributed at 5% Significance Level**								SE of Mean	0.0496291		
6652									95% KM (t) UCL	0.3305569		
6653	**Assuming Gamma Distribution**								95% KM (z) UCL	0.3222387		
6654	Gamma ROS Statistics using Extrapolated Data								95% KM (jackknife) UCL	0.3283196		
6655					Minimum	0.0838134			95% KM (bootstrap t) UCL	0.3958306		
6656					Maximum	0.65			95% KM (BCA) UCL	0.3318182		
6657					Mean	0.2401255			95% KM (Percentile Bootstrap) UCL	0.3281818		
6658					Median	0.17			95% KM (Chebyshev) UCL	0.4569343		
6659					SD	0.1635502			97.5% KM (Chebyshev) UCL	0.5505397		
6660					k star	2.2573739			99% KM (Chebyshev) UCL	0.7344094		

6661					Theta star	0.1063738						
6662					Nu star	49.662225			**Potential UCLs to Use**			
6663					AppChi2	34.482425					95% KM (t) UCL	0.3305569
6664				95% Gamma Approximate UCL		0.3458332				95% KM (Percentile Bootstrap) UCL		0.3281818
6665				95% Adjusted Gamma UCL		0.3677128						
6666	**Note: DL/2 is not a recommended method.**											
6667												
6668	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
6669	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
6670	**For additional insight, the user may want to consult a statistician.**											
6671												
6672												
6673	**M|MG/KG|VANADIUM (gi_et_clams_and_mussels_ne_2010)**											
6674												
6675	**General Statistics**											
6676	Number of Valid Observations					5			Number of Distinct Observations			5
6677												
6678	**Raw Statistics**								**Log-transformed Statistics**			
6679	Minimum					0.19			Minimum of Log Data			-1.660731
6680	Maximum					0.294			Maximum of Log Data			-1.224176
6681	Mean					0.2338			Mean of log Data			-1.463598
6682	Median					0.234			SD of log Data			0.1591317
6683	SD					0.0382779						
6684	Coefficient of Variation					0.1637208						
6685	Skewness					0.9546664						
6686												
6687												
6688	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
6689												
6690	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
6691	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6692												
6693												
6694	**Warning: There are only 5 Values in this data**											
6695	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
6696	**the resulting calculations may not be reliable enough to draw conclusions**											
6697												
6698	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
6699												
6700	**Relevant UCL Statistics**											
6701	**Normal Distribution Test**								**Lognormal Distribution Test**			
6702	Shapiro Wilk Test Statistic					0.926861			Shapiro Wilk Test Statistic			0.9516755
6703	Shapiro Wilk Critical Value					0.762			Shapiro Wilk Critical Value			0.762
6704	**Data appear Normal at 5% Significance Level**								**Data appear Lognormal at 5% Significance Level**			
6705												
6706	**Assuming Normal Distribution**								**Assuming Lognormal Distribution**			
6707	95% Student's-t UCL					0.2702938					95% H-UCL	0.2775526
6708	**95% UCLs (Adjusted for Skewness)**										95% Chebyshev (MVUE) UCL	0.306204
6709	95% Adjusted-CLT UCL (Chen-1995)					0.2697666					97.5% Chebyshev (MVUE) UCL	0.3375531
6710	95% Modified-t UCL (Johnson-1978)					0.2715119					99% Chebyshev (MVUE) UCL	0.3991324
6711												
6712	**Gamma Distribution Test**								**Data Distribution**			
6713	k star (bias corrected)					19.60166			**Data appear Normal at 5% Significance Level**			
6714	Theta Star					0.0119276						
6715	MLE of Mean					0.2338						
6716	MLE of Standard Deviation					0.0528078						
6717	nu star					196.0166						
6718	Approximate Chi Square Value (.05)					164.6248			**Nonparametric Statistics**			
6719	Adjusted Level of Significance					0.0086					95% CLT UCL	0.2619573
6720	Adjusted Chi Square Value					151.97715					95% Jackknife UCL	0.2702938
6721											95% Standard Bootstrap UCL	0.2591321
6722	Anderson-Darling Test Statistic					0.3058152					95% Bootstrap-t UCL	0.2810691
6723	Anderson-Darling 5% Critical Value					0.6782791					95% Hall's Bootstrap UCL	0.4182249
6724	Kolmogorov-Smirnov Test Statistic					0.2667155					95% Percentile Bootstrap UCL	0.2612
6725	Kolmogorov-Smirnov 5% Critical Value					0.3568733					95% BCA Bootstrap UCL	0.2664
6726	**Data appear Gamma Distributed at 5% Significance Level**										95% Chebyshev(Mean, Sd) UCL	0.3084174
6727											97.5% Chebyshev(Mean, Sd) UCL	0.3407044
6728	**Assuming Gamma Distribution**										99% Chebyshev(Mean, Sd) UCL	0.404126
6729	95% Approximate Gamma UCL					0.2783826						
6730	95% Adjusted Gamma UCL					0.3015498						
6731												
6732	**Potential UCL to Use**										Use 95% Student's-t UCL	0.2702938
6733												
6734	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											

	A	B	C	D	E	F	G	H	I	J	K	L
6735	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
6736	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
6737												
6738												
6739	M|MG/KG|VANADIUM (gi_et_clams_and_mussels_nw_2005)											
6740												
6741	General Statistics											
6742	Number of Valid Data					6	Number of Detected Data					5
6743	Number of Distinct Detected Data					5	Number of Non-Detect Data					1
6744							Percent Non-Detects					16.67%
6745												
6746	Raw Statistics						Log-transformed Statistics					
6747	Minimum Detected					0.14	Minimum Detected					-1.966113
6748	Maximum Detected					0.92	Maximum Detected					-0.083382
6749	Mean of Detected					0.336	Mean of Detected					-1.363437
6750	SD of Detected					0.3289833	SD of Detected					0.7466069
6751	Minimum Non-Detect					0.13	Minimum Non-Detect					-2.040221
6752	Maximum Non-Detect					0.13	Maximum Non-Detect					-2.040221
6753												
6754												
6755	Warning: There are only 5 Detected Values in this data											
6756	Note: It should be noted that even though bootstrap may be performed on this data set											
6757	the resulting calculations may not be reliable enough to draw conclusions											
6758												
6759	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
6760												
6761												
6762	UCL Statistics											
6763	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
6764	Shapiro Wilk Test Statistic					0.6678201	Shapiro Wilk Test Statistic					0.8105198
6765	5% Shapiro Wilk Critical Value					0.762	5% Shapiro Wilk Critical Value					0.762
6766	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
6767												
6768	Assuming Normal Distribution						Assuming Lognormal Distribution					
6769	DL/2 Substitution Method						DL/2 Substitution Method					
6770	Mean					0.2908333	Mean					-1.591759
6771	SD					0.3143631	SD					0.8710469
6772	95% DL/2 (t) UCL					0.549441	95% H-Stat (DL/2) UCL					1.250298
6773												
6774	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
6775	Mean					0.2667266	Mean in Log Scale					-1.660877
6776	SD					0.3175757	SD in Log Scale					0.988313
6777	95% MLE (t) UCL					0.5279771	Mean in Original Scale					0.2871557
6778	95% MLE (Tiku) UCL					0.5199909	SD in Original Scale					0.3176453
6779							95% t UCL					0.5484635
6780							95% Percentile Bootstrap UCL					0.5238224
6781							95% BCA Bootstrap UCL					0.5583333
6782												
6783	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
6784	k star (bias corrected)					0.9266868	Data appear Lognormal at 5% Significance Level					
6785	Theta Star					0.3625821						
6786	nu star					9.2668676						
6787												
6788	A-D Test Statistic					0.7247116	Nonparametric Statistics					
6789	5% A-D Critical Value					0.6845145	Kaplan-Meier (KM) Method					
6790	K-S Test Statistic					0.6845145	Mean					0.3033333
6791	5% K-S Critical Value					0.3605099	SD					0.2783683
6792	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.1270571
6793							95% KM (t) UCL					0.5593596
6794	Assuming Gamma Distribution						95% KM (z) UCL					0.5123237
6795	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.552017
6796	Minimum					1E-12	95% KM (bootstrap t) UCL					1.8498237
6797	Maximum					0.92	95% KM (BCA) UCL					0.5583333
6798	Mean					0.28	95% KM (Percentile Bootstrap) UCL					0.545
6799	Median					0.185	95% KM (Chebyshev) UCL					0.8571626
6800	SD					0.3246537	97.5% KM (Chebyshev) UCL					1.096805
6801	k star					0.1956104	99% KM (Chebyshev) UCL					1.567536
6802	Theta star					1.4314167						
6803	Nu star					2.3473248	Potential UCLs to Use					
6804	AppChi2					0.2086202	95% KM (Chebyshev) UCL					0.8571626
6805	95% Gamma Approximate UCL					3.1504657						
6806	95% Adjusted Gamma UCL					6.4507194						
6807	Note: DL/2 is not a recommended method.											
6808												

	A	B	C	D	E	F	G	H	I	J	K	L
6809	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
6810	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
6811	For additional insight, the user may want to consult a statistician.											
6812												
6813												
6814	M|MG/KG|VANADIUM (gi_et_clams_and_mussels_nw_2010)											
6815												
6816	General Statistics											
6817	Number of Valid Observations	1				Number of Distinct Observations	1					
6818												
6819												
6820	Warning: This data set only has 1 observations!											
6821	Data set is too small to compute reliable and meaningful statistics and estimates!											
6822	The data set for variable M|MG/KG|VANADIUM (gi_et_clams_and_mussels_nw_2010) was not processed!											
6823												
6824	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6825	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6826												
6827												
6828												
6829	M|MG/KG|VANADIUM (gi_et_clams_and_mussels_ref_2010)											
6830												
6831	General Statistics											
6832	Number of Valid Observations	3				Number of Distinct Observations	3					
6833												
6834												
6835	Warning: This data set only has 3 observations!											
6836	Data set is too small to compute reliable and meaningful statistics and estimates!											
6837	The data set for variable M|MG/KG|VANADIUM (gi_et_clams_and_mussels_ref_2010) was not processed!											
6838												
6839	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6840	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6841												
6842												
6843												
6844	M|MG/KG|VANADIUM (gi_et_clams_and_mussels_s_2005)											
6845												
6846	General Statistics											
6847	Number of Valid Data	3				Number of Detected Data	1					
6848	Number of Distinct Detected Data	1				Number of Non-Detect Data	2					
6849						Percent Non-Detects	66.67%					
6850												
6851	Warning: This data set only has 3 observations!											
6852	Data set is too small to compute reliable and meaningful statistics and estimates!											
6853	The data set for variable M|MG/KG|VANADIUM (gi_et_clams_and_mussels_s_2005) was not processed!											
6854												
6855	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6856	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6857												
6858												
6859												
6860	M|MG/KG|VANADIUM (gi_et_clams_and_mussels_s_2010)											
6861												
6862	General Statistics											
6863	Number of Valid Observations	1				Number of Distinct Observations	1					
6864												
6865												
6866	Warning: This data set only has 1 observations!											
6867	Data set is too small to compute reliable and meaningful statistics and estimates!											
6868	The data set for variable M|MG/KG|VANADIUM (gi_et_clams_and_mussels_s_2010) was not processed!											
6869												
6870	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6871	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6872												
6873												
6874												
6875	M|MG/KG|VANADIUM (gi_et_clams_and_mussels_stillwater_2005)											
6876												
6877	General Statistics											
6878	Number of Valid Observations	1				Number of Distinct Observations	1					
6879												
6880												
6881	Warning: This data set only has 1 observations!											
6882	Data set is too small to compute reliable and meaningful statistics and estimates!											

	A	B	C	D	E	F	G	H	I	J	K	L
6883	The data set for variable M|MG/KG|VANADIUM (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
6884												
6885	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6886	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6887												
6888												
6889												
6890	M|MG/KG|VANADIUM (gi_et_clams_and_mussels_stillwater_2010)											
6891												
6892	General Statistics											
6893	Number of Valid Observations	3				Number of Distinct Observations	3					
6894												
6895												
6896	Warning: This data set only has 3 observations!											
6897	Data set is too small to compute reliable and meaningful statistics and estimates!											
6898	The data set for variable M|MG/KG|VANADIUM (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
6899												
6900	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6901	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6902												
6903												
6904												
6905	M|MG/KG|VANADIUM (gi_et_crabs_ne_2010)											
6906												
6907	General Statistics											
6908	Number of Valid Observations	2				Number of Distinct Observations	2					
6909												
6910												
6911	Warning: This data set only has 2 observations!											
6912	Data set is too small to compute reliable and meaningful statistics and estimates!											
6913	The data set for variable M|MG/KG|VANADIUM (gi_et_crabs_ne_2010) was not processed!											
6914												
6915	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6916	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6917												
6918												
6919												
6920	M|MG/KG|VANADIUM (gi_et_crabs_nw_2010)											
6921												
6922	General Statistics											
6923	Number of Valid Observations	1				Number of Distinct Observations	1					
6924												
6925												
6926	Warning: This data set only has 1 observations!											
6927	Data set is too small to compute reliable and meaningful statistics and estimates!											
6928	The data set for variable M|MG/KG|VANADIUM (gi_et_crabs_nw_2010) was not processed!											
6929												
6930	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6931	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6932												
6933												
6934												
6935	M|MG/KG|VANADIUM (gi_et_crabs_ref_2010)											
6936												
6937	General Statistics											
6938	Number of Valid Observations	3				Number of Distinct Observations	3					
6939												
6940												
6941	Warning: This data set only has 3 observations!											
6942	Data set is too small to compute reliable and meaningful statistics and estimates!											
6943	The data set for variable M|MG/KG|VANADIUM (gi_et_crabs_ref_2010) was not processed!											
6944												
6945	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
6946	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
6947												
6948												
6949												
6950	M|MG/KG|VANADIUM (gi_et_crabs_stillwater_2010)											
6951												
6952	General Statistics											
6953	Number of Valid Observations	3				Number of Distinct Observations	2					
6954												
6955												
6956	Warning: This data set only has 3 observations!											

	A	B	C	D	E	F	G	H	I	J	K	L
6957	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
6958	**The data set for variable M|MG/KG|VANADIUM (gi_et_crabs_stillwater_2010) was not processed!**											
6959												
6960	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
6961	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
6962												
6963												
6964												
6965	**M|MG/KG|ZINC (gi_et_clams_and_mussels_ne_2005)**											
6966												
6967	**General Statistics**											
6968	Number of Valid Observations					11	Number of Distinct Observations					11
6969												
6970	**Raw Statistics**						**Log-transformed Statistics**					
6971	Minimum					7.1	Minimum of Log Data					1.9600948
6972	Maximum					24.3	Maximum of Log Data					3.1904764
6973	Mean					13.981818	Mean of log Data					2.5793165
6974	Median					13.2	SD of log Data					0.3577113
6975	SD					5.1150402						
6976	Coefficient of Variation					0.3658351						
6977	Skewness					0.8718491						
6978												
6979	**Relevant UCL Statistics**											
6980	**Normal Distribution Test**						**Lognormal Distribution Test**					
6981	Shapiro Wilk Test Statistic					0.939829	Shapiro Wilk Test Statistic					0.9872926
6982	Shapiro Wilk Critical Value					0.85	Shapiro Wilk Critical Value					0.85
6983	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
6984												
6985	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
6986	95% Student's-t UCL					16.777073	95% H-UCL					17.644011
6987	**95% UCLs (Adjusted for Skewness)**						95% Chebyshev (MVUE) UCL					20.618413
6988	95% Adjusted-CLT UCL (Chen-1995)					16.951771	97.5% Chebyshev (MVUE) UCL					23.493445
6989	95% Modified-t UCL (Johnson-1978)					16.844642	99% Chebyshev (MVUE) UCL					29.140891
6990												
6991	**Gamma Distribution Test**						**Data Distribution**					
6992	k star (bias corrected)					6.4016405	**Data appear Normal at 5% Significance Level**					
6993	Theta Star					2.1840992						
6994	MLE of Mean					13.981818						
6995	MLE of Standard Deviation					5.5260907						
6996	nu star					140.83609						
6997	Approximate Chi Square Value (.05)					114.41324	**Nonparametric Statistics**					
6998	Adjusted Level of Significance					0.02783	95% CLT UCL					16.518582
6999	Adjusted Chi Square Value					110.53372	95% Jackknife UCL					16.777073
7000							95% Standard Bootstrap UCL					16.418465
7001	Anderson-Darling Test Statistic					0.178966	95% Bootstrap-t UCL					17.80959
7002	Anderson-Darling 5% Critical Value					0.7298927	95% Hall's Bootstrap UCL					19.243799
7003	Kolmogorov-Smirnov Test Statistic					0.123577	95% Percentile Bootstrap UCL					16.445455
7004	Kolmogorov-Smirnov 5% Critical Value					0.2555389	95% BCA Bootstrap UCL					16.854545
7005	**Data appear Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL					20.704298
7006							97.5% Chebyshev(Mean, Sd) UCL					23.61312
7007	**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL					29.326939
7008	95% Approximate Gamma UCL					17.210811						
7009	95% Adjusted Gamma UCL					17.814877						
7010												
7011	**Potential UCL to Use**						Use 95% Student's-t UCL					16.777073
7012												
7013	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
7014	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
7015	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
7016												
7017												
7018	**M|MG/KG|ZINC (gi_et_clams_and_mussels_ne_2010)**											
7019												
7020	**General Statistics**											
7021	Number of Valid Observations					5	Number of Distinct Observations					5
7022												
7023	**Raw Statistics**						**Log-transformed Statistics**					
7024	Minimum					15.1	Minimum of Log Data					2.7146947
7025	Maximum					19.5	Maximum of Log Data					2.9704145
7026	Mean					17.48	Mean of log Data					2.8561263
7027	Median					18.4	SD of log Data					0.1117564
7028	SD					1.9149413						
7029	Coefficient of Variation					0.1095504						
7030	Skewness					-0.46264						

7031												
7032												
7033	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
7034												
7035	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
7036	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
7037												
7038												
7039	**Warning: There are only 5 Values in this data**											
7040	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
7041	**the resulting calculations may not be reliable enough to draw conclusions**											
7042												
7043	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
7044												
7045	**Relevant UCL Statistics**											
7046	**Normal Distribution Test**						**Lognormal Distribution Test**					
7047	Shapiro Wilk Test Statistic				0.8834971		Shapiro Wilk Test Statistic				0.8770336	
7048	Shapiro Wilk Critical Value				0.762		Shapiro Wilk Critical Value				0.762	
7049	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
7050												
7051	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
7052	95% Student's-t UCL				19.305688					95% H-UCL		19.62953
7053	**95% UCLs (Adjusted for Skewness)**									95% Chebyshev (MVUE) UCL		21.287771
7054	95% Adjusted-CLT UCL (Chen-1995)				18.699307					97.5% Chebyshev (MVUE) UCL		22.934938
7055	95% Modified-t UCL (Johnson-1978)				19.276157					99% Chebyshev (MVUE) UCL		26.17048
7056												
7057	**Gamma Distribution Test**						**Data Distribution**					
7058	k star (bias corrected)				40.758864		**Data appear Normal at 5% Significance Level**					
7059	Theta Star				0.4288638							
7060	MLE of Mean				17.48							
7061	MLE of Standard Deviation				2.7379808							
7062	nu star				407.58864							
7063	Approximate Chi Square Value (.05)				361.79012		**Nonparametric Statistics**					
7064	Adjusted Level of Significance				0.0086					95% CLT UCL		18.888633
7065	Adjusted Chi Square Value				342.69587					95% Jackknife UCL		19.305688
7066										95% Standard Bootstrap UCL		18.721919
7067	Anderson-Darling Test Statistic				0.4558207					95% Bootstrap-t UCL		19.326933
7068	Anderson-Darling 5% Critical Value				0.67808					95% Hall's Bootstrap UCL		18.249523
7069	Kolmogorov-Smirnov Test Statistic				0.3103222					95% Percentile Bootstrap UCL		18.74
7070	Kolmogorov-Smirnov 5% Critical Value				0.35682					95% BCA Bootstrap UCL		18.58
7071	**Data appear Gamma Distributed at 5% Significance Level**									95% Chebyshev(Mean, Sd) UCL		21.212908
7072										97.5% Chebyshev(Mean, Sd) UCL		22.82814
7073	**Assuming Gamma Distribution**									99% Chebyshev(Mean, Sd) UCL		26.000951
7074	95% Approximate Gamma UCL				19.692769							
7075	95% Adjusted Gamma UCL				20.790007							
7076												
7077	**Potential UCL to Use**									Use 95% Student's-t UCL		19.305688
7078												
7079	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
7080	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
7081	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
7082												
7083												
7084	**M|MG/KG|ZINC (gi_et_clams_and_mussels_nw_2005)**											
7085												
7086	**General Statistics**											
7087	Number of Valid Observations				6		Number of Distinct Observations				6	
7088												
7089	**Raw Statistics**						**Log-transformed Statistics**					
7090	Minimum				10.5		Minimum of Log Data				2.3513753	
7091	Maximum				36.1		Maximum of Log Data				3.5862929	
7092	Mean				18.383333		Mean of log Data				2.7996307	
7093	Median				14.25		SD of log Data				0.5009426	
7094	SD				10.161381							
7095	Coefficient of Variation				0.5527497							
7096	Skewness				1.3191814							
7097												
7098												
7099	**Warning: A sample size of 'n' = 6 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
7100												
7101	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
7102	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
7103												
7104												

	A	B	C	D	E	F	G	H	I	J	K	L
7105	**Warning: There are only 6 Values in this data**											
7106	**Note: It should be noted that even though bootstrap methods may be performed on this data set,**											
7107	**the resulting calculations may not be reliable enough to draw conclusions**											
7108												
7109	**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**											
7110												
7111	**Relevant UCL Statistics**											
7112	**Normal Distribution Test**						**Lognormal Distribution Test**					
7113	Shapiro Wilk Test Statistic					0.8312196	Shapiro Wilk Test Statistic					0.8841464
7114	Shapiro Wilk Critical Value					0.788	Shapiro Wilk Critical Value					0.788
7115	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
7116												
7117	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
7118	95% Student's-t UCL					26.742492	95% H-UCL					33.669529
7119	**95% UCLs (Adjusted for Skewness)**						95% Chebyshev (MVUE) UCL					34.445146
7120	95% Adjusted-CLT UCL (Chen-1995)					27.593976	97.5% Chebyshev (MVUE) UCL					41.464554
7121	95% Modified-t UCL (Johnson-1978)					27.114845	99% Chebyshev (MVUE) UCL					55.252821
7122												
7123	**Gamma Distribution Test**						**Data Distribution**					
7124	k star (bias corrected)					2.427057	**Data appear Normal at 5% Significance Level**					
7125	Theta Star					7.5743312						
7126	MLE of Mean					18.383333						
7127	MLE of Standard Deviation					11.800062						
7128	nu star					29.124684						
7129	Approximate Chi Square Value (.05)					17.806099	**Nonparametric Statistics**					
7130	Adjusted Level of Significance					0.01222	95% CLT UCL					25.206789
7131	Adjusted Chi Square Value					14.704911	95% Jackknife UCL					26.742492
7132							95% Standard Bootstrap UCL					24.713263
7133	Anderson-Darling Test Statistic					0.4482726	95% Bootstrap-t UCL					40.983172
7134	Anderson-Darling 5% Critical Value					0.6987604	95% Hall's Bootstrap UCL					61.418835
7135	Kolmogorov-Smirnov Test Statistic					0.2373229	95% Percentile Bootstrap UCL					25.666667
7136	Kolmogorov-Smirnov 5% Critical Value					0.3330661	95% BCA Bootstrap UCL					26.4
7137	**Data appear Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL					36.465644
7138							97.5% Chebyshev(Mean, Sd) UCL					44.289874
7139	**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL					59.659059
7140	95% Approximate Gamma UCL					30.068841						
7141	95% Adjusted Gamma UCL					36.4102						
7142												
7143	**Potential UCL to Use**						Use 95% Student's-t UCL					26.742492
7144												
7145	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
7146	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
7147	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
7148												
7149												
7150	**M|MG/KG|ZINC (gi_et_clams_and_mussels_nw_2010)**											
7151												
7152	**General Statistics**											
7153	Number of Valid Observations					1	Number of Distinct Observations					1
7154												
7155												
7156	**Warning: This data set only has 1 observations!**											
7157	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
7158	**The data set for variable M|MG/KG|ZINC (gi_et_clams_and_mussels_nw_2010) was not processed!**											
7159												
7160	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
7161	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
7162												
7163												
7164												
7165	**M|MG/KG|ZINC (gi_et_clams_and_mussels_ref_2010)**											
7166												
7167	**General Statistics**											
7168	Number of Valid Observations					3	Number of Distinct Observations					3
7169												
7170												
7171	**Warning: This data set only has 3 observations!**											
7172	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
7173	**The data set for variable M|MG/KG|ZINC (gi_et_clams_and_mussels_ref_2010) was not processed!**											
7174												
7175	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
7176	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
7177												
7178												

	A	B	C	D	E	F	G	H	I	J	K	L
7179												
7180	**M|MG/KG|ZINC (gi_et_clams_and_mussels_s_2005)**											
7181												
7182	**General Statistics**											
7183	Number of Valid Observations				3		Number of Distinct Observations				3	
7184												
7185												
7186	**Warning: This data set only has 3 observations!**											
7187	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
7188	**The data set for variable M|MG/KG|ZINC (gi_et_clams_and_mussels_s_2005) was not processed!**											
7189												
7190	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
7191	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
7192												
7193												
7194												
7195	**M|MG/KG|ZINC (gi_et_clams_and_mussels_s_2010)**											
7196												
7197	**General Statistics**											
7198	Number of Valid Observations				1		Number of Distinct Observations				1	
7199												
7200												
7201	**Warning: This data set only has 1 observations!**											
7202	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
7203	**The data set for variable M|MG/KG|ZINC (gi_et_clams_and_mussels_s_2010) was not processed!**											
7204												
7205	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
7206	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
7207												
7208												
7209												
7210	**M|MG/KG|ZINC (gi_et_clams_and_mussels_stillwater_2005)**											
7211												
7212	**General Statistics**											
7213	Number of Valid Observations				1		Number of Distinct Observations				1	
7214												
7215												
7216	**Warning: This data set only has 1 observations!**											
7217	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
7218	**The data set for variable M|MG/KG|ZINC (gi_et_clams_and_mussels_stillwater_2005) was not processed!**											
7219												
7220	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
7221	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
7222												
7223												
7224												
7225	**M|MG/KG|ZINC (gi_et_clams_and_mussels_stillwater_2010)**											
7226												
7227	**General Statistics**											
7228	Number of Valid Observations				3		Number of Distinct Observations				3	
7229												
7230												
7231	**Warning: This data set only has 3 observations!**											
7232	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
7233	**The data set for variable M|MG/KG|ZINC (gi_et_clams_and_mussels_stillwater_2010) was not processed!**											
7234												
7235	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
7236	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
7237												
7238												
7239												
7240	**M|MG/KG|ZINC (gi_et_crabs_ne_2010)**											
7241												
7242	**General Statistics**											
7243	Number of Valid Observations				2		Number of Distinct Observations				2	
7244												
7245												
7246	**Warning: This data set only has 2 observations!**											
7247	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
7248	**The data set for variable M|MG/KG|ZINC (gi_et_crabs_ne_2010) was not processed!**											
7249												
7250	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
7251	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
7252												

7253												
7254												
7255	**M|MG/KG|ZINC (gi_et_crabs_nw_2010)**											
7256												
7257						**General Statistics**						
7258					Number of Valid Observations	1			Number of Distinct Observations	1		
7259												
7260												
7261						**Warning: This data set only has 1 observations!**						
7262						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
7263						**The data set for variable M|MG/KG|ZINC (gi_et_crabs_nw_2010) was not processed!**						
7264												
7265						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
7266						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
7267												
7268												
7269												
7270	**M|MG/KG|ZINC (gi_et_crabs_ref_2010)**											
7271												
7272						**General Statistics**						
7273					Number of Valid Observations	3			Number of Distinct Observations	3		
7274												
7275												
7276						**Warning: This data set only has 3 observations!**						
7277						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
7278						**The data set for variable M|MG/KG|ZINC (gi_et_crabs_ref_2010) was not processed!**						
7279												
7280						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
7281						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
7282												
7283												
7284												
7285	**M|MG/KG|ZINC (gi_et_crabs_stillwater_2010)**											
7286												
7287						**General Statistics**						
7288					Number of Valid Observations	3			Number of Distinct Observations	3		
7289												
7290												
7291						**Warning: This data set only has 3 observations!**						
7292						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
7293						**The data set for variable M|MG/KG|ZINC (gi_et_crabs_stillwater_2010) was not processed!**						
7294												
7295						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
7296						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
7297												
7298												
7299												
7300	**OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_ne_2005)**											
7301												
7302						**General Statistics**						
7303					Number of Valid Data	11			Number of Detected Data	0		
7304					Number of Distinct Detected Data	0			Number of Non-Detect Data	11		
7305									Percent Non-Detects	100.00%		
7306												
7307						**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**						
7308						**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**						
7309						**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**						
7310												
7311						**The data set for variable OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_ne_2005) was not processed!**						
7312												
7313												
7314												
7315	**OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_ne_2010)**											
7316												
7317						**General Statistics**						
7318					Number of Valid Data	0			Number of Detected Data	0		
7319					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
7320					Number of Missing Values	5			Percent Non-Detects	NaN%		
7321												
7322						**Warning: This data set only has 0 observations!**						
7323						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
7324						**The data set for variable OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_ne_2010) was not processed!**						
7325												
7326						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						

	A	B	C	D	E	F	G	H	I	J	K	L
7327	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7328												
7329												
7330												
7331	OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_nw_2005)											
7332												
7333	General Statistics											
7334					Number of Valid Data	6		Number of Detected Data				0
7335					Number of Distinct Detected Data	0		Number of Non-Detect Data				6
7336								Percent Non-Detects				100.00%
7337												
7338	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
7339	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
7340	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
7341												
7342	The data set for variable OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_nw_2005) was not processed!											
7343												
7344												
7345												
7346	OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_nw_2010)											
7347												
7348	General Statistics											
7349					Number of Valid Data	0		Number of Detected Data				0
7350					Number of Distinct Detected Data	0		Number of Non-Detect Data				0
7351					Number of Missing Values	1		Percent Non-Detects				NaN%
7352												
7353	Warning: This data set only has 0 observations!											
7354	Data set is too small to compute reliable and meaningful statistics and estimates!											
7355	The data set for variable OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_nw_2010) was not processed!											
7356												
7357	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7358	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7359												
7360												
7361												
7362	OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_ref_2010)											
7363												
7364	General Statistics											
7365					Number of Valid Data	0		Number of Detected Data				0
7366					Number of Distinct Detected Data	0		Number of Non-Detect Data				0
7367					Number of Missing Values	3		Percent Non-Detects				NaN%
7368												
7369	Warning: This data set only has 0 observations!											
7370	Data set is too small to compute reliable and meaningful statistics and estimates!											
7371	The data set for variable OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_ref_2010) was not processed!											
7372												
7373	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7374	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7375												
7376												
7377												
7378	OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_s_2005)											
7379												
7380	General Statistics											
7381					Number of Valid Data	3		Number of Detected Data				1
7382					Number of Distinct Detected Data	1		Number of Non-Detect Data				2
7383								Percent Non-Detects				66.67%
7384												
7385	Warning: This data set only has 3 observations!											
7386	Data set is too small to compute reliable and meaningful statistics and estimates!											
7387	The data set for variable OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_s_2005) was not processed!											
7388												
7389	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7390	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7391												
7392												
7393												
7394	OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_s_2010)											
7395												
7396	General Statistics											
7397					Number of Valid Data	0		Number of Detected Data				0
7398					Number of Distinct Detected Data	0		Number of Non-Detect Data				0
7399					Number of Missing Values	1		Percent Non-Detects				NaN%
7400												

	A	B	C	D	E	F	G	H	I	J	K	L
7401	Warning: This data set only has 0 observations!											
7402	Data set is too small to compute reliable and meaningful statistics and estimates!											
7403	The data set for variable OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_s_2010) was not processed!											
7404												
7405	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7406	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7407												
7408												
7409												
7410	OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_stillwater_2005)											
7411												
7412	General Statistics											
7413					Number of Valid Data	1			Number of Detected Data	0		
7414					Number of Distinct Detected Data	0			Number of Non-Detect Data	1		
7415									Percent Non-Detects	100.00%		
7416												
7417	Warning: This data set only has 1 observations!											
7418	Data set is too small to compute reliable and meaningful statistics and estimates!											
7419	The data set for variable OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
7420												
7421	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7422	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7423												
7424												
7425												
7426	OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_stillwater_2010)											
7427												
7428	General Statistics											
7429					Number of Valid Data	0			Number of Detected Data	0		
7430					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
7431					Number of Missing Values	3			Percent Non-Detects	NaN%		
7432												
7433	Warning: This data set only has 0 observations!											
7434	Data set is too small to compute reliable and meaningful statistics and estimates!											
7435	The data set for variable OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
7436												
7437	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7438	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7439												
7440												
7441												
7442	OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_crabs_ne_2010)											
7443												
7444	General Statistics											
7445					Number of Valid Data	0			Number of Detected Data	0		
7446					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
7447					Number of Missing Values	2			Percent Non-Detects	NaN%		
7448												
7449	Warning: This data set only has 0 observations!											
7450	Data set is too small to compute reliable and meaningful statistics and estimates!											
7451	The data set for variable OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_crabs_ne_2010) was not processed!											
7452												
7453	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7454	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7455												
7456												
7457												
7458	OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_crabs_nw_2010)											
7459												
7460	General Statistics											
7461					Number of Valid Data	0			Number of Detected Data	0		
7462					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
7463					Number of Missing Values	1			Percent Non-Detects	NaN%		
7464												
7465	Warning: This data set only has 0 observations!											
7466	Data set is too small to compute reliable and meaningful statistics and estimates!											
7467	The data set for variable OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_crabs_nw_2010) was not processed!											
7468												
7469	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7470	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7471												
7472												
7473												
7474	OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_crabs_ref_2010)											

7475												
7476						General Statistics						
7477					Number of Valid Data	0			Number of Detected Data			0
7478					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
7479					Number of Missing Values	3			Percent Non-Detects			NaN%
7480												
7481						Warning: This data set only has 0 observations!						
7482						Data set is too small to compute reliable and meaningful statistics and estimates!						
7483						The data set for variable OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_crabs_ref_2010) was not processed!						
7484												
7485						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
7486						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
7487												
7488												
7489												
7490	OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_crabs_stillwater_2010)											
7491												
7492						General Statistics						
7493					Number of Valid Data	0			Number of Detected Data			0
7494					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
7495					Number of Missing Values	3			Percent Non-Detects			NaN%
7496												
7497						Warning: This data set only has 0 observations!						
7498						Data set is too small to compute reliable and meaningful statistics and estimates!						
7499						The data set for variable OS|UG/KG|2,4-DIMETHYLPHENOL (gi_et_crabs_stillwater_2010) was not processed!						
7500												
7501						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
7502						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
7503												
7504												
7505												
7506	OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_ne_2005)											
7507												
7508						General Statistics						
7509					Number of Valid Data	11			Number of Detected Data			3
7510					Number of Distinct Detected Data	3			Number of Non-Detect Data			8
7511									Percent Non-Detects			72.73%
7512												
7513					Raw Statistics				Log-transformed Statistics			
7514					Minimum Detected	230			Minimum Detected			5.4380793
7515					Maximum Detected	330			Maximum Detected			5.7990927
7516					Mean of Detected	286.66667			Mean of Detected			5.6469848
7517					SD of Detected	51.316014			SD of Detected			0.1870886
7518					Minimum Non-Detect	1900			Minimum Non-Detect			7.5496092
7519					Maximum Non-Detect	2000			Maximum Non-Detect			7.6009025
7520												
7521	Note: Data have multiple DLs - Use of KM Method is								Number treated as Non-Detect			11
7522	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected			0
7523	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage			100.00%
7524												
7525						Warning: There are only 3 Distinct Detected Values in this data set						
7526						The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.						
7527						Those methods will return a 'N/A' value on your output display!						
7528												
7529						It is necessary to have 4 or more Distinct Values for bootstrap methods.						
7530						However, results obtained using 4 to 9 distinct values may not be reliable.						
7531						It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.						
7532												
7533												
7534						UCL Statistics						
7535					Normal Distribution Test with Detected Values Only				Lognormal Distribution Test with Detected Values Only			
7536					Shapiro Wilk Test Statistic	0.9493489			Shapiro Wilk Test Statistic			0.9308583
7537					5% Shapiro Wilk Critical Value	0.767			5% Shapiro Wilk Critical Value			0.767
7538					Data appear Normal at 5% Significance Level				Data appear Lognormal at 5% Significance Level			
7539												
7540					Assuming Normal Distribution				Assuming Lognormal Distribution			
7541					DL/2 Substitution Method				DL/2 Substitution Method			
7542					Mean	789.54545			Mean			6.5476181
7543					SD	324.45689			SD			0.5848485
7544					95% DL/2 (t) UCL	966.85388			95% H-Stat (DL/2) UCL			1264.647
7545												
7546					Maximum Likelihood Estimate(MLE) Method	N/A			Log ROS Method			
7547					MLE method failed to converge properly				Mean in Log Scale			5.6469848
7548									SD in Log Scale			0.1567879

7549											Mean in Original Scale	286.58981
7550											SD in Original Scale	44.337536
7551											95% t UCL	310.81928
7552											95% Percentile Bootstrap UCL	307.83268
7553											95% BCA Bootstrap UCL	307.20803
7554												
7555			Gamma Distribution Test with Detected Values Only								Data Distribution Test with Detected Values Only	
7556					k star (bias corrected)	N/A					Data appear Normal at 5% Significance Level	
7557					Theta Star	N/A						
7558					nu star	N/A						
7559												
7560					A-D Test Statistic	N/A					Nonparametric Statistics	
7561					5% A-D Critical Value	N/A					Kaplan-Meier (KM) Method	
7562					K-S Test Statistic	N/A					Mean	286.66667
7563					5% K-S Critical Value	N/A					SD	41.89935
7564			Data not Gamma Distributed at 5% Significance Level								SE of Mean	29.627315
7565											95% KM (t) UCL	340.36502
7566			Assuming Gamma Distribution								95% KM (z) UCL	335.39926
7567			Gamma ROS Statistics using Extrapolated Data								95% KM (jackknife) UCL	349.37284
7568					Minimum	N/A					95% KM (bootstrap t) UCL	352.97542
7569					Maximum	N/A					95% KM (BCA) UCL	N/A
7570					Mean	N/A					95% KM (Percentile Bootstrap) UCL	330
7571					Median	N/A					95% KM (Chebyshev) UCL	415.80914
7572					SD	N/A					97.5% KM (Chebyshev) UCL	471.68919
7573					k star	N/A					99% KM (Chebyshev) UCL	581.45473
7574					Theta star	N/A						
7575					Nu star	N/A					Potential UCLs to Use	
7576					AppChi2	N/A					95% KM (t) UCL	340.36502
7577					95% Gamma Approximate UCL	N/A					95% KM (Percentile Bootstrap) UCL	330
7578					95% Adjusted Gamma UCL	N/A						
7579					Warning: Recommended UCL exceeds the maximum observation							
7580	Note: DL/2 is not a recommended method.											
7581												
7582	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
7583	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
7584	For additional insight, the user may want to consult a statistician.											
7585												
7586												
7587	OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_ne_2010)											
7588												
7589					General Statistics							
7590					Number of Valid Data	0					Number of Detected Data	0
7591					Number of Distinct Detected Data	0					Number of Non-Detect Data	0
7592					Number of Missing Values	5					Percent Non-Detects	NaN%
7593												
7594					Warning: This data set only has 0 observations!							
7595	Data set is too small to compute reliable and meaningful statistics and estimates!											
7596	The data set for variable OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_ne_2010) was not processed!											
7597												
7598	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7599	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7600												
7601												
7602												
7603	OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_nw_2005)											
7604												
7605					General Statistics							
7606					Number of Valid Data	6					Number of Detected Data	3
7607					Number of Distinct Detected Data	3					Number of Non-Detect Data	3
7608											Percent Non-Detects	50.00%
7609												
7610					Raw Statistics						Log-transformed Statistics	
7611					Minimum Detected	220					Minimum Detected	5.3936275
7612					Maximum Detected	600					Maximum Detected	6.3969297
7613					Mean of Detected	406.66667					Mean of Detected	5.9273406
7614					SD of Detected	190.0877					SD of Detected	0.5047155
7615					Minimum Non-Detect	1900					Minimum Non-Detect	7.5496092
7616					Maximum Non-Detect	2000					Maximum Non-Detect	7.6009025
7617												
7618	Note: Data have multiple DLs - Use of KM Method is										Number treated as Non-Detect	6
7619	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	0
7620	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	100.00%
7621												
7622	Warning: There are only 3 Distinct Detected Values in this data set											

	A	B	C	D	E	F	G	H	I	J	K	L
7623	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
7624	**Those methods will return a 'N/A' value on your output display!**											
7625												
7626	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
7627	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
7628	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
7629												
7630												
7631	**UCL Statistics**											
7632	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
7633	Shapiro Wilk Test Statistic					0.9990583	Shapiro Wilk Test Statistic					0.9878748
7634	5% Shapiro Wilk Critical Value					0.767	5% Shapiro Wilk Critical Value					0.767
7635	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
7636												
7637	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
7638	DL/2 Substitution Method						DL/2 Substitution Method					
7639	Mean					686.66667	Mean					6.4004502
7640	SD					329.94949	SD					0.6089705
7641	95% DL/2 (t) UCL					958.09633	95% H-Stat (DL/2) UCL					1603.6396
7642												
7643	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
7644	**MLE method failed to converge properly**						Mean in Log Scale					5.9273406
7645							SD in Log Scale					0.3780813
7646							Mean in Original Scale					397.38293
7647							SD in Original Scale					143.47435
7648							95% t UCL					515.41067
7649							95% Percentile Bootstrap UCL					484.32692
7650							95% BCA Bootstrap UCL					487.6023
7651												
7652	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
7653	k star (bias corrected)					N/A	**Data appear Normal at 5% Significance Level**					
7654	Theta Star					N/A						
7655	nu star					N/A						
7656												
7657	A-D Test Statistic					N/A	**Nonparametric Statistics**					
7658	5% A-D Critical Value					N/A	Kaplan-Meier (KM) Method					
7659	K-S Test Statistic					N/A	Mean					406.66667
7660	5% K-S Critical Value					N/A	SD					155.20596
7661	**Data not Gamma Distributed at 5% Significance Level**						SE of Mean					109.74718
7662							95% KM (t) UCL					627.81255
7663	**Assuming Gamma Distribution**						95% KM (z) UCL					587.18472
7664	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					653.91528
7665	Minimum					N/A	95% KM (bootstrap t) UCL					752.16706
7666	Maximum					N/A	95% KM (BCA) UCL					533.33333
7667	Mean					N/A	95% KM (Percentile Bootstrap) UCL					600
7668	Median					N/A	95% KM (Chebyshev) UCL					885.04355
7669	SD					N/A	97.5% KM (Chebyshev) UCL					1092.0376
7670	k star					N/A	99% KM (Chebyshev) UCL					1498.6374
7671	Theta star					N/A						
7672	Nu star					N/A	**Potential UCLs to Use**					
7673	AppChi2					N/A	95% KM (t) UCL					627.81255
7674	95% Gamma Approximate UCL					N/A	95% KM (Percentile Bootstrap) UCL					600
7675	95% Adjusted Gamma UCL					N/A						
7676	**Warning: Recommended UCL exceeds the maximum observation**											
7677	**Note: DL/2 is not a recommended method.**											
7678												
7679	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
7680	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
7681	**For additional insight, the user may want to consult a statistician.**											
7682												
7683												
7684	**OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_nw_2010)**											
7685												
7686	**General Statistics**											
7687	Number of Valid Data					0	Number of Detected Data					0
7688	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
7689	Number of Missing Values					1	Percent Non-Detects					NaN%
7690												
7691	**Warning: This data set only has 0 observations!**											
7692	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
7693	**The data set for variable OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_nw_2010) was not processed!**											
7694												
7695	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
7696	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											

	A	B	C	D	E	F	G	H	I	J	K	L
7697												
7698												
7699												
7700	**OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_ref_2010)**											
7701												
7702	**General Statistics**											
7703					Number of Valid Data	0			Number of Detected Data			0
7704					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
7705					Number of Missing Values	3			Percent Non-Detects			NaN%
7706												
7707	**Warning: This data set only has 0 observations!**											
7708	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
7709	**The data set for variable OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_ref_2010) was not processed!**											
7710												
7711	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
7712	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
7713												
7714												
7715												
7716	**OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_s_2005)**											
7717												
7718	**General Statistics**											
7719					Number of Valid Data	3			Number of Detected Data			0
7720					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
7721									Percent Non-Detects			100.00%
7722												
7723	**Warning: This data set only has 3 observations!**											
7724	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
7725	**The data set for variable OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_s_2005) was not processed!**											
7726												
7727	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
7728	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
7729												
7730												
7731												
7732	**OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_s_2010)**											
7733												
7734	**General Statistics**											
7735					Number of Valid Data	0			Number of Detected Data			0
7736					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
7737					Number of Missing Values	1			Percent Non-Detects			NaN%
7738												
7739	**Warning: This data set only has 0 observations!**											
7740	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
7741	**The data set for variable OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_s_2010) was not processed!**											
7742												
7743	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
7744	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
7745												
7746												
7747												
7748	**OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_stillwater_2005)**											
7749												
7750	**General Statistics**											
7751					Number of Valid Data	1			Number of Detected Data			0
7752					Number of Distinct Detected Data	0			Number of Non-Detect Data			1
7753									Percent Non-Detects			100.00%
7754												
7755	**Warning: This data set only has 1 observations!**											
7756	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
7757	**The data set for variable OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_stillwater_2005) was not processed!**											
7758												
7759	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
7760	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
7761												
7762												
7763												
7764	**OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_stillwater_2010)**											
7765												
7766	**General Statistics**											
7767					Number of Valid Data	0			Number of Detected Data			0
7768					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
7769					Number of Missing Values	3			Percent Non-Detects			NaN%
7770												

	A	B	C	D	E	F	G	H	I	J	K	L
7771	Warning: This data set only has 0 observations!											
7772	Data set is too small to compute reliable and meaningful statistics and estimates!											
7773	The data set for variable OS|UG/KG|2-METHYLPHENOL (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
7774												
7775	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7776	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7777												
7778												
7779												
7780	OS|UG/KG|2-METHYLPHENOL (gi_et_crabs_ne_2010)											
7781												
7782	General Statistics											
7783					Number of Valid Data	0			Number of Detected Data	0		
7784					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
7785					Number of Missing Values	2			Percent Non-Detects	NaN%		
7786												
7787	Warning: This data set only has 0 observations!											
7788	Data set is too small to compute reliable and meaningful statistics and estimates!											
7789	The data set for variable OS|UG/KG|2-METHYLPHENOL (gi_et_crabs_ne_2010) was not processed!											
7790												
7791	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7792	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7793												
7794												
7795												
7796	OS|UG/KG|2-METHYLPHENOL (gi_et_crabs_nw_2010)											
7797												
7798	General Statistics											
7799					Number of Valid Data	0			Number of Detected Data	0		
7800					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
7801					Number of Missing Values	1			Percent Non-Detects	NaN%		
7802												
7803	Warning: This data set only has 0 observations!											
7804	Data set is too small to compute reliable and meaningful statistics and estimates!											
7805	The data set for variable OS|UG/KG|2-METHYLPHENOL (gi_et_crabs_nw_2010) was not processed!											
7806												
7807	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7808	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7809												
7810												
7811												
7812	OS|UG/KG|2-METHYLPHENOL (gi_et_crabs_ref_2010)											
7813												
7814	General Statistics											
7815					Number of Valid Data	0			Number of Detected Data	0		
7816					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
7817					Number of Missing Values	3			Percent Non-Detects	NaN%		
7818												
7819	Warning: This data set only has 0 observations!											
7820	Data set is too small to compute reliable and meaningful statistics and estimates!											
7821	The data set for variable OS|UG/KG|2-METHYLPHENOL (gi_et_crabs_ref_2010) was not processed!											
7822												
7823	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7824	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7825												
7826												
7827												
7828	OS|UG/KG|2-METHYLPHENOL (gi_et_crabs_stillwater_2010)											
7829												
7830	General Statistics											
7831					Number of Valid Data	0			Number of Detected Data	0		
7832					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
7833					Number of Missing Values	3			Percent Non-Detects	NaN%		
7834												
7835	Warning: This data set only has 0 observations!											
7836	Data set is too small to compute reliable and meaningful statistics and estimates!											
7837	The data set for variable OS|UG/KG|2-METHYLPHENOL (gi_et_crabs_stillwater_2010) was not processed!											
7838												
7839	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7840	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7841												
7842												
7843												
7844	OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_ne_2005)											

7845												
7846						General Statistics						
7847					Number of Valid Data	11			Number of Detected Data	1		
7848					Number of Distinct Detected Data	1			Number of Non-Detect Data	10		
7849									Percent Non-Detects	90.91%		
7850												
7851	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
7852	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters											
7853												
7854	The data set for variable OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_ne_2005) was not											
7855												
7856												
7857												
7858	OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_ne_2010)											
7859												
7860						General Statistics						
7861					Number of Valid Data	0			Number of Detected Data	0		
7862					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
7863					Number of Missing Values	5			Percent Non-Detects	NaN%		
7864												
7865	Warning: This data set only has 0 observations!											
7866	Data set is too small to compute reliable and meaningful statistics and estimates!											
7867	The data set for variable OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_ne_2010) was not											
7868												
7869	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7870	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7871												
7872												
7873												
7874	OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_nw_2005)											
7875												
7876						General Statistics						
7877					Number of Valid Data	6			Number of Detected Data	0		
7878					Number of Distinct Detected Data	0			Number of Non-Detect Data	6		
7879									Percent Non-Detects	100.00%		
7880												
7881	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
7882	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
7883	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
7884												
7885	The data set for variable OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_nw_2005) was not											
7886												
7887												
7888												
7889	OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_nw_2010)											
7890												
7891						General Statistics						
7892					Number of Valid Data	0			Number of Detected Data	0		
7893					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
7894					Number of Missing Values	1			Percent Non-Detects	NaN%		
7895												
7896	Warning: This data set only has 0 observations!											
7897	Data set is too small to compute reliable and meaningful statistics and estimates!											
7898	The data set for variable OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_nw_2010) was not											
7899												
7900	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7901	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7902												
7903												
7904												
7905	OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_ref_2010)											
7906												
7907						General Statistics						
7908					Number of Valid Data	0			Number of Detected Data	0		
7909					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
7910					Number of Missing Values	3			Percent Non-Detects	NaN%		
7911												
7912	Warning: This data set only has 0 observations!											
7913	Data set is too small to compute reliable and meaningful statistics and estimates!											
7914	The data set for variable OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_ref_2010) was not											
7915												
7916	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7917	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7918												

	A	B	C	D	E	F	G	H	I	J	K	L
7919												
7920												
7921	OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_s_2005)											
7922												
7923	General Statistics											
7924					Number of Valid Data	3			Number of Detected Data			0
7925					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
7926									Percent Non-Detects			100.00%
7927												
7928	Warning: This data set only has 3 observations!											
7929	Data set is too small to compute reliable and meaningful statistics and estimates!											
7930	The data set for variable OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_s_2005) was not processed!											
7931												
7932	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7933	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7934												
7935												
7936												
7937	OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_s_2010)											
7938												
7939	General Statistics											
7940					Number of Valid Data	0			Number of Detected Data			0
7941					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
7942					Number of Missing Values	1			Percent Non-Detects			NaN%
7943												
7944	Warning: This data set only has 0 observations!											
7945	Data set is too small to compute reliable and meaningful statistics and estimates!											
7946	The data set for variable OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_s_2010) was not processed!											
7947												
7948	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7949	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7950												
7951												
7952												
7953	OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_stillwater_2005)											
7954												
7955	General Statistics											
7956					Number of Valid Data	1			Number of Detected Data			0
7957					Number of Distinct Detected Data	0			Number of Non-Detect Data			1
7958									Percent Non-Detects			100.00%
7959												
7960	Warning: This data set only has 1 observations!											
7961	Data set is too small to compute reliable and meaningful statistics and estimates!											
7962	The data set for variable OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_stillwater_2005) was not											
7963												
7964	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7965	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7966												
7967												
7968												
7969	OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_stillwater_2010)											
7970												
7971	General Statistics											
7972					Number of Valid Data	0			Number of Detected Data			0
7973					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
7974					Number of Missing Values	3			Percent Non-Detects			NaN%
7975												
7976	Warning: This data set only has 0 observations!											
7977	Data set is too small to compute reliable and meaningful statistics and estimates!											
7978	The data set for variable OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_clams_and_mussels_stillwater_2010) was not											
7979												
7980	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7981	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7982												
7983												
7984												
7985	OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_crabs_ne_2010)											
7986												
7987	General Statistics											
7988					Number of Valid Data	0			Number of Detected Data			0
7989					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
7990					Number of Missing Values	2			Percent Non-Detects			NaN%
7991												
7992	Warning: This data set only has 0 observations!											

	A	B	C	D	E	F	G	H	I	J	K	L
7993	Data set is too small to compute reliable and meaningful statistics and estimates!											
7994	The data set for variable OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_crabs_ne_2010) was not processed!											
7995												
7996	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
7997	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
7998												
7999												
8000												
8001	OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_crabs_nw_2010)											
8002												
8003	General Statistics											
8004					Number of Valid Data	0			Number of Detected Data	0		
8005					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
8006					Number of Missing Values	1			Percent Non-Detects	NaN%		
8007												
8008	Warning: This data set only has 0 observations!											
8009	Data set is too small to compute reliable and meaningful statistics and estimates!											
8010	The data set for variable OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_crabs_nw_2010) was not processed!											
8011												
8012	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8013	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8014												
8015												
8016												
8017	OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_crabs_ref_2010)											
8018												
8019	General Statistics											
8020					Number of Valid Data	0			Number of Detected Data	0		
8021					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
8022					Number of Missing Values	3			Percent Non-Detects	NaN%		
8023												
8024	Warning: This data set only has 0 observations!											
8025	Data set is too small to compute reliable and meaningful statistics and estimates!											
8026	The data set for variable OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_crabs_ref_2010) was not processed!											
8027												
8028	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8029	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8030												
8031												
8032												
8033	OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_crabs_stillwater_2010)											
8034												
8035	General Statistics											
8036					Number of Valid Data	0			Number of Detected Data	0		
8037					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
8038					Number of Missing Values	3			Percent Non-Detects	NaN%		
8039												
8040	Warning: This data set only has 0 observations!											
8041	Data set is too small to compute reliable and meaningful statistics and estimates!											
8042	The data set for variable OS|UG/KG|4-CHLORO-3-METHYLPHENOL (gi_et_crabs_stillwater_2010) was not processed!											
8043												
8044	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8045	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8046												
8047												
8048												
8049	OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_ne_2005)											
8050												
8051	General Statistics											
8052					Number of Valid Data	11			Number of Detected Data	0		
8053					Number of Distinct Detected Data	0			Number of Non-Detect Data	11		
8054									Percent Non-Detects	100.00%		
8055												
8056	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
8057	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
8058	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
8059												
8060	The data set for variable OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_ne_2005) was not processed!											
8061												
8062												
8063												
8064	OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_ne_2010)											
8065												
8066	General Statistics											

8067					Number of Valid Data	0				Number of Detected Data		0
8068					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
8069					Number of Missing Values	5				Percent Non-Detects		NaN%
8070												
8071					Warning: This data set only has 0 observations!							
8072					Data set is too small to compute reliable and meaningful statistics and estimates!							
8073					The data set for variable OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_ne_2010) was not processed!							
8074												
8075					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
8076					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
8077												
8078												
8079												
8080	OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_nw_2005)											
8081												
8082					General Statistics							
8083					Number of Valid Data	6				Number of Detected Data		0
8084					Number of Distinct Detected Data	0				Number of Non-Detect Data		6
8085										Percent Non-Detects		100.00%
8086												
8087					Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!							
8088					Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!							
8089					The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).							
8090												
8091					The data set for variable OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_nw_2005) was not processed!							
8092												
8093												
8094												
8095	OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_nw_2010)											
8096												
8097					General Statistics							
8098					Number of Valid Data	0				Number of Detected Data		0
8099					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
8100					Number of Missing Values	1				Percent Non-Detects		NaN%
8101												
8102					Warning: This data set only has 0 observations!							
8103					Data set is too small to compute reliable and meaningful statistics and estimates!							
8104					The data set for variable OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_nw_2010) was not processed!							
8105												
8106					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
8107					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
8108												
8109												
8110												
8111	OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_ref_2010)											
8112												
8113					General Statistics							
8114					Number of Valid Data	0				Number of Detected Data		0
8115					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
8116					Number of Missing Values	3				Percent Non-Detects		NaN%
8117												
8118					Warning: This data set only has 0 observations!							
8119					Data set is too small to compute reliable and meaningful statistics and estimates!							
8120					The data set for variable OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_ref_2010) was not processed!							
8121												
8122					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
8123					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
8124												
8125												
8126												
8127	OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_s_2005)											
8128												
8129					General Statistics							
8130					Number of Valid Data	3				Number of Detected Data		0
8131					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
8132										Percent Non-Detects		100.00%
8133												
8134					Warning: This data set only has 3 observations!							
8135					Data set is too small to compute reliable and meaningful statistics and estimates!							
8136					The data set for variable OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_s_2005) was not processed!							
8137												
8138					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
8139					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
8140												

	A	B	C	D	E	F	G	H	I	J	K	L
8141												
8142												
8143	OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_s_2010)											
8144												
8145	General Statistics											
8146					Number of Valid Data	0			Number of Detected Data			0
8147					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
8148					Number of Missing Values	1			Percent Non-Detects			NaN%
8149												
8150	Warning: This data set only has 0 observations!											
8151	Data set is too small to compute reliable and meaningful statistics and estimates!											
8152	The data set for variable OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_s_2010) was not processed!											
8153												
8154	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8155	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8156												
8157												
8158												
8159	OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_stillwater_2005)											
8160												
8161	General Statistics											
8162					Number of Valid Observations	1			Number of Distinct Observations			1
8163												
8164												
8165	Warning: This data set only has 1 observations!											
8166	Data set is too small to compute reliable and meaningful statistics and estimates!											
8167	The data set for variable OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
8168												
8169	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8170	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8171												
8172												
8173												
8174	OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_stillwater_2010)											
8175												
8176	General Statistics											
8177					Number of Valid Data	0			Number of Detected Data			0
8178					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
8179					Number of Missing Values	3			Percent Non-Detects			NaN%
8180												
8181	Warning: This data set only has 0 observations!											
8182	Data set is too small to compute reliable and meaningful statistics and estimates!											
8183	The data set for variable OS|UG/KG|ANTHRACENE (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
8184												
8185	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8186	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8187												
8188												
8189												
8190	OS|UG/KG|ANTHRACENE (gi_et_crabs_ne_2010)											
8191												
8192	General Statistics											
8193					Number of Valid Data	0			Number of Detected Data			0
8194					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
8195					Number of Missing Values	2			Percent Non-Detects			NaN%
8196												
8197	Warning: This data set only has 0 observations!											
8198	Data set is too small to compute reliable and meaningful statistics and estimates!											
8199	The data set for variable OS|UG/KG|ANTHRACENE (gi_et_crabs_ne_2010) was not processed!											
8200												
8201	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8202	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8203												
8204												
8205												
8206	OS|UG/KG|ANTHRACENE (gi_et_crabs_nw_2010)											
8207												
8208	General Statistics											
8209					Number of Valid Data	0			Number of Detected Data			0
8210					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
8211					Number of Missing Values	1			Percent Non-Detects			NaN%
8212												
8213	Warning: This data set only has 0 observations!											
8214	Data set is too small to compute reliable and meaningful statistics and estimates!											

	A	B	C	D	E	F	G	H	I	J	K	L
8215	The data set for variable OS|UG/KG|ANTHRACENE (gi_et_crabs_nw_2010) was not processed!											
8216												
8217	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8218	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8219												
8220												
8221												
8222	OS|UG/KG|ANTHRACENE (gi_et_crabs_ref_2010)											
8223												
8224	General Statistics											
8225					Number of Valid Data	0			Number of Detected Data	0		
8226					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
8227					Number of Missing Values	3			Percent Non-Detects	NaN%		
8228												
8229	Warning: This data set only has 0 observations!											
8230	Data set is too small to compute reliable and meaningful statistics and estimates!											
8231	The data set for variable OS|UG/KG|ANTHRACENE (gi_et_crabs_ref_2010) was not processed!											
8232												
8233	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8234	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8235												
8236												
8237												
8238	OS|UG/KG|ANTHRACENE (gi_et_crabs_stillwater_2010)											
8239												
8240	General Statistics											
8241					Number of Valid Data	0			Number of Detected Data	0		
8242					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
8243					Number of Missing Values	3			Percent Non-Detects	NaN%		
8244												
8245	Warning: This data set only has 0 observations!											
8246	Data set is too small to compute reliable and meaningful statistics and estimates!											
8247	The data set for variable OS|UG/KG|ANTHRACENE (gi_et_crabs_stillwater_2010) was not processed!											
8248												
8249	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8250	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8251												
8252												
8253												
8254	OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_ne_2005)											
8255												
8256	General Statistics											
8257					Number of Valid Data	11			Number of Detected Data	10		
8258					Number of Distinct Detected Data	10			Number of Non-Detect Data	1		
8259									Percent Non-Detects	9.09%		
8260												
8261	Raw Statistics							Log-transformed Statistics				
8262					Minimum Detected	1100			Minimum Detected	7.0030655		
8263					Maximum Detected	27000			Maximum Detected	10.203592		
8264					Mean of Detected	11975			Mean of Detected	8.8198767		
8265					SD of Detected	10419.62			SD of Detected	1.2716405		
8266					Minimum Non-Detect	2000			Minimum Non-Detect	7.6009025		
8267					Maximum Non-Detect	2000			Maximum Non-Detect	7.6009025		
8268												
8269												
8270	UCL Statistics											
8271	Normal Distribution Test with Detected Values Only							Lognormal Distribution Test with Detected Values Only				
8272					Shapiro Wilk Test Statistic	0.8473486			Shapiro Wilk Test Statistic	0.8578576		
8273					5% Shapiro Wilk Critical Value	0.842			5% Shapiro Wilk Critical Value	0.842		
8274	Data appear Normal at 5% Significance Level							Data appear Lognormal at 5% Significance Level				
8275												
8276	Assuming Normal Distribution							Assuming Lognormal Distribution				
8277					DL/2 Substitution Method				DL/2 Substitution Method			
8278					Mean	10977.273			Mean	8.6460475		
8279					SD	10424.091			SD	1.3370659		
8280					95% DL/2 (t) UCL	16673.805			95% H-Stat (DL/2) UCL	65958.333		
8281												
8282					Maximum Likelihood Estimate(MLE) Method				Log ROS Method			
8283					Mean	9073.1023			Mean in Log Scale	8.6641896		
8284					SD	12523.981			SD in Log Scale	1.3122445		
8285					95% MLE (t) UCL	15917.178			Mean in Original Scale	10997.352		
8286					95% MLE (Tiku) UCL	16265.11			SD in Original Scale	10403.143		
8287									95% t UCL	16682.436		
8288									95% Percentile Bootstrap UCL	15765.534		

8289											95% BCA Bootstrap UCL	15990.909
8290												
8291	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
8292					k star (bias corrected)	0.7738176	Data appear Normal at 5% Significance Level					
8293					Theta Star	15475.223						
8294					nu star	15.476352						
8295												
8296					A-D Test Statistic	0.6842249	Nonparametric Statistics					
8297					5% A-D Critical Value	0.7480853					Kaplan-Meier (KM) Method	
8298					K-S Test Statistic	0.7480853					Mean	11000
8299					5% K-S Critical Value	0.2736963					SD	9916.5037
8300	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	3151.7209
8301											95% KM (t) UCL	16712.372
8302	Assuming Gamma Distribution										95% KM (z) UCL	16184.12
8303	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	16683.945
8304					Minimum	280.90322					95% KM (bootstrap t) UCL	17568.986
8305					Maximum	27000					95% KM (BCA) UCL	16040.909
8306					Mean	10911.9					95% KM (Percentile Bootstrap) UCL	16359.091
8307					Median	5400					95% KM (Chebyshev) UCL	24738.033
8308					SD	10494.933					97.5% KM (Chebyshev) UCL	30682.491
8309					k star	0.6255619					99% KM (Chebyshev) UCL	42359.227
8310					Theta star	17443.358						
8311					Nu star	13.762362	Potential UCLs to Use					
8312					AppChi2	6.4089691					95% KM (t) UCL	16712.372
8313					95% Gamma Approximate UCL	23431.775					95% KM (Percentile Bootstrap) UCL	16359.091
8314					95% Adjusted Gamma UCL	26763.359						
8315	Note: DL/2 is not a recommended method.											
8316												
8317	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
8318	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
8319	For additional insight, the user may want to consult a statistician.											
8320												
8321												
8322	OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_ne_2010)											
8323												
8324	General Statistics											
8325					Number of Valid Data	0	Number of Detected Data	0				
8326					Number of Distinct Detected Data	0	Number of Non-Detect Data	0				
8327					Number of Missing Values	5	Percent Non-Detects	NaN%				
8328												
8329	Warning: This data set only has 0 observations!											
8330	Data set is too small to compute reliable and meaningful statistics and estimates!											
8331	The data set for variable OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_ne_2010) was not processed!											
8332												
8333	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8334	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8335												
8336												
8337												
8338	OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_nw_2005)											
8339												
8340	General Statistics											
8341					Number of Valid Data	6	Number of Detected Data	5				
8342					Number of Distinct Detected Data	5	Number of Non-Detect Data	1				
8343							Percent Non-Detects	16.67%				
8344												
8345	Raw Statistics						Log-transformed Statistics					
8346					Minimum Detected	960	Minimum Detected	6.8669333				
8347					Maximum Detected	8700	Maximum Detected	9.0710783				
8348					Mean of Detected	4212	Mean of Detected	8.1088814				
8349					SD of Detected	2923.4774	SD of Detected	0.8304454				
8350					Minimum Non-Detect	2000	Minimum Non-Detect	7.6009025				
8351					Maximum Non-Detect	2000	Maximum Non-Detect	7.6009025				
8352												
8353												
8354	Warning: There are only 5 Detected Values in this data											
8355	Note: It should be noted that even though bootstrap may be performed on this data set											
8356	the resulting calculations may not be reliable enough to draw conclusions											
8357												
8358	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
8359												
8360												
8361	UCL Statistics											
8362	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					

8363					Shapiro Wilk Test Statistic	0.9420012					Shapiro Wilk Test Statistic	0.9535542
8364					5% Shapiro Wilk Critical Value	0.762					5% Shapiro Wilk Critical Value	0.762
8365					**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**	
8366												
8367					**Assuming Normal Distribution**						**Assuming Lognormal Distribution**	
8368					DL/2 Substitution Method						DL/2 Substitution Method	
8369					Mean	3676.6667					Mean	7.9086937
8370					SD	2925.2122					SD	0.890035
8371					95% DL/2 (t) UCL	6083.0634					95% H-Stat (DL/2) UCL	17919.09
8372												
8373					Maximum Likelihood Estimate(MLE) Method						Log ROS Method	
8374					Mean	3295.2816					Mean in Log Scale	7.9072502
8375					SD	3236.3982					SD in Log Scale	0.891988
8376					95% MLE (t) UCL	5957.6724					Mean in Original Scale	3675.2294
8377					95% MLE (Tiku) UCL	6173.5615					SD in Original Scale	2926.7921
8378											95% t UCL	6082.9258
8379											95% Percentile Bootstrap UCL	5533.3333
8380											95% BCA Bootstrap UCL	5976.6667
8381												
8382					**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**	
8383					k star (bias corrected)	1.0389414					**Data appear Normal at 5% Significance Level**	
8384					Theta Star	4054.1268						
8385					nu star	10.389414						
8386												
8387					A-D Test Statistic	0.2317525					**Nonparametric Statistics**	
8388					5% A-D Critical Value	0.6839695					Kaplan-Meier (KM) Method	
8389					K-S Test Statistic	0.6839695					Mean	3670
8390					5% K-S Critical Value	0.3601928					SD	2677.0568
8391					**Data appear Gamma Distributed at 5% Significance Level**						SE of Mean	1221.9037
8392											95% KM (t) UCL	6132.195
8393					**Assuming Gamma Distribution**						95% KM (z) UCL	5679.8527
8394					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	6096.4859
8395					Minimum	960					95% KM (bootstrap t) UCL	6984.9355
8396					Maximum	8700					95% KM (BCA) UCL	5966.6667
8397					Mean	3752.6955					95% KM (Percentile Bootstrap) UCL	5883.3333
8398					Median	3400					95% KM (Chebyshev) UCL	8996.1547
8399					SD	2846.6014					97.5% KM (Chebyshev) UCL	11300.786
8400					k star	1.1523902					99% KM (Chebyshev) UCL	15827.788
8401					Theta star	3256.4453						
8402					Nu star	13.828682					**Potential UCLs to Use**	
8403					AppChi2	6.4542161					95% KM (t) UCL	6132.195
8404					95% Gamma Approximate UCL	8040.4549					95% KM (Percentile Bootstrap) UCL	5883.3333
8405					95% Adjusted Gamma UCL	10914.669						
8406	**Note: DL/2 is not a recommended method.**											
8407												
8408	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
8409	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
8410	**For additional insight, the user may want to consult a statistician.**											
8411												
8412												
8413	**OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_nw_2010)**											
8414												
8415					**General Statistics**							
8416					Number of Valid Data	0					Number of Detected Data	0
8417					Number of Distinct Detected Data	0					Number of Non-Detect Data	0
8418					Number of Missing Values	1					Percent Non-Detects	NaN%
8419												
8420	**Warning: This data set only has 0 observations!**											
8421	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
8422	**The data set for variable OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_nw_2010) was not processed!**											
8423												
8424	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
8425	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
8426												
8427												
8428												
8429	**OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_ref_2010)**											
8430												
8431					**General Statistics**							
8432					Number of Valid Data	0					Number of Detected Data	0
8433					Number of Distinct Detected Data	0					Number of Non-Detect Data	0
8434					Number of Missing Values	3					Percent Non-Detects	NaN%
8435												
8436	**Warning: This data set only has 0 observations!**											

	A	B	C	D	E	F	G	H	I	J	K	L
8437	Data set is too small to compute reliable and meaningful statistics and estimates!											
8438	The data set for variable OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_ref_2010) was not processed!											
8439												
8440	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8441	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8442												
8443												
8444												
8445	OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_s_2005)											
8446												
8447	General Statistics											
8448	Number of Valid Observations	3				Number of Distinct Observations	3					
8449												
8450												
8451	Warning: This data set only has 3 observations!											
8452	Data set is too small to compute reliable and meaningful statistics and estimates!											
8453	The data set for variable OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_s_2005) was not processed!											
8454												
8455	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8456	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8457												
8458												
8459												
8460	OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_s_2010)											
8461												
8462	General Statistics											
8463	Number of Valid Data	0				Number of Detected Data	0					
8464	Number of Distinct Detected Data	0				Number of Non-Detect Data	0					
8465	Number of Missing Values	1				Percent Non-Detects	NaN%					
8466												
8467	Warning: This data set only has 0 observations!											
8468	Data set is too small to compute reliable and meaningful statistics and estimates!											
8469	The data set for variable OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_s_2010) was not processed!											
8470												
8471	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8472	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8473												
8474												
8475												
8476	OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_stillwater_2005)											
8477												
8478	General Statistics											
8479	Number of Valid Observations	1				Number of Distinct Observations	1					
8480												
8481												
8482	Warning: This data set only has 1 observations!											
8483	Data set is too small to compute reliable and meaningful statistics and estimates!											
8484	The data set for variable OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
8485												
8486	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8487	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8488												
8489												
8490												
8491	OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_stillwater_2010)											
8492												
8493	General Statistics											
8494	Number of Valid Data	0				Number of Detected Data	0					
8495	Number of Distinct Detected Data	0				Number of Non-Detect Data	0					
8496	Number of Missing Values	3				Percent Non-Detects	NaN%					
8497												
8498	Warning: This data set only has 0 observations!											
8499	Data set is too small to compute reliable and meaningful statistics and estimates!											
8500	The data set for variable OS|UG/KG|BENZALDEHYDE (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
8501												
8502	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8503	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8504												
8505												
8506												
8507	OS|UG/KG|BENZALDEHYDE (gi_et_crabs_ne_2010)											
8508												
8509	General Statistics											
8510	Number of Valid Data	0				Number of Detected Data	0					

8511					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
8512					Number of Missing Values	2				Percent Non-Detects		NaN%
8513												
8514					Warning: This data set only has 0 observations!							
8515					Data set is too small to compute reliable and meaningful statistics and estimates!							
8516					The data set for variable OS|UG/KG|BENZALDEHYDE (gi_et_crabs_ne_2010) was not processed!							
8517												
8518					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
8519					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
8520												
8521												
8522												
8523	OS|UG/KG|BENZALDEHYDE (gi_et_crabs_nw_2010)											
8524												
8525					General Statistics							
8526					Number of Valid Data	0				Number of Detected Data		0
8527					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
8528					Number of Missing Values	1				Percent Non-Detects		NaN%
8529												
8530					Warning: This data set only has 0 observations!							
8531					Data set is too small to compute reliable and meaningful statistics and estimates!							
8532					The data set for variable OS|UG/KG|BENZALDEHYDE (gi_et_crabs_nw_2010) was not processed!							
8533												
8534					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
8535					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
8536												
8537												
8538												
8539	OS|UG/KG|BENZALDEHYDE (gi_et_crabs_ref_2010)											
8540												
8541					General Statistics							
8542					Number of Valid Data	0				Number of Detected Data		0
8543					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
8544					Number of Missing Values	3				Percent Non-Detects		NaN%
8545												
8546					Warning: This data set only has 0 observations!							
8547					Data set is too small to compute reliable and meaningful statistics and estimates!							
8548					The data set for variable OS|UG/KG|BENZALDEHYDE (gi_et_crabs_ref_2010) was not processed!							
8549												
8550					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
8551					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
8552												
8553												
8554												
8555	OS|UG/KG|BENZALDEHYDE (gi_et_crabs_stillwater_2010)											
8556												
8557					General Statistics							
8558					Number of Valid Data	0				Number of Detected Data		0
8559					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
8560					Number of Missing Values	3				Percent Non-Detects		NaN%
8561												
8562					Warning: This data set only has 0 observations!							
8563					Data set is too small to compute reliable and meaningful statistics and estimates!							
8564					The data set for variable OS|UG/KG|BENZALDEHYDE (gi_et_crabs_stillwater_2010) was not processed!							
8565												
8566					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
8567					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
8568												
8569												
8570												
8571	OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_ne_2005)											
8572												
8573					General Statistics							
8574					Number of Valid Data	11				Number of Detected Data		0
8575					Number of Distinct Detected Data	0				Number of Non-Detect Data		11
8576										Percent Non-Detects		100.00%
8577												
8578					Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!							
8579					Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!							
8580					The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).							
8581												
8582					The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_ne_2005) was not processed!							
8583												
8584												

	A	B	C	D	E	F	G	H	I	J	K	L
8585												
8586	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_ne_2010)**											
8587												
8588	**General Statistics**											
8589					Number of Valid Data	0			Number of Detected Data			0
8590					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
8591					Number of Missing Values	5			Percent Non-Detects			NaN%
8592												
8593	**Warning: This data set only has 0 observations!**											
8594	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
8595	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_ne_2010) was not processed!**											
8596												
8597	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
8598	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
8599												
8600												
8601												
8602	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_nw_2005)**											
8603												
8604	**General Statistics**											
8605					Number of Valid Data	6			Number of Detected Data			0
8606					Number of Distinct Detected Data	0			Number of Non-Detect Data			6
8607									Percent Non-Detects			100.00%
8608												
8609	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**											
8610	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**											
8611	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
8612												
8613	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_nw_2005) was not processed!**											
8614												
8615												
8616												
8617	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_nw_2010)**											
8618												
8619	**General Statistics**											
8620					Number of Valid Data	0			Number of Detected Data			0
8621					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
8622					Number of Missing Values	1			Percent Non-Detects			NaN%
8623												
8624	**Warning: This data set only has 0 observations!**											
8625	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
8626	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_nw_2010) was not processed!**											
8627												
8628	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
8629	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
8630												
8631												
8632												
8633	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_ref_2010)**											
8634												
8635	**General Statistics**											
8636					Number of Valid Data	0			Number of Detected Data			0
8637					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
8638					Number of Missing Values	3			Percent Non-Detects			NaN%
8639												
8640	**Warning: This data set only has 0 observations!**											
8641	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
8642	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_ref_2010) was not processed!**											
8643												
8644	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
8645	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
8646												
8647												
8648												
8649	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_s_2005)**											
8650												
8651	**General Statistics**											
8652					Number of Valid Data	3			Number of Detected Data			0
8653					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
8654									Percent Non-Detects			100.00%
8655												
8656	**Warning: This data set only has 3 observations!**											
8657	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
8658	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_s_2005) was not processed!**											

	A	B	C	D	E	F	G	H	I	J	K	L
8659												
8660	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
8661	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
8662												
8663												
8664												
8665	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_s_2010)**											
8666												
8667	**General Statistics**											
8668					Number of Valid Data	0			Number of Detected Data			0
8669					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
8670					Number of Missing Values	1			Percent Non-Detects			NaN%
8671												
8672	**Warning: This data set only has 0 observations!**											
8673	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
8674	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_s_2010) was not processed!**											
8675												
8676	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
8677	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
8678												
8679												
8680												
8681	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_stillwater_2005)**											
8682												
8683	**General Statistics**											
8684					Number of Valid Observations	1			Number of Distinct Observations			1
8685												
8686												
8687	**Warning: This data set only has 1 observations!**											
8688	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
8689	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_stillwater_2005) was not**											
8690												
8691	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
8692	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
8693												
8694												
8695												
8696	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_stillwater_2010)**											
8697												
8698	**General Statistics**											
8699					Number of Valid Data	0			Number of Detected Data			0
8700					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
8701					Number of Missing Values	3			Percent Non-Detects			NaN%
8702												
8703	**Warning: This data set only has 0 observations!**											
8704	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
8705	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_clams_and_mussels_stillwater_2010) was not**											
8706												
8707	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
8708	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
8709												
8710												
8711												
8712	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_crabs_ne_2010)**											
8713												
8714	**General Statistics**											
8715					Number of Valid Data	0			Number of Detected Data			0
8716					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
8717					Number of Missing Values	2			Percent Non-Detects			NaN%
8718												
8719	**Warning: This data set only has 0 observations!**											
8720	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
8721	**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_crabs_ne_2010) was not processed!**											
8722												
8723	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
8724	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
8725												
8726												
8727												
8728	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_crabs_nw_2010)**											
8729												
8730	**General Statistics**											
8731					Number of Valid Data	0			Number of Detected Data			0
8732					Number of Distinct Detected Data	0			Number of Non-Detect Data			0

8733					Number of Missing Values	1				Percent Non-Detects		NaN%
8734												
8735						**Warning: This data set only has 0 observations!**							
8736						**Data set is too small to compute reliable and meaningful statistics and estimates!**							
8737						**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_crabs_nw_2010) was not processed!**							
8738												
8739						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**							
8740						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**							
8741												
8742												
8743												
8744	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_crabs_ref_2010)**											
8745												
8746						**General Statistics**							
8747					Number of Valid Data	0				Number of Detected Data		0
8748					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
8749					Number of Missing Values	3				Percent Non-Detects		NaN%
8750												
8751						**Warning: This data set only has 0 observations!**							
8752						**Data set is too small to compute reliable and meaningful statistics and estimates!**							
8753						**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_crabs_ref_2010) was not processed!**							
8754												
8755						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**							
8756						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**							
8757												
8758												
8759												
8760	**OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_crabs_stillwater_2010)**											
8761												
8762						**General Statistics**							
8763					Number of Valid Data	0				Number of Detected Data		0
8764					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
8765					Number of Missing Values	3				Percent Non-Detects		NaN%
8766												
8767						**Warning: This data set only has 0 observations!**							
8768						**Data set is too small to compute reliable and meaningful statistics and estimates!**							
8769						**The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE (gi_et_crabs_stillwater_2010) was not processed!**							
8770												
8771						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**							
8772						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**							
8773												
8774												
8775												
8776	**OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_ne_2005)**											
8777												
8778						**General Statistics**							
8779					Number of Valid Data	11				Number of Detected Data		0
8780					Number of Distinct Detected Data	0				Number of Non-Detect Data		11
8781										Percent Non-Detects		100.00%
8782												
8783						**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**							
8784						**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**							
8785						**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**							
8786												
8787						**The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_ne_2005) was not processed!**							
8788												
8789												
8790												
8791	**OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_ne_2010)**											
8792												
8793						**General Statistics**							
8794					Number of Valid Data	0				Number of Detected Data		0
8795					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
8796					Number of Missing Values	5				Percent Non-Detects		NaN%
8797												
8798						**Warning: This data set only has 0 observations!**							
8799						**Data set is too small to compute reliable and meaningful statistics and estimates!**							
8800						**The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_ne_2010) was not processed!**							
8801												
8802						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**							
8803						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**							
8804												
8805												
8806												

	A	B	C	D	E	F	G	H	I	J	K	L
8807	OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_nw_2005)											
8808												
8809	General Statistics											
8810					Number of Valid Data	6			Number of Detected Data			0
8811					Number of Distinct Detected Data	0			Number of Non-Detect Data			6
8812									Percent Non-Detects			100.00%
8813												
8814	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
8815	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
8816	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
8817												
8818	The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_nw_2005) was not processed!											
8819												
8820												
8821												
8822	OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_nw_2010)											
8823												
8824	General Statistics											
8825					Number of Valid Data	0			Number of Detected Data			0
8826					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
8827					Number of Missing Values	1			Percent Non-Detects			NaN%
8828												
8829	Warning: This data set only has 0 observations!											
8830	Data set is too small to compute reliable and meaningful statistics and estimates!											
8831	The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_nw_2010) was not processed!											
8832												
8833	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8834	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8835												
8836												
8837												
8838	OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_ref_2010)											
8839												
8840	General Statistics											
8841					Number of Valid Data	0			Number of Detected Data			0
8842					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
8843					Number of Missing Values	3			Percent Non-Detects			NaN%
8844												
8845	Warning: This data set only has 0 observations!											
8846	Data set is too small to compute reliable and meaningful statistics and estimates!											
8847	The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_ref_2010) was not processed!											
8848												
8849	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8850	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8851												
8852												
8853												
8854	OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_s_2005)											
8855												
8856	General Statistics											
8857					Number of Valid Data	3			Number of Detected Data			0
8858					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
8859									Percent Non-Detects			100.00%
8860												
8861	Warning: This data set only has 3 observations!											
8862	Data set is too small to compute reliable and meaningful statistics and estimates!											
8863	The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_s_2005) was not processed!											
8864												
8865	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8866	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8867												
8868												
8869												
8870	OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_s_2010)											
8871												
8872	General Statistics											
8873					Number of Valid Data	0			Number of Detected Data			0
8874					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
8875					Number of Missing Values	1			Percent Non-Detects			NaN%
8876												
8877	Warning: This data set only has 0 observations!											
8878	Data set is too small to compute reliable and meaningful statistics and estimates!											
8879	The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_s_2010) was not processed!											
8880												

	A	B	C	D	E	F	G	H	I	J	K	L
8881	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8882	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8883												
8884												
8885												
8886	OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_stillwater_2005)											
8887												
8888	General Statistics											
8889	Number of Valid Observations	1				Number of Distinct Observations	1					
8890												
8891												
8892	Warning: This data set only has 1 observations!											
8893	Data set is too small to compute reliable and meaningful statistics and estimates!											
8894	The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
8895												
8896	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8897	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8898												
8899												
8900												
8901	OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_stillwater_2010)											
8902												
8903	General Statistics											
8904	Number of Valid Data	0				Number of Detected Data	0					
8905	Number of Distinct Detected Data	0				Number of Non-Detect Data	0					
8906	Number of Missing Values	3				Percent Non-Detects	NaN%					
8907												
8908	Warning: This data set only has 0 observations!											
8909	Data set is too small to compute reliable and meaningful statistics and estimates!											
8910	The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
8911												
8912	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8913	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8914												
8915												
8916												
8917	OS|UG/KG|BENZO(A)PYRENE (gi_et_crabs_ne_2010)											
8918												
8919	General Statistics											
8920	Number of Valid Data	0				Number of Detected Data	0					
8921	Number of Distinct Detected Data	0				Number of Non-Detect Data	0					
8922	Number of Missing Values	2				Percent Non-Detects	NaN%					
8923												
8924	Warning: This data set only has 0 observations!											
8925	Data set is too small to compute reliable and meaningful statistics and estimates!											
8926	The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_et_crabs_ne_2010) was not processed!											
8927												
8928	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8929	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8930												
8931												
8932												
8933	OS|UG/KG|BENZO(A)PYRENE (gi_et_crabs_nw_2010)											
8934												
8935	General Statistics											
8936	Number of Valid Data	0				Number of Detected Data	0					
8937	Number of Distinct Detected Data	0				Number of Non-Detect Data	0					
8938	Number of Missing Values	1				Percent Non-Detects	NaN%					
8939												
8940	Warning: This data set only has 0 observations!											
8941	Data set is too small to compute reliable and meaningful statistics and estimates!											
8942	The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_et_crabs_nw_2010) was not processed!											
8943												
8944	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8945	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8946												
8947												
8948												
8949	OS|UG/KG|BENZO(A)PYRENE (gi_et_crabs_ref_2010)											
8950												
8951	General Statistics											
8952	Number of Valid Data	0				Number of Detected Data	0					
8953	Number of Distinct Detected Data	0				Number of Non-Detect Data	0					
8954	Number of Missing Values	3				Percent Non-Detects	NaN%					

	A	B	C	D	E	F	G	H	I	J	K	L
8955												
8956	Warning: This data set only has 0 observations!											
8957	Data set is too small to compute reliable and meaningful statistics and estimates!											
8958	The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_et_crabs_ref_2010) was not processed!											
8959												
8960	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8961	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8962												
8963												
8964												
8965	OS|UG/KG|BENZO(A)PYRENE (gi_et_crabs_stillwater_2010)											
8966												
8967	General Statistics											
8968	Number of Valid Data					0	Number of Detected Data					0
8969	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
8970	Number of Missing Values					3	Percent Non-Detects					NaN%
8971												
8972	Warning: This data set only has 0 observations!											
8973	Data set is too small to compute reliable and meaningful statistics and estimates!											
8974	The data set for variable OS|UG/KG|BENZO(A)PYRENE (gi_et_crabs_stillwater_2010) was not processed!											
8975												
8976	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
8977	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
8978												
8979												
8980												
8981	OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_ne_2005)											
8982												
8983	General Statistics											
8984	Number of Valid Data					11	Number of Detected Data					0
8985	Number of Distinct Detected Data					0	Number of Non-Detect Data					11
8986							Percent Non-Detects					100.00%
8987												
8988	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
8989	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
8990	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
8991												
8992	The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_ne_2005) was not processed!											
8993												
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8995												
8996	OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_ne_2010)											
8997												
8998	General Statistics											
8999	Number of Valid Data					0	Number of Detected Data					0
9000	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
9001	Number of Missing Values					5	Percent Non-Detects					NaN%
9002												
9003	Warning: This data set only has 0 observations!											
9004	Data set is too small to compute reliable and meaningful statistics and estimates!											
9005	The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_ne_2010) was not processed!											
9006												
9007	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9008	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9009												
9010												
9011												
9012	OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_nw_2005)											
9013												
9014	General Statistics											
9015	Number of Valid Data					6	Number of Detected Data					0
9016	Number of Distinct Detected Data					0	Number of Non-Detect Data					6
9017							Percent Non-Detects					100.00%
9018												
9019	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
9020	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
9021	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
9022												
9023	The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_nw_2005) was not processed!											
9024												
9025												
9026												
9027	OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_nw_2010)											
9028												

	A	B	C	D	E	F	G	H	I	J	K	L
9029	General Statistics											
9030					Number of Valid Data	0			Number of Detected Data			0
9031					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9032					Number of Missing Values	1			Percent Non-Detects			NaN%
9033												
9034	Warning: This data set only has 0 observations!											
9035	Data set is too small to compute reliable and meaningful statistics and estimates!											
9036	The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_nw_2010) was not processed!											
9037												
9038	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9039	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9040												
9041												
9042												
9043	OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_ref_2010)											
9044												
9045	General Statistics											
9046					Number of Valid Data	0			Number of Detected Data			0
9047					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9048					Number of Missing Values	3			Percent Non-Detects			NaN%
9049												
9050	Warning: This data set only has 0 observations!											
9051	Data set is too small to compute reliable and meaningful statistics and estimates!											
9052	The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_ref_2010) was not processed!											
9053												
9054	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9055	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9056												
9057												
9058												
9059	OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_s_2005)											
9060												
9061	General Statistics											
9062					Number of Valid Data	3			Number of Detected Data			0
9063					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
9064									Percent Non-Detects			100.00%
9065												
9066	Warning: This data set only has 3 observations!											
9067	Data set is too small to compute reliable and meaningful statistics and estimates!											
9068	The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_s_2005) was not processed!											
9069												
9070	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9071	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9072												
9073												
9074												
9075	OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_s_2010)											
9076												
9077	General Statistics											
9078					Number of Valid Data	0			Number of Detected Data			0
9079					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9080					Number of Missing Values	1			Percent Non-Detects			NaN%
9081												
9082	Warning: This data set only has 0 observations!											
9083	Data set is too small to compute reliable and meaningful statistics and estimates!											
9084	The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_s_2010) was not processed!											
9085												
9086	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9087	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9088												
9089												
9090												
9091	OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_stillwater_2005)											
9092												
9093	General Statistics											
9094					Number of Valid Observations	1			Number of Distinct Observations			1
9095												
9096												
9097	Warning: This data set only has 1 observations!											
9098	Data set is too small to compute reliable and meaningful statistics and estimates!											
9099	The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_stillwater_2005) was not											
9100												
9101	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9102	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											

	A	B	C	D	E	F	G	H	I	J	K	L
9103												
9104												
9105												
9106	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_stillwater_2010)**											
9107												
9108						**General Statistics**						
9109					Number of Valid Data	0			Number of Detected Data			0
9110					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9111					Number of Missing Values	3			Percent Non-Detects			NaN%
9112												
9113						**Warning: This data set only has 0 observations!**						
9114						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
9115						**The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_clams_and_mussels_stillwater_2010) was not**						
9116												
9117						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
9118						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
9119												
9120												
9121												
9122	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_crabs_ne_2010)**											
9123												
9124						**General Statistics**						
9125					Number of Valid Data	0			Number of Detected Data			0
9126					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9127					Number of Missing Values	2			Percent Non-Detects			NaN%
9128												
9129						**Warning: This data set only has 0 observations!**						
9130						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
9131						**The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_crabs_ne_2010) was not processed!**						
9132												
9133						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
9134						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
9135												
9136												
9137												
9138	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_crabs_nw_2010)**											
9139												
9140						**General Statistics**						
9141					Number of Valid Data	0			Number of Detected Data			0
9142					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9143					Number of Missing Values	1			Percent Non-Detects			NaN%
9144												
9145						**Warning: This data set only has 0 observations!**						
9146						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
9147						**The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_crabs_nw_2010) was not processed!**						
9148												
9149						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
9150						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
9151												
9152												
9153												
9154	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_crabs_ref_2010)**											
9155												
9156						**General Statistics**						
9157					Number of Valid Data	0			Number of Detected Data			0
9158					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9159					Number of Missing Values	3			Percent Non-Detects			NaN%
9160												
9161						**Warning: This data set only has 0 observations!**						
9162						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
9163						**The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_crabs_ref_2010) was not processed!**						
9164												
9165						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
9166						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
9167												
9168												
9169												
9170	**OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_crabs_stillwater_2010)**											
9171												
9172						**General Statistics**						
9173					Number of Valid Data	0			Number of Detected Data			0
9174					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9175					Number of Missing Values	3			Percent Non-Detects			NaN%
9176												

9177	Warning: This data set only has 0 observations!											
9178	Data set is too small to compute reliable and meaningful statistics and estimates!											
9179	The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE (gi_et_crabs_stillwater_2010) was not processed!											
9180												
9181	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9182	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9183												
9184												
9185												
9186	OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_ne_2005)											
9187												
9188	General Statistics											
9189						Number of Valid Data	11			Number of Detected Data	1	
9190						Number of Distinct Detected Data	1			Number of Non-Detect Data	10	
9191										Percent Non-Detects	90.91%	
9192												
9193	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
9194	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters											
9195												
9196	The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_ne_2005) was not											
9197												
9198												
9199												
9200	OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_ne_2010)											
9201												
9202	General Statistics											
9203						Number of Valid Data	0			Number of Detected Data	0	
9204						Number of Distinct Detected Data	0			Number of Non-Detect Data	0	
9205						Number of Missing Values	5			Percent Non-Detects	NaN%	
9206												
9207	Warning: This data set only has 0 observations!											
9208	Data set is too small to compute reliable and meaningful statistics and estimates!											
9209	The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_ne_2010) was not											
9210												
9211	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9212	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9213												
9214												
9215												
9216	OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_nw_2005)											
9217												
9218	General Statistics											
9219						Number of Valid Data	6			Number of Detected Data	0	
9220						Number of Distinct Detected Data	0			Number of Non-Detect Data	6	
9221										Percent Non-Detects	100.00%	
9222												
9223	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
9224	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
9225	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
9226												
9227	The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_nw_2005) was not											
9228												
9229												
9230												
9231	OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_nw_2010)											
9232												
9233	General Statistics											
9234						Number of Valid Data	0			Number of Detected Data	0	
9235						Number of Distinct Detected Data	0			Number of Non-Detect Data	0	
9236						Number of Missing Values	1			Percent Non-Detects	NaN%	
9237												
9238	Warning: This data set only has 0 observations!											
9239	Data set is too small to compute reliable and meaningful statistics and estimates!											
9240	The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_nw_2010) was not											
9241												
9242	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9243	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9244												
9245												
9246												
9247	OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_ref_2010)											
9248												
9249	General Statistics											
9250						Number of Valid Data	0			Number of Detected Data	0	

9251					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
9252					Number of Missing Values	3				Percent Non-Detects		NaN%
9253												
9254	**Warning: This data set only has 0 observations!**											
9255	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
9256	**The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_ref_2010) was not**											
9257												
9258	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
9259	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
9260												
9261												
9262												
9263	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_s_2005)**											
9264												
9265	**General Statistics**											
9266					Number of Valid Data	3				Number of Detected Data		0
9267					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
9268										Percent Non-Detects		100.00%
9269												
9270	**Warning: This data set only has 3 observations!**											
9271	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
9272	**The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_s_2005) was not**											
9273												
9274	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
9275	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
9276												
9277												
9278												
9279	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_s_2010)**											
9280												
9281	**General Statistics**											
9282					Number of Valid Data	0				Number of Detected Data		0
9283					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
9284					Number of Missing Values	1				Percent Non-Detects		NaN%
9285												
9286	**Warning: This data set only has 0 observations!**											
9287	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
9288	**The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_s_2010) was not**											
9289												
9290	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
9291	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
9292												
9293												
9294												
9295	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_stillwater_2005)**											
9296												
9297	**General Statistics**											
9298					Number of Valid Data	1				Number of Detected Data		0
9299					Number of Distinct Detected Data	0				Number of Non-Detect Data		1
9300										Percent Non-Detects		100.00%
9301												
9302	**Warning: This data set only has 1 observations!**											
9303	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
9304	**The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_stillwater_2005) was not**											
9305												
9306	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
9307	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
9308												
9309												
9310												
9311	**OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_stillwater_2010)**											
9312												
9313	**General Statistics**											
9314					Number of Valid Data	0				Number of Detected Data		0
9315					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
9316					Number of Missing Values	3				Percent Non-Detects		NaN%
9317												
9318	**Warning: This data set only has 0 observations!**											
9319	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
9320	**The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_clams_and_mussels_stillwater_2010) was not**											
9321												
9322	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
9323	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
9324												

	A	B	C	D	E	F	G	H	I	J	K	L
9325												
9326												
9327	OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_crabs_ne_2010)											
9328												
9329	General Statistics											
9330					Number of Valid Data	0			Number of Detected Data	0		
9331					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
9332					Number of Missing Values	2			Percent Non-Detects	NaN%		
9333												
9334	Warning: This data set only has 0 observations!											
9335	Data set is too small to compute reliable and meaningful statistics and estimates!											
9336	The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_crabs_ne_2010) was not processed!											
9337												
9338	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9339	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9340												
9341												
9342												
9343	OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_crabs_nw_2010)											
9344												
9345	General Statistics											
9346					Number of Valid Data	0			Number of Detected Data	0		
9347					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
9348					Number of Missing Values	1			Percent Non-Detects	NaN%		
9349												
9350	Warning: This data set only has 0 observations!											
9351	Data set is too small to compute reliable and meaningful statistics and estimates!											
9352	The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_crabs_nw_2010) was not processed!											
9353												
9354	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9355	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9356												
9357												
9358												
9359	OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_crabs_ref_2010)											
9360												
9361	General Statistics											
9362					Number of Valid Data	0			Number of Detected Data	0		
9363					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
9364					Number of Missing Values	3			Percent Non-Detects	NaN%		
9365												
9366	Warning: This data set only has 0 observations!											
9367	Data set is too small to compute reliable and meaningful statistics and estimates!											
9368	The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_crabs_ref_2010) was not processed!											
9369												
9370	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9371	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9372												
9373												
9374												
9375	OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_crabs_stillwater_2010)											
9376												
9377	General Statistics											
9378					Number of Valid Data	0			Number of Detected Data	0		
9379					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
9380					Number of Missing Values	3			Percent Non-Detects	NaN%		
9381												
9382	Warning: This data set only has 0 observations!											
9383	Data set is too small to compute reliable and meaningful statistics and estimates!											
9384	The data set for variable OS|UG/KG|BIS(2-ETHYLHEXYL)PHTHALATE (gi_et_crabs_stillwater_2010) was not processed!											
9385												
9386	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9387	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9388												
9389												
9390												
9391	OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_ne_2005)											
9392												
9393	General Statistics											
9394					Number of Valid Data	11			Number of Detected Data	0		
9395					Number of Distinct Detected Data	0			Number of Non-Detect Data	11		
9396									Percent Non-Detects	100.00%		
9397												
9398	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											

	A	B	C	D	E	F	G	H	I	J	K	L
9399	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
9400	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
9401												
9402	The data set for variable OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_ne_2005) was not processed!											
9403												
9404												
9405												
9406	OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_ne_2010)											
9407												
9408	General Statistics											
9409					Number of Valid Data	0			Number of Detected Data			0
9410					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9411					Number of Missing Values	5			Percent Non-Detects			NaN%
9412												
9413	Warning: This data set only has 0 observations!											
9414	Data set is too small to compute reliable and meaningful statistics and estimates!											
9415	The data set for variable OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_ne_2010) was not processed!											
9416												
9417	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9418	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9419												
9420												
9421												
9422	OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_nw_2005)											
9423												
9424	General Statistics											
9425					Number of Valid Data	6			Number of Detected Data			0
9426					Number of Distinct Detected Data	0			Number of Non-Detect Data			6
9427									Percent Non-Detects			100.00%
9428												
9429	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
9430	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
9431	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
9432												
9433	The data set for variable OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_nw_2005) was not processed!											
9434												
9435												
9436												
9437	OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_nw_2010)											
9438												
9439	General Statistics											
9440					Number of Valid Data	0			Number of Detected Data			0
9441					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9442					Number of Missing Values	1			Percent Non-Detects			NaN%
9443												
9444	Warning: This data set only has 0 observations!											
9445	Data set is too small to compute reliable and meaningful statistics and estimates!											
9446	The data set for variable OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_nw_2010) was not processed!											
9447												
9448	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9449	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9450												
9451												
9452												
9453	OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_ref_2010)											
9454												
9455	General Statistics											
9456					Number of Valid Data	0			Number of Detected Data			0
9457					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9458					Number of Missing Values	3			Percent Non-Detects			NaN%
9459												
9460	Warning: This data set only has 0 observations!											
9461	Data set is too small to compute reliable and meaningful statistics and estimates!											
9462	The data set for variable OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_ref_2010) was not processed!											
9463												
9464	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9465	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9466												
9467												
9468												
9469	OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_s_2005)											
9470												
9471	General Statistics											
9472					Number of Valid Data	3			Number of Detected Data			0

9473					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
9474										Percent Non-Detects		100.00%
9475												
9476					Warning: This data set only has 3 observations!							
9477					Data set is too small to compute reliable and meaningful statistics and estimates!							
9478					The data set for variable OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_s_2005) was not processed!							
9479												
9480					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
9481					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
9482												
9483												
9484												
9485	OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_s_2010)											
9486												
9487					General Statistics							
9488					Number of Valid Data	0				Number of Detected Data		0
9489					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
9490					Number of Missing Values	1				Percent Non-Detects		NaN%
9491												
9492					Warning: This data set only has 0 observations!							
9493					Data set is too small to compute reliable and meaningful statistics and estimates!							
9494					The data set for variable OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_s_2010) was not processed!							
9495												
9496					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
9497					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
9498												
9499												
9500												
9501	OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_stillwater_2005)											
9502												
9503					General Statistics							
9504					Number of Valid Observations	1				Number of Distinct Observations		1
9505												
9506												
9507					Warning: This data set only has 1 observations!							
9508					Data set is too small to compute reliable and meaningful statistics and estimates!							
9509					The data set for variable OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_stillwater_2005) was not processed!							
9510												
9511					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
9512					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
9513												
9514												
9515												
9516	OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_stillwater_2010)											
9517												
9518					General Statistics							
9519					Number of Valid Data	0				Number of Detected Data		0
9520					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
9521					Number of Missing Values	3				Percent Non-Detects		NaN%
9522												
9523					Warning: This data set only has 0 observations!							
9524					Data set is too small to compute reliable and meaningful statistics and estimates!							
9525					The data set for variable OS|UG/KG|CHRYSENE (gi_et_clams_and_mussels_stillwater_2010) was not processed!							
9526												
9527					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
9528					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
9529												
9530												
9531												
9532	OS|UG/KG|CHRYSENE (gi_et_crabs_ne_2010)											
9533												
9534					General Statistics							
9535					Number of Valid Data	0				Number of Detected Data		0
9536					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
9537					Number of Missing Values	2				Percent Non-Detects		NaN%
9538												
9539					Warning: This data set only has 0 observations!							
9540					Data set is too small to compute reliable and meaningful statistics and estimates!							
9541					The data set for variable OS|UG/KG|CHRYSENE (gi_et_crabs_ne_2010) was not processed!							
9542												
9543					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
9544					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
9545												
9546												

9547												
9548	**OS|UG/KG|CHRYSENE (gi_et_crabs_nw_2010)**											
9549												
9550	**General Statistics**											
9551						Number of Valid Data	0			Number of Detected Data		0
9552						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
9553						Number of Missing Values	1			Percent Non-Detects		NaN%
9554												
9555	**Warning: This data set only has 0 observations!**											
9556	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
9557	**The data set for variable OS|UG/KG|CHRYSENE (gi_et_crabs_nw_2010) was not processed!**											
9558												
9559	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
9560	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
9561												
9562												
9563												
9564	**OS|UG/KG|CHRYSENE (gi_et_crabs_ref_2010)**											
9565												
9566	**General Statistics**											
9567						Number of Valid Data	0			Number of Detected Data		0
9568						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
9569						Number of Missing Values	3			Percent Non-Detects		NaN%
9570												
9571	**Warning: This data set only has 0 observations!**											
9572	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
9573	**The data set for variable OS|UG/KG|CHRYSENE (gi_et_crabs_ref_2010) was not processed!**											
9574												
9575	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
9576	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
9577												
9578												
9579												
9580	**OS|UG/KG|CHRYSENE (gi_et_crabs_stillwater_2010)**											
9581												
9582	**General Statistics**											
9583						Number of Valid Data	0			Number of Detected Data		0
9584						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
9585						Number of Missing Values	3			Percent Non-Detects		NaN%
9586												
9587	**Warning: This data set only has 0 observations!**											
9588	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
9589	**The data set for variable OS|UG/KG|CHRYSENE (gi_et_crabs_stillwater_2010) was not processed!**											
9590												
9591	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
9592	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
9593												
9594												
9595												
9596	**OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_ne_2005)**											
9597												
9598	**General Statistics**											
9599						Number of Valid Data	11			Number of Detected Data		1
9600						Number of Distinct Detected Data	1			Number of Non-Detect Data		10
9601										Percent Non-Detects		90.91%
9602												
9603	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
9604	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters**											
9605												
9606	**The data set for variable OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_ne_2005) was not processed!**											
9607												
9608												
9609												
9610	**OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_ne_2010)**											
9611												
9612	**General Statistics**											
9613						Number of Valid Data	0			Number of Detected Data		0
9614						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
9615						Number of Missing Values	5			Percent Non-Detects		NaN%
9616												
9617	**Warning: This data set only has 0 observations!**											
9618	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
9619	**The data set for variable OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_ne_2010) was not processed!**											
9620												

	A	B	C	D	E	F	G	H	I	J	K	L
9621	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9622	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9623												
9624												
9625												
9626	OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_nw_2005)											
9627												
9628	General Statistics											
9629					Number of Valid Data	6			Number of Detected Data	0		
9630					Number of Distinct Detected Data	0			Number of Non-Detect Data	6		
9631									Percent Non-Detects	100.00%		
9632												
9633	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
9634	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
9635	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
9636												
9637	The data set for variable OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_nw_2005) was not processed!											
9638												
9639												
9640												
9641	OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_nw_2010)											
9642												
9643	General Statistics											
9644					Number of Valid Data	0			Number of Detected Data	0		
9645					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
9646					Number of Missing Values	1			Percent Non-Detects	NaN%		
9647												
9648	Warning: This data set only has 0 observations!											
9649	Data set is too small to compute reliable and meaningful statistics and estimates!											
9650	The data set for variable OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_nw_2010) was not processed!											
9651												
9652	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9653	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9654												
9655												
9656												
9657	OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_ref_2010)											
9658												
9659	General Statistics											
9660					Number of Valid Data	0			Number of Detected Data	0		
9661					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
9662					Number of Missing Values	3			Percent Non-Detects	NaN%		
9663												
9664	Warning: This data set only has 0 observations!											
9665	Data set is too small to compute reliable and meaningful statistics and estimates!											
9666	The data set for variable OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_ref_2010) was not processed!											
9667												
9668	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9669	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9670												
9671												
9672												
9673	OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_s_2005)											
9674												
9675	General Statistics											
9676					Number of Valid Data	3			Number of Detected Data	0		
9677					Number of Distinct Detected Data	0			Number of Non-Detect Data	3		
9678									Percent Non-Detects	100.00%		
9679												
9680	Warning: This data set only has 3 observations!											
9681	Data set is too small to compute reliable and meaningful statistics and estimates!											
9682	The data set for variable OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_s_2005) was not processed!											
9683												
9684	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9685	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9686												
9687												
9688												
9689	OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_s_2010)											
9690												
9691	General Statistics											
9692					Number of Valid Data	0			Number of Detected Data	0		
9693					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
9694					Number of Missing Values	1			Percent Non-Detects	NaN%		

	A	B	C	D	E	F	G	H	I	J	K	L
9695												
9696	Warning: This data set only has 0 observations!											
9697	Data set is too small to compute reliable and meaningful statistics and estimates!											
9698	The data set for variable OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_s_2010) was not processed!											
9699												
9700	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9701	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9702												
9703												
9704												
9705	OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_stillwater_2005)											
9706												
9707	General Statistics											
9708	Number of Valid Observations	1				Number of Distinct Observations	1					
9709												
9710												
9711	Warning: This data set only has 1 observations!											
9712	Data set is too small to compute reliable and meaningful statistics and estimates!											
9713	The data set for variable OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
9714												
9715	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9716	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9717												
9718												
9719												
9720	OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_stillwater_2010)											
9721												
9722	General Statistics											
9723	Number of Valid Data	0				Number of Detected Data	0					
9724	Number of Distinct Detected Data	0				Number of Non-Detect Data	0					
9725	Number of Missing Values	3				Percent Non-Detects	NaN%					
9726												
9727	Warning: This data set only has 0 observations!											
9728	Data set is too small to compute reliable and meaningful statistics and estimates!											
9729	The data set for variable OS|UG/KG|FLUORANTHENE (gi_et_clams_and_mussels_stillwater_2010) was not processed!											
9730												
9731	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9732	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9733												
9734												
9735												
9736	OS|UG/KG|FLUORANTHENE (gi_et_crabs_ne_2010)											
9737												
9738	General Statistics											
9739	Number of Valid Data	0				Number of Detected Data	0					
9740	Number of Distinct Detected Data	0				Number of Non-Detect Data	0					
9741	Number of Missing Values	2				Percent Non-Detects	NaN%					
9742												
9743	Warning: This data set only has 0 observations!											
9744	Data set is too small to compute reliable and meaningful statistics and estimates!											
9745	The data set for variable OS|UG/KG|FLUORANTHENE (gi_et_crabs_ne_2010) was not processed!											
9746												
9747	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9748	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9749												
9750												
9751												
9752	OS|UG/KG|FLUORANTHENE (gi_et_crabs_nw_2010)											
9753												
9754	General Statistics											
9755	Number of Valid Data	0				Number of Detected Data	0					
9756	Number of Distinct Detected Data	0				Number of Non-Detect Data	0					
9757	Number of Missing Values	1				Percent Non-Detects	NaN%					
9758												
9759	Warning: This data set only has 0 observations!											
9760	Data set is too small to compute reliable and meaningful statistics and estimates!											
9761	The data set for variable OS|UG/KG|FLUORANTHENE (gi_et_crabs_nw_2010) was not processed!											
9762												
9763	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9764	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9765												
9766												
9767												
9768	OS|UG/KG|FLUORANTHENE (gi_et_crabs_ref_2010)											

9769												
9770						General Statistics						
9771						Number of Valid Data	0			Number of Detected Data		0
9772						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
9773						Number of Missing Values	3			Percent Non-Detects		NaN%
9774												
9775						Warning: This data set only has 0 observations!						
9776						Data set is too small to compute reliable and meaningful statistics and estimates!						
9777						The data set for variable OS|UG/KG|FLUORANTHENE (gi_et_crabs_ref_2010) was not processed!						
9778												
9779						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
9780						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
9781												
9782												
9783												
9784	OS|UG/KG|FLUORANTHENE (gi_et_crabs_stillwater_2010)											
9785												
9786						General Statistics						
9787						Number of Valid Data	0			Number of Detected Data		0
9788						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
9789						Number of Missing Values	3			Percent Non-Detects		NaN%
9790												
9791						Warning: This data set only has 0 observations!						
9792						Data set is too small to compute reliable and meaningful statistics and estimates!						
9793						The data set for variable OS|UG/KG|FLUORANTHENE (gi_et_crabs_stillwater_2010) was not processed!						
9794												
9795						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
9796						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
9797												
9798												
9799												
9800	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_ne_2005)											
9801												
9802						General Statistics						
9803						Number of Valid Data	11			Number of Detected Data		1
9804						Number of Distinct Detected Data	1			Number of Non-Detect Data		10
9805										Percent Non-Detects		90.91%
9806												
9807						Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!						
9808						It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters						
9809												
9810						The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_ne_2005) was not						
9811												
9812												
9813												
9814	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_ne_2010)											
9815												
9816						General Statistics						
9817						Number of Valid Data	0			Number of Detected Data		0
9818						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
9819						Number of Missing Values	5			Percent Non-Detects		NaN%
9820												
9821						Warning: This data set only has 0 observations!						
9822						Data set is too small to compute reliable and meaningful statistics and estimates!						
9823						The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_ne_2010) was not						
9824												
9825						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
9826						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
9827												
9828												
9829												
9830	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_nw_2005)											
9831												
9832						General Statistics						
9833						Number of Valid Data	6			Number of Detected Data		0
9834						Number of Distinct Detected Data	0			Number of Non-Detect Data		6
9835										Percent Non-Detects		100.00%
9836												
9837						Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!						
9838						Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!						
9839						The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).						
9840												
9841						The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_nw_2005) was not						
9842												

	A	B	C	D	E	F	G	H	I	J	K	L
9843												
9844												
9845	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_nw_2010)											
9846												
9847	General Statistics											
9848	Number of Valid Data					0		Number of Detected Data				0
9849	Number of Distinct Detected Data					0		Number of Non-Detect Data				0
9850	Number of Missing Values					1		Percent Non-Detects				NaN%
9851												
9852	Warning: This data set only has 0 observations!											
9853	Data set is too small to compute reliable and meaningful statistics and estimates!											
9854	The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_nw_2010) was not											
9855												
9856	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9857	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9858												
9859												
9860												
9861	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_ref_2010)											
9862												
9863	General Statistics											
9864	Number of Valid Data					0		Number of Detected Data				0
9865	Number of Distinct Detected Data					0		Number of Non-Detect Data				0
9866	Number of Missing Values					3		Percent Non-Detects				NaN%
9867												
9868	Warning: This data set only has 0 observations!											
9869	Data set is too small to compute reliable and meaningful statistics and estimates!											
9870	The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_ref_2010) was not											
9871												
9872	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9873	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9874												
9875												
9876												
9877	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_s_2005)											
9878												
9879	General Statistics											
9880	Number of Valid Data					3		Number of Detected Data				0
9881	Number of Distinct Detected Data					0		Number of Non-Detect Data				3
9882								Percent Non-Detects				100.00%
9883												
9884	Warning: This data set only has 3 observations!											
9885	Data set is too small to compute reliable and meaningful statistics and estimates!											
9886	The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_s_2005) was not											
9887												
9888	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9889	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9890												
9891												
9892												
9893	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_s_2010)											
9894												
9895	General Statistics											
9896	Number of Valid Data					0		Number of Detected Data				0
9897	Number of Distinct Detected Data					0		Number of Non-Detect Data				0
9898	Number of Missing Values					1		Percent Non-Detects				NaN%
9899												
9900	Warning: This data set only has 0 observations!											
9901	Data set is too small to compute reliable and meaningful statistics and estimates!											
9902	The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_s_2010) was not											
9903												
9904	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9905	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9906												
9907												
9908												
9909	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_stillwater_2005)											
9910												
9911	General Statistics											
9912	Number of Valid Observations					1		Number of Distinct Observations				1
9913												
9914												
9915	Warning: This data set only has 1 observations!											
9916	Data set is too small to compute reliable and meaningful statistics and estimates!											

	A	B	C	D	E	F	G	H	I	J	K	L
9917	The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_stillwater_2005) was not											
9918												
9919	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9920	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9921												
9922												
9923												
9924	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_stillwater_2010)											
9925												
9926	General Statistics											
9927					Number of Valid Data	0			Number of Detected Data			0
9928					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9929					Number of Missing Values	3			Percent Non-Detects			NaN%
9930												
9931	Warning: This data set only has 0 observations!											
9932	Data set is too small to compute reliable and meaningful statistics and estimates!											
9933	The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_stillwater_2010) was not											
9934												
9935	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9936	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9937												
9938												
9939												
9940	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_crabs_ne_2010)											
9941												
9942	General Statistics											
9943					Number of Valid Data	0			Number of Detected Data			0
9944					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9945					Number of Missing Values	2			Percent Non-Detects			NaN%
9946												
9947	Warning: This data set only has 0 observations!											
9948	Data set is too small to compute reliable and meaningful statistics and estimates!											
9949	The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_crabs_ne_2010) was not processed!											
9950												
9951	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9952	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9953												
9954												
9955												
9956	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_crabs_nw_2010)											
9957												
9958	General Statistics											
9959					Number of Valid Data	0			Number of Detected Data			0
9960					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9961					Number of Missing Values	1			Percent Non-Detects			NaN%
9962												
9963	Warning: This data set only has 0 observations!											
9964	Data set is too small to compute reliable and meaningful statistics and estimates!											
9965	The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_crabs_nw_2010) was not processed!											
9966												
9967	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9968	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9969												
9970												
9971												
9972	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_crabs_ref_2010)											
9973												
9974	General Statistics											
9975					Number of Valid Data	0			Number of Detected Data			0
9976					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
9977					Number of Missing Values	3			Percent Non-Detects			NaN%
9978												
9979	Warning: This data set only has 0 observations!											
9980	Data set is too small to compute reliable and meaningful statistics and estimates!											
9981	The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_crabs_ref_2010) was not processed!											
9982												
9983	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
9984	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
9985												
9986												
9987												
9988	OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_crabs_stillwater_2010)											
9989												
9990	General Statistics											

9991					Number of Valid Data	0				Number of Detected Data		0
9992					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
9993					Number of Missing Values	3				Percent Non-Detects		NaN%
9994												
9995					Warning: This data set only has 0 observations!							
9996					Data set is too small to compute reliable and meaningful statistics and estimates!							
9997					The data set for variable OS|UG/KG|HIGH MOLECULAR WEIGHT PAHS (gi_et_crabs_stillwater_2010) was not processed!							
9998												
9999					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
10000					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
10001												
10002												
10003												
10004	OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_ne_2005)											
10005												
10006					General Statistics							
10007					Number of Valid Data	11				Number of Detected Data		1
10008					Number of Distinct Detected Data	1				Number of Non-Detect Data		10
10009										Percent Non-Detects		90.91%
10010												
10011					Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!							
10012					It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters							
10013												
10014					The data set for variable OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_ne_2005) was not processed!							
10015												
10016												
10017												
10018	OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_ne_2010)											
10019												
10020					General Statistics							
10021					Number of Valid Data	0				Number of Detected Data		0
10022					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
10023					Number of Missing Values	5				Percent Non-Detects		NaN%
10024												
10025					Warning: This data set only has 0 observations!							
10026					Data set is too small to compute reliable and meaningful statistics and estimates!							
10027					The data set for variable OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_ne_2010) was not processed!							
10028												
10029					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
10030					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
10031												
10032												
10033												
10034	OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_nw_2005)											
10035												
10036					General Statistics							
10037					Number of Valid Data	6				Number of Detected Data		0
10038					Number of Distinct Detected Data	0				Number of Non-Detect Data		6
10039										Percent Non-Detects		100.00%
10040												
10041					Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!							
10042					Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!							
10043					The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).							
10044												
10045					The data set for variable OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_nw_2005) was not processed!							
10046												
10047												
10048												
10049	OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_nw_2010)											
10050												
10051					General Statistics							
10052					Number of Valid Data	0				Number of Detected Data		0
10053					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
10054					Number of Missing Values	1				Percent Non-Detects		NaN%
10055												
10056					Warning: This data set only has 0 observations!							
10057					Data set is too small to compute reliable and meaningful statistics and estimates!							
10058					The data set for variable OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_nw_2010) was not processed!							
10059												
10060					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
10061					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
10062												
10063												
10064												

	A	B	C	D	E	F	G	H	I	J	K	L
10065	**OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_ref_2010)**											
10066												
10067	**General Statistics**											
10068					Number of Valid Data	0			Number of Detected Data			0
10069					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10070					Number of Missing Values	3			Percent Non-Detects			NaN%
10071												
10072	**Warning: This data set only has 0 observations!**											
10073	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10074	**The data set for variable OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_ref_2010) was not processed!**											
10075												
10076	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10077	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10078												
10079												
10080												
10081	**OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_s_2005)**											
10082												
10083	**General Statistics**											
10084					Number of Valid Data	3			Number of Detected Data			0
10085					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
10086									Percent Non-Detects			100.00%
10087												
10088	**Warning: This data set only has 3 observations!**											
10089	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10090	**The data set for variable OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_s_2005) was not processed!**											
10091												
10092	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10093	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10094												
10095												
10096												
10097	**OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_s_2010)**											
10098												
10099	**General Statistics**											
10100					Number of Valid Data	0			Number of Detected Data			0
10101					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10102					Number of Missing Values	1			Percent Non-Detects			NaN%
10103												
10104	**Warning: This data set only has 0 observations!**											
10105	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10106	**The data set for variable OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_s_2010) was not processed!**											
10107												
10108	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10109	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10110												
10111												
10112												
10113	**OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_stillwater_2005)**											
10114												
10115	**General Statistics**											
10116					Number of Valid Data	1			Number of Detected Data			0
10117					Number of Distinct Detected Data	0			Number of Non-Detect Data			1
10118									Percent Non-Detects			100.00%
10119												
10120	**Warning: This data set only has 1 observations!**											
10121	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10122	**The data set for variable OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_stillwater_2005) was not processed!**											
10123												
10124	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10125	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10126												
10127												
10128												
10129	**OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_stillwater_2010)**											
10130												
10131	**General Statistics**											
10132					Number of Valid Data	0			Number of Detected Data			0
10133					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10134					Number of Missing Values	3			Percent Non-Detects			NaN%
10135												
10136	**Warning: This data set only has 0 observations!**											
10137	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10138	**The data set for variable OS|UG/KG|ISOPHORONE (gi_et_clams_and_mussels_stillwater_2010) was not processed!**											

	A	B	C	D	E	F	G	H	I	J	K	L
10139												
10140	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10141	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10142												
10143												
10144												
10145	**OS|UG/KG|ISOPHORONE (gi_et_crabs_ne_2010)**											
10146												
10147	**General Statistics**											
10148					Number of Valid Data	0			Number of Detected Data			0
10149					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10150					Number of Missing Values	2			Percent Non-Detects			NaN%
10151												
10152	**Warning: This data set only has 0 observations!**											
10153	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10154	**The data set for variable OS|UG/KG|ISOPHORONE (gi_et_crabs_ne_2010) was not processed!**											
10155												
10156	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10157	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10158												
10159												
10160												
10161	**OS|UG/KG|ISOPHORONE (gi_et_crabs_nw_2010)**											
10162												
10163	**General Statistics**											
10164					Number of Valid Data	0			Number of Detected Data			0
10165					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10166					Number of Missing Values	1			Percent Non-Detects			NaN%
10167												
10168	**Warning: This data set only has 0 observations!**											
10169	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10170	**The data set for variable OS|UG/KG|ISOPHORONE (gi_et_crabs_nw_2010) was not processed!**											
10171												
10172	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10173	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10174												
10175												
10176												
10177	**OS|UG/KG|ISOPHORONE (gi_et_crabs_ref_2010)**											
10178												
10179	**General Statistics**											
10180					Number of Valid Data	0			Number of Detected Data			0
10181					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10182					Number of Missing Values	3			Percent Non-Detects			NaN%
10183												
10184	**Warning: This data set only has 0 observations!**											
10185	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10186	**The data set for variable OS|UG/KG|ISOPHORONE (gi_et_crabs_ref_2010) was not processed!**											
10187												
10188	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10189	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10190												
10191												
10192												
10193	**OS|UG/KG|ISOPHORONE (gi_et_crabs_stillwater_2010)**											
10194												
10195	**General Statistics**											
10196					Number of Valid Data	0			Number of Detected Data			0
10197					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10198					Number of Missing Values	3			Percent Non-Detects			NaN%
10199												
10200	**Warning: This data set only has 0 observations!**											
10201	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10202	**The data set for variable OS|UG/KG|ISOPHORONE (gi_et_crabs_stillwater_2010) was not processed!**											
10203												
10204	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10205	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10206												
10207												
10208												
10209	**OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_ne_2005)**											
10210												
10211	**General Statistics**											
10212					Number of Valid Data	11			Number of Detected Data			0

10213					Number of Distinct Detected Data	0				Number of Non-Detect Data		11
10214										Percent Non-Detects		100.00%
10215												
10216	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
10217	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
10218	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
10219												
10220	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_ne_2005) was not											
10221												
10222												
10223												
10224	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_ne_2010)											
10225												
10226	General Statistics											
10227					Number of Valid Data	0				Number of Detected Data		0
10228					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
10229					Number of Missing Values	5				Percent Non-Detects		NaN%
10230												
10231	Warning: This data set only has 0 observations!											
10232	Data set is too small to compute reliable and meaningful statistics and estimates!											
10233	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_ne_2010) was not											
10234												
10235	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10236	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10237												
10238												
10239												
10240	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_nw_2005)											
10241												
10242	General Statistics											
10243					Number of Valid Data	6				Number of Detected Data		0
10244					Number of Distinct Detected Data	0				Number of Non-Detect Data		6
10245										Percent Non-Detects		100.00%
10246												
10247	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
10248	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
10249	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
10250												
10251	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_nw_2005) was not											
10252												
10253												
10254												
10255	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_nw_2010)											
10256												
10257	General Statistics											
10258					Number of Valid Data	0				Number of Detected Data		0
10259					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
10260					Number of Missing Values	1				Percent Non-Detects		NaN%
10261												
10262	Warning: This data set only has 0 observations!											
10263	Data set is too small to compute reliable and meaningful statistics and estimates!											
10264	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_nw_2010) was not											
10265												
10266	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10267	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10268												
10269												
10270												
10271	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_ref_2010)											
10272												
10273	General Statistics											
10274					Number of Valid Data	0				Number of Detected Data		0
10275					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
10276					Number of Missing Values	3				Percent Non-Detects		NaN%
10277												
10278	Warning: This data set only has 0 observations!											
10279	Data set is too small to compute reliable and meaningful statistics and estimates!											
10280	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_ref_2010) was not											
10281												
10282	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10283	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10284												
10285												
10286												

	A	B	C	D	E	F	G	H	I	J	K	L
10287	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_s_2005)											
10288												
10289	General Statistics											
10290					Number of Valid Data	3			Number of Detected Data	0		
10291					Number of Distinct Detected Data	0			Number of Non-Detect Data	3		
10292									Percent Non-Detects	100.00%		
10293												
10294	Warning: This data set only has 3 observations!											
10295	Data set is too small to compute reliable and meaningful statistics and estimates!											
10296	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_s_2005) was not											
10297												
10298	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10299	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10300												
10301												
10302												
10303	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_s_2010)											
10304												
10305	General Statistics											
10306					Number of Valid Data	0			Number of Detected Data	0		
10307					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
10308					Number of Missing Values	1			Percent Non-Detects	NaN%		
10309												
10310	Warning: This data set only has 0 observations!											
10311	Data set is too small to compute reliable and meaningful statistics and estimates!											
10312	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_s_2010) was not											
10313												
10314	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10315	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10316												
10317												
10318												
10319	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_stillwater_2005)											
10320												
10321	General Statistics											
10322					Number of Valid Observations	1			Number of Distinct Observations	1		
10323												
10324												
10325	Warning: This data set only has 1 observations!											
10326	Data set is too small to compute reliable and meaningful statistics and estimates!											
10327	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_stillwater_2005) was not											
10328												
10329	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10330	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10331												
10332												
10333												
10334	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_stillwater_2010)											
10335												
10336	General Statistics											
10337					Number of Valid Data	0			Number of Detected Data	0		
10338					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
10339					Number of Missing Values	3			Percent Non-Detects	NaN%		
10340												
10341	Warning: This data set only has 0 observations!											
10342	Data set is too small to compute reliable and meaningful statistics and estimates!											
10343	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_clams_and_mussels_stillwater_2010) was not											
10344												
10345	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10346	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10347												
10348												
10349												
10350	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_crabs_ne_2010)											
10351												
10352	General Statistics											
10353					Number of Valid Data	0			Number of Detected Data	0		
10354					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
10355					Number of Missing Values	2			Percent Non-Detects	NaN%		
10356												
10357	Warning: This data set only has 0 observations!											
10358	Data set is too small to compute reliable and meaningful statistics and estimates!											
10359	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_crabs_ne_2010) was not processed!											
10360												

	A	B	C	D	E	F	G	H	I	J	K	L
10361	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10362	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10363												
10364												
10365												
10366	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_crabs_nw_2010)											
10367												
10368	General Statistics											
10369					Number of Valid Data	0			Number of Detected Data	0		
10370					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
10371					Number of Missing Values	1			Percent Non-Detects	NaN%		
10372												
10373	Warning: This data set only has 0 observations!											
10374	Data set is too small to compute reliable and meaningful statistics and estimates!											
10375	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_crabs_nw_2010) was not processed!											
10376												
10377	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10378	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10379												
10380												
10381												
10382	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_crabs_ref_2010)											
10383												
10384	General Statistics											
10385					Number of Valid Data	0			Number of Detected Data	0		
10386					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
10387					Number of Missing Values	3			Percent Non-Detects	NaN%		
10388												
10389	Warning: This data set only has 0 observations!											
10390	Data set is too small to compute reliable and meaningful statistics and estimates!											
10391	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_crabs_ref_2010) was not processed!											
10392												
10393	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10394	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10395												
10396												
10397												
10398	OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_crabs_stillwater_2010)											
10399												
10400	General Statistics											
10401					Number of Valid Data	0			Number of Detected Data	0		
10402					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
10403					Number of Missing Values	3			Percent Non-Detects	NaN%		
10404												
10405	Warning: This data set only has 0 observations!											
10406	Data set is too small to compute reliable and meaningful statistics and estimates!											
10407	The data set for variable OS|UG/KG|LOW MOLECULAR WEIGHT PAHS (gi_et_crabs_stillwater_2010) was not processed!											
10408												
10409	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10410	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10411												
10412												
10413												
10414	OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_ne_2005)											
10415												
10416	General Statistics											
10417					Number of Valid Data	11			Number of Detected Data	0		
10418					Number of Distinct Detected Data	0			Number of Non-Detect Data	11		
10419									Percent Non-Detects	100.00%		
10420												
10421	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
10422	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
10423	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
10424												
10425	The data set for variable OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_ne_2005) was not processed!											
10426												
10427												
10428												
10429	OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_ne_2010)											
10430												
10431	General Statistics											
10432					Number of Valid Data	0			Number of Detected Data	0		
10433					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
10434					Number of Missing Values	5			Percent Non-Detects	NaN%		

	A	B	C	D	E	F	G	H	I	J	K	L
10435												
10436	Warning: This data set only has 0 observations!											
10437	Data set is too small to compute reliable and meaningful statistics and estimates!											
10438	The data set for variable OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_ne_2010) was not processed!											
10439												
10440	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10441	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10442												
10443												
10444												
10445	OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_nw_2005)											
10446												
10447	General Statistics											
10448						Number of Valid Data	6			Number of Detected Data		0
10449						Number of Distinct Detected Data	0			Number of Non-Detect Data		6
10450										Percent Non-Detects		100.00%
10451												
10452	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
10453	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
10454	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
10455												
10456	The data set for variable OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_nw_2005) was not processed!											
10457												
10458												
10459												
10460	OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_nw_2010)											
10461												
10462	General Statistics											
10463						Number of Valid Data	0			Number of Detected Data		0
10464						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
10465						Number of Missing Values	1			Percent Non-Detects		NaN%
10466												
10467	Warning: This data set only has 0 observations!											
10468	Data set is too small to compute reliable and meaningful statistics and estimates!											
10469	The data set for variable OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_nw_2010) was not processed!											
10470												
10471	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10472	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10473												
10474												
10475												
10476	OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_ref_2010)											
10477												
10478	General Statistics											
10479						Number of Valid Data	0			Number of Detected Data		0
10480						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
10481						Number of Missing Values	3			Percent Non-Detects		NaN%
10482												
10483	Warning: This data set only has 0 observations!											
10484	Data set is too small to compute reliable and meaningful statistics and estimates!											
10485	The data set for variable OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_ref_2010) was not processed!											
10486												
10487	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10488	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10489												
10490												
10491												
10492	OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_s_2005)											
10493												
10494	General Statistics											
10495						Number of Valid Data	3			Number of Detected Data		0
10496						Number of Distinct Detected Data	0			Number of Non-Detect Data		3
10497										Percent Non-Detects		100.00%
10498												
10499	Warning: This data set only has 3 observations!											
10500	Data set is too small to compute reliable and meaningful statistics and estimates!											
10501	The data set for variable OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_s_2005) was not processed!											
10502												
10503	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10504	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10505												
10506												
10507												
10508	OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_s_2010)											

	A	B	C	D	E	F	G	H	I	J	K	L
10509												
10510						**General Statistics**						
10511					Number of Valid Data	0			Number of Detected Data			0
10512					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10513					Number of Missing Values	1			Percent Non-Detects			NaN%
10514												
10515						**Warning: This data set only has 0 observations!**						
10516						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
10517						**The data set for variable OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_s_2010) was not processed!**						
10518												
10519						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
10520						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
10521												
10522												
10523												
10524	**OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_stillwater_2005)**											
10525												
10526						**General Statistics**						
10527					Number of Valid Observations	1			Number of Distinct Observations			1
10528												
10529												
10530						**Warning: This data set only has 1 observations!**						
10531						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
10532						**The data set for variable OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_stillwater_2005) was not processed!**						
10533												
10534						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
10535						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
10536												
10537												
10538												
10539	**OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_stillwater_2010)**											
10540												
10541						**General Statistics**						
10542					Number of Valid Data	0			Number of Detected Data			0
10543					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10544					Number of Missing Values	3			Percent Non-Detects			NaN%
10545												
10546						**Warning: This data set only has 0 observations!**						
10547						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
10548						**The data set for variable OS|UG/KG|PHENANTHRENE (gi_et_clams_and_mussels_stillwater_2010) was not processed!**						
10549												
10550						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
10551						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
10552												
10553												
10554												
10555	**OS|UG/KG|PHENANTHRENE (gi_et_crabs_ne_2010)**											
10556												
10557						**General Statistics**						
10558					Number of Valid Data	0			Number of Detected Data			0
10559					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10560					Number of Missing Values	2			Percent Non-Detects			NaN%
10561												
10562						**Warning: This data set only has 0 observations!**						
10563						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
10564						**The data set for variable OS|UG/KG|PHENANTHRENE (gi_et_crabs_ne_2010) was not processed!**						
10565												
10566						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
10567						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
10568												
10569												
10570												
10571	**OS|UG/KG|PHENANTHRENE (gi_et_crabs_nw_2010)**											
10572												
10573						**General Statistics**						
10574					Number of Valid Data	0			Number of Detected Data			0
10575					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10576					Number of Missing Values	1			Percent Non-Detects			NaN%
10577												
10578						**Warning: This data set only has 0 observations!**						
10579						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
10580						**The data set for variable OS|UG/KG|PHENANTHRENE (gi_et_crabs_nw_2010) was not processed!**						
10581												
10582						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						

	A	B	C	D	E	F	G	H	I	J	K	L
10583	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10584												
10585												
10586												
10587	OS|UG/KG|PHENANTHRENE (gi_et_crabs_ref_2010)											
10588												
10589	General Statistics											
10590					Number of Valid Data	0			Number of Detected Data	0		
10591					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
10592					Number of Missing Values	3			Percent Non-Detects	NaN%		
10593												
10594	Warning: This data set only has 0 observations!											
10595	Data set is too small to compute reliable and meaningful statistics and estimates!											
10596	The data set for variable OS|UG/KG|PHENANTHRENE (gi_et_crabs_ref_2010) was not processed!											
10597												
10598	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10599	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10600												
10601												
10602												
10603	OS|UG/KG|PHENANTHRENE (gi_et_crabs_stillwater_2010)											
10604												
10605	General Statistics											
10606					Number of Valid Data	0			Number of Detected Data	0		
10607					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
10608					Number of Missing Values	3			Percent Non-Detects	NaN%		
10609												
10610	Warning: This data set only has 0 observations!											
10611	Data set is too small to compute reliable and meaningful statistics and estimates!											
10612	The data set for variable OS|UG/KG|PHENANTHRENE (gi_et_crabs_stillwater_2010) was not processed!											
10613												
10614	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10615	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10616												
10617												
10618												
10619	OS|UG/KG|PYRENE (gi_et_clams_and_mussels_ne_2005)											
10620												
10621	General Statistics											
10622					Number of Valid Data	11			Number of Detected Data	1		
10623					Number of Distinct Detected Data	1			Number of Non-Detect Data	10		
10624									Percent Non-Detects	90.91%		
10625												
10626	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
10627	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters											
10628												
10629	The data set for variable OS|UG/KG|PYRENE (gi_et_clams_and_mussels_ne_2005) was not processed!											
10630												
10631												
10632												
10633	OS|UG/KG|PYRENE (gi_et_clams_and_mussels_ne_2010)											
10634												
10635	General Statistics											
10636					Number of Valid Data	0			Number of Detected Data	0		
10637					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
10638					Number of Missing Values	5			Percent Non-Detects	NaN%		
10639												
10640	Warning: This data set only has 0 observations!											
10641	Data set is too small to compute reliable and meaningful statistics and estimates!											
10642	The data set for variable OS|UG/KG|PYRENE (gi_et_clams_and_mussels_ne_2010) was not processed!											
10643												
10644	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10645	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10646												
10647												
10648												
10649	OS|UG/KG|PYRENE (gi_et_clams_and_mussels_nw_2005)											
10650												
10651	General Statistics											
10652					Number of Valid Data	6			Number of Detected Data	0		
10653					Number of Distinct Detected Data	0			Number of Non-Detect Data	6		
10654									Percent Non-Detects	100.00%		
10655												
10656	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											

	A	B	C	D	E	F	G	H	I	J	K	L
10657	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
10658	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
10659												
10660	The data set for variable OS|UG/KG|PYRENE (gi_et_clams_and_mussels_nw_2005) was not processed!											
10661												
10662												
10663												
10664	OS|UG/KG|PYRENE (gi_et_clams_and_mussels_nw_2010)											
10665												
10666	General Statistics											
10667					Number of Valid Data	0			Number of Detected Data			0
10668					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10669					Number of Missing Values	1			Percent Non-Detects			NaN%
10670												
10671	Warning: This data set only has 0 observations!											
10672	Data set is too small to compute reliable and meaningful statistics and estimates!											
10673	The data set for variable OS|UG/KG|PYRENE (gi_et_clams_and_mussels_nw_2010) was not processed!											
10674												
10675	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10676	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10677												
10678												
10679												
10680	OS|UG/KG|PYRENE (gi_et_clams_and_mussels_ref_2010)											
10681												
10682	General Statistics											
10683					Number of Valid Data	0			Number of Detected Data			0
10684					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10685					Number of Missing Values	3			Percent Non-Detects			NaN%
10686												
10687	Warning: This data set only has 0 observations!											
10688	Data set is too small to compute reliable and meaningful statistics and estimates!											
10689	The data set for variable OS|UG/KG|PYRENE (gi_et_clams_and_mussels_ref_2010) was not processed!											
10690												
10691	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10692	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10693												
10694												
10695												
10696	OS|UG/KG|PYRENE (gi_et_clams_and_mussels_s_2005)											
10697												
10698	General Statistics											
10699					Number of Valid Data	3			Number of Detected Data			0
10700					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
10701									Percent Non-Detects			100.00%
10702												
10703	Warning: This data set only has 3 observations!											
10704	Data set is too small to compute reliable and meaningful statistics and estimates!											
10705	The data set for variable OS|UG/KG|PYRENE (gi_et_clams_and_mussels_s_2005) was not processed!											
10706												
10707	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10708	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10709												
10710												
10711												
10712	OS|UG/KG|PYRENE (gi_et_clams_and_mussels_s_2010)											
10713												
10714	General Statistics											
10715					Number of Valid Data	0			Number of Detected Data			0
10716					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10717					Number of Missing Values	1			Percent Non-Detects			NaN%
10718												
10719	Warning: This data set only has 0 observations!											
10720	Data set is too small to compute reliable and meaningful statistics and estimates!											
10721	The data set for variable OS|UG/KG|PYRENE (gi_et_clams_and_mussels_s_2010) was not processed!											
10722												
10723	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10724	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10725												
10726												
10727												
10728	OS|UG/KG|PYRENE (gi_et_clams_and_mussels_stillwater_2005)											
10729												
10730	General Statistics											

10731	Number of Valid Observations				1		Number of Distinct Observations				1	
10732												
10733												
10734	**Warning: This data set only has 1 observations!**											
10735	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10736	**The data set for variable OS|UG/KG|PYRENE (gi_et_clams_and_mussels_stillwater_2005) was not processed!**											
10737												
10738	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10739	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10740												
10741												
10742												
10743	**OS|UG/KG|PYRENE (gi_et_clams_and_mussels_stillwater_2010)**											
10744												
10745	**General Statistics**											
10746	Number of Valid Data				0		Number of Detected Data				0	
10747	Number of Distinct Detected Data				0		Number of Non-Detect Data				0	
10748	Number of Missing Values				3		Percent Non-Detects				NaN%	
10749												
10750	**Warning: This data set only has 0 observations!**											
10751	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10752	**The data set for variable OS|UG/KG|PYRENE (gi_et_clams_and_mussels_stillwater_2010) was not processed!**											
10753												
10754	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10755	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10756												
10757												
10758												
10759	**OS|UG/KG|PYRENE (gi_et_crabs_ne_2010)**											
10760												
10761	**General Statistics**											
10762	Number of Valid Data				0		Number of Detected Data				0	
10763	Number of Distinct Detected Data				0		Number of Non-Detect Data				0	
10764	Number of Missing Values				2		Percent Non-Detects				NaN%	
10765												
10766	**Warning: This data set only has 0 observations!**											
10767	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10768	**The data set for variable OS|UG/KG|PYRENE (gi_et_crabs_ne_2010) was not processed!**											
10769												
10770	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10771	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10772												
10773												
10774												
10775	**OS|UG/KG|PYRENE (gi_et_crabs_nw_2010)**											
10776												
10777	**General Statistics**											
10778	Number of Valid Data				0		Number of Detected Data				0	
10779	Number of Distinct Detected Data				0		Number of Non-Detect Data				0	
10780	Number of Missing Values				1		Percent Non-Detects				NaN%	
10781												
10782	**Warning: This data set only has 0 observations!**											
10783	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10784	**The data set for variable OS|UG/KG|PYRENE (gi_et_crabs_nw_2010) was not processed!**											
10785												
10786	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10787	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10788												
10789												
10790												
10791	**OS|UG/KG|PYRENE (gi_et_crabs_ref_2010)**											
10792												
10793	**General Statistics**											
10794	Number of Valid Data				0		Number of Detected Data				0	
10795	Number of Distinct Detected Data				0		Number of Non-Detect Data				0	
10796	Number of Missing Values				3		Percent Non-Detects				NaN%	
10797												
10798	**Warning: This data set only has 0 observations!**											
10799	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10800	**The data set for variable OS|UG/KG|PYRENE (gi_et_crabs_ref_2010) was not processed!**											
10801												
10802	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10803	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10804												

	A	B	C	D	E	F	G	H	I	J	K	L
10805												
10806												
10807	OS|UG/KG|PYRENE (gi_et_crabs_stillwater_2010)											
10808												
10809	General Statistics											
10810						Number of Valid Data	0			Number of Detected Data		0
10811						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
10812						Number of Missing Values	3			Percent Non-Detects		NaN%
10813												
10814	Warning: This data set only has 0 observations!											
10815	Data set is too small to compute reliable and meaningful statistics and estimates!											
10816	The data set for variable OS|UG/KG|PYRENE (gi_et_crabs_stillwater_2010) was not processed!											
10817												
10818	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10819	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10820												
10821												
10822												
10823	OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_ne_2005)											
10824												
10825	General Statistics											
10826						Number of Valid Data	11			Number of Detected Data		0
10827						Number of Distinct Detected Data	0			Number of Non-Detect Data		11
10828										Percent Non-Detects		100.00%
10829												
10830	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
10831	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
10832	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
10833												
10834	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_ne_2005) was not											
10835												
10836												
10837												
10838	OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_ne_2010)											
10839												
10840	General Statistics											
10841						Number of Valid Data	0			Number of Detected Data		0
10842						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
10843						Number of Missing Values	5			Percent Non-Detects		NaN%
10844												
10845	Warning: This data set only has 0 observations!											
10846	Data set is too small to compute reliable and meaningful statistics and estimates!											
10847	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_ne_2010) was not											
10848												
10849	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
10850	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
10851												
10852												
10853												
10854	OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_nw_2005)											
10855												
10856	General Statistics											
10857						Number of Valid Data	6			Number of Detected Data		0
10858						Number of Distinct Detected Data	0			Number of Non-Detect Data		6
10859										Percent Non-Detects		100.00%
10860												
10861	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
10862	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
10863	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
10864												
10865	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_nw_2005) was not											
10866												
10867												
10868												
10869	OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_nw_2010)											
10870												
10871	General Statistics											
10872						Number of Valid Data	0			Number of Detected Data		0
10873						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
10874						Number of Missing Values	1			Percent Non-Detects		NaN%
10875												
10876	Warning: This data set only has 0 observations!											
10877	Data set is too small to compute reliable and meaningful statistics and estimates!											
10878	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_nw_2010) was not											

	A	B	C	D	E	F	G	H	I	J	K	L
10879												
10880	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10881	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10882												
10883												
10884												
10885	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_ref_2010)**											
10886												
10887	**General Statistics**											
10888					Number of Valid Data	0			Number of Detected Data			0
10889					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10890					Number of Missing Values	3			Percent Non-Detects			NaN%
10891												
10892	**Warning: This data set only has 0 observations!**											
10893	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10894	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_ref_2010) was not**											
10895												
10896	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10897	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10898												
10899												
10900												
10901	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_s_2005)**											
10902												
10903	**General Statistics**											
10904					Number of Valid Data	3			Number of Detected Data			0
10905					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
10906									Percent Non-Detects			100.00%
10907												
10908	**Warning: This data set only has 3 observations!**											
10909	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10910	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_s_2005) was not**											
10911												
10912	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10913	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10914												
10915												
10916												
10917	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_s_2010)**											
10918												
10919	**General Statistics**											
10920					Number of Valid Data	0			Number of Detected Data			0
10921					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
10922					Number of Missing Values	1			Percent Non-Detects			NaN%
10923												
10924	**Warning: This data set only has 0 observations!**											
10925	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10926	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_s_2010) was not**											
10927												
10928	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10929	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10930												
10931												
10932												
10933	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_stillwater_2005)**											
10934												
10935	**General Statistics**											
10936					Number of Valid Observations	1			Number of Distinct Observations			1
10937												
10938												
10939	**Warning: This data set only has 1 observations!**											
10940	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
10941	**The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_stillwater_2005)**											
10942												
10943	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
10944	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
10945												
10946												
10947												
10948	**OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_stillwater_2010)**											
10949												
10950	**General Statistics**											
10951					Number of Valid Data	0			Number of Detected Data			0
10952					Number of Distinct Detected Data	0			Number of Non-Detect Data			0

	A	B	C	D	E	F	G	H	I	J	K	L
10953					Number of Missing Values	3				Percent Non-Detects		NaN%
10954												
10955					Warning: This data set only has 0 observations!							
10956					Data set is too small to compute reliable and meaningful statistics and estimates!							
10957					The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_clams_and_mussels_stillwater_2010)							
10958												
10959					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
10960					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
10961												
10962												
10963												
10964	OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_crabs_ne_2010)											
10965												
10966					General Statistics							
10967					Number of Valid Data	0				Number of Detected Data		0
10968					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
10969					Number of Missing Values	2				Percent Non-Detects		NaN%
10970												
10971					Warning: This data set only has 0 observations!							
10972					Data set is too small to compute reliable and meaningful statistics and estimates!							
10973					The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_crabs_ne_2010) was not processed!							
10974												
10975					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
10976					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
10977												
10978												
10979												
10980	OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_crabs_nw_2010)											
10981												
10982					General Statistics							
10983					Number of Valid Data	0				Number of Detected Data		0
10984					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
10985					Number of Missing Values	1				Percent Non-Detects		NaN%
10986												
10987					Warning: This data set only has 0 observations!							
10988					Data set is too small to compute reliable and meaningful statistics and estimates!							
10989					The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_crabs_nw_2010) was not processed!							
10990												
10991					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
10992					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
10993												
10994												
10995												
10996	OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_crabs_ref_2010)											
10997												
10998					General Statistics							
10999					Number of Valid Data	0				Number of Detected Data		0
11000					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
11001					Number of Missing Values	3				Percent Non-Detects		NaN%
11002												
11003					Warning: This data set only has 0 observations!							
11004					Data set is too small to compute reliable and meaningful statistics and estimates!							
11005					The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_crabs_ref_2010) was not processed!							
11006												
11007					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
11008					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
11009												
11010												
11011												
11012	OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_crabs_stillwater_2010)											
11013												
11014					General Statistics							
11015					Number of Valid Data	0				Number of Detected Data		0
11016					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
11017					Number of Missing Values	3				Percent Non-Detects		NaN%
11018												
11019					Warning: This data set only has 0 observations!							
11020					Data set is too small to compute reliable and meaningful statistics and estimates!							
11021					The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-HALFND (gi_et_crabs_stillwater_2010) was not							
11022												
11023					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
11024					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
11025												
11026												

	A	B	C	D	E	F	G	H	I	J	K	L
11027												
11028	OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_ne_2005)											
11029												
11030	General Statistics											
11031	Number of Valid Data					11	Number of Detected Data					0
11032	Number of Distinct Detected Data					0	Number of Non-Detect Data					11
11033							Percent Non-Detects					100.00%
11034												
11035	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
11036	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
11037	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
11038												
11039	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_ne_2005) was not											
11040												
11041												
11042												
11043	OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_ne_2010)											
11044												
11045	General Statistics											
11046	Number of Valid Data					0	Number of Detected Data					0
11047	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
11048	Number of Missing Values					5	Percent Non-Detects					NaN%
11049												
11050	Warning: This data set only has 0 observations!											
11051	Data set is too small to compute reliable and meaningful statistics and estimates!											
11052	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_ne_2010) was not											
11053												
11054	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11055	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11056												
11057												
11058												
11059	OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_nw_2005)											
11060												
11061	General Statistics											
11062	Number of Valid Data					6	Number of Detected Data					0
11063	Number of Distinct Detected Data					0	Number of Non-Detect Data					6
11064							Percent Non-Detects					100.00%
11065												
11066	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
11067	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
11068	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
11069												
11070	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_nw_2005) was not											
11071												
11072												
11073												
11074	OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_nw_2010)											
11075												
11076	General Statistics											
11077	Number of Valid Data					0	Number of Detected Data					0
11078	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
11079	Number of Missing Values					1	Percent Non-Detects					NaN%
11080												
11081	Warning: This data set only has 0 observations!											
11082	Data set is too small to compute reliable and meaningful statistics and estimates!											
11083	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_nw_2010) was not											
11084												
11085	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11086	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11087												
11088												
11089												
11090	OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_ref_2010)											
11091												
11092	General Statistics											
11093	Number of Valid Data					0	Number of Detected Data					0
11094	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
11095	Number of Missing Values					3	Percent Non-Detects					NaN%
11096												
11097	Warning: This data set only has 0 observations!											
11098	Data set is too small to compute reliable and meaningful statistics and estimates!											
11099	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_ref_2010) was not											
11100												

	A	B	C	D	E	F	G	H	I	J	K	L
11101	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11102	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11103												
11104												
11105												
11106	OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_s_2005)											
11107												
11108	General Statistics											
11109					Number of Valid Data	3			Number of Detected Data	0		
11110					Number of Distinct Detected Data	0			Number of Non-Detect Data	3		
11111									Percent Non-Detects	100.00%		
11112												
11113	Warning: This data set only has 3 observations!											
11114	Data set is too small to compute reliable and meaningful statistics and estimates!											
11115	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_s_2005) was not											
11116												
11117	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11118	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11119												
11120												
11121												
11122	OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_s_2010)											
11123												
11124	General Statistics											
11125					Number of Valid Data	0			Number of Detected Data	0		
11126					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
11127					Number of Missing Values	1			Percent Non-Detects	NaN%		
11128												
11129	Warning: This data set only has 0 observations!											
11130	Data set is too small to compute reliable and meaningful statistics and estimates!											
11131	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_s_2010) was not											
11132												
11133	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11134	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11135												
11136												
11137												
11138	OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_stillwater_2005)											
11139												
11140	General Statistics											
11141					Number of Valid Observations	1			Number of Distinct Observations	1		
11142												
11143												
11144	Warning: This data set only has 1 observations!											
11145	Data set is too small to compute reliable and meaningful statistics and estimates!											
11146	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_stillwater_2005) was not											
11147												
11148	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11149	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11150												
11151												
11152												
11153	OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_stillwater_2010)											
11154												
11155	General Statistics											
11156					Number of Valid Data	0			Number of Detected Data	0		
11157					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
11158					Number of Missing Values	3			Percent Non-Detects	NaN%		
11159												
11160	Warning: This data set only has 0 observations!											
11161	Data set is too small to compute reliable and meaningful statistics and estimates!											
11162	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_clams_and_mussels_stillwater_2010) was not											
11163												
11164	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11165	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11166												
11167												
11168												
11169	OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_crabs_ne_2010)											
11170												
11171	General Statistics											
11172					Number of Valid Data	0			Number of Detected Data	0		
11173					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
11174					Number of Missing Values	2			Percent Non-Detects	NaN%		

	A	B	C	D	E	F	G	H	I	J	K	L
11175												
11176	Warning: This data set only has 0 observations!											
11177	Data set is too small to compute reliable and meaningful statistics and estimates!											
11178	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_crabs_ne_2010) was not processed!											
11179												
11180	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11181	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11182												
11183												
11184												
11185	OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_crabs_nw_2010)											
11186												
11187	General Statistics											
11188					Number of Valid Data	0			Number of Detected Data			0
11189					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
11190					Number of Missing Values	1			Percent Non-Detects			NaN%
11191												
11192	Warning: This data set only has 0 observations!											
11193	Data set is too small to compute reliable and meaningful statistics and estimates!											
11194	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_crabs_nw_2010) was not processed!											
11195												
11196	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11197	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11198												
11199												
11200												
11201	OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_crabs_ref_2010)											
11202												
11203	General Statistics											
11204					Number of Valid Data	0			Number of Detected Data			0
11205					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
11206					Number of Missing Values	3			Percent Non-Detects			NaN%
11207												
11208	Warning: This data set only has 0 observations!											
11209	Data set is too small to compute reliable and meaningful statistics and estimates!											
11210	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_crabs_ref_2010) was not processed!											
11211												
11212	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11213	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11214												
11215												
11216												
11217	OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_crabs_stillwater_2010)											
11218												
11219	General Statistics											
11220					Number of Valid Data	0			Number of Detected Data			0
11221					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
11222					Number of Missing Values	3			Percent Non-Detects			NaN%
11223												
11224	Warning: This data set only has 0 observations!											
11225	Data set is too small to compute reliable and meaningful statistics and estimates!											
11226	The data set for variable OS|UG/KG|TOTAL CARCINOGENIC PAHS-POS (gi_et_crabs_stillwater_2010) was not processed!											
11227												
11228	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11229	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11230												
11231												
11232												
11233	OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_ne_2005)											
11234												
11235	General Statistics											
11236					Number of Valid Data	11			Number of Detected Data			1
11237					Number of Distinct Detected Data	1			Number of Non-Detect Data			10
11238									Percent Non-Detects			90.91%
11239												
11240	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
11241	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters											
11242												
11243	The data set for variable OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_ne_2005) was not processed!											
11244												
11245												
11246												
11247	OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_ne_2010)											
11248												

	A	B	C	D	E	F	G	H	I	J	K	L
11249	General Statistics											
11250					Number of Valid Data	0			Number of Detected Data			0
11251					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
11252					Number of Missing Values	5			Percent Non-Detects			NaN%
11253												
11254	Warning: This data set only has 0 observations!											
11255	Data set is too small to compute reliable and meaningful statistics and estimates!											
11256	The data set for variable OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_ne_2010) was not processed!											
11257												
11258	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11259	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11260												
11261												
11262												
11263	OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_nw_2005)											
11264												
11265	General Statistics											
11266					Number of Valid Data	6			Number of Detected Data			0
11267					Number of Distinct Detected Data	0			Number of Non-Detect Data			6
11268									Percent Non-Detects			100.00%
11269												
11270	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
11271	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
11272	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
11273												
11274	The data set for variable OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_nw_2005) was not processed!											
11275												
11276												
11277												
11278	OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_nw_2010)											
11279												
11280	General Statistics											
11281					Number of Valid Data	0			Number of Detected Data			0
11282					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
11283					Number of Missing Values	1			Percent Non-Detects			NaN%
11284												
11285	Warning: This data set only has 0 observations!											
11286	Data set is too small to compute reliable and meaningful statistics and estimates!											
11287	The data set for variable OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_nw_2010) was not processed!											
11288												
11289	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11290	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11291												
11292												
11293												
11294	OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_ref_2010)											
11295												
11296	General Statistics											
11297					Number of Valid Data	0			Number of Detected Data			0
11298					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
11299					Number of Missing Values	3			Percent Non-Detects			NaN%
11300												
11301	Warning: This data set only has 0 observations!											
11302	Data set is too small to compute reliable and meaningful statistics and estimates!											
11303	The data set for variable OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_ref_2010) was not processed!											
11304												
11305	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11306	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11307												
11308												
11309												
11310	OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_s_2005)											
11311												
11312	General Statistics											
11313					Number of Valid Data	3			Number of Detected Data			0
11314					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
11315									Percent Non-Detects			100.00%
11316												
11317	Warning: This data set only has 3 observations!											
11318	Data set is too small to compute reliable and meaningful statistics and estimates!											
11319	The data set for variable OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_s_2005) was not processed!											
11320												
11321	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11322	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											

	A	B	C	D	E	F	G	H	I	J	K	L
11323												
11324												
11325												
11326	**OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_s_2010)**											
11327												
11328	**General Statistics**											
11329	Number of Valid Data					0	Number of Detected Data					0
11330	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
11331	Number of Missing Values					1	Percent Non-Detects					NaN%
11332												
11333	**Warning: This data set only has 0 observations!**											
11334	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11335	**The data set for variable OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_s_2010) was not processed!**											
11336												
11337	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11338	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11339												
11340												
11341												
11342	**OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_stillwater_2005)**											
11343												
11344	**General Statistics**											
11345	Number of Valid Observations					1	Number of Distinct Observations					1
11346												
11347												
11348	**Warning: This data set only has 1 observations!**											
11349	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11350	**The data set for variable OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_stillwater_2005) was not processed!**											
11351												
11352	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11353	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11354												
11355												
11356												
11357	**OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_stillwater_2010)**											
11358												
11359	**General Statistics**											
11360	Number of Valid Data					0	Number of Detected Data					0
11361	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
11362	Number of Missing Values					3	Percent Non-Detects					NaN%
11363												
11364	**Warning: This data set only has 0 observations!**											
11365	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11366	**The data set for variable OS|UG/KG|TOTAL PAHS (gi_et_clams_and_mussels_stillwater_2010) was not processed!**											
11367												
11368	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11369	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11370												
11371												
11372												
11373	**OS|UG/KG|TOTAL PAHS (gi_et_crabs_ne_2010)**											
11374												
11375	**General Statistics**											
11376	Number of Valid Data					0	Number of Detected Data					0
11377	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
11378	Number of Missing Values					2	Percent Non-Detects					NaN%
11379												
11380	**Warning: This data set only has 0 observations!**											
11381	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11382	**The data set for variable OS|UG/KG|TOTAL PAHS (gi_et_crabs_ne_2010) was not processed!**											
11383												
11384	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11385	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11386												
11387												
11388												
11389	**OS|UG/KG|TOTAL PAHS (gi_et_crabs_nw_2010)**											
11390												
11391	**General Statistics**											
11392	Number of Valid Data					0	Number of Detected Data					0
11393	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
11394	Number of Missing Values					1	Percent Non-Detects					NaN%
11395												
11396	**Warning: This data set only has 0 observations!**											

	A	B	C	D	E	F	G	H	I	J	K	L
11397	Data set is too small to compute reliable and meaningful statistics and estimates!											
11398	The data set for variable OS|UG/KG|TOTAL PAHS (gi_et_crabs_nw_2010) was not processed!											
11399												
11400	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11401	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11402												
11403												
11404												
11405	OS|UG/KG|TOTAL PAHS (gi_et_crabs_ref_2010)											
11406												
11407	General Statistics											
11408					Number of Valid Data	0			Number of Detected Data			0
11409					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
11410					Number of Missing Values	3			Percent Non-Detects			NaN%
11411												
11412	Warning: This data set only has 0 observations!											
11413	Data set is too small to compute reliable and meaningful statistics and estimates!											
11414	The data set for variable OS|UG/KG|TOTAL PAHS (gi_et_crabs_ref_2010) was not processed!											
11415												
11416	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11417	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11418												
11419												
11420												
11421	OS|UG/KG|TOTAL PAHS (gi_et_crabs_stillwater_2010)											
11422												
11423	General Statistics											
11424					Number of Valid Data	0			Number of Detected Data			0
11425					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
11426					Number of Missing Values	3			Percent Non-Detects			NaN%
11427												
11428	Warning: This data set only has 0 observations!											
11429	Data set is too small to compute reliable and meaningful statistics and estimates!											
11430	The data set for variable OS|UG/KG|TOTAL PAHS (gi_et_crabs_stillwater_2010) was not processed!											
11431												
11432	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11433	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11434												
11435												
11436												
11437	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_ne_2005)											
11438												
11439	General Statistics											
11440					Number of Valid Data	0			Number of Detected Data			0
11441					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
11442					Number of Missing Values	11			Percent Non-Detects			NaN%
11443												
11444	Warning: This data set only has 0 observations!											
11445	Data set is too small to compute reliable and meaningful statistics and estimates!											
11446	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_ne_2005) was not processed!											
11447												
11448	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11449	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11450												
11451												
11452												
11453	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_ne_2010)											
11454												
11455	General Statistics											
11456					Number of Valid Data	5			Number of Detected Data			1
11457					Number of Distinct Detected Data	1			Number of Non-Detect Data			4
11458									Percent Non-Detects			80.00%
11459												
11460	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
11461	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters											
11462												
11463	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_ne_2010) was not processed!											
11464												
11465												
11466												
11467	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2005)											
11468												
11469	General Statistics											
11470					Number of Valid Data	0			Number of Detected Data			0

11471					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
11472					Number of Missing Values	6				Percent Non-Detects		NaN%
11473												
11474	**Warning: This data set only has 0 observations!**											
11475	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11476	**The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2005) was not processed!**											
11477												
11478	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11479	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11480												
11481												
11482												
11483	**PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2010)**											
11484												
11485	**General Statistics**											
11486					Number of Valid Data	1				Number of Detected Data		0
11487					Number of Distinct Detected Data	0				Number of Non-Detect Data		1
11488										Percent Non-Detects		100.00%
11489												
11490	**Warning: This data set only has 1 observations!**											
11491	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11492	**The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2010) was not processed!**											
11493												
11494	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11495	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11496												
11497												
11498												
11499	**PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_ref_2010)**											
11500												
11501	**General Statistics**											
11502					Number of Valid Data	3				Number of Detected Data		0
11503					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
11504										Percent Non-Detects		100.00%
11505												
11506	**Warning: This data set only has 3 observations!**											
11507	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11508	**The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_ref_2010) was not processed!**											
11509												
11510	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11511	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11512												
11513												
11514												
11515	**PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2005)**											
11516												
11517	**General Statistics**											
11518					Number of Valid Data	0				Number of Detected Data		0
11519					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
11520					Number of Missing Values	3				Percent Non-Detects		NaN%
11521												
11522	**Warning: This data set only has 0 observations!**											
11523	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11524	**The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2005) was not processed!**											
11525												
11526	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11527	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11528												
11529												
11530												
11531	**PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2010)**											
11532												
11533	**General Statistics**											
11534					Number of Valid Data	1				Number of Detected Data		0
11535					Number of Distinct Detected Data	0				Number of Non-Detect Data		1
11536										Percent Non-Detects		100.00%
11537												
11538	**Warning: This data set only has 1 observations!**											
11539	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11540	**The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2010) was not processed!**											
11541												
11542	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11543	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11544												

11545											
11546											
11547	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2005)										
11548											
11549						General Statistics					
11550					Number of Valid Data	0			Number of Detected Data	0	
11551					Number of Distinct Detected Data	0			Number of Non-Detect Data	0	
11552					Number of Missing Values	1			Percent Non-Detects	NaN%	
11553											
11554						Warning: This data set only has 0 observations!					
11555						Data set is too small to compute reliable and meaningful statistics and estimates!					
11556						The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2005) was not					
11557											
11558						It is suggested to collect at least 8 to 10 observations before using these statistical methods!					
11559						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.					
11560											
11561											
11562											
11563	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2010)										
11564											
11565						General Statistics					
11566					Number of Valid Data	3			Number of Detected Data	0	
11567					Number of Distinct Detected Data	0			Number of Non-Detect Data	3	
11568									Percent Non-Detects	100.00%	
11569											
11570						Warning: This data set only has 3 observations!					
11571						Data set is too small to compute reliable and meaningful statistics and estimates!					
11572						The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2010) was not					
11573											
11574						It is suggested to collect at least 8 to 10 observations before using these statistical methods!					
11575						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.					
11576											
11577											
11578											
11579	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_crabs_ne_2010)										
11580											
11581						General Statistics					
11582					Number of Valid Data	2			Number of Detected Data	1	
11583					Number of Distinct Detected Data	1			Number of Non-Detect Data	1	
11584									Percent Non-Detects	50.00%	
11585											
11586						Warning: This data set only has 2 observations!					
11587						Data set is too small to compute reliable and meaningful statistics and estimates!					
11588						The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_crabs_ne_2010) was not processed!					
11589											
11590						It is suggested to collect at least 8 to 10 observations before using these statistical methods!					
11591						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.					
11592											
11593											
11594											
11595	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_crabs_nw_2010)										
11596											
11597						General Statistics					
11598					Number of Valid Data	1			Number of Detected Data	0	
11599					Number of Distinct Detected Data	0			Number of Non-Detect Data	1	
11600									Percent Non-Detects	100.00%	
11601											
11602						Warning: This data set only has 1 observations!					
11603						Data set is too small to compute reliable and meaningful statistics and estimates!					
11604						The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_crabs_nw_2010) was not processed!					
11605											
11606						It is suggested to collect at least 8 to 10 observations before using these statistical methods!					
11607						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.					
11608											
11609											
11610											
11611	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_crabs_ref_2010)										
11612											
11613						General Statistics					
11614					Number of Valid Data	3			Number of Detected Data	0	
11615					Number of Distinct Detected Data	0			Number of Non-Detect Data	3	
11616									Percent Non-Detects	100.00%	
11617											
11618						Warning: This data set only has 3 observations!					

	A	B	C	D	E	F	G	H	I	J	K	L
11619	Data set is too small to compute reliable and meaningful statistics and estimates!											
11620	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_crabs_ref_2010) was not processed!											
11621												
11622	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11623	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11624												
11625												
11626												
11627	PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_crabs_stillwater_2010)											
11628												
11629	General Statistics											
11630					Number of Valid Data	3			Number of Detected Data	0		
11631					Number of Distinct Detected Data	0			Number of Non-Detect Data	3		
11632									Percent Non-Detects	100.00%		
11633												
11634	Warning: This data set only has 3 observations!											
11635	Data set is too small to compute reliable and meaningful statistics and estimates!											
11636	The data set for variable PCBH|UG/KG|DICHLOROBIPHENYLS (gi_et_crabs_stillwater_2010) was not processed!											
11637												
11638	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11639	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11640												
11641												
11642												
11643	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_ne_2005)											
11644												
11645	General Statistics											
11646					Number of Valid Data	0			Number of Detected Data	0		
11647					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
11648					Number of Missing Values	11			Percent Non-Detects	NaN%		
11649												
11650	Warning: This data set only has 0 observations!											
11651	Data set is too small to compute reliable and meaningful statistics and estimates!											
11652	The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_ne_2005) was not											
11653												
11654	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11655	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11656												
11657												
11658												
11659	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_ne_2010)											
11660												
11661	General Statistics											
11662					Number of Valid Data	5			Number of Detected Data	4		
11663					Number of Distinct Detected Data	4			Number of Non-Detect Data	1		
11664									Percent Non-Detects	20.00%		
11665												
11666	Raw Statistics							Log-transformed Statistics				
11667					Minimum Detected	5.85			Minimum Detected	1.7664417		
11668					Maximum Detected	21			Maximum Detected	3.0445224		
11669					Mean of Detected	11.2375			Mean of Detected	2.3039326		
11670					SD of Detected	6.6839827			SD of Detected	0.5352636		
11671					Minimum Non-Detect	3.8			Minimum Non-Detect	1.3350011		
11672					Maximum Non-Detect	3.8			Maximum Non-Detect	1.3350011		
11673												
11674												
11675	Warning: There are only 4 Distinct Detected Values in this data											
11676	Note: It should be noted that even though bootstrap may be performed on this data set											
11677	the resulting calculations may not be reliable enough to draw conclusions											
11678												
11679	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
11680												
11681												
11682	UCL Statistics											
11683	Normal Distribution Test with Detected Values Only							Lognormal Distribution Test with Detected Values Only				
11684					Shapiro Wilk Test Statistic	0.821802			Shapiro Wilk Test Statistic	0.9165229		
11685					5% Shapiro Wilk Critical Value	0.748			5% Shapiro Wilk Critical Value	0.748		
11686	Data appear Normal at 5% Significance Level							Data appear Lognormal at 5% Significance Level				
11687												
11688	Assuming Normal Distribution							Assuming Lognormal Distribution				
11689					DL/2 Substitution Method				DL/2 Substitution Method			
11690					Mean	9.37			Mean	1.9715168		
11691					SD	7.1375416			SD	0.8760031		
11692					95% DL/2 (t) UCL	16.174867			95% H-Stat (DL/2) UCL	71.680235		

11693												
11694					Maximum Likelihood Estimate(MLE) Method						Log ROS Method	
11695					Mean	8.9143345					Mean in Log Scale	2.0266883
11696					SD	7.1263779					SD in Log Scale	0.7740815
11697					95% MLE (t) UCL	15.708558					Mean in Original Scale	9.4907109
11698					95% MLE (Tiku) UCL	15.828719					SD in Original Scale	6.9830567
11699											95% t UCL	16.148293
11700											95% Percentile Bootstrap UCL	13.98
11701											95% BCA Bootstrap UCL	15.53
11702												
11703					Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only	
11704					k star (bias corrected)	1.2905606					Data appear Normal at 5% Significance Level	
11705					Theta Star	8.7074562						
11706					nu star	10.324485						
11707												
11708					A-D Test Statistic	0.4231253					Nonparametric Statistics	
11709					5% A-D Critical Value	0.6589543					Kaplan-Meier (KM) Method	
11710					K-S Test Statistic	0.6589543					Mean	10.16
11711					5% K-S Critical Value	0.3960262					SD	5.6079765
11712					Data appear Gamma Distributed at 5% Significance Level						SE of Mean	2.8959466
11713											95% KM (t) UCL	16.333714
11714					Assuming Gamma Distribution						95% KM (z) UCL	14.923408
11715					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	16.134531
11716					Minimum	3.9761918					95% KM (bootstrap t) UCL	27.839383
11717					Maximum	21					95% KM (BCA) UCL	14.94
11718					Mean	9.7852384					95% KM (Percentile Bootstrap) UCL	15.63
11719					Median	8.8					95% KM (Chebyshev) UCL	22.783139
11720					SD	6.6371709					97.5% KM (Chebyshev) UCL	28.245181
11721					k star	1.4333339					99% KM (Chebyshev) UCL	38.974305
11722					Theta star	6.8269078						
11723					Nu star	14.333339					Potential UCLs to Use	
11724					AppChi2	6.8001885					95% KM (t) UCL	16.333714
11725					95% Gamma Approximate UCL	20.625184					95% KM (Percentile Bootstrap) UCL	15.63
11726					95% Adjusted Gamma UCL	N/A						
11727	Note: DL/2 is not a recommended method.											
11728												
11729	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
11730	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
11731	For additional insight, the user may want to consult a statistician.											
11732												
11733												
11734	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2005)											
11735												
11736	General Statistics											
11737					Number of Valid Data	0					Number of Detected Data	0
11738					Number of Distinct Detected Data	0					Number of Non-Detect Data	0
11739					Number of Missing Values	6					Percent Non-Detects	NaN%
11740												
11741	Warning: This data set only has 0 observations!											
11742	Data set is too small to compute reliable and meaningful statistics and estimates!											
11743	The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2005) was not											
11744												
11745	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11746	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11747												
11748												
11749												
11750	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2010)											
11751												
11752	General Statistics											
11753					Number of Valid Data	1					Number of Detected Data	0
11754					Number of Distinct Detected Data	0					Number of Non-Detect Data	1
11755											Percent Non-Detects	100.00%
11756												
11757	Warning: This data set only has 1 observations!											
11758	Data set is too small to compute reliable and meaningful statistics and estimates!											
11759	The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2010) was not											
11760												
11761	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11762	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11763												
11764												
11765												
11766	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_ref_2010)											

	A	B	C	D	E	F	G	H	I	J	K	L
11767												
11768	**General Statistics**											
11769					Number of Valid Data	3			Number of Detected Data			0
11770					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
11771									Percent Non-Detects			100.00%
11772												
11773	**Warning: This data set only has 3 observations!**											
11774	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11775	**The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_ref_2010) was not**											
11776												
11777	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11778	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11779												
11780												
11781												
11782	**PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2005)**											
11783												
11784	**General Statistics**											
11785					Number of Valid Data	0			Number of Detected Data			0
11786					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
11787					Number of Missing Values	3			Percent Non-Detects			NaN%
11788												
11789	**Warning: This data set only has 0 observations!**											
11790	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11791	**The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2005) was not processed!**											
11792												
11793	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11794	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11795												
11796												
11797												
11798	**PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2010)**											
11799												
11800	**General Statistics**											
11801					Number of Valid Observations	1			Number of Distinct Observations			1
11802												
11803												
11804	**Warning: This data set only has 1 observations!**											
11805	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11806	**The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2010) was not processed!**											
11807												
11808	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11809	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11810												
11811												
11812												
11813	**PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2005)**											
11814												
11815	**General Statistics**											
11816					Number of Valid Data	0			Number of Detected Data			0
11817					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
11818					Number of Missing Values	1			Percent Non-Detects			NaN%
11819												
11820	**Warning: This data set only has 0 observations!**											
11821	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11822	**The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2005) was not**											
11823												
11824	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11825	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11826												
11827												
11828												
11829	**PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2010)**											
11830												
11831	**General Statistics**											
11832					Number of Valid Data	3			Number of Detected Data			2
11833					Number of Distinct Detected Data	2			Number of Non-Detect Data			1
11834									Percent Non-Detects			33.33%
11835												
11836	**Warning: This data set only has 3 observations!**											
11837	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11838	**The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2010) was not**											
11839												
11840	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											

	A	B	C	D	E	F	G	H	I	J	K	L
11841	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11842												
11843												
11844												
11845	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_crabs_ne_2010)											
11846												
11847	General Statistics											
11848				Number of Valid Observations	2			Number of Distinct Observations	2			
11849												
11850												
11851	Warning: This data set only has 2 observations!											
11852	Data set is too small to compute reliable and meaningful statistics and estimates!											
11853	The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_crabs_ne_2010) was not processed!											
11854												
11855	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11856	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11857												
11858												
11859												
11860	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_crabs_nw_2010)											
11861												
11862	General Statistics											
11863				Number of Valid Observations	1			Number of Distinct Observations	1			
11864												
11865												
11866	Warning: This data set only has 1 observations!											
11867	Data set is too small to compute reliable and meaningful statistics and estimates!											
11868	The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_crabs_nw_2010) was not processed!											
11869												
11870	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11871	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11872												
11873												
11874												
11875	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_crabs_ref_2010)											
11876												
11877	General Statistics											
11878				Number of Valid Data	3			Number of Detected Data	1			
11879				Number of Distinct Detected Data	1			Number of Non-Detect Data	2			
11880								Percent Non-Detects	66.67%			
11881												
11882	Warning: This data set only has 3 observations!											
11883	Data set is too small to compute reliable and meaningful statistics and estimates!											
11884	The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_crabs_ref_2010) was not processed!											
11885												
11886	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11887	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11888												
11889												
11890												
11891	PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_crabs_stillwater_2010)											
11892												
11893	General Statistics											
11894				Number of Valid Observations	3			Number of Distinct Observations	2			
11895												
11896												
11897	Warning: This data set only has 3 observations!											
11898	Data set is too small to compute reliable and meaningful statistics and estimates!											
11899	The data set for variable PCBH|UG/KG|HEPTACHLOROBIPHENYLS (gi_et_crabs_stillwater_2010) was not processed!											
11900												
11901	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
11902	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
11903												
11904												
11905												
11906	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_ne_2005)											
11907												
11908	General Statistics											
11909				Number of Valid Data	0			Number of Detected Data	0			
11910				Number of Distinct Detected Data	0			Number of Non-Detect Data	0			
11911				Number of Missing Values	11			Percent Non-Detects	NaN%			
11912												
11913	Warning: This data set only has 0 observations!											
11914	Data set is too small to compute reliable and meaningful statistics and estimates!											

	A	B	C	D	E	F	G	H	I	J	K	L
11915	**The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_ne_2005) was not processed!**											
11916												
11917	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
11918	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11919												
11920												
11921												
11922	**PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_ne_2010)**											
11923												
11924	**General Statistics**											
11925	Number of Valid Observations	5					Number of Distinct Observations	4				
11926												
11927	**Raw Statistics**						**Log-transformed Statistics**					
11928	Minimum	16					Minimum of Log Data	2.7725887				
11929	Maximum	34					Maximum of Log Data	3.5263605				
11930	Mean	24.8					Mean of log Data	3.1628542				
11931	Median	21					SD of log Data	0.345792				
11932	SD	8.5848704										
11933	Coefficient of Variation	0.3461641										
11934	Skewness	0.4121985										
11935												
11936												
11937	**Warning: There are only 4 Distinct Values in this data**											
11938	**There are insufficient Distinct Values to perform some GOF tests and bootstrap methods.**											
11939	**Those methods will return a 'N/A' value on your output display!**											
11940												
11941	**It is necessary to have 4 or more Distinct Values to compute bootstrap methods.**											
11942	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
11943	**It is recommended to have 10-15 or more observations for accurate and meaningful bootstrap results.**											
11944												
11945												
11946	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
11947												
11948	**It is suggested to collect at least 8 to 10 observations using these statistical methods!**											
11949	**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
11950												
11951	**Relevant UCL Statistics**											
11952	**Normal Distribution Test**						**Lognormal Distribution Test**					
11953	Shapiro Wilk Test Statistic	0.8236366					Shapiro Wilk Test Statistic	0.8600691				
11954	Shapiro Wilk Critical Value	0.762					Shapiro Wilk Critical Value	0.762				
11955	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
11956												
11957	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
11958	95% Student's-t UCL	32.984737					95% H-UCL	38.732724				
11959	**95% UCLs (Adjusted for Skewness)**						95% Chebyshev (MVUE) UCL	41.425293				
11960	95% Adjusted-CLT UCL (Chen-1995)	31.871263					97.5% Chebyshev (MVUE) UCL	48.62482				
11961	95% Modified-t UCL (Johnson-1978)	33.102693					99% Chebyshev (MVUE) UCL	62.766895				
11962												
11963	**Gamma Distribution Test**						**Data Distribution**					
11964	k star (bias corrected)	4.3664946					**Data appear Normal at 5% Significance Level**					
11965	Theta Star	5.6796131										
11966	MLE of Mean	24.8										
11967	MLE of Standard Deviation	11.86821										
11968	nu star	43.664946										
11969	Approximate Chi Square Value (.05)	29.511642					**Nonparametric Statistics**					
11970	Adjusted Level of Significance	0.0086					95% CLT UCL	31.115038				
11971	Adjusted Chi Square Value	24.540821					95% Jackknife UCL	32.984737				
11972							95% Standard Bootstrap UCL	30.22251				
11973	Anderson-Darling Test Statistic	0.5057832					95% Bootstrap-t UCL	48.258332				
11974	Anderson-Darling 5% Critical Value	0.6788689					95% Hall's Bootstrap UCL	123.80451				
11975	Kolmogorov-Smirnov Test Statistic	0.2816386					95% Percentile Bootstrap UCL	30.4				
11976	Kolmogorov-Smirnov 5% Critical Value	0.3575649					95% BCA Bootstrap UCL	30.4				
11977	**Data appear Gamma Distributed at 5% Significance Level**						95% Chebyshev(Mean, Sd) UCL	41.534993				
11978							97.5% Chebyshev(Mean, Sd) UCL	48.776238				
11979	**Assuming Gamma Distribution**						99% Chebyshev(Mean, Sd) UCL	63.000262				
11980	95% Approximate Gamma UCL	36.693676										
11981	95% Adjusted Gamma UCL	44.126097										
11982												
11983	**Potential UCL to Use**						Use 95% Student's-t UCL	32.984737				
11984												
11985	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
11986	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
11987	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
11988												

	A	B	C	D	E	F	G	H	I	J	K	L
11989												
11990	**PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_nw_2005)**											
11991												
11992	**General Statistics**											
11993					Number of Valid Data	0			Number of Detected Data			0
11994					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
11995					Number of Missing Values	6			Percent Non-Detects			NaN%
11996												
11997	**Warning: This data set only has 0 observations!**											
11998	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
11999	**The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_nw_2005) was not processed!**											
12000												
12001	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
12002	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
12003												
12004												
12005												
12006	**PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_nw_2010)**											
12007												
12008	**General Statistics**											
12009					Number of Valid Observations	1			Number of Distinct Observations			1
12010												
12011												
12012	**Warning: This data set only has 1 observations!**											
12013	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
12014	**The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_nw_2010) was not processed!**											
12015												
12016	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
12017	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
12018												
12019												
12020												
12021	**PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_ref_2010)**											
12022												
12023	**General Statistics**											
12024					Number of Valid Observations	3			Number of Distinct Observations			3
12025												
12026												
12027	**Warning: This data set only has 3 observations!**											
12028	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
12029	**The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_ref_2010) was not processed!**											
12030												
12031	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
12032	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
12033												
12034												
12035												
12036	**PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_s_2005)**											
12037												
12038	**General Statistics**											
12039					Number of Valid Data	0			Number of Detected Data			0
12040					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
12041					Number of Missing Values	3			Percent Non-Detects			NaN%
12042												
12043	**Warning: This data set only has 0 observations!**											
12044	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
12045	**The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_s_2005) was not processed!**											
12046												
12047	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
12048	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
12049												
12050												
12051												
12052	**PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_s_2010)**											
12053												
12054	**General Statistics**											
12055					Number of Valid Observations	1			Number of Distinct Observations			1
12056												
12057												
12058	**Warning: This data set only has 1 observations!**											
12059	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
12060	**The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_s_2010) was not processed!**											
12061												
12062	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											

	A	B	C	D	E	F	G	H	I	J	K	L
12063	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12064												
12065												
12066												
12067	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_stillwater_2005)											
12068												
12069	General Statistics											
12070					Number of Valid Data	0			Number of Detected Data	0		
12071					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
12072					Number of Missing Values	1			Percent Non-Detects	NaN%		
12073												
12074	Warning: This data set only has 0 observations!											
12075	Data set is too small to compute reliable and meaningful statistics and estimates!											
12076	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_stillwater_2005) was not											
12077												
12078	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12079	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12080												
12081												
12082												
12083	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_stillwater_2010)											
12084												
12085	General Statistics											
12086					Number of Valid Observations	3			Number of Distinct Observations	3		
12087												
12088												
12089	Warning: This data set only has 3 observations!											
12090	Data set is too small to compute reliable and meaningful statistics and estimates!											
12091	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_clams_and_mussels_stillwater_2010) was not											
12092												
12093	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12094	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12095												
12096												
12097												
12098	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_crabs_ne_2010)											
12099												
12100	General Statistics											
12101					Number of Valid Observations	2			Number of Distinct Observations	2		
12102												
12103												
12104	Warning: This data set only has 2 observations!											
12105	Data set is too small to compute reliable and meaningful statistics and estimates!											
12106	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_crabs_ne_2010) was not processed!											
12107												
12108	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12109	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12110												
12111												
12112												
12113	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_crabs_nw_2010)											
12114												
12115	General Statistics											
12116					Number of Valid Observations	1			Number of Distinct Observations	1		
12117												
12118												
12119	Warning: This data set only has 1 observations!											
12120	Data set is too small to compute reliable and meaningful statistics and estimates!											
12121	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_crabs_nw_2010) was not processed!											
12122												
12123	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12124	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12125												
12126												
12127												
12128	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_crabs_ref_2010)											
12129												
12130	General Statistics											
12131					Number of Valid Observations	3			Number of Distinct Observations	3		
12132												
12133												
12134	Warning: This data set only has 3 observations!											
12135	Data set is too small to compute reliable and meaningful statistics and estimates!											
12136	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_crabs_ref_2010) was not processed!											

12137												
12138	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12139	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12140												
12141												
12142												
12143	PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_crabs_stillwater_2010)											
12144												
12145	General Statistics											
12146	Number of Valid Observations	3				Number of Distinct Observations	3					
12147												
12148												
12149	Warning: This data set only has 3 observations!											
12150	Data set is too small to compute reliable and meaningful statistics and estimates!											
12151	The data set for variable PCBH|UG/KG|HEXACHLOROBIPHENYL (gi_et_crabs_stillwater_2010) was not processed!											
12152												
12153	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12154	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12155												
12156												
12157												
12158	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_ne_2005)											
12159												
12160	General Statistics											
12161	Number of Valid Data	0				Number of Detected Data	0					
12162	Number of Distinct Detected Data	0				Number of Non-Detect Data	0					
12163	Number of Missing Values	11				Percent Non-Detects	NaN%					
12164												
12165	Warning: This data set only has 0 observations!											
12166	Data set is too small to compute reliable and meaningful statistics and estimates!											
12167	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_ne_2005) was not											
12168												
12169	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12170	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12171												
12172												
12173												
12174	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_ne_2010)											
12175												
12176	General Statistics											
12177	Number of Valid Data	5				Number of Detected Data	4					
12178	Number of Distinct Detected Data	3				Number of Non-Detect Data	1					
12179						Percent Non-Detects	20.00%					
12180												
12181	Raw Statistics					Log-transformed Statistics						
12182	Minimum Detected	5				Minimum Detected	1.6094379					
12183	Maximum Detected	20				Maximum Detected	2.9957323					
12184	Mean of Detected	13.25				Mean of Detected	2.4708212					
12185	SD of Detected	6.1846584				SD of Detected	0.5983643					
12186	Minimum Non-Detect	2				Minimum Non-Detect	0.6931472					
12187	Maximum Non-Detect	2				Maximum Non-Detect	0.6931472					
12188												
12189												
12190	Warning: There are only 3 Distinct Detected Values in this data set											
12191	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
12192	Those methods will return a 'N/A' value on your output display!											
12193												
12194	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
12195	However, results obtained using 4 to 9 distinct values may not be reliable.											
12196	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
12197												
12198												
12199	UCL Statistics											
12200	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
12201	Shapiro Wilk Test Statistic	0.9259683				Shapiro Wilk Test Statistic	0.8449375					
12202	5% Shapiro Wilk Critical Value	0.748				5% Shapiro Wilk Critical Value	0.748					
12203	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
12204												
12205	Assuming Normal Distribution					Assuming Lognormal Distribution						
12206	DL/2 Substitution Method					DL/2 Substitution Method						
12207	Mean	10.8				Mean	1.976657					
12208	SD	7.6615925				SD	1.2204595					
12209	95% DL/2 (t) UCL	18.104492				95% H-Stat (DL/2) UCL	546.25387					
12210												

12211	Maximum Likelihood Estimate(MLE) Method									Log ROS Method		
12212					Mean	10.172912				Mean in Log Scale		2.1842772
12213					SD	7.9564278				SD in Log Scale		0.8240554
12214					95% MLE (t) UCL	17.758497				Mean in Original Scale		11.16477
12215					95% MLE (Tiku) UCL	18.132346				SD in Original Scale		7.1012973
12216										95% t UCL		17.935082
12217										95% Percentile Bootstrap UCL		15.8
12218										95% BCA Bootstrap UCL		15.8
12219												
12220	Gamma Distribution Test with Detected Values Only									Data Distribution Test with Detected Values Only		
12221					k star (bias corrected)	1.3111597				Data appear Normal at 5% Significance Level		
12222					Theta Star	10.105558						
12223					nu star	10.489278						
12224												
12225					A-D Test Statistic	0.4567122				Nonparametric Statistics		
12226					5% A-D Critical Value	0.6589667				Kaplan-Meier (KM) Method		
12227					K-S Test Statistic	0.6589667				Mean		11.6
12228					5% K-S Critical Value	0.3960039				SD		5.8172158
12229	Data appear Gamma Distributed at 5% Significance Level									SE of Mean		3.0039973
12230										95% KM (t) UCL		18.004062
12231	Assuming Gamma Distribution									95% KM (z) UCL		16.541136
12232	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL		18.753757
12233					Minimum	5				95% KM (bootstrap t) UCL		15.558114
12234					Maximum	20				95% KM (BCA) UCL		16.4
12235					Mean	11.696896				95% KM (Percentile Bootstrap) UCL		16.4
12236					Median	14				95% KM (Chebyshev) UCL		24.694121
12237					SD	6.3834289				97.5% KM (Chebyshev) UCL		30.359957
12238					k star	1.6023263				99% KM (Chebyshev) UCL		41.489396
12239					Theta star	7.299946						
12240					Nu star	16.023263				Potential UCLs to Use		
12241					AppChi2	7.9785896				95% KM (t) UCL		18.004062
12242					95% Gamma Approximate UCL	23.490673				95% KM (Percentile Bootstrap) UCL		16.4
12243					95% Adjusted Gamma UCL	N/A						
12244	Note: DL/2 is not a recommended method.											
12245												
12246	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
12247	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
12248	For additional insight, the user may want to consult a statistician.											
12249												
12250												
12251	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2005)											
12252												
12253	General Statistics											
12254					Number of Valid Data	0				Number of Detected Data		0
12255					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
12256					Number of Missing Values	6				Percent Non-Detects		NaN%
12257												
12258	Warning: This data set only has 0 observations!											
12259	Data set is too small to compute reliable and meaningful statistics and estimates!											
12260	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2005) was not											
12261												
12262	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12263	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12264												
12265												
12266												
12267	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2010)											
12268												
12269	General Statistics											
12270					Number of Valid Data	1				Number of Detected Data		0
12271					Number of Distinct Detected Data	0				Number of Non-Detect Data		1
12272										Percent Non-Detects		100.00%
12273												
12274	Warning: This data set only has 1 observations!											
12275	Data set is too small to compute reliable and meaningful statistics and estimates!											
12276	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2010) was not											
12277												
12278	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12279	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12280												
12281												
12282												
12283	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_ref_2010)											
12284												

	A	B	C	D	E	F	G	H	I	J	K	L
12285	General Statistics											
12286					Number of Valid Data	3			Number of Detected Data			0
12287					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
12288									Percent Non-Detects			100.00%
12289												
12290	Warning: This data set only has 3 observations!											
12291	Data set is too small to compute reliable and meaningful statistics and estimates!											
12292	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_ref_2010) was not											
12293												
12294	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12295	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12296												
12297												
12298												
12299	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2005)											
12300												
12301	General Statistics											
12302					Number of Valid Data	0			Number of Detected Data			0
12303					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
12304					Number of Missing Values	3			Percent Non-Detects			NaN%
12305												
12306	Warning: This data set only has 0 observations!											
12307	Data set is too small to compute reliable and meaningful statistics and estimates!											
12308	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2005) was not processed!											
12309												
12310	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12311	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12312												
12313												
12314												
12315	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2010)											
12316												
12317	General Statistics											
12318					Number of Valid Observations	1			Number of Distinct Observations			1
12319												
12320												
12321	Warning: This data set only has 1 observations!											
12322	Data set is too small to compute reliable and meaningful statistics and estimates!											
12323	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2010) was not processed!											
12324												
12325	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12326	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12327												
12328												
12329												
12330	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2005)											
12331												
12332	General Statistics											
12333					Number of Valid Data	0			Number of Detected Data			0
12334					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
12335					Number of Missing Values	1			Percent Non-Detects			NaN%
12336												
12337	Warning: This data set only has 0 observations!											
12338	Data set is too small to compute reliable and meaningful statistics and estimates!											
12339	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2005) was not											
12340												
12341	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12342	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12343												
12344												
12345												
12346	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2010)											
12347												
12348	General Statistics											
12349					Number of Valid Data	3			Number of Detected Data			1
12350					Number of Distinct Detected Data	1			Number of Non-Detect Data			2
12351									Percent Non-Detects			66.67%
12352												
12353	Warning: This data set only has 3 observations!											
12354	Data set is too small to compute reliable and meaningful statistics and estimates!											
12355	The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2010) was not											
12356												
12357	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12358	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											

12359												
12360												
12361												
12362	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_crabs_ne_2010)											
12363												
12364						General Statistics							
12365					Number of Valid Data	2			Number of Detected Data	1		
12366					Number of Distinct Detected Data	1			Number of Non-Detect Data	1		
12367									Percent Non-Detects	50.00%		
12368												
12369						Warning: This data set only has 2 observations!						
12370						Data set is too small to compute reliable and meaningful statistics and estimates!						
12371						The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_crabs_ne_2010) was not processed!						
12372												
12373						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
12374						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
12375												
12376												
12377												
12378	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_crabs_nw_2010)											
12379												
12380						General Statistics						
12381					Number of Valid Observations	1			Number of Distinct Observations	1		
12382												
12383												
12384						Warning: This data set only has 1 observations!						
12385						Data set is too small to compute reliable and meaningful statistics and estimates!						
12386						The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_crabs_nw_2010) was not processed!						
12387												
12388						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
12389						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
12390												
12391												
12392												
12393	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_crabs_ref_2010)											
12394												
12395						General Statistics						
12396					Number of Valid Data	3			Number of Detected Data	2		
12397					Number of Distinct Detected Data	2			Number of Non-Detect Data	1		
12398									Percent Non-Detects	33.33%		
12399												
12400						Warning: This data set only has 3 observations!						
12401						Data set is too small to compute reliable and meaningful statistics and estimates!						
12402						The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_crabs_ref_2010) was not processed!						
12403												
12404						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
12405						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
12406												
12407												
12408												
12409	PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_crabs_stillwater_2010)											
12410												
12411						General Statistics						
12412					Number of Valid Observations	3			Number of Distinct Observations	3		
12413												
12414												
12415						Warning: This data set only has 3 observations!						
12416						Data set is too small to compute reliable and meaningful statistics and estimates!						
12417						The data set for variable PCBH|UG/KG|PENTACHLOROBIPHENYLS (gi_et_crabs_stillwater_2010) was not processed!						
12418												
12419						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
12420						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
12421												
12422												
12423												
12424	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_ne_2005)											
12425												
12426						General Statistics						
12427					Number of Valid Data	0			Number of Detected Data	0		
12428					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
12429					Number of Missing Values	11			Percent Non-Detects	NaN%		
12430												
12431						Warning: This data set only has 0 observations!						
12432						Data set is too small to compute reliable and meaningful statistics and estimates!						

	A	B	C	D	E	F	G	H	I	J	K	L
12433	**The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_ne_2005) was not**											
12434												
12435	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
12436	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
12437												
12438												
12439												
12440	**PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_ne_2010)**											
12441												
12442	**General Statistics**											
12443					Number of Valid Data	5			Number of Detected Data			2
12444					Number of Distinct Detected Data	2			Number of Non-Detect Data			3
12445									Percent Non-Detects			60.00%
12446												
12447	**Raw Statistics**						**Log-transformed Statistics**					
12448					Minimum Detected	3.05			Minimum Detected			1.1151416
12449					Maximum Detected	5.7			Maximum Detected			1.7404662
12450					Mean of Detected	4.375			Mean of Detected			1.4278039
12451					SD of Detected	1.873833			SD of Detected			0.4421713
12452					Minimum Non-Detect	1			Minimum Non-Detect			0
12453					Maximum Non-Detect	3			Maximum Non-Detect			1.0986123
12454												
12455	Note: Data have multiple DLs - Use of KM Method is								Number treated as Non-Detect			3
12456	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected			2
12457	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage			60.00%
12458												
12459	**Warning: Data set has only 2 Distinct Detected Values.**											
12460	**This may not be adequate enough to compute meaningful and reliable test statistics and estimates.**											
12461	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
12462												
12463	**Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.**											
12464												
12465	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
12466	**Those methods will return a 'N/A' value on your output display!**											
12467												
12468	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
12469	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
12470	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
12471												
12472												
12473	**UCL Statistics**											
12474	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
12475					Shapiro Wilk Test Statistic	N/A			Shapiro Wilk Test Statistic			N/A
12476					5% Shapiro Wilk Critical Value	N/A			5% Shapiro Wilk Critical Value			N/A
12477	**Data not Normal at 5% Significance Level**						**Data not Lognormal at 5% Significance Level**					
12478												
12479	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
12480					DL/2 Substitution Method				DL/2 Substitution Method			
12481					Mean	2.35			Mean			0.5135851
12482					SD	2.1023796			SD			0.9485212
12483					95% DL/2 (t) UCL	4.3543895			95% H-Stat (DL/2) UCL			24.16194
12484												
12485					Maximum Likelihood Estimate(MLE) Method	N/A			Log ROS Method			
12486	**MLE method failed to converge properly**								Mean in Log Scale			N/A
12487									SD in Log Scale			N/A
12488									Mean in Original Scale			N/A
12489									SD in Original Scale			N/A
12490									95% t UCL			N/A
12491									95% Percentile Bootstrap UCL			N/A
12492									95% BCA Bootstrap UCL			N/A
12493												
12494	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
12495					k star (bias corrected)	N/A	**Data do not follow a Discernable Distribution (0.05)**					
12496					Theta Star	N/A						
12497					nu star	N/A						
12498												
12499					A-D Test Statistic	N/A	**Nonparametric Statistics**					
12500					5% A-D Critical Value	N/A			Kaplan-Meier (KM) Method			
12501					K-S Test Statistic	N/A			Mean			3.58
12502					5% K-S Critical Value	N/A			SD			1.06
12503	**Data not Gamma Distributed at 5% Significance Level**								SE of Mean			0.6704029
12504									95% KM (t) UCL			5.0091962
12505	**Assuming Gamma Distribution**								95% KM (z) UCL			4.6827146
12506	Gamma ROS Statistics using Extrapolated Data								95% KM (jackknife) UCL			5.8216054

12507					Minimum	N/A				95% KM (bootstrap t) UCL		N/A
12508					Maximum	N/A				95% KM (BCA) UCL		N/A
12509					Mean	N/A				95% KM (Percentile Bootstrap) UCL		5.7
12510					Median	N/A				95% KM (Chebyshev) UCL		6.5022183
12511					SD	N/A				97.5% KM (Chebyshev) UCL		7.7666645
12512					k star	N/A				99% KM (Chebyshev) UCL		10.250424
12513					Theta star	N/A						
12514					Nu star	N/A				**Potential UCLs to Use**		
12515					AppChi2	N/A				95% KM (t) UCL		5.0091962
12516				95% Gamma Approximate UCL		N/A				95% KM (% Bootstrap) UCL		5.7
12517				95% Adjusted Gamma UCL		N/A						
12518	**Note: DL/2 is not a recommended method.**											
12519												
12520	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
12521	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
12522	**For additional insight, the user may want to consult a statistician.**											
12523												
12524												
12525	**PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2005)**											
12526												
12527	**General Statistics**											
12528					Number of Valid Data	0				Number of Detected Data		0
12529					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
12530					Number of Missing Values	6				Percent Non-Detects		NaN%
12531												
12532	**Warning: This data set only has 0 observations!**											
12533	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
12534	**The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2005) was not**											
12535												
12536	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
12537	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
12538												
12539												
12540												
12541	**PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2010)**											
12542												
12543	**General Statistics**											
12544					Number of Valid Data	1				Number of Detected Data		0
12545					Number of Distinct Detected Data	0				Number of Non-Detect Data		1
12546										Percent Non-Detects		100.00%
12547												
12548	**Warning: This data set only has 1 observations!**											
12549	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
12550	**The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_nw_2010) was not**											
12551												
12552	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
12553	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
12554												
12555												
12556												
12557	**PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_ref_2010)**											
12558												
12559	**General Statistics**											
12560					Number of Valid Data	3				Number of Detected Data		0
12561					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
12562										Percent Non-Detects		100.00%
12563												
12564	**Warning: This data set only has 3 observations!**											
12565	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
12566	**The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_ref_2010) was not**											
12567												
12568	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
12569	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
12570												
12571												
12572												
12573	**PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2005)**											
12574												
12575	**General Statistics**											
12576					Number of Valid Data	0				Number of Detected Data		0
12577					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
12578					Number of Missing Values	3				Percent Non-Detects		NaN%
12579												
12580	**Warning: This data set only has 0 observations!**											

	A	B	C	D	E	F	G	H	I	J	K	L
12581	Data set is too small to compute reliable and meaningful statistics and estimates!											
12582	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2005) was not processed!											
12583												
12584	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12585	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12586												
12587												
12588												
12589	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2010)											
12590												
12591	General Statistics											
12592				Number of Valid Observations	1			Number of Distinct Observations	1			
12593												
12594												
12595	Warning: This data set only has 1 observations!											
12596	Data set is too small to compute reliable and meaningful statistics and estimates!											
12597	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_s_2010) was not processed!											
12598												
12599	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12600	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12601												
12602												
12603												
12604	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2005)											
12605												
12606	General Statistics											
12607					Number of Valid Data	0			Number of Detected Data	0		
12608					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
12609					Number of Missing Values	1			Percent Non-Detects	NaN%		
12610												
12611	Warning: This data set only has 0 observations!											
12612	Data set is too small to compute reliable and meaningful statistics and estimates!											
12613	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2005) was not											
12614												
12615	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12616	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12617												
12618												
12619												
12620	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2010)											
12621												
12622	General Statistics											
12623					Number of Valid Data	3			Number of Detected Data	0		
12624					Number of Distinct Detected Data	0			Number of Non-Detect Data	3		
12625									Percent Non-Detects	100.00%		
12626												
12627	Warning: This data set only has 3 observations!											
12628	Data set is too small to compute reliable and meaningful statistics and estimates!											
12629	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_clams_and_mussels_stillwater_2010) was not											
12630												
12631	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12632	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12633												
12634												
12635												
12636	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_crabs_ne_2010)											
12637												
12638	General Statistics											
12639					Number of Valid Data	2			Number of Detected Data	0		
12640					Number of Distinct Detected Data	0			Number of Non-Detect Data	2		
12641									Percent Non-Detects	100.00%		
12642												
12643	Warning: This data set only has 2 observations!											
12644	Data set is too small to compute reliable and meaningful statistics and estimates!											
12645	The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_crabs_ne_2010) was not processed!											
12646												
12647	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12648	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12649												
12650												
12651												
12652	PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_crabs_nw_2010)											
12653												
12654	General Statistics											

12655					Number of Valid Data	1				Number of Detected Data		0
12656					Number of Distinct Detected Data	0				Number of Non-Detect Data		1
12657										Percent Non-Detects		100.00%
12658												
12659	**Warning: This data set only has 1 observations!**											
12660	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
12661	**The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_crabs_nw_2010) was not processed!**											
12662												
12663	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
12664	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
12665												
12666												
12667												
12668	**PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_crabs_ref_2010)**											
12669												
12670	**General Statistics**											
12671					Number of Valid Data	3				Number of Detected Data		0
12672					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
12673										Percent Non-Detects		100.00%
12674												
12675	**Warning: This data set only has 3 observations!**											
12676	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
12677	**The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_crabs_ref_2010) was not processed!**											
12678												
12679	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
12680	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
12681												
12682												
12683												
12684	**PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_crabs_stillwater_2010)**											
12685												
12686	**General Statistics**											
12687					Number of Valid Data	3				Number of Detected Data		0
12688					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
12689										Percent Non-Detects		100.00%
12690												
12691	**Warning: This data set only has 3 observations!**											
12692	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
12693	**The data set for variable PCBH|UG/KG|TETRACHLOROBIPHENYLS (gi_et_crabs_stillwater_2010) was not processed!**											
12694												
12695	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
12696	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
12697												
12698												
12699												
12700	**PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_ne_2005)**											
12701												
12702	**General Statistics**											
12703					Number of Valid Data	0				Number of Detected Data		0
12704					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
12705					Number of Missing Values	11				Percent Non-Detects		NaN%
12706												
12707	**Warning: This data set only has 0 observations!**											
12708	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
12709	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_ne_2005) was not processed!**											
12710												
12711	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
12712	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
12713												
12714												
12715												
12716	**PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_ne_2010)**											
12717												
12718	**General Statistics**											
12719					Number of Valid Observations	5				Number of Distinct Observations		5
12720												
12721	**Raw Statistics**									**Log-transformed Statistics**		
12722					Minimum	29.8				Minimum of Log Data		3.3945084
12723					Maximum	62				Maximum of Log Data		4.1271344
12724					Mean	46.38				Mean of log Data		3.8030722
12725					Median	42.8				SD of log Data		0.2946536
12726					SD	13.149601						
12727					Coefficient of Variation	0.2835188						
12728					Skewness	0.0457854						

12729												
12730												
12731	Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!											
12732												
12733	It is suggested to collect at least 8 to 10 observations using these statistical methods!											
12734	If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12735												
12736												
12737	Warning: There are only 5 Values in this data											
12738	Note: It should be noted that even though bootstrap methods may be performed on this data set,											
12739	the resulting calculations may not be reliable enough to draw conclusions											
12740												
12741	The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.											
12742												
12743	Relevant UCL Statistics											
12744	Normal Distribution Test						Lognormal Distribution Test					
12745					Shapiro Wilk Test Statistic	0.9456554					Shapiro Wilk Test Statistic	0.9475071
12746					Shapiro Wilk Critical Value	0.762					Shapiro Wilk Critical Value	0.762
12747	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
12748												
12749	Assuming Normal Distribution						Assuming Lognormal Distribution					
12750					95% Student's-t UCL	58.916709					95% H-UCL	66.593164
12751	95% UCLs (Adjusted for Skewness)										95% Chebyshev (MVUE) UCL	72.993973
12752					95% Adjusted-CLT UCL (Chen-1995)	56.18152					97.5% Chebyshev (MVUE) UCL	84.495136
12753					95% Modified-t UCL (Johnson-1978)	58.936778					99% Chebyshev (MVUE) UCL	107.08694
12754												
12755	Gamma Distribution Test						Data Distribution					
12756					k star (bias corrected)	6.1170719	Data appear Normal at 5% Significance Level					
12757					Theta Star	7.5820589						
12758					MLE of Mean	46.38						
12759					MLE of Standard Deviation	18.75249						
12760					nu star	61.170719						
12761					Approximate Chi Square Value (.05)	44.183127	Nonparametric Statistics					
12762					Adjusted Level of Significance	0.0086					95% CLT UCL	56.052858
12763					Adjusted Chi Square Value	37.957663					95% Jackknife UCL	58.916709
12764											95% Standard Bootstrap UCL	55.062469
12765					Anderson-Darling Test Statistic	0.2710086					95% Bootstrap-t UCL	66.955921
12766					Anderson-Darling 5% Critical Value	0.6787858					95% Hall's Bootstrap UCL	69.991079
12767					Kolmogorov-Smirnov Test Statistic	0.2244285					95% Percentile Bootstrap UCL	55.56
12768					Kolmogorov-Smirnov 5% Critical Value	0.3573767					95% BCA Bootstrap UCL	55.34
12769	Data appear Gamma Distributed at 5% Significance Level										95% Chebyshev(Mean, Sd) UCL	72.013291
12770											97.5% Chebyshev(Mean, Sd) UCL	83.104836
12771	Assuming Gamma Distribution										99% Chebyshev(Mean, Sd) UCL	104.89203
12772					95% Approximate Gamma UCL	64.21225						
12773					95% Adjusted Gamma UCL	74.743748						
12774												
12775	Potential UCL to Use										Use 95% Student's-t UCL	58.916709
12776												
12777	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
12778	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
12779	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
12780												
12781												
12782	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_nw_2005)											
12783												
12784	General Statistics											
12785					Number of Valid Data	0					Number of Detected Data	0
12786					Number of Distinct Detected Data	0					Number of Non-Detect Data	0
12787					Number of Missing Values	6					Percent Non-Detects	NaN%
12788												
12789	Warning: This data set only has 0 observations!											
12790	Data set is too small to compute reliable and meaningful statistics and estimates!											
12791	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_nw_2005) was not processed!											
12792												
12793	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12794	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12795												
12796												
12797												
12798	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_nw_2010)											
12799												
12800	General Statistics											
12801					Number of Valid Observations	1					Number of Distinct Observations	1
12802												

	A	B	C	D	E	F	G	H	I	J	K	L
12803												
12804	Warning: This data set only has 1 observations!											
12805	Data set is too small to compute reliable and meaningful statistics and estimates!											
12806	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_nw_2010) was not processed!											
12807												
12808	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12809	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12810												
12811												
12812												
12813	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_ref_2010)											
12814												
12815	General Statistics											
12816	Number of Valid Observations	3					Number of Distinct Observations	3				
12817												
12818												
12819	Warning: This data set only has 3 observations!											
12820	Data set is too small to compute reliable and meaningful statistics and estimates!											
12821	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_ref_2010) was not processed!											
12822												
12823	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12824	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12825												
12826												
12827												
12828	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_s_2005)											
12829												
12830	General Statistics											
12831	Number of Valid Data	0					Number of Detected Data	0				
12832	Number of Distinct Detected Data	0					Number of Non-Detect Data	0				
12833	Number of Missing Values	3					Percent Non-Detects	NaN%				
12834												
12835	Warning: This data set only has 0 observations!											
12836	Data set is too small to compute reliable and meaningful statistics and estimates!											
12837	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_s_2005) was not processed!											
12838												
12839	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12840	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12841												
12842												
12843												
12844	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_s_2010)											
12845												
12846	General Statistics											
12847	Number of Valid Observations	1					Number of Distinct Observations	1				
12848												
12849												
12850	Warning: This data set only has 1 observations!											
12851	Data set is too small to compute reliable and meaningful statistics and estimates!											
12852	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_s_2010) was not processed!											
12853												
12854	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12855	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12856												
12857												
12858												
12859	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_stillwater_2005)											
12860												
12861	General Statistics											
12862	Number of Valid Data	0					Number of Detected Data	0				
12863	Number of Distinct Detected Data	0					Number of Non-Detect Data	0				
12864	Number of Missing Values	1					Percent Non-Detects	NaN%				
12865												
12866	Warning: This data set only has 0 observations!											
12867	Data set is too small to compute reliable and meaningful statistics and estimates!											
12868	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_stillwater_2005) was not											
12869												
12870	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12871	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12872												
12873												
12874												
12875	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_stillwater_2010)											
12876												

	A	B	C	D	E	F	G	H	I	J	K	L
12877	General Statistics											
12878	Number of Valid Observations	3					Number of Distinct Observations	3				
12879												
12880												
12881	Warning: This data set only has 3 observations!											
12882	Data set is too small to compute reliable and meaningful statistics and estimates!											
12883	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_clams_and_mussels_stillwater_2010) was not											
12884												
12885	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12886	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12887												
12888												
12889												
12890	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_crabs_ne_2010)											
12891												
12892	General Statistics											
12893	Number of Valid Observations	2					Number of Distinct Observations	2				
12894												
12895												
12896	Warning: This data set only has 2 observations!											
12897	Data set is too small to compute reliable and meaningful statistics and estimates!											
12898	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_crabs_ne_2010) was not processed!											
12899												
12900	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12901	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12902												
12903												
12904												
12905	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_crabs_nw_2010)											
12906												
12907	General Statistics											
12908	Number of Valid Observations	1					Number of Distinct Observations	1				
12909												
12910												
12911	Warning: This data set only has 1 observations!											
12912	Data set is too small to compute reliable and meaningful statistics and estimates!											
12913	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_crabs_nw_2010) was not processed!											
12914												
12915	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12916	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12917												
12918												
12919												
12920	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_crabs_ref_2010)											
12921												
12922	General Statistics											
12923	Number of Valid Observations	3					Number of Distinct Observations	3				
12924												
12925												
12926	Warning: This data set only has 3 observations!											
12927	Data set is too small to compute reliable and meaningful statistics and estimates!											
12928	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_crabs_ref_2010) was not processed!											
12929												
12930	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12931	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12932												
12933												
12934												
12935	PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_crabs_stillwater_2010)											
12936												
12937	General Statistics											
12938	Number of Valid Observations	3					Number of Distinct Observations	3				
12939												
12940												
12941	Warning: This data set only has 3 observations!											
12942	Data set is too small to compute reliable and meaningful statistics and estimates!											
12943	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS (gi_et_crabs_stillwater_2010) was not processed!											
12944												
12945	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
12946	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
12947												
12948												
12949												
12950	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_ne_2005)											

12951												
12952						**General Statistics**						
12953						Number of Valid Data	0			Number of Detected Data		0
12954						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
12955						Number of Missing Values	11			Percent Non-Detects		NaN%
12956												
12957						**Warning: This data set only has 0 observations!**						
12958						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
12959						**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_ne_2005) was not**						
12960												
12961						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
12962						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
12963												
12964												
12965												
12966	**PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_ne_2010)**											
12967												
12968						**General Statistics**						
12969						Number of Valid Observations	5			Number of Distinct Observations		5
12970												
12971						**Raw Statistics**				**Log-transformed Statistics**		
12972						Minimum	34.2			Minimum of Log Data		3.5322256
12973						Maximum	72.6			Maximum of Log Data		4.2849649
12974						Mean	56.52			Mean of log Data		3.9995164
12975						Median	55.6			SD of log Data		0.3055416
12976						SD	15.775044					
12977						Coefficient of Variation	0.2791055					
12978						Skewness	-0.48738					
12979												
12980												
12981	**Warning: A sample size of 'n' = 5 may not adequate enough to compute meaningful and reliable test statistics and estimates!**											
12982												
12983						**It is suggested to collect at least 8 to 10 observations using these statistical methods!**						
12984						**If possible compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
12985												
12986												
12987						**Warning: There are only 5 Values in this data**						
12988						**Note: It should be noted that even though bootstrap methods may be performed on this data set,**						
12989						**the resulting calculations may not be reliable enough to draw conclusions**						
12990												
12991						**The literature suggests to use bootstrap methods on data sets having more than 10-15 observations.**						
12992												
12993						**Relevant UCL Statistics**						
12994						**Normal Distribution Test**				**Lognormal Distribution Test**		
12995						Shapiro Wilk Test Statistic	0.9340157			Shapiro Wilk Test Statistic		0.912709
12996						Shapiro Wilk Critical Value	0.762			Shapiro Wilk Critical Value		0.762
12997						**Data appear Normal at 5% Significance Level**				**Data appear Lognormal at 5% Significance Level**		
12998												
12999						**Assuming Normal Distribution**				**Assuming Lognormal Distribution**		
13000						95% Student's-t UCL	71.559783			95% H-UCL		82.688279
13001						**95% UCLs (Adjusted for Skewness)**				95% Chebyshev (MVUE) UCL		90.259011
13002						95% Adjusted-CLT UCL (Chen-1995)	66.481093			97.5% Chebyshev (MVUE) UCL		104.8081
13003						95% Modified-t UCL (Johnson-1978)	71.303501			99% Chebyshev (MVUE) UCL		133.38697
13004												
13005						**Gamma Distribution Test**				**Data Distribution**		
13006						k star (bias corrected)	5.9007611			**Data appear Normal at 5% Significance Level**		
13007						Theta Star	9.5784254					
13008						MLE of Mean	56.52					
13009						MLE of Standard Deviation	23.267415					
13010						nu star	59.007611					
13011						Approximate Chi Square Value (.05)	42.345796			**Nonparametric Statistics**		
13012						Adjusted Level of Significance	0.0086			95% CLT UCL		68.124136
13013						Adjusted Chi Square Value	36.26483			95% Jackknife UCL		71.559783
13014										95% Standard Bootstrap UCL		66.960412
13015						Anderson-Darling Test Statistic	0.3051451			95% Bootstrap-t UCL		71.887617
13016						Anderson-Darling 5% Critical Value	0.678796			95% Hall's Bootstrap UCL		71.084875
13017						Kolmogorov-Smirnov Test Statistic	0.2293983			95% Percentile Bootstrap UCL		67.16
13018						Kolmogorov-Smirnov 5% Critical Value	0.3574			95% BCA Bootstrap UCL		64.92
13019						**Data appear Gamma Distributed at 5% Significance Level**				95% Chebyshev(Mean, Sd) UCL		87.271221
13020										97.5% Chebyshev(Mean, Sd) UCL		100.5773
13021						**Assuming Gamma Distribution**				99% Chebyshev(Mean, Sd) UCL		126.71451
13022						95% Approximate Gamma UCL	78.758944					
13023						95% Adjusted Gamma UCL	91.965417					
13024												

13025	Potential UCL to Use									Use 95% Student's-t UCL		71.559783
13026												
13027	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
13028	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
13029	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
13030												
13031												
13032	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_nw_2005)											
13033												
13034	General Statistics											
13035				Number of Valid Data		0				Number of Detected Data		0
13036				Number of Distinct Detected Data		0				Number of Non-Detect Data		0
13037				Number of Missing Values		6				Percent Non-Detects		NaN%
13038												
13039	Warning: This data set only has 0 observations!											
13040	Data set is too small to compute reliable and meaningful statistics and estimates!											
13041	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_nw_2005) was not											
13042												
13043	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13044	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13045												
13046												
13047												
13048	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_nw_2010)											
13049												
13050	General Statistics											
13051				Number of Valid Observations		1				Number of Distinct Observations		1
13052												
13053												
13054	Warning: This data set only has 1 observations!											
13055	Data set is too small to compute reliable and meaningful statistics and estimates!											
13056	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_nw_2010) was not											
13057												
13058	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13059	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13060												
13061												
13062												
13063	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_ref_2010)											
13064												
13065	General Statistics											
13066				Number of Valid Observations		3				Number of Distinct Observations		3
13067												
13068												
13069	Warning: This data set only has 3 observations!											
13070	Data set is too small to compute reliable and meaningful statistics and estimates!											
13071	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_ref_2010) was not											
13072												
13073	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13074	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13075												
13076												
13077												
13078	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_s_2005)											
13079												
13080	General Statistics											
13081				Number of Valid Data		0				Number of Detected Data		0
13082				Number of Distinct Detected Data		0				Number of Non-Detect Data		0
13083				Number of Missing Values		3				Percent Non-Detects		NaN%
13084												
13085	Warning: This data set only has 0 observations!											
13086	Data set is too small to compute reliable and meaningful statistics and estimates!											
13087	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_s_2005) was not											
13088												
13089	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13090	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13091												
13092												
13093												
13094	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_s_2010)											
13095												
13096	General Statistics											
13097				Number of Valid Observations		1				Number of Distinct Observations		1
13098												

	A	B	C	D	E	F	G	H	I	J	K	L
13099												
13100	Warning: This data set only has 1 observations!											
13101	Data set is too small to compute reliable and meaningful statistics and estimates!											
13102	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_s_2010) was not											
13103												
13104	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13105	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13106												
13107												
13108												
13109	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_stillwater_2005)											
13110												
13111	General Statistics											
13112	Number of Valid Data	0	Number of Detected Data	0								
13113	Number of Distinct Detected Data	0	Number of Non-Detect Data	0								
13114	Number of Missing Values	1	Percent Non-Detects	NaN%								
13115												
13116	Warning: This data set only has 0 observations!											
13117	Data set is too small to compute reliable and meaningful statistics and estimates!											
13118	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_stillwater_2005) was											
13119												
13120	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13121	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13122												
13123												
13124												
13125	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_stillwater_2010)											
13126												
13127	General Statistics											
13128	Number of Valid Observations	3	Number of Distinct Observations	3								
13129												
13130												
13131	Warning: This data set only has 3 observations!											
13132	Data set is too small to compute reliable and meaningful statistics and estimates!											
13133	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_clams_and_mussels_stillwater_2010) was											
13134												
13135	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13136	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13137												
13138												
13139												
13140	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_crabs_ne_2010)											
13141												
13142	General Statistics											
13143	Number of Valid Observations	2	Number of Distinct Observations	2								
13144												
13145												
13146	Warning: This data set only has 2 observations!											
13147	Data set is too small to compute reliable and meaningful statistics and estimates!											
13148	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_crabs_ne_2010) was not processed!											
13149												
13150	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13151	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13152												
13153												
13154												
13155	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_crabs_nw_2010)											
13156												
13157	General Statistics											
13158	Number of Valid Observations	1	Number of Distinct Observations	1								
13159												
13160												
13161	Warning: This data set only has 1 observations!											
13162	Data set is too small to compute reliable and meaningful statistics and estimates!											
13163	The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_crabs_nw_2010) was not processed!											
13164												
13165	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13166	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13167												
13168												
13169												
13170	PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_crabs_ref_2010)											
13171												
13172	General Statistics											

13173	Number of Valid Observations				3		Number of Distinct Observations				2	
13174												
13175												
13176	**Warning: This data set only has 3 observations!**											
13177	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
13178	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_crabs_ref_2010) was not processed!**											
13179												
13180	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
13181	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
13182												
13183												
13184												
13185	**PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_crabs_stillwater_2010)**											
13186												
13187	**General Statistics**											
13188	Number of Valid Observations				3		Number of Distinct Observations				3	
13189												
13190												
13191	**Warning: This data set only has 3 observations!**											
13192	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
13193	**The data set for variable PCBH|UG/KG|TOTAL PCB HOMOLOGS-HALFND (gi_et_crabs_stillwater_2010) was not processed!**											
13194												
13195	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
13196	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
13197												
13198												
13199												
13200	**PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_ne_2005)**											
13201												
13202	**General Statistics**											
13203	Number of Valid Data				11		Number of Detected Data				3	
13204	Number of Distinct Detected Data				3		Number of Non-Detect Data				8	
13205							Percent Non-Detects				72.73%	
13206												
13207	**Raw Statistics**						**Log-transformed Statistics**					
13208	Minimum Detected				98		Minimum Detected				4.5849675	
13209	Maximum Detected				170		Maximum Detected				5.1357984	
13210	Mean of Detected				142.66667		Mean of Detected				4.9319799	
13211	SD of Detected				39.004273		SD of Detected				0.3020464	
13212	Minimum Non-Detect				95		Minimum Non-Detect				4.5538769	
13213	Maximum Non-Detect				99		Maximum Non-Detect				4.5951199	
13214												
13215	Note: Data have multiple DLs - Use of KM Method is						Number treated as Non-Detect				9	
13216	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				2	
13217	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				81.82%	
13218												
13219	**Warning: There are only 3 Distinct Detected Values in this data set**											
13220	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
13221	**Those methods will return a 'N/A' value on your output display!**											
13222												
13223	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
13224	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
13225	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
13226												
13227												
13228	**UCL Statistics**											
13229	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
13230	Shapiro Wilk Test Statistic				0.851868		Shapiro Wilk Test Statistic				0.8314208	
13231	5% Shapiro Wilk Critical Value				0.767		5% Shapiro Wilk Critical Value				0.767	
13232	**Data appear Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
13233												
13234	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
13235	DL/2 Substitution Method						DL/2 Substitution Method					
13236	Mean				74.136364		Mean				4.1670505	
13237	SD				47.347698		SD				0.50963	
13238	95% DL/2 (t) UCL				100.01082		95% H-Stat (DL/2) UCL				104.54564	
13239												
13240	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
13241	**MLE method failed to converge properly**						Mean in Log Scale				4.1804178	
13242							SD in Log Scale				0.534946	
13243							Mean in Original Scale				75.556474	
13244							SD in Original Scale				47.374475	
13245							95% t UCL				101.44556	
13246							95% Percentile Bootstrap UCL				100.174	

13247											95% BCA Bootstrap UCL	103.02002
13248												
13249	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
13250					k star (bias corrected)	N/A	Data appear Normal at 5% Significance Level					
13251					Theta Star	N/A						
13252					nu star	N/A						
13253												
13254					A-D Test Statistic	N/A	Nonparametric Statistics					
13255					5% A-D Critical Value	N/A					Kaplan-Meier (KM) Method	
13256					K-S Test Statistic	N/A					Mean	110.18182
13257					5% K-S Critical Value	N/A					SD	25.929338
13258	Data not Gamma Distributed at 5% Significance Level										SE of Mean	9.5750427
13259											95% KM (t) UCL	127.53621
13260	Assuming Gamma Distribution										95% KM (z) UCL	125.93136
13261	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	150.30128
13262					Minimum	N/A					95% KM (bootstrap t) UCL	117.67087
13263					Maximum	N/A					95% KM (BCA) UCL	170
13264					Mean	N/A					95% KM (Percentile Bootstrap) UCL	170
13265					Median	N/A					95% KM (Chebyshev) UCL	151.91846
13266					SD	N/A					97.5% KM (Chebyshev) UCL	169.97794
13267					k star	N/A					99% KM (Chebyshev) UCL	205.45229
13268					Theta star	N/A						
13269					Nu star	N/A	Potential UCLs to Use					
13270					AppChi2	N/A					95% KM (t) UCL	127.53621
13271					95% Gamma Approximate UCL	N/A					95% KM (Percentile Bootstrap) UCL	170
13272					95% Adjusted Gamma UCL	N/A						
13273	Note: DL/2 is not a recommended method.											
13274												
13275	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
13276	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
13277	For additional insight, the user may want to consult a statistician.											
13278												
13279												
13280	PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_ne_2010)											
13281												
13282	General Statistics											
13283					Number of Valid Data	0	Number of Detected Data					0
13284					Number of Distinct Detected Data	0	Number of Non-Detect Data					0
13285					Number of Missing Values	5	Percent Non-Detects					NaN%
13286												
13287	Warning: This data set only has 0 observations!											
13288	Data set is too small to compute reliable and meaningful statistics and estimates!											
13289	The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_ne_2010) was not processed!											
13290												
13291	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13292	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13293												
13294												
13295												
13296	PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_nw_2005)											
13297												
13298	General Statistics											
13299					Number of Valid Data	6	Number of Detected Data					0
13300					Number of Distinct Detected Data	0	Number of Non-Detect Data					6
13301							Percent Non-Detects					100.00%
13302												
13303	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
13304	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
13305	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
13306												
13307	The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_nw_2005) was not processed!											
13308												
13309												
13310												
13311	PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_nw_2010)											
13312												
13313	General Statistics											
13314					Number of Valid Data	0	Number of Detected Data					0
13315					Number of Distinct Detected Data	0	Number of Non-Detect Data					0
13316					Number of Missing Values	1	Percent Non-Detects					NaN%
13317												
13318	Warning: This data set only has 0 observations!											
13319	Data set is too small to compute reliable and meaningful statistics and estimates!											
13320	The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_nw_2010) was not processed!											

13321												
13322	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13323	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13324												
13325												
13326												
13327	PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_ref_2010)											
13328												
13329	General Statistics											
13330						Number of Valid Data	0			Number of Detected Data	0	
13331						Number of Distinct Detected Data	0			Number of Non-Detect Data	0	
13332						Number of Missing Values	3			Percent Non-Detects	NaN%	
13333												
13334	Warning: This data set only has 0 observations!											
13335	Data set is too small to compute reliable and meaningful statistics and estimates!											
13336	The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_ref_2010) was not processed!											
13337												
13338	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13339	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13340												
13341												
13342												
13343	PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_s_2005)											
13344												
13345	General Statistics											
13346						Number of Valid Data	3			Number of Detected Data	0	
13347						Number of Distinct Detected Data	0			Number of Non-Detect Data	3	
13348										Percent Non-Detects	100.00%	
13349												
13350	Warning: This data set only has 3 observations!											
13351	Data set is too small to compute reliable and meaningful statistics and estimates!											
13352	The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_s_2005) was not processed!											
13353												
13354	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13355	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13356												
13357												
13358												
13359	PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_s_2010)											
13360												
13361	General Statistics											
13362						Number of Valid Data	0			Number of Detected Data	0	
13363						Number of Distinct Detected Data	0			Number of Non-Detect Data	0	
13364						Number of Missing Values	1			Percent Non-Detects	NaN%	
13365												
13366	Warning: This data set only has 0 observations!											
13367	Data set is too small to compute reliable and meaningful statistics and estimates!											
13368	The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_s_2010) was not processed!											
13369												
13370	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13371	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13372												
13373												
13374												
13375	PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_stillwater_2005)											
13376												
13377	General Statistics											
13378						Number of Valid Observations	1			Number of Distinct Observations	1	
13379												
13380												
13381	Warning: This data set only has 1 observations!											
13382	Data set is too small to compute reliable and meaningful statistics and estimates!											
13383	The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_stillwater_2005) was not processed!											
13384												
13385	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13386	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13387												
13388												
13389												
13390	PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_stillwater_2010)											
13391												
13392	General Statistics											
13393						Number of Valid Data	0			Number of Detected Data	0	
13394						Number of Distinct Detected Data	0			Number of Non-Detect Data	0	

13395					Number of Missing Values	3				Percent Non-Detects		NaN%
13396												
13397					Warning: This data set only has 0 observations!							
13398					Data set is too small to compute reliable and meaningful statistics and estimates!							
13399					The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_clams_and_mussels_stillwater_2010) was not processed!							
13400												
13401					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
13402					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
13403												
13404												
13405												
13406	PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_crabs_ne_2010)											
13407												
13408					General Statistics							
13409					Number of Valid Data	0				Number of Detected Data		0
13410					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
13411					Number of Missing Values	2				Percent Non-Detects		NaN%
13412												
13413					Warning: This data set only has 0 observations!							
13414					Data set is too small to compute reliable and meaningful statistics and estimates!							
13415					The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_crabs_ne_2010) was not processed!							
13416												
13417					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
13418					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
13419												
13420												
13421												
13422	PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_crabs_nw_2010)											
13423												
13424					General Statistics							
13425					Number of Valid Data	0				Number of Detected Data		0
13426					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
13427					Number of Missing Values	1				Percent Non-Detects		NaN%
13428												
13429					Warning: This data set only has 0 observations!							
13430					Data set is too small to compute reliable and meaningful statistics and estimates!							
13431					The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_crabs_nw_2010) was not processed!							
13432												
13433					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
13434					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
13435												
13436												
13437												
13438	PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_crabs_ref_2010)											
13439												
13440					General Statistics							
13441					Number of Valid Data	0				Number of Detected Data		0
13442					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
13443					Number of Missing Values	3				Percent Non-Detects		NaN%
13444												
13445					Warning: This data set only has 0 observations!							
13446					Data set is too small to compute reliable and meaningful statistics and estimates!							
13447					The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_crabs_ref_2010) was not processed!							
13448												
13449					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
13450					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
13451												
13452												
13453												
13454	PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_crabs_stillwater_2010)											
13455												
13456					General Statistics							
13457					Number of Valid Data	0				Number of Detected Data		0
13458					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
13459					Number of Missing Values	3				Percent Non-Detects		NaN%
13460												
13461					Warning: This data set only has 0 observations!							
13462					Data set is too small to compute reliable and meaningful statistics and estimates!							
13463					The data set for variable PEST/PCB|UG/KG|AROCLOR-1260 (gi_et_crabs_stillwater_2010) was not processed!							
13464												
13465					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
13466					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
13467												
13468												

	A	B	C	D	E	F	G	H	I	J	K	L
13469												
13470	**PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_ne_2005)**											
13471												
13472	**General Statistics**											
13473					Number of Valid Data	11			Number of Detected Data			1
13474					Number of Distinct Detected Data	1			Number of Non-Detect Data			10
13475									Percent Non-Detects			90.91%
13476												
13477	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
13478	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters**											
13479												
13480	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_ne_2005) was not processed!**											
13481												
13482												
13483												
13484	**PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_ne_2010)**											
13485												
13486	**General Statistics**											
13487					Number of Valid Data	0			Number of Detected Data			0
13488					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
13489					Number of Missing Values	5			Percent Non-Detects			NaN%
13490												
13491	**Warning: This data set only has 0 observations!**											
13492	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
13493	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_ne_2010) was not processed!**											
13494												
13495	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
13496	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
13497												
13498												
13499												
13500	**PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_nw_2005)**											
13501												
13502	**General Statistics**											
13503					Number of Valid Data	6			Number of Detected Data			0
13504					Number of Distinct Detected Data	0			Number of Non-Detect Data			6
13505									Percent Non-Detects			100.00%
13506												
13507	**Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!**											
13508	**Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!**											
13509	**The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).**											
13510												
13511	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_nw_2005) was not processed!**											
13512												
13513												
13514												
13515	**PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_nw_2010)**											
13516												
13517	**General Statistics**											
13518					Number of Valid Data	0			Number of Detected Data			0
13519					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
13520					Number of Missing Values	1			Percent Non-Detects			NaN%
13521												
13522	**Warning: This data set only has 0 observations!**											
13523	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
13524	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_nw_2010) was not processed!**											
13525												
13526	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
13527	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
13528												
13529												
13530												
13531	**PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_ref_2010)**											
13532												
13533	**General Statistics**											
13534					Number of Valid Data	0			Number of Detected Data			0
13535					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
13536					Number of Missing Values	3			Percent Non-Detects			NaN%
13537												
13538	**Warning: This data set only has 0 observations!**											
13539	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
13540	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_ref_2010) was not processed!**											
13541												
13542	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											

	A	B	C	D	E	F	G	H	I	J	K	L
13543	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
13544												
13545												
13546												
13547	**PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_s_2005)**											
13548												
13549	**General Statistics**											
13550					Number of Valid Data	3		Number of Detected Data	0			
13551					Number of Distinct Detected Data	0		Number of Non-Detect Data	3			
13552								Percent Non-Detects	100.00%			
13553												
13554	**Warning: This data set only has 3 observations!**											
13555	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
13556	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_s_2005) was not processed!**											
13557												
13558	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
13559	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
13560												
13561												
13562												
13563	**PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_s_2010)**											
13564												
13565	**General Statistics**											
13566					Number of Valid Data	0		Number of Detected Data	0			
13567					Number of Distinct Detected Data	0		Number of Non-Detect Data	0			
13568					Number of Missing Values	1		Percent Non-Detects	NaN%			
13569												
13570	**Warning: This data set only has 0 observations!**											
13571	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
13572	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_s_2010) was not processed!**											
13573												
13574	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
13575	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
13576												
13577												
13578												
13579	**PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_stillwater_2005)**											
13580												
13581	**General Statistics**											
13582					Number of Valid Data	1		Number of Detected Data	0			
13583					Number of Distinct Detected Data	0		Number of Non-Detect Data	1			
13584								Percent Non-Detects	100.00%			
13585												
13586	**Warning: This data set only has 1 observations!**											
13587	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
13588	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_stillwater_2005) was not processed!**											
13589												
13590	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
13591	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
13592												
13593												
13594												
13595	**PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_stillwater_2010)**											
13596												
13597	**General Statistics**											
13598					Number of Valid Data	0		Number of Detected Data	0			
13599					Number of Distinct Detected Data	0		Number of Non-Detect Data	0			
13600					Number of Missing Values	3		Percent Non-Detects	NaN%			
13601												
13602	**Warning: This data set only has 0 observations!**											
13603	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
13604	**The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_et_clams_and_mussels_stillwater_2010) was not processed!**											
13605												
13606	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
13607	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
13608												
13609												
13610												
13611	**PEST/PCB|UG/KG|BETA-BHC (gi_et_crabs_ne_2010)**											
13612												
13613	**General Statistics**											
13614					Number of Valid Data	0		Number of Detected Data	0			
13615					Number of Distinct Detected Data	0		Number of Non-Detect Data	0			
13616					Number of Missing Values	2		Percent Non-Detects	NaN%			

	A	B	C	D	E	F	G	H	I	J	K	L
13617												
13618	Warning: This data set only has 0 observations!											
13619	Data set is too small to compute reliable and meaningful statistics and estimates!											
13620	The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_et_crabs_ne_2010) was not processed!											
13621												
13622	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13623	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13624												
13625												
13626												
13627	PEST/PCB|UG/KG|BETA-BHC (gi_et_crabs_nw_2010)											
13628												
13629	General Statistics											
13630					Number of Valid Data	0			Number of Detected Data			0
13631					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
13632					Number of Missing Values	1			Percent Non-Detects			NaN%
13633												
13634	Warning: This data set only has 0 observations!											
13635	Data set is too small to compute reliable and meaningful statistics and estimates!											
13636	The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_et_crabs_nw_2010) was not processed!											
13637												
13638	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13639	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13640												
13641												
13642												
13643	PEST/PCB|UG/KG|BETA-BHC (gi_et_crabs_ref_2010)											
13644												
13645	General Statistics											
13646					Number of Valid Data	0			Number of Detected Data			0
13647					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
13648					Number of Missing Values	3			Percent Non-Detects			NaN%
13649												
13650	Warning: This data set only has 0 observations!											
13651	Data set is too small to compute reliable and meaningful statistics and estimates!											
13652	The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_et_crabs_ref_2010) was not processed!											
13653												
13654	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13655	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13656												
13657												
13658												
13659	PEST/PCB|UG/KG|BETA-BHC (gi_et_crabs_stillwater_2010)											
13660												
13661	General Statistics											
13662					Number of Valid Data	0			Number of Detected Data			0
13663					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
13664					Number of Missing Values	3			Percent Non-Detects			NaN%
13665												
13666	Warning: This data set only has 0 observations!											
13667	Data set is too small to compute reliable and meaningful statistics and estimates!											
13668	The data set for variable PEST/PCB|UG/KG|BETA-BHC (gi_et_crabs_stillwater_2010) was not processed!											
13669												
13670	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13671	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13672												
13673												
13674												
13675	PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_ne_2005)											
13676												
13677	General Statistics											
13678					Number of Valid Data	11			Number of Detected Data			1
13679					Number of Distinct Detected Data	1			Number of Non-Detect Data			10
13680									Percent Non-Detects			90.91%
13681												
13682	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
13683	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters											
13684												
13685	The data set for variable PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_ne_2005) was not processed!											
13686												
13687												
13688												
13689	PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_ne_2010)											
13690												

	A	B	C	D	E	F	G	H	I	J	K	L
13691	General Statistics											
13692					Number of Valid Data	0			Number of Detected Data			0
13693					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
13694					Number of Missing Values	5			Percent Non-Detects			NaN%
13695												
13696	Warning: This data set only has 0 observations!											
13697	Data set is too small to compute reliable and meaningful statistics and estimates!											
13698	The data set for variable PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_ne_2010) was not processed!											
13699												
13700	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13701	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13702												
13703												
13704												
13705	PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_nw_2005)											
13706												
13707	General Statistics											
13708					Number of Valid Data	6			Number of Detected Data			0
13709					Number of Distinct Detected Data	0			Number of Non-Detect Data			6
13710									Percent Non-Detects			100.00%
13711												
13712	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
13713	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
13714	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
13715												
13716	The data set for variable PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_nw_2005) was not processed!											
13717												
13718												
13719												
13720	PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_nw_2010)											
13721												
13722	General Statistics											
13723					Number of Valid Data	0			Number of Detected Data			0
13724					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
13725					Number of Missing Values	1			Percent Non-Detects			NaN%
13726												
13727	Warning: This data set only has 0 observations!											
13728	Data set is too small to compute reliable and meaningful statistics and estimates!											
13729	The data set for variable PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_nw_2010) was not processed!											
13730												
13731	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13732	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13733												
13734												
13735												
13736	PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_ref_2010)											
13737												
13738	General Statistics											
13739					Number of Valid Data	0			Number of Detected Data			0
13740					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
13741					Number of Missing Values	3			Percent Non-Detects			NaN%
13742												
13743	Warning: This data set only has 0 observations!											
13744	Data set is too small to compute reliable and meaningful statistics and estimates!											
13745	The data set for variable PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_ref_2010) was not processed!											
13746												
13747	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13748	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13749												
13750												
13751												
13752	PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_s_2005)											
13753												
13754	General Statistics											
13755					Number of Valid Data	3			Number of Detected Data			0
13756					Number of Distinct Detected Data	0			Number of Non-Detect Data			3
13757									Percent Non-Detects			100.00%
13758												
13759	Warning: This data set only has 3 observations!											
13760	Data set is too small to compute reliable and meaningful statistics and estimates!											
13761	The data set for variable PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_s_2005) was not processed!											
13762												
13763	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13764	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											

	A	B	C	D	E	F	G	H	I	J	K	L
13765												
13766												
13767												
13768	**PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_s_2010)**											
13769												
13770						**General Statistics**						
13771					Number of Valid Data	0			Number of Detected Data			0
13772					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
13773					Number of Missing Values	1			Percent Non-Detects			NaN%
13774												
13775						**Warning: This data set only has 0 observations!**						
13776						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
13777						**The data set for variable PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_s_2010) was not processed!**						
13778												
13779						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
13780						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
13781												
13782												
13783												
13784	**PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_stillwater_2005)**											
13785												
13786						**General Statistics**						
13787					Number of Valid Data	1			Number of Detected Data			0
13788					Number of Distinct Detected Data	0			Number of Non-Detect Data			1
13789									Percent Non-Detects			100.00%
13790												
13791						**Warning: This data set only has 1 observations!**						
13792						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
13793						**The data set for variable PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_stillwater_2005) was not processed!**						
13794												
13795						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
13796						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
13797												
13798												
13799												
13800	**PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_stillwater_2010)**											
13801												
13802						**General Statistics**						
13803					Number of Valid Data	0			Number of Detected Data			0
13804					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
13805					Number of Missing Values	3			Percent Non-Detects			NaN%
13806												
13807						**Warning: This data set only has 0 observations!**						
13808						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
13809						**The data set for variable PEST/PCB|UG/KG|ENDRIN (gi_et_clams_and_mussels_stillwater_2010) was not processed!**						
13810												
13811						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
13812						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
13813												
13814												
13815												
13816	**PEST/PCB|UG/KG|ENDRIN (gi_et_crabs_ne_2010)**											
13817												
13818						**General Statistics**						
13819					Number of Valid Data	0			Number of Detected Data			0
13820					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
13821					Number of Missing Values	2			Percent Non-Detects			NaN%
13822												
13823						**Warning: This data set only has 0 observations!**						
13824						**Data set is too small to compute reliable and meaningful statistics and estimates!**						
13825						**The data set for variable PEST/PCB|UG/KG|ENDRIN (gi_et_crabs_ne_2010) was not processed!**						
13826												
13827						**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**						
13828						**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**						
13829												
13830												
13831												
13832	**PEST/PCB|UG/KG|ENDRIN (gi_et_crabs_nw_2010)**											
13833												
13834						**General Statistics**						
13835					Number of Valid Data	0			Number of Detected Data			0
13836					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
13837					Number of Missing Values	1			Percent Non-Detects			NaN%
13838												

	A	B	C	D	E	F	G	H	I	J	K	L
13839	Warning: This data set only has 0 observations!											
13840	Data set is too small to compute reliable and meaningful statistics and estimates!											
13841	The data set for variable PEST/PCB|UG/KG|ENDRIN (gi_et_crabs_nw_2010) was not processed!											
13842												
13843	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13844	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13845												
13846												
13847												
13848	PEST/PCB|UG/KG|ENDRIN (gi_et_crabs_ref_2010)											
13849												
13850	General Statistics											
13851					Number of Valid Data	0			Number of Detected Data	0		
13852					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
13853					Number of Missing Values	3			Percent Non-Detects	NaN%		
13854												
13855	Warning: This data set only has 0 observations!											
13856	Data set is too small to compute reliable and meaningful statistics and estimates!											
13857	The data set for variable PEST/PCB|UG/KG|ENDRIN (gi_et_crabs_ref_2010) was not processed!											
13858												
13859	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13860	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13861												
13862												
13863												
13864	PEST/PCB|UG/KG|ENDRIN (gi_et_crabs_stillwater_2010)											
13865												
13866	General Statistics											
13867					Number of Valid Data	0			Number of Detected Data	0		
13868					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
13869					Number of Missing Values	3			Percent Non-Detects	NaN%		
13870												
13871	Warning: This data set only has 0 observations!											
13872	Data set is too small to compute reliable and meaningful statistics and estimates!											
13873	The data set for variable PEST/PCB|UG/KG|ENDRIN (gi_et_crabs_stillwater_2010) was not processed!											
13874												
13875	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13876	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13877												
13878												
13879												
13880	PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_ne_2005)											
13881												
13882	General Statistics											
13883					Number of Valid Data	11			Number of Detected Data	1		
13884					Number of Distinct Detected Data	1			Number of Non-Detect Data	10		
13885									Percent Non-Detects	90.91%		
13886												
13887	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
13888	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters											
13889												
13890	The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_ne_2005) was not processed!											
13891												
13892												
13893												
13894	PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_ne_2010)											
13895												
13896	General Statistics											
13897					Number of Valid Data	0			Number of Detected Data	0		
13898					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
13899					Number of Missing Values	5			Percent Non-Detects	NaN%		
13900												
13901	Warning: This data set only has 0 observations!											
13902	Data set is too small to compute reliable and meaningful statistics and estimates!											
13903	The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_ne_2010) was not processed!											
13904												
13905	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13906	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13907												
13908												
13909												
13910	PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_nw_2005)											
13911												
13912	General Statistics											

13913				Number of Valid Data	6			Number of Detected Data	0			
13914				Number of Distinct Detected Data	0			Number of Non-Detect Data	6			
13915								Percent Non-Detects	100.00%			
13916												
13917	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
13918	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
13919	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
13920												
13921	The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_nw_2005) was not processed!											
13922												
13923												
13924												
13925	PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_nw_2010)											
13926												
13927	General Statistics											
13928				Number of Valid Data	0			Number of Detected Data	0			
13929				Number of Distinct Detected Data	0			Number of Non-Detect Data	0			
13930				Number of Missing Values	1			Percent Non-Detects	NaN%			
13931												
13932	Warning: This data set only has 0 observations!											
13933	Data set is too small to compute reliable and meaningful statistics and estimates!											
13934	The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_nw_2010) was not processed!											
13935												
13936	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13937	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13938												
13939												
13940												
13941	PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_ref_2010)											
13942												
13943	General Statistics											
13944				Number of Valid Data	0			Number of Detected Data	0			
13945				Number of Distinct Detected Data	0			Number of Non-Detect Data	0			
13946				Number of Missing Values	3			Percent Non-Detects	NaN%			
13947												
13948	Warning: This data set only has 0 observations!											
13949	Data set is too small to compute reliable and meaningful statistics and estimates!											
13950	The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_ref_2010) was not processed!											
13951												
13952	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13953	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13954												
13955												
13956												
13957	PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_s_2005)											
13958												
13959	General Statistics											
13960				Number of Valid Data	3			Number of Detected Data	0			
13961				Number of Distinct Detected Data	0			Number of Non-Detect Data	3			
13962								Percent Non-Detects	100.00%			
13963												
13964	Warning: This data set only has 3 observations!											
13965	Data set is too small to compute reliable and meaningful statistics and estimates!											
13966	The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_s_2005) was not processed!											
13967												
13968	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13969	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13970												
13971												
13972												
13973	PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_s_2010)											
13974												
13975	General Statistics											
13976				Number of Valid Data	0			Number of Detected Data	0			
13977				Number of Distinct Detected Data	0			Number of Non-Detect Data	0			
13978				Number of Missing Values	1			Percent Non-Detects	NaN%			
13979												
13980	Warning: This data set only has 0 observations!											
13981	Data set is too small to compute reliable and meaningful statistics and estimates!											
13982	The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_s_2010) was not processed!											
13983												
13984	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
13985	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
13986												

	A	B	C	D	E	F	G	H	I	J	K	L
13987												
13988												
13989	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_stillwater_2005)**											
13990												
13991	**General Statistics**											
13992					Number of Valid Data	1		Number of Detected Data				0
13993					Number of Distinct Detected Data	0		Number of Non-Detect Data				1
13994								Percent Non-Detects				100.00%
13995												
13996	**Warning: This data set only has 1 observations!**											
13997	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
13998	**The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_stillwater_2005) was not**											
13999												
14000	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14001	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14002												
14003												
14004												
14005	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_stillwater_2010)**											
14006												
14007	**General Statistics**											
14008					Number of Valid Data	0		Number of Detected Data				0
14009					Number of Distinct Detected Data	0		Number of Non-Detect Data				0
14010					Number of Missing Values	3		Percent Non-Detects				NaN%
14011												
14012	**Warning: This data set only has 0 observations!**											
14013	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
14014	**The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_clams_and_mussels_stillwater_2010) was not**											
14015												
14016	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14017	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14018												
14019												
14020												
14021	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_crabs_ne_2010)**											
14022												
14023	**General Statistics**											
14024					Number of Valid Data	0		Number of Detected Data				0
14025					Number of Distinct Detected Data	0		Number of Non-Detect Data				0
14026					Number of Missing Values	2		Percent Non-Detects				NaN%
14027												
14028	**Warning: This data set only has 0 observations!**											
14029	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
14030	**The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_crabs_ne_2010) was not processed!**											
14031												
14032	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14033	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14034												
14035												
14036												
14037	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_crabs_nw_2010)**											
14038												
14039	**General Statistics**											
14040					Number of Valid Data	0		Number of Detected Data				0
14041					Number of Distinct Detected Data	0		Number of Non-Detect Data				0
14042					Number of Missing Values	1		Percent Non-Detects				NaN%
14043												
14044	**Warning: This data set only has 0 observations!**											
14045	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
14046	**The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_crabs_nw_2010) was not processed!**											
14047												
14048	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14049	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14050												
14051												
14052												
14053	**PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_crabs_ref_2010)**											
14054												
14055	**General Statistics**											
14056					Number of Valid Data	0		Number of Detected Data				0
14057					Number of Distinct Detected Data	0		Number of Non-Detect Data				0
14058					Number of Missing Values	3		Percent Non-Detects				NaN%
14059												
14060	**Warning: This data set only has 0 observations!**											

	A	B	C	D	E	F	G	H	I	J	K	L
14061	Data set is too small to compute reliable and meaningful statistics and estimates!											
14062	The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_crabs_ref_2010) was not processed!											
14063												
14064	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14065	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14066												
14067												
14068												
14069	PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_crabs_stillwater_2010)											
14070												
14071	General Statistics											
14072					Number of Valid Data	0			Number of Detected Data			0
14073					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
14074					Number of Missing Values	3			Percent Non-Detects			NaN%
14075												
14076	Warning: This data set only has 0 observations!											
14077	Data set is too small to compute reliable and meaningful statistics and estimates!											
14078	The data set for variable PEST/PCB|UG/KG|ENDRIN ALDEHYDE (gi_et_crabs_stillwater_2010) was not processed!											
14079												
14080	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14081	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14082												
14083												
14084												
14085	PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_ne_2005)											
14086												
14087	General Statistics											
14088					Number of Valid Data	11			Number of Detected Data			1
14089					Number of Distinct Detected Data	1			Number of Non-Detect Data			10
14090									Percent Non-Detects			90.91%
14091												
14092	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
14093	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters											
14094												
14095	The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_ne_2005) was not											
14096												
14097												
14098												
14099	PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_ne_2010)											
14100												
14101	General Statistics											
14102					Number of Valid Data	0			Number of Detected Data			0
14103					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
14104					Number of Missing Values	5			Percent Non-Detects			NaN%
14105												
14106	Warning: This data set only has 0 observations!											
14107	Data set is too small to compute reliable and meaningful statistics and estimates!											
14108	The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_ne_2010) was not											
14109												
14110	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14111	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14112												
14113												
14114												
14115	PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_nw_2005)											
14116												
14117	General Statistics											
14118					Number of Valid Data	6			Number of Detected Data			0
14119					Number of Distinct Detected Data	0			Number of Non-Detect Data			6
14120									Percent Non-Detects			100.00%
14121												
14122	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
14123	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
14124	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
14125												
14126	The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_nw_2005) was not											
14127												
14128												
14129												
14130	PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_nw_2010)											
14131												
14132	General Statistics											
14133					Number of Valid Data	0			Number of Detected Data			0
14134					Number of Distinct Detected Data	0			Number of Non-Detect Data			0

14135					Number of Missing Values	1				Percent Non-Detects		NaN%
14136												
14137						Warning: This data set only has 0 observations!						
14138						Data set is too small to compute reliable and meaningful statistics and estimates!						
14139						The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_nw_2010) was not						
14140												
14141						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
14142						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
14143												
14144												
14145												
14146	PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_ref_2010)											
14147												
14148						General Statistics						
14149					Number of Valid Data	0				Number of Detected Data		0
14150					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
14151					Number of Missing Values	3				Percent Non-Detects		NaN%
14152												
14153						Warning: This data set only has 0 observations!						
14154						Data set is too small to compute reliable and meaningful statistics and estimates!						
14155						The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_ref_2010) was not						
14156												
14157						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
14158						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
14159												
14160												
14161												
14162	PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_s_2005)											
14163												
14164						General Statistics						
14165					Number of Valid Data	3				Number of Detected Data		0
14166					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
14167										Percent Non-Detects		100.00%
14168												
14169						Warning: This data set only has 3 observations!						
14170						Data set is too small to compute reliable and meaningful statistics and estimates!						
14171	The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_s_2005) was not processed!											
14172												
14173						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
14174						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
14175												
14176												
14177												
14178	PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_s_2010)											
14179												
14180						General Statistics						
14181					Number of Valid Data	0				Number of Detected Data		0
14182					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
14183					Number of Missing Values	1				Percent Non-Detects		NaN%
14184												
14185						Warning: This data set only has 0 observations!						
14186						Data set is too small to compute reliable and meaningful statistics and estimates!						
14187	The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_s_2010) was not processed!											
14188												
14189						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
14190						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
14191												
14192												
14193												
14194	PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_stillwater_2005)											
14195												
14196						General Statistics						
14197					Number of Valid Data	1				Number of Detected Data		0
14198					Number of Distinct Detected Data	0				Number of Non-Detect Data		1
14199										Percent Non-Detects		100.00%
14200												
14201						Warning: This data set only has 1 observations!						
14202						Data set is too small to compute reliable and meaningful statistics and estimates!						
14203	The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_stillwater_2005) was not											
14204												
14205						It is suggested to collect at least 8 to 10 observations before using these statistical methods!						
14206						If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.						
14207												
14208												

	A	B	C	D	E	F	G	H	I	J	K	L
14209												
14210	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_stillwater_2010)**											
14211												
14212	**General Statistics**											
14213						Number of Valid Data	0			Number of Detected Data		0
14214						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
14215						Number of Missing Values	3			Percent Non-Detects		NaN%
14216												
14217	**Warning: This data set only has 0 observations!**											
14218	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
14219	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_clams_and_mussels_stillwater_2010) was not**											
14220												
14221	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14222	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14223												
14224												
14225												
14226	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_crabs_ne_2010)**											
14227												
14228	**General Statistics**											
14229						Number of Valid Data	0			Number of Detected Data		0
14230						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
14231						Number of Missing Values	2			Percent Non-Detects		NaN%
14232												
14233	**Warning: This data set only has 0 observations!**											
14234	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
14235	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_crabs_ne_2010) was not processed!**											
14236												
14237	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14238	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14239												
14240												
14241												
14242	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_crabs_nw_2010)**											
14243												
14244	**General Statistics**											
14245						Number of Valid Data	0			Number of Detected Data		0
14246						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
14247						Number of Missing Values	1			Percent Non-Detects		NaN%
14248												
14249	**Warning: This data set only has 0 observations!**											
14250	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
14251	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_crabs_nw_2010) was not processed!**											
14252												
14253	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14254	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14255												
14256												
14257												
14258	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_crabs_ref_2010)**											
14259												
14260	**General Statistics**											
14261						Number of Valid Data	0			Number of Detected Data		0
14262						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
14263						Number of Missing Values	3			Percent Non-Detects		NaN%
14264												
14265	**Warning: This data set only has 0 observations!**											
14266	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
14267	**The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_crabs_ref_2010) was not processed!**											
14268												
14269	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14270	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14271												
14272												
14273												
14274	**PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_crabs_stillwater_2010)**											
14275												
14276	**General Statistics**											
14277						Number of Valid Data	0			Number of Detected Data		0
14278						Number of Distinct Detected Data	0			Number of Non-Detect Data		0
14279						Number of Missing Values	3			Percent Non-Detects		NaN%
14280												
14281	**Warning: This data set only has 0 observations!**											
14282	**Data set is too small to compute reliable and meaningful statistics and estimates!**											

14283	The data set for variable PEST/PCB|UG/KG|GAMMA-BHC (LINDANE) (gi_et_crabs_stillwater_2010) was not processed!											
14284												
14285	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14286	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14287												
14288												
14289												
14290	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_ne_2005)											
14291												
14292	General Statistics											
14293						Number of Valid Data	11			Number of Detected Data	0	
14294						Number of Distinct Detected Data	0			Number of Non-Detect Data	11	
14295										Percent Non-Detects	100.00%	
14296												
14297	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
14298	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
14299	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
14300												
14301	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_ne_2005) was not processed!											
14302												
14303												
14304												
14305	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_ne_2010)											
14306												
14307	General Statistics											
14308						Number of Valid Data	0			Number of Detected Data	0	
14309						Number of Distinct Detected Data	0			Number of Non-Detect Data	0	
14310						Number of Missing Values	5			Percent Non-Detects	NaN%	
14311												
14312	Warning: This data set only has 0 observations!											
14313	Data set is too small to compute reliable and meaningful statistics and estimates!											
14314	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_ne_2010) was not processed!											
14315												
14316	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14317	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14318												
14319												
14320												
14321	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_nw_2005)											
14322												
14323	General Statistics											
14324						Number of Valid Data	6			Number of Detected Data	0	
14325						Number of Distinct Detected Data	0			Number of Non-Detect Data	6	
14326										Percent Non-Detects	100.00%	
14327												
14328	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
14329	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
14330	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
14331												
14332	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_nw_2005) was not processed!											
14333												
14334												
14335												
14336	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_nw_2010)											
14337												
14338	General Statistics											
14339						Number of Valid Data	0			Number of Detected Data	0	
14340						Number of Distinct Detected Data	0			Number of Non-Detect Data	0	
14341						Number of Missing Values	1			Percent Non-Detects	NaN%	
14342												
14343	Warning: This data set only has 0 observations!											
14344	Data set is too small to compute reliable and meaningful statistics and estimates!											
14345	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_nw_2010) was not processed!											
14346												
14347	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14348	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14349												
14350												
14351												
14352	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_ref_2010)											
14353												
14354	General Statistics											
14355						Number of Valid Data	0			Number of Detected Data	0	
14356						Number of Distinct Detected Data	0			Number of Non-Detect Data	0	

14357					Number of Missing Values	3				Percent Non-Detects		NaN%
14358												
14359	**Warning: This data set only has 0 observations!**											
14360	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
14361	**The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_ref_2010) was not processed!**											
14362												
14363	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14364	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14365												
14366												
14367												
14368	**PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_s_2005)**											
14369												
14370	**General Statistics**											
14371					Number of Valid Data	3				Number of Detected Data		0
14372					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
14373										Percent Non-Detects		100.00%
14374												
14375	**Warning: This data set only has 3 observations!**											
14376	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
14377	**The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_s_2005) was not processed!**											
14378												
14379	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14380	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14381												
14382												
14383												
14384	**PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_s_2010)**											
14385												
14386	**General Statistics**											
14387					Number of Valid Data	0				Number of Detected Data		0
14388					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
14389					Number of Missing Values	1				Percent Non-Detects		NaN%
14390												
14391	**Warning: This data set only has 0 observations!**											
14392	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
14393	**The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_s_2010) was not processed!**											
14394												
14395	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14396	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14397												
14398												
14399												
14400	**PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_stillwater_2005)**											
14401												
14402	**General Statistics**											
14403					Number of Valid Observations	1				Number of Distinct Observations		1
14404												
14405												
14406	**Warning: This data set only has 1 observations!**											
14407	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
14408	**The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_stillwater_2005) was not**											
14409												
14410	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14411	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14412												
14413												
14414												
14415	**PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_stillwater_2010)**											
14416												
14417	**General Statistics**											
14418					Number of Valid Data	0				Number of Detected Data		0
14419					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
14420					Number of Missing Values	3				Percent Non-Detects		NaN%
14421												
14422	**Warning: This data set only has 0 observations!**											
14423	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
14424	**The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_clams_and_mussels_stillwater_2010) was not**											
14425												
14426	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14427	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14428												
14429												
14430												

	A	B	C	D	E	F	G	H	I	J	K	L
14431	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_crabs_ne_2010)											
14432												
14433	General Statistics											
14434					Number of Valid Data	0			Number of Detected Data			0
14435					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
14436					Number of Missing Values	2			Percent Non-Detects			NaN%
14437												
14438	Warning: This data set only has 0 observations!											
14439	Data set is too small to compute reliable and meaningful statistics and estimates!											
14440	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_crabs_ne_2010) was not processed!											
14441												
14442	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14443	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14444												
14445												
14446												
14447	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_crabs_nw_2010)											
14448												
14449	General Statistics											
14450					Number of Valid Data	0			Number of Detected Data			0
14451					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
14452					Number of Missing Values	1			Percent Non-Detects			NaN%
14453												
14454	Warning: This data set only has 0 observations!											
14455	Data set is too small to compute reliable and meaningful statistics and estimates!											
14456	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_crabs_nw_2010) was not processed!											
14457												
14458	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14459	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14460												
14461												
14462												
14463	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_crabs_ref_2010)											
14464												
14465	General Statistics											
14466					Number of Valid Data	0			Number of Detected Data			0
14467					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
14468					Number of Missing Values	3			Percent Non-Detects			NaN%
14469												
14470	Warning: This data set only has 0 observations!											
14471	Data set is too small to compute reliable and meaningful statistics and estimates!											
14472	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_crabs_ref_2010) was not processed!											
14473												
14474	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14475	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14476												
14477												
14478												
14479	PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_crabs_stillwater_2010)											
14480												
14481	General Statistics											
14482					Number of Valid Data	0			Number of Detected Data			0
14483					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
14484					Number of Missing Values	3			Percent Non-Detects			NaN%
14485												
14486	Warning: This data set only has 0 observations!											
14487	Data set is too small to compute reliable and meaningful statistics and estimates!											
14488	The data set for variable PEST/PCB|UG/KG|GAMMA-CHLORDANE (gi_et_crabs_stillwater_2010) was not processed!											
14489												
14490	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14491	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14492												
14493												
14494												
14495	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_ne_2005)											
14496												
14497	General Statistics											
14498					Number of Valid Data	11			Number of Detected Data			3
14499					Number of Distinct Detected Data	3			Number of Non-Detect Data			8
14500									Percent Non-Detects			72.73%
14501												
14502	Raw Statistics							Log-transformed Statistics				
14503					Minimum Detected	98			Minimum Detected			4.5849675
14504					Maximum Detected	170			Maximum Detected			5.1357984

14505				Mean of Detected	142.66667					Mean of Detected	4.9319799	
14506				SD of Detected	39.004273					SD of Detected	0.3020464	
14507				Minimum Non-Detect	95					Minimum Non-Detect	4.5538769	
14508				Maximum Non-Detect	99					Maximum Non-Detect	4.5951199	
14509												
14510	Note: Data have multiple DLs - Use of KM Method is									Number treated as Non-Detect	9	
14511	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected	2	
14512	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage	81.82%	
14513												
14514	**Warning: There are only 3 Distinct Detected Values in this data set**											
14515	**The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.**											
14516	**Those methods will return a 'N/A' value on your output display!**											
14517												
14518	**It is necessary to have 4 or more Distinct Values for bootstrap methods.**											
14519	**However, results obtained using 4 to 9 distinct values may not be reliable.**											
14520	**It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.**											
14521												
14522												
14523	**UCL Statistics**											
14524	**Normal Distribution Test with Detected Values Only**									**Lognormal Distribution Test with Detected Values Only**		
14525				Shapiro Wilk Test Statistic	0.851868					Shapiro Wilk Test Statistic	0.8314208	
14526				5% Shapiro Wilk Critical Value	0.767					5% Shapiro Wilk Critical Value	0.767	
14527	**Data appear Normal at 5% Significance Level**									**Data appear Lognormal at 5% Significance Level**		
14528												
14529	**Assuming Normal Distribution**									**Assuming Lognormal Distribution**		
14530				DL/2 Substitution Method						DL/2 Substitution Method		
14531				Mean	74.136364					Mean	4.1670505	
14532				SD	47.347698					SD	0.50963	
14533				95% DL/2 (t) UCL	100.01082					95% H-Stat (DL/2) UCL	104.54564	
14534												
14535				Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
14536	**MLE method failed to converge properly**									Mean in Log Scale	4.1804178	
14537										SD in Log Scale	0.534946	
14538										Mean in Original Scale	75.556474	
14539										SD in Original Scale	47.374475	
14540										95% t UCL	101.44556	
14541										95% Percentile Bootstrap UCL	97.413458	
14542										95% BCA Bootstrap UCL	103.4962	
14543												
14544	**Gamma Distribution Test with Detected Values Only**									**Data Distribution Test with Detected Values Only**		
14545				k star (bias corrected)	N/A					**Data appear Normal at 5% Significance Level**		
14546				Theta Star	N/A							
14547				nu star	N/A							
14548												
14549				A-D Test Statistic	N/A					**Nonparametric Statistics**		
14550				5% A-D Critical Value	N/A					Kaplan-Meier (KM) Method		
14551				K-S Test Statistic	N/A					Mean	110.18182	
14552				5% K-S Critical Value	N/A					SD	25.929338	
14553	**Data not Gamma Distributed at 5% Significance Level**									SE of Mean	9.5750427	
14554										95% KM (t) UCL	127.53621	
14555	**Assuming Gamma Distribution**									95% KM (z) UCL	125.93136	
14556	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	150.30128	
14557				Minimum	N/A					95% KM (bootstrap t) UCL	117.67087	
14558				Maximum	N/A					95% KM (BCA) UCL	N/A	
14559				Mean	N/A					95% KM (Percentile Bootstrap) UCL	170	
14560				Median	N/A					95% KM (Chebyshev) UCL	151.91846	
14561				SD	N/A					97.5% KM (Chebyshev) UCL	169.97794	
14562				k star	N/A					99% KM (Chebyshev) UCL	205.45229	
14563				Theta star	N/A							
14564				Nu star	N/A					**Potential UCLs to Use**		
14565				AppChi2	N/A					95% KM (t) UCL	127.53621	
14566				95% Gamma Approximate UCL	N/A					95% KM (Percentile Bootstrap) UCL	170	
14567				95% Adjusted Gamma UCL	N/A							
14568	**Note: DL/2 is not a recommended method.**											
14569												
14570	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
14571	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
14572	**For additional insight, the user may want to consult a statistician.**											
14573												
14574												
14575	**PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_ne_2010)**											
14576												
14577	**General Statistics**											
14578				Number of Valid Data	0					Number of Detected Data	0	

14579					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
14580					Number of Missing Values	5				Percent Non-Detects		NaN%
14581												
14582					Warning: This data set only has 0 observations!							
14583					Data set is too small to compute reliable and meaningful statistics and estimates!							
14584					The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_ne_2010) was not processed!							
14585												
14586					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
14587					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
14588												
14589												
14590												
14591	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_nw_2005)											
14592												
14593					General Statistics							
14594					Number of Valid Data	6				Number of Detected Data		0
14595					Number of Distinct Detected Data	0				Number of Non-Detect Data		6
14596										Percent Non-Detects		100.00%
14597												
14598					Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!							
14599					Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!							
14600					The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).							
14601												
14602					The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_nw_2005) was not processed!							
14603												
14604												
14605												
14606	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_nw_2010)											
14607												
14608					General Statistics							
14609					Number of Valid Data	0				Number of Detected Data		0
14610					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
14611					Number of Missing Values	1				Percent Non-Detects		NaN%
14612												
14613					Warning: This data set only has 0 observations!							
14614					Data set is too small to compute reliable and meaningful statistics and estimates!							
14615					The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_nw_2010) was not processed!							
14616												
14617					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
14618					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
14619												
14620												
14621												
14622	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_ref_2010)											
14623												
14624					General Statistics							
14625					Number of Valid Data	0				Number of Detected Data		0
14626					Number of Distinct Detected Data	0				Number of Non-Detect Data		0
14627					Number of Missing Values	3				Percent Non-Detects		NaN%
14628												
14629					Warning: This data set only has 0 observations!							
14630					Data set is too small to compute reliable and meaningful statistics and estimates!							
14631					The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_ref_2010) was not processed!							
14632												
14633					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
14634					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
14635												
14636												
14637												
14638	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_s_2005)											
14639												
14640					General Statistics							
14641					Number of Valid Data	3				Number of Detected Data		0
14642					Number of Distinct Detected Data	0				Number of Non-Detect Data		3
14643										Percent Non-Detects		100.00%
14644												
14645					Warning: This data set only has 3 observations!							
14646					Data set is too small to compute reliable and meaningful statistics and estimates!							
14647					The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_s_2005) was not processed!							
14648												
14649					It is suggested to collect at least 8 to 10 observations before using these statistical methods!							
14650					If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.							
14651												
14652												

	A	B	C	D	E	F	G	H	I	J	K	L
14653												
14654	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_s_2010)											
14655												
14656	General Statistics											
14657					Number of Valid Data	0			Number of Detected Data			0
14658					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
14659					Number of Missing Values	1			Percent Non-Detects			NaN%
14660												
14661	Warning: This data set only has 0 observations!											
14662	Data set is too small to compute reliable and meaningful statistics and estimates!											
14663	The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_s_2010) was not processed!											
14664												
14665	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14666	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14667												
14668												
14669												
14670	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_stillwater_2005)											
14671												
14672	General Statistics											
14673					Number of Valid Observations	1			Number of Distinct Observations			1
14674												
14675												
14676	Warning: This data set only has 1 observations!											
14677	Data set is too small to compute reliable and meaningful statistics and estimates!											
14678	The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_stillwater_2005) was not											
14679												
14680	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14681	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14682												
14683												
14684												
14685	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_stillwater_2010)											
14686												
14687	General Statistics											
14688					Number of Valid Data	0			Number of Detected Data			0
14689					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
14690					Number of Missing Values	3			Percent Non-Detects			NaN%
14691												
14692	Warning: This data set only has 0 observations!											
14693	Data set is too small to compute reliable and meaningful statistics and estimates!											
14694	The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_clams_and_mussels_stillwater_2010) was not											
14695												
14696	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14697	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14698												
14699												
14700												
14701	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_crabs_ne_2010)											
14702												
14703	General Statistics											
14704					Number of Valid Data	0			Number of Detected Data			0
14705					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
14706					Number of Missing Values	2			Percent Non-Detects			NaN%
14707												
14708	Warning: This data set only has 0 observations!											
14709	Data set is too small to compute reliable and meaningful statistics and estimates!											
14710	The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_crabs_ne_2010) was not processed!											
14711												
14712	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14713	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14714												
14715												
14716												
14717	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_crabs_nw_2010)											
14718												
14719	General Statistics											
14720					Number of Valid Data	0			Number of Detected Data			0
14721					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
14722					Number of Missing Values	1			Percent Non-Detects			NaN%
14723												
14724	Warning: This data set only has 0 observations!											
14725	Data set is too small to compute reliable and meaningful statistics and estimates!											
14726	The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_crabs_nw_2010) was not processed!											

	A	B	C	D	E	F	G	H	I	J	K	L
14727												
14728	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14729	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14730												
14731												
14732												
14733	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_crabs_ref_2010)											
14734												
14735	General Statistics											
14736					Number of Valid Data	0			Number of Detected Data	0		
14737					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
14738					Number of Missing Values	3			Percent Non-Detects	NaN%		
14739												
14740	Warning: This data set only has 0 observations!											
14741	Data set is too small to compute reliable and meaningful statistics and estimates!											
14742	The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_crabs_ref_2010) was not processed!											
14743												
14744	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14745	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14746												
14747												
14748												
14749	PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_crabs_stillwater_2010)											
14750												
14751	General Statistics											
14752					Number of Valid Data	0			Number of Detected Data	0		
14753					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
14754					Number of Missing Values	3			Percent Non-Detects	NaN%		
14755												
14756	Warning: This data set only has 0 observations!											
14757	Data set is too small to compute reliable and meaningful statistics and estimates!											
14758	The data set for variable PEST/PCB|UG/KG|TOTAL AROCLOR (gi_et_crabs_stillwater_2010) was not processed!											
14759												
14760	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14761	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14762												
14763												
14764												
14765	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_ne_2005)											
14766												
14767	General Statistics											
14768					Number of Valid Data	11			Number of Detected Data	0		
14769					Number of Distinct Detected Data	0			Number of Non-Detect Data	11		
14770									Percent Non-Detects	100.00%		
14771												
14772	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
14773	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
14774	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
14775												
14776	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_ne_2005) was not processed!											
14777												
14778												
14779												
14780	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_ne_2010)											
14781												
14782	General Statistics											
14783					Number of Valid Data	0			Number of Detected Data	0		
14784					Number of Distinct Detected Data	0			Number of Non-Detect Data	0		
14785					Number of Missing Values	5			Percent Non-Detects	NaN%		
14786												
14787	Warning: This data set only has 0 observations!											
14788	Data set is too small to compute reliable and meaningful statistics and estimates!											
14789	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_ne_2010) was not processed!											
14790												
14791	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14792	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14793												
14794												
14795												
14796	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_nw_2005)											
14797												
14798	General Statistics											
14799					Number of Valid Data	6			Number of Detected Data	0		
14800					Number of Distinct Detected Data	0			Number of Non-Detect Data	6		

14801											Percent Non-Detects	100.00%
14802												
14803	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
14804	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
14805	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
14806												
14807	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_nw_2005) was not processed!											
14808												
14809												
14810												
14811	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_nw_2010)											
14812												
14813	General Statistics											
14814						Number of Valid Data	0				Number of Detected Data	0
14815						Number of Distinct Detected Data	0				Number of Non-Detect Data	0
14816						Number of Missing Values	1				Percent Non-Detects	NaN%
14817												
14818	Warning: This data set only has 0 observations!											
14819	Data set is too small to compute reliable and meaningful statistics and estimates!											
14820	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_nw_2010) was not processed!											
14821												
14822	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14823	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14824												
14825												
14826												
14827	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_ref_2010)											
14828												
14829	General Statistics											
14830						Number of Valid Data	0				Number of Detected Data	0
14831						Number of Distinct Detected Data	0				Number of Non-Detect Data	0
14832						Number of Missing Values	3				Percent Non-Detects	NaN%
14833												
14834	Warning: This data set only has 0 observations!											
14835	Data set is too small to compute reliable and meaningful statistics and estimates!											
14836	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_ref_2010) was not processed!											
14837												
14838	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14839	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14840												
14841												
14842												
14843	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_s_2005)											
14844												
14845	General Statistics											
14846						Number of Valid Data	3				Number of Detected Data	0
14847						Number of Distinct Detected Data	0				Number of Non-Detect Data	3
14848											Percent Non-Detects	100.00%
14849												
14850	Warning: This data set only has 3 observations!											
14851	Data set is too small to compute reliable and meaningful statistics and estimates!											
14852	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_s_2005) was not processed!											
14853												
14854	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14855	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14856												
14857												
14858												
14859	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_s_2010)											
14860												
14861	General Statistics											
14862						Number of Valid Data	0				Number of Detected Data	0
14863						Number of Distinct Detected Data	0				Number of Non-Detect Data	0
14864						Number of Missing Values	1				Percent Non-Detects	NaN%
14865												
14866	Warning: This data set only has 0 observations!											
14867	Data set is too small to compute reliable and meaningful statistics and estimates!											
14868	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_s_2010) was not processed!											
14869												
14870	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14871	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14872												
14873												
14874												

	A	B	C	D	E	F	G	H	I	J	K	L
14875	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_stillwater_2005)											
14876												
14877	General Statistics											
14878	Number of Valid Observations					1	Number of Distinct Observations					1
14879												
14880												
14881	Warning: This data set only has 1 observations!											
14882	Data set is too small to compute reliable and meaningful statistics and estimates!											
14883	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_stillwater_2005) was not											
14884												
14885	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14886	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14887												
14888												
14889												
14890	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_stillwater_2010)											
14891												
14892	General Statistics											
14893	Number of Valid Data					0	Number of Detected Data					0
14894	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
14895	Number of Missing Values					3	Percent Non-Detects					NaN%
14896												
14897	Warning: This data set only has 0 observations!											
14898	Data set is too small to compute reliable and meaningful statistics and estimates!											
14899	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_clams_and_mussels_stillwater_2010) was not											
14900												
14901	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14902	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14903												
14904												
14905												
14906	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_crabs_ne_2010)											
14907												
14908	General Statistics											
14909	Number of Valid Data					0	Number of Detected Data					0
14910	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
14911	Number of Missing Values					2	Percent Non-Detects					NaN%
14912												
14913	Warning: This data set only has 0 observations!											
14914	Data set is too small to compute reliable and meaningful statistics and estimates!											
14915	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_crabs_ne_2010) was not processed!											
14916												
14917	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14918	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14919												
14920												
14921												
14922	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_crabs_nw_2010)											
14923												
14924	General Statistics											
14925	Number of Valid Data					0	Number of Detected Data					0
14926	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
14927	Number of Missing Values					1	Percent Non-Detects					NaN%
14928												
14929	Warning: This data set only has 0 observations!											
14930	Data set is too small to compute reliable and meaningful statistics and estimates!											
14931	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_crabs_nw_2010) was not processed!											
14932												
14933	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
14934	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
14935												
14936												
14937												
14938	PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_crabs_ref_2010)											
14939												
14940	General Statistics											
14941	Number of Valid Data					0	Number of Detected Data					0
14942	Number of Distinct Detected Data					0	Number of Non-Detect Data					0
14943	Number of Missing Values					3	Percent Non-Detects					NaN%
14944												
14945	Warning: This data set only has 0 observations!											
14946	Data set is too small to compute reliable and meaningful statistics and estimates!											
14947	The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_crabs_ref_2010) was not processed!											
14948												

	A	B	C	D	E	F	G	H	I	J	K	L
14949	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14950	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14951												
14952												
14953												
14954	**PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_crabs_stillwater_2010)**											
14955												
14956	**General Statistics**											
14957					Number of Valid Data	0			Number of Detected Data			0
14958					Number of Distinct Detected Data	0			Number of Non-Detect Data			0
14959					Number of Missing Values	3			Percent Non-Detects			NaN%
14960												
14961	**Warning: This data set only has 0 observations!**											
14962	**Data set is too small to compute reliable and meaningful statistics and estimates!**											
14963	**The data set for variable PEST/PCB|UG/KG|TOTAL CHLORDANE (gi_et_crabs_stillwater_2010) was not processed!**											
14964												
14965	**It is suggested to collect at least 8 to 10 observations before using these statistical methods!**											
14966	**If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.**											
14967												
14968												

APPENDIX G

ECOLOGICAL RISK ASSESSMENT SUPPORT INFORMATION

APPENDIX G.1

RECEPTOR PROFILES

APPENDIX G.1

RECEPTOR PROFILES

The following sections present the receptor profiles for the raccoon and Herring gull. The majority of the information for the profiles was obtained from the Wildlife Exposure Factors Handbook (USEPA, 1993). The data for the incidental soil ingestion rates were obtained from the USEPA Ecological Soil Screening Level Guidance (USEPA, 2005) or the Estimates of Soil Ingestion by Wildlife (Beyer, 1994).

The food and water ingestion rates are listed in g/g (of body weight)-day on a wet weight basis but were converted to dry weight for the ERA. The home ranges are presented in hectares in USEPA (1993) but were converted to acres by multiplying the number of hectares by 2.471. Also note that the estimated percent of soil in the diets are listed in dry weight. The attached table presents the calculation of the exposure parameters and how the calculations were done.

Raccoon (*Procyon lotor*)

Raccoons are found near virtually every aquatic habitat, particularly in hardwood swamps, mangroves, floodplain forests, and freshwater and saltwater marshes. They are also common in suburban residential areas. They use surface waters for both drinking and foraging. They feed primarily on fleshy fruits, nuts, acorns, and corn, but also eat grains, insects, frogs, crayfish, eggs, and virtually any animal and vegetable matter.

The adult body weight for the raccoon ranges from 3.67 to 7.6 kg, with an average of 5.64 kg. The water ingestion rate ranges from 0.082 to 0.083 g/g-day, which is converted to the ingestion rate in L/day by multiplying the value by the body weight of the raccoon. The incidental sediment ingestion rate is calculated by multiplying the ingestion rate by the percentage of sediment that is incidentally ingested (9.4 percent), as cited in Beyer (1994).

The home range for the conservative model is assumed to be equal to the size of the site indicating that the raccoon will spend all of its time at the site. The typical home range sizes for the raccoon are 96 to 6,325 acres for an average home range of 1,558 acres.

Herring Gull

Herring gulls are abundant in temperate coastal areas and primarily nest on sandy or rocky offshore or barrier beach islands. They can also be found in coastal marshes, peninsulas, or cliffs along seacoasts, lakes, and rivers (USEPA, 1993). They forage on open water around concentrations of prey, which may include fish, crustacea, mollusks, worms, and insects, among other things.

The adult body weight of the Herring gull ranges from 0.951 to 1.232 kg, with an average of 1.0915 kg. The listed food ingestion rates of the Herring gull were 0.20 and 0.21 g/g-day (wet-weight), with an average of 0.205 g/g-day. The water ingestion rate ranges from 0.0558 to 0.059 g/g-day, with an average of 0.057 g/g-day. The food and water ingestion rates in kg/day and L/day, respectively, were calculated as shown in the attached table. The food ingestion rates were then multiplied by 0.15, which is the percent solids of mussels (Sample et al., 1997) to convert the ingestion rate from a wet-weight value to a dry-weight value. The incidental sediment ingestion rate is calculated by multiplying the ingestion rate by the percentage of sediment that is incidentally ingested (8.2 percent), from Beyer (1994) and USEPA (2005).

The foraging range for the Herring gull ranges from 3 to 50 km-radius with an average of 10 km-radius.

References:

Beyer, N., E. Connor, and S. Gerould. 1994. Estimates of Soil Ingestion by Wildlife. Journal of Wildlife Management 58(2) pp. 375-382.

Sample, B.E., M.S. Aplin, R.A. Efroymson, G.W., Suter II, and C.J.E. Welsh. 1997. Methods and Tools for Estimation of the Exposure of Terrestrial Wildlife to Contaminants. Oak Ridge National Laboratory. October. ORNL/TM-13391.

USEPA (U.S. Environmental Protection Agency), 1993. Wildlife Exposure Factors Handbook. U.S. Environmental Protection Agency. Office of Research and Development. Washington, D.C. December 1993. EPA/600/R-93/187a.

USEPA (U.S. Environmental Protection Agency), 2005. Ecological Soil Screening Level Guidance, Office of Emergency and Remedial Response. February.

APPENDIX G.2

TOXICITY REFERENCE VALUES

APPENDIX G.2

WILDLIFE TOXICITY REFERENCE VALUES

PARAMETER	Mammal		Bird	
	NOAEL	LOAEL	NOAEL	LOAEL
SEMIVOLATILES				
2-Methylnaphthalene	65.6	356	2	20
2-Methylphenol	5	15	NV	NV
4-Methylphenol	NV	NV	NV	NV
7,12-Dimethylbenz(a)anthracene	NV	NV	2	20
Acenaphthene	65.6	356	2	20
Acenaphthylene	65.6	356	2	20
Anthracene	65.6	356	2	20
Benzaldehyde	20	40	NV	NV
Benzo(a)anthracene	0.615	38.4	2	20
Benzo(a)pyrene	0.615	38.4	2	20
Benzo(b)fluoranthene	0.615	38.4	2	20
Benzo(g,h,i)perylene	0.615	38.4	2	20
Benzo(k)fluoranthene	0.615	38.4	2	20
Carbazole	65.6	356	2	20
Chrysene	0.615	38.4	2	20
Dibenzo(a,h)anthracene	0.615	38.4	2	20
Dibenzofuran	NV	NV	2	20
Fluoranthene	65.6	356	2	20
Fluorene	65.6	356	2	20
Indeno(1,2,3-cd)pyrene	0.615	38.4	2	20
Naphthalene	65.6	356	2	20
Phenanthrene	65.6	356	2	20
Pyrene	0.615	38.4	2	20
PESTICIDES/PCBs				
Gamma-Chlordane	4.58	9.16	2.14	10.7
Total Aroclor	0.068	0.68	0.18	1.8
INORGANICS				
Aluminum	1.93	19.3	109.7	1097
Antimony	0.059	2.76	NV	NV
Arsenic	1.04	4.55	2.24	4.51
Barium	51.8	82.7	20.8	41.7
Beryllium	0.532	0.673	NV	NV
Cadmium	0.77	6.9	1.47	6.35
Chromium	2.40	58.17	2.66	15.63
Cobalt	7.33	18.90	7.61	18.34
Copper	5.6	82.7	4.05	34.87
Iron	50	500	100	1000
Lead	4.7	186.4	1.63	44.63
Manganese	51.5	145.67	179	376.6
Mercury	0.032	0.16	0.0064	0.064
Nickel	1.70	14.77	6.71	18.57
Selenium	0.143	0.661	0.29	0.819
Silver	6.02	118.6	2.02	60.47
Thallium	0.0074	0.074	NV	NV
Vanadium	4.16	9.44	0.34	1.69
Zinc	75.4	297.58	66.1	171.44

Notes:

The sources of these NOAELS and LOAELS are presented in the table titled "Sources and Endpoints for NOAELS and LOAELS for Terrestrial Wildlife" in this appendix.

The NOAELS and LOAELS in the source table were divided by 10 if a subchronic study was the basis for the value. Also, if only a NOAEL was available, the value was multiplied by 10 to estimate the LOAEL. If only a LOAEL was available, the value was divided by 10 to estimate the NOAEL.

APPENDIX G.2
SOURCES AND ENDPOINTS FOR NOAELS AND LOAELS FOR TERRESTRIAL WILDLIFE

Parameters	Concentration (mg/kg-day)	Endpoint	Effect	Chronic/ Subchronic	Species	Primary Reference	Source of Reference
Semivolatiles Organics							
2-Methylnaphthalene	356	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
2-Methylnaphthalene	65.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
2-Methylphenol	150	LOAEL	neurotoxicity	Subchronic	rat	USEPA, 1986 and 1987	IRIS, 2002
2-Methylphenol	50	NOAEL	neurotoxicity	subchronic	rat	USEPA, 1986 and 1987	IRIS, 2002
7,12-Dimethylbenz(a)anthracene	20	LOAEL	systemic	chronic	nestling/starlings	Trust et al., 1994	
7,12-Dimethylbenz(a)anthracene	2	NOAEL	systemic	chronic	nestling/starlings	Trust et al., 1994	
Acenaphthene	356	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Acenaphthene	65.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Acenaphthylene	356	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Acenaphthylene	65.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Anthracene	356	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Anthracene	65.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Benzaldehyde	200	NOAEL	systemic	subchronic	rat	Kluwe et al., 1983	IRIS, 2009
Benzaldehyde	400	LOAEL	systemic	subchronic	rat	Kluwe et al., 1983	IRIS, 2009
Benzo(a)anthracene	38.4	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Benzo(a)anthracene	0.615	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Benzo(a)pyrene	38.4	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Benzo(a)pyrene	0.615	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Benzo(b)fluoranthene	38.4	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Benzo(b)fluoranthene	0.615	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Benzo(g,h,I)perylene	38.4	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Benzo(g,h,I)perylene	0.615	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Benzo(k)fluoranthene	38.4	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Benzo(k)fluoranthene	0.615	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Carbazole	356	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Carbazole	65.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Chrysene	38.4	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Chrysene	0.615	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Dibenzo(a,h)anthracene	38.4	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Dibenzo(a,h)anthracene	0.615	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Fluoranthene	356	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Fluoranthene	65.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Fluorene	356	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Fluorene	65.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Indeno(1,2,3-cd)pyrene	38.4	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Indeno(1,2,3-cd)pyrene	0.615	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Naphthalene	356	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Naphthalene	65.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Phenanthrene	356	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Phenanthrene	65.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Pyrene	38.4	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Pyrene	0.615	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	

APPENDIX G.2
SOURCES AND ENDPOINTS FOR NOAELS AND LOAELS FOR TERRESTRIAL WILDLIFE
PAGE 2 OF 3

Parameters	Concentration (mg/kg-day)	Endpoint	Effect	Chronic/ Subchronic	Species	Primary Reference	Source of Reference
Pesticides/PCBs							
Aroclor-1254	1.8	LOAEL	reproductive	chronic	pheasant	Dahlgren et al., 1972	Sample et.al., 1996
Aroclor-1254	0.68	LOAEL	reproduction	chronic	mouse	McCoy et al., 1995	Sample et.al., 1996
Chlordane	10.7	LOAEL	mortality	chronic	red-winged blackbird	Stickel et al., 1983	Sample et.al., 1996
Chlordane	9.16	LOAEL	reproduction	chronic	mouse	WHO, 1984	Sample et.al., 1996
Chlordane	2.14	NOAEL	mortality	chronic	red-winged blackbird	Stickel et al., 1983	Sample et.al., 1996
Chlordane	4.58	NOAEL	reproduction	chronic	mouse	WHO, 1984	Sample et.al., 1996
Inorganics							
Aluminum	19.3	LOAEL	reproductive	chronic	mouse	Ondreicka et al., 1966	Sample et.al., 1996
Aluminum	109.7	NOAEL	reproductive	chronic	ringed dove	Carriere et al., 1986	Sample et.al., 1996
Antimony	2.76	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2005	
Antimony	0.059	NOAEL	reproduction & growth	chronic	rat	USEPA, 2005	
Arsenic	4.51	LOAEL	reproduction & growth	chronic	birds	USEPA, 2005	
Arsenic	4.55	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2005	
Arsenic	2.24	NOAEL	reproduction & growth	chronic	chicken	USEPA, 2005	
Arsenic	1.04	NOAEL	reproduction & growth	chronic	dog	USEPA, 2005	
Barium	82.7	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2005	
Barium	416.53	LOAEL	Survival	subchronic	chicks	Johnson et al., 1960	Sample et.al., 1996
Barium	51.8	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2005	
Barium	208.26	NOAEL	Survival	subchronic	chicks	Johnson et al., 1960	Sample et.al., 1996
Beryllium	0.673	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2005	
Beryllium	0.532	NOAEL	Survival	chronic	rat	USEPA, 2005	
Cadmium	6.35	LOAEL	reproduction & growth	chronic	birds	USEPA, 2005	
Cadmium	6.9	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2005	
Cadmium	1.47	NOAEL	reproduction & growth	chronic	birds	USEPA, 2005	
Cadmium	0.77	NOAEL	reproduction & growth	chronic	rat	USEPA, 2005	
Chromium(III)	15.63	LOAEL	reproduction & growth	chronic	birds	USEPA, 2008	
Chromium(III)	58.17	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2008	
Chromium(III)	2.66	NOAEL	reproduction & growth	chronic	birds	USEPA, 2008	
Chromium(III)	2.4	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2008	
Cobalt	18.34	LOAEL	reproduction & growth	chronic	birds	USEPA, 2005	
Cobalt	18.9	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2005	
Cobalt	7.61	NOAEL	reproduction & growth	chronic	birds	USEPA, 2005	
Cobalt	7.33	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2005	
Copper	34.87	LOAEL	reproduction & growth	chronic	birds	USEPA, 2007	
Copper	82.7	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Copper	4.05	NOAEL	reproduction & growth	chronic	chicken	USEPA, 2007	
Copper	5.6	NOAEL	reproduction & growth	chronic	pig	USEPA, 2007	
Iron	500	LOAEL	unknown	chronic	rabbit	NAS, 1980	
Iron	1000	LOAEL	unknown	chronic	poultry	NAS, 1980	
Lead	44.6	LOAEL	reproduction & growth	chronic	birds	USEPA, 2005	
Lead	186.4	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2005	
Lead	1.63	NOAEL	reproduction & growth	chronic	chicken	USEPA, 2005	
Lead	4.7	NOAEL	reproduction & growth	chronic	rat	USEPA, 2005	
Manganese	376.6	LOAEL	reproduction & growth	chronic	birds	USEPA, 2007	
Manganese	145.67	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	

APPENDIX G.2
SOURCES AND ENDPOINTS FOR NOAELS AND LOAELS FOR TERRESTRIAL WILDLIFE

Parameters	Concentration (mg/kg-day)	Endpoint	Effect	Chronic/ Subchronic	Species	Primary Reference	Source of Reference
Manganese	179	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007	
Manganese	51.5	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Mercury	0.064	LOAEL	reproductive	chronic	mallard duck	Heinz, 1979	Sample et.al., 1996
Mercury	0.032	NOAEL	reproductive	chronic	rat	Verschuuren et al., 1976	Sample et.al., 1996
Nickel	18.57	LOAEL	reproduction & growth	chronic	birds	USEPA, 2007	
Nickel	14.77	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Nickel	6.71	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007	
Nickel	1.7	NOAEL	reproduction & growth	chronic	mouse	USEPA, 2007	
Selenium	0.819	LOAEL	reproduction & growth	chronic	birds	USEPA, 2007	
Selenium	0.661	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Selenium	0.29	NOAEL	reproduction & growth	chronic	chicken	USEPA, 2007	
Selenium	0.143	NOAEL	reproduction & growth	chronic	pig	USEPA, 2007	
Silver	60.47	LOAEL	reproduction & growth	chronic	birds	USEPA, 2006	
Silver	118.62	LOAEL	reproduction & growth	subchronic*	mammals	USEPA, 2006	
Silver	2.02	NOAEL	reproduction & growth	subchronic*	turkey	USEPA, 2006	
Silver	6.02	NOAEL	reproduction & growth	chronic	pig	USEPA, 2006	
Thallium	0.74	LOAEL	reproductive	subchronic	rat	Formigli et al., 1986	Sample et.al., 1996
Vanadium	1.686	LOAEL	reproduction & growth	chronic	birds	USEPA, 2005	
Vanadium	9.436	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2005	
Vanadium	0.344	NOAEL	reproduction & growth	chronic	chicken	USEPA, 2005	
Vanadium	4.16	NOAEL	reproduction & growth	chronic	mouse	USEPA, 2005	
Zinc	297.58	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Zinc	171.44	LOAEL	reproduction & growth	chronic	birds	USEPA, 2007	
Zinc	75.4	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007	
Zinc	66.1	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007	

Notes:
NOAEL = No Observed Adverse Effects Level
LOAEL = Lowest Observed Adverse Effects Level
The NOAELS and LOAELS for the PAHs for birds were based on 7,12-dimethylbenz(a)anthracene.
The LOAELs used for several metals were calculated as the geometric mean of growth and reproduction data from the Ecological Soil Screening Levels (U.S. EPA, 2005, 2006, 2007).
The LOAELs for Aroclor-1254 were used as surrogates for Aroclor-1260.
References for the NOAELS and LOAELs are presented in this Attachment and Titled "TRV Source and Endpoint References".
* Value has been adjusted for chronic effects.

APPENDIX G.2
SOURCES AND ENPOINTS FOR NOAELS AND LOAELS FOR TERRESTRIAL WILDLIFE

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APPENDIX G.3

EXPOSURE FACTORS CALCULATION

APPENDIX G.3

DRY WEIGHT DERIVATION OF BODY WEIGHT, FOOD INTAKE, AND WATER INTAKE FACTORS FOR TERRESTRIAL FOOD CHAIN MODELS

Data from EPA (1993)				Derivation of Factors for Modeling			
Species/Factor	Age/Sex/ Cond./Seas.	Value	Study Average	Calculation of Values			Notes
Raccoon							
Body Weight (kg)	A M	7.6	6.7	Minimum Value	3.67	kg	
	A F parous	6.4		Maximum Value	7.6	kg	
	A F nulliparous	6		Overall Study Average	5.636	kg	
	A M	6.76	6.25				
	A F	5.74					
	A M	4.31	3.99				
	A F	3.67					
Food Ingestion Rate (g/g-day)			No Value	Conservative value:	0.237	kg/day	Used maximum body weight in below equation
				Average value	0.184	kg/day	Used average body weight in below equation
							Food ingestion rates were calculated from Nagy et al., (1999) for carnivores as follows: $FI = ((2.23)*BW(g)^{0.85})/1000$
Water Ingestion Rate (g/g-day)	A M	0.082	0.083	Conservative value:	0.468	L/day	Maximum ingestion rate * Average Body weight
	A F	0.083		Average value	0.465	L/day	Average ingestion rate * Average Body weight
Herring Gull							
Body Weight (kg)	A F spring	951	1068	Minimum Value	0.951	kg	
	A M winter	1184		Maximum Value	1.232	kg	
				Overall Study Average	1.0915	kg	
	A F spring	999	1115.5				
	A M winter	1232					
Food Ingestion Rate (g/g-day)	A M breeding	0.2	0.205	Conservative value:	0.03438	kg/day	Maximum ingestion rate * Average Body weight * 0.15[(1)]
	A MF breeding	0.21		Average value	0.03356	kg/day	Average ingestion rate * Average Body weight * 0.15[(1)]
							[(1)] - 0.15 = percent solids in mussels to convert to a dry weight ingestion rate
Water Ingestion Rate (g/g-day)	A M	0.055	0.057	Conservative value:	0.064399	L/day	Maximum ingestion rate * Average Body weight
	A F	0.059		Average value	0.062216	L/day	Average ingestion rate * Average Body weight

Notes:
A = Adult
F = Female, M = Male, B = Both
BW = Body Weight

APPENDIX G.4

FOOD CHAIN MODEL CALCULATIONS

APPENDIX G.4

CHEMICAL CONCENTRATIONS IN SEDIMENT AND TISSUE - SEDIMENT
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT
JAMESTOWN, RHODE ISLAND

Chemical	Sediment Concentrations (mg/kg)				Clam and Mussel Concentrations (mg/kg)	
	Maximum Detection	Average All	Average of Positive Detections	Average [1]	Maximum Detection	Average
SEMIVOLATILES						
2-METHYLNAPHTHALENE	0.28	0.0156	0.0182	1.56E-02		
2-METHYLPHENOL					6.00E-01	7.97E-01
ACENAPHTHENE	1.3	0.0559	0.0689	5.59E-02		
ACENAPHTHYLENE	0.81	0.0306	0.0394	3.06E-02		
ANTHRACENE	4.4	0.207	0.231	2.07E-01		
BENZALDEHYDE					3.70E+01	8.96E+00
BENZO(A)ANTHRACENE	5.4	0.353	0.369	3.53E-01		
BENZO(A)PYRENE	3.8	0.268	0.285	2.68E-01		
BENZO(B)FLUORANTHENE	4.9	0.363	0.377	3.63E-01		
BENZO(G,H,I)PERYLENE	1.6	0.132	0.143	1.32E-01		
BENZO(K)FLUORANTHENE	3.9	0.203	0.217	2.03E-01		
CARBAZOLE	1.4	0.2	0.254	2.00E-01		
CHRYSENE	8.7	0.45	0.473	4.50E-01		
DIBENZO(A,H)ANTHRACENE	0.58	0.046	0.0532	4.60E-02		
DIBENZOFURAN	0.51	0.163	0.157	1.63E-01		
FLUORANTHENE	28	1.1	1.15	1.10E+00		
FLUORENE	0.82	0.0574	0.0681	5.74E-02		
INDENO(1,2,3-CD)PYRENE	1.6	0.13	0.141	1.30E-01		
NAPHTHALENE	0.73	0.0281	0.0349	2.81E-02		
PHENANTHRENE	7.2	0.421	0.449	4.21E-01		
PYRENE	22	0.966	0.998	9.66E-01		
PESTICIDES						
BETA-BHC	0.057	0.00408	0.00644	4.08E-03		
ENDOSULFAN SULFATE	0.64	0.0275	0.096	2.75E-02		
GAMMA-CHLORDANE	0.6	0.0273	0.125	2.73E-02		
TOTAL CHLORDANE	0.6	0.0258	0.125	2.58E-02		
PCBS						
TOTAL AROCLOR	55	1.62	2.93	1.62E+00	4.40E-01	8.08E-02
PCB HOMOLOGS						
TOTAL PCB HOMOLOGS	2.72	0.412	0.468	4.12E-01	8.10E-02	4.38E-02
METALS						
ALUMINUM	9100	5410	5410	5.41E+03	4.26E+01	9.06E+00
ANTIMONY	43.5	0.992	1.76	9.92E-01		
ARSENIC	11.3	3.05	3.11	3.05E+00	4.20E+00	2.36E+00
BARIUM	32.5	13.3	13.3	1.33E+01	7.54E-01	3.72E-01
BERYLLIUM	0.79	0.296	0.296	2.96E-01	1.20E-02	1.84E-02
CADMIUM	398	2.48	3.47	2.48E+00	7.30E-01	1.49E-01
CHROMIUM	3910	35.7	35.7	3.57E+01	6.10E+00	5.01E-01
COBALT	10.8	3.53	3.53	3.53E+00	2.10E-01	9.12E-02
COPPER	497	25.5	25.5	2.55E+01	2.70E+00	1.31E+00
IRON	72100	17000	17000	1.70E+04	1.02E+02	3.80E+01
LEAD	21200	149	149	1.49E+02	1.40E+00	2.44E-01
MANGANESE	418	139	139	1.39E+02	3.86E+01	5.79E+00
MERCURY	0.94	0.0588	0.0686	5.88E-02	2.20E-02	9.59E-03
NICKEL	47.4	9.47	9.47	9.47E+00	5.90E-01	2.98E-01
SELENIUM	7.9	1.01	2.04	1.01E+00	9.42E-01	5.40E-01
SILVER	0.608	0.0614	0.245	6.14E-02	4.80E-01	8.68E-02
THALLIUM	4.9	0.394	0.639	3.94E-01		
VANADIUM	28.4	15.4	15.4	1.54E+01	1.20E+00	2.60E-01
ZINC	1160	59.2	59.2	5.92E+01	3.61E+01	1.55E+01

1 - If the average of all value is the greater than the maximum detection, the average of the positive detections was used as the average value.

APPENDIX G.4

HERRING GULL - CONSERVATIVE INPUTS
TERRESTRIAL WILDLIFE MODEL ECOLOGICAL EFFECTS QUOTIENT CALCULATION - SEDIMENT
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT
JAMESTOWN, RHODE ISLAND

Chemical	Max Sed. Conc. (mg/kg)	ShellFish Conc. (mg/kg)	Dose (mg/kg/d) from: Sediment	Dose (mg/kg/d) from: ShellFish	Total Dose (mg/kg/d)	NOAEL (mg/kg/d)	LOAEL (mg/kg/d)	Hazard Quotients NOAEL	Hazard Quotients LOAEL
SEMIVOLATILES									
2-METHYLNAPHTHALENE	2.80E-01	0.00E+00	8.30E-04	0.00E+00	8.30E-04	2.00E+00	2.00E+01	4.1E-04	4.1E-05
2-METHYLPHENOL	0.00E+00	6.00E-01	0.00E+00	1.44E-01	1.44E-01	NV	NV	#VALUE!	#VALUE!
ACENAPHTHENE	1.30E+00	0.00E+00	3.85E-03	0.00E+00	3.85E-03	2.00E+00	2.00E+01	1.9E-03	1.9E-04
ACENAPHTHYLENE	8.10E-01	0.00E+00	2.40E-03	0.00E+00	2.40E-03	2.00E+00	2.00E+01	1.2E-03	1.2E-04
ANTHRACENE	4.40E+00	0.00E+00	1.30E-02	0.00E+00	1.30E-02	2.00E+00	2.00E+01	6.5E-03	6.5E-04
BENZALDEHYDE	0.00E+00	3.70E+01	0.00E+00	8.91E+00	8.91E+00	NV	NV	#VALUE!	#VALUE!
BENZO(A)ANTHRACENE	5.40E+00	0.00E+00	1.60E-02	0.00E+00	1.60E-02	2.00E+00	2.00E+01	8.0E-03	8.0E-04
BENZO(A)PYRENE	3.80E+00	0.00E+00	1.13E-02	0.00E+00	1.13E-02	2.00E+00	2.00E+01	5.6E-03	5.6E-04
BENZO(B)FLUORANTHENE	4.90E+00	0.00E+00	1.45E-02	0.00E+00	1.45E-02	2.00E+00	2.00E+01	7.3E-03	7.3E-04
BENZO(G,H,I)PERYLENE	1.60E+00	0.00E+00	4.74E-03	0.00E+00	4.74E-03	2.00E+00	2.00E+01	2.4E-03	2.4E-04
BENZO(K)FLUORANTHENE	3.90E+00	0.00E+00	1.16E-02	0.00E+00	1.16E-02	2.00E+00	2.00E+01	5.8E-03	5.8E-04
CARBAZOLE	1.40E+00	0.00E+00	4.15E-03	0.00E+00	4.15E-03	2.00E+00	2.00E+01	2.1E-03	2.1E-04
CHRYSENE	8.70E+00	0.00E+00	2.58E-02	0.00E+00	2.58E-02	2.00E+00	2.00E+01	1.3E-02	1.3E-03
DIBENZO(A,H)ANTHRACENE	5.80E-01	0.00E+00	1.72E-03	0.00E+00	1.72E-03	2.00E+00	2.00E+01	8.6E-04	8.6E-05
DIBENZOFURAN	5.10E-01	0.00E+00	1.51E-03	0.00E+00	1.51E-03	2.00E+00	2.00E+01	7.6E-04	7.6E-05
FLUORANTHENE	2.80E+01	0.00E+00	8.30E-02	0.00E+00	8.30E-02	2.00E+00	2.00E+01	4.1E-02	4.1E-03
FLUORENE	8.20E-01	0.00E+00	2.43E-03	0.00E+00	2.43E-03	2.00E+00	2.00E+01	1.2E-03	1.2E-04
INDENO(1,2,3-CD)PYRENE	1.60E+00	0.00E+00	4.74E-03	0.00E+00	4.74E-03	2.00E+00	2.00E+01	2.4E-03	2.4E-04
NAPHTHALENE	7.30E-01	0.00E+00	2.16E-03	0.00E+00	2.16E-03	2.00E+00	2.00E+01	1.1E-03	1.1E-04
PHENANTHRENE	7.20E+00	0.00E+00	2.13E-02	0.00E+00	2.13E-02	2.00E+00	2.00E+01	1.1E-02	1.1E-03
PYRENE	2.20E+01	0.00E+00	6.52E-02	0.00E+00	6.52E-02	2.00E+00	2.00E+01	3.3E-02	3.3E-03
PESTICIDES									
BETA-BHC	5.70E-02	0.00E+00	1.69E-04	0.00E+00	1.69E-04	5.60E-01	2.25E+00	3.0E-04	7.5E-05
ENDOSULFAN SULFATE	6.40E-01	0.00E+00	1.90E-03	0.00E+00	1.90E-03	1.00E+01	1.00E+02	1.9E-04	1.9E-05
GAMMA-CHLORDANE	6.00E-01	0.00E+00	1.78E-03	0.00E+00	1.78E-03	2.14E+00	1.07E+01	8.3E-04	1.7E-04
TOTAL CHLORDANE	6.00E-01	0.00E+00	1.78E-03	0.00E+00	1.78E-03	2.14E+00	1.07E+01	8.3E-04	1.7E-04
PCBS									
TOTAL AROCLOR	5.50E+01	4.40E-01	1.63E-01	1.06E-01	2.69E-01	1.80E-01	1.80E+00	1.5E+00	1.5E-01
PCB HOMOLOGS									
TOTAL PCB HOMOLOGS	2.72E+00	8.10E-02	8.06E-03	1.95E-02	2.76E-02	1.80E-01	1.80E+00	1.5E-01	1.5E-02
METALS									
ALUMINUM	9.10E+03	4.26E+01	2.70E+01	1.03E+01	3.72E+01	1.10E+02	1.10E+03	3.4E-01	3.4E-02
ANTIMONY	4.35E+01	0.00E+00	1.29E-01	0.00E+00	1.29E-01	NV	NV	#VALUE!	#VALUE!
ARSENIC	1.13E+01	4.20E+00	3.35E-02	1.01E+00	1.04E+00	2.24E+00	4.51E+00	4.7E-01	2.3E-01
BARIUM	3.25E+01	7.54E-01	9.63E-02	1.82E-01	2.78E-01	2.08E+01	4.17E+01	1.3E-02	6.7E-03
BERYLLIUM	7.90E-01	1.20E-02	2.34E-03	2.89E-03	5.23E-03	NV	NV	#VALUE!	#VALUE!
CADMIUM	3.98E+02	7.30E-01	1.18E+00	1.76E-01	1.36E+00	1.47E+00	6.35E+00	9.2E-01	2.1E-01
CHROMIUM	3.91E+03	6.10E+00	1.16E+01	1.47E+00	1.31E+01	2.66E+00	1.56E+01	4.9E+00	8.4E-01
COBALT	1.08E+01	2.10E-01	3.20E-02	5.06E-02	8.26E-02	7.61E+00	1.83E+01	1.1E-02	4.5E-03
COPPER	4.97E+02	2.70E+00	1.47E+00	6.50E-01	2.12E+00	4.05E+00	3.49E+01	5.2E-01	6.1E-02
IRON	7.21E+04	1.02E+02	2.14E+02	2.46E+01	2.38E+02	1.00E+02	1.00E+03	2.4E+00	2.4E-01
LEAD	2.12E+04	1.40E+00	6.28E+01	3.37E-01	6.32E+01	1.63E+00	4.46E+01	3.9E+01	1.4E+00
MANGANESE	4.18E+02	3.86E+01	1.24E+00	9.29E+00	1.05E+01	1.79E+02	3.77E+02	5.9E-02	2.8E-02
MERCURY	9.40E-01	2.20E-02	2.79E-03	5.30E-03	8.08E-03	6.40E-03	6.40E-02	1.3E+00	1.3E-01
NICKEL	4.74E+01	5.90E-01	1.41E-01	1.42E-01	2.83E-01	6.71E+00	1.86E+01	4.2E-02	1.5E-02
SELENIUM	7.90E+00	9.42E-01	2.34E-02	2.27E-01	2.50E-01	2.90E-01	8.19E-01	8.6E-01	3.1E-01
SILVER	6.08E-01	4.80E-01	1.80E-03	1.16E-01	1.17E-01	2.02E+00	6.05E+01	5.8E-02	1.9E-03
THALLIUM	4.90E+00	0.00E+00	1.45E-02	0.00E+00	1.45E-02	NV	NV	#VALUE!	#VALUE!
VANADIUM	2.84E+01	1.20E+00	8.42E-02	2.89E-01	3.73E-01	3.44E-01	1.69E+00	1.1E+00	2.2E-01
ZINC	1.16E+03	3.61E+01	3.44E+00	8.69E+00	1.21E+01	6.61E+01	1.71E+02	1.8E-01	7.1E-02

Cells are shaded if the value is greater than 1.0

Body Weight = (BW)	9.51E-01	kg
Wet Food Ingestion Rate = (If)	2.29E-01	kg/day
Sediment Ingestion Rate = (Is)	2.82E-03	kg/day
Home Range = (HR)	Assume 100% on site	
Contaminated Area = (CA)	Assume equal to home range	

Dose (sediment) = (Cs * Is)(H)/BW
Dose (fish) = (Cf * If)(H)/BW
Cf = Contaminant concentration in fish
Cs = Contaminant concentration in sediment

Total Dose = Dose (sediment) + Dose (invertebrate)
H=CA/HR (Assume = to 1)

Conc = Concentration
LOAEL = Lowest Observed Adverse Effects Concentration
NOAEL = No Observed Adverse Effects Concentration
Sed = Sediment

APPENDIX G.4

HERRING GULL - AVERAGE INPUTS
TERRESTRIAL WILDLIFE MODEL ECOLOGICAL EFFECTS QUOTIENT CALCULATION - SEDIMENT
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT
JAMESTOWN, RHODE ISLAND

Chemical	Avg Sed. Conc. (mg/kg)	ShellFish Conc. (mg/kg)	Dose (mg/kg/d) from: Sediment	Dose (mg/kg/d) from: ShellFish	Total Dose (mg/kg/d)	NOAEL (mg/kg/d)	LOAEL (mg/kg/d)	Hazard Quotients NOAEL	Hazard Quotients LOAEL
SEMIVOLATILES									
2-METHYLNAPHTHALENE	1.56E-02	0.00E+00	3.93E-05	0.00E+00	3.93E-05	2.00E+00	2.00E+01	2.0E-05	2.0E-06
2-METHYLPHENOL	0.00E+00	7.97E-01	0.00E+00	1.63E-01	1.63E-01	NV	NV	#VALUE!	#VALUE!
ACENAPHTHENE	5.59E-02	0.00E+00	1.41E-04	0.00E+00	1.41E-04	2.00E+00	2.00E+01	7.0E-05	7.0E-06
ACENAPHTHYLENE	3.06E-02	0.00E+00	7.71E-05	0.00E+00	7.71E-05	2.00E+00	2.00E+01	3.9E-05	3.9E-06
ANTHRACENE	2.07E-01	0.00E+00	5.22E-04	0.00E+00	5.22E-04	2.00E+00	2.00E+01	2.6E-04	2.6E-05
BENZALDEHYDE	0.00E+00	8.96E+00	0.00E+00	1.84E+00	1.84E+00	NV	NV	#VALUE!	#VALUE!
BENZO(A)ANTHRACENE	3.53E-01	0.00E+00	8.90E-04	0.00E+00	8.90E-04	2.00E+00	2.00E+01	4.4E-04	4.4E-05
BENZO(A)PYRENE	2.68E-01	0.00E+00	6.75E-04	0.00E+00	6.75E-04	2.00E+00	2.00E+01	3.4E-04	3.4E-05
BENZO(B)FLUORANTHENE	3.63E-01	0.00E+00	9.15E-04	0.00E+00	9.15E-04	2.00E+00	2.00E+01	4.6E-04	4.6E-05
BENZO(G,H,I)PERYLENE	1.32E-01	0.00E+00	3.33E-04	0.00E+00	3.33E-04	2.00E+00	2.00E+01	1.7E-04	1.7E-05
BENZO(K)FLUORANTHENE	2.03E-01	0.00E+00	5.12E-04	0.00E+00	5.12E-04	2.00E+00	2.00E+01	2.6E-04	2.6E-05
CARBAZOLE	2.00E-01	0.00E+00	5.04E-04	0.00E+00	5.04E-04	2.00E+00	2.00E+01	2.5E-04	2.5E-05
CHRYSENE	4.50E-01	0.00E+00	1.13E-03	0.00E+00	1.13E-03	2.00E+00	2.00E+01	5.7E-04	5.7E-05
DIBENZO(A,H)ANTHRACENE	4.60E-02	0.00E+00	1.16E-04	0.00E+00	1.16E-04	2.00E+00	2.00E+01	5.8E-05	5.8E-06
DIBENZOFURAN	1.63E-01	0.00E+00	4.11E-04	0.00E+00	4.11E-04	2.00E+00	2.00E+01	2.1E-04	2.1E-05
FLUORANTHENE	1.10E+00	0.00E+00	2.77E-03	0.00E+00	2.77E-03	2.00E+00	2.00E+01	1.4E-03	1.4E-04
FLUORENE	5.74E-02	0.00E+00	1.45E-04	0.00E+00	1.45E-04	2.00E+00	2.00E+01	7.2E-05	7.2E-06
INDENO(1,2,3-CD)PYRENE	1.30E-01	0.00E+00	3.28E-04	0.00E+00	3.28E-04	2.00E+00	2.00E+01	1.6E-04	1.6E-05
NAPHTHALENE	2.81E-02	0.00E+00	7.08E-05	0.00E+00	7.08E-05	2.00E+00	2.00E+01	3.5E-05	3.5E-06
PHENANTHRENE	4.21E-01	0.00E+00	1.06E-03	0.00E+00	1.06E-03	2.00E+00	2.00E+01	5.3E-04	5.3E-05
PYRENE	9.66E-01	0.00E+00	2.43E-03	0.00E+00	2.43E-03	2.00E+00	2.00E+01	1.2E-03	1.2E-04
PESTICIDES									
BETA-BHC	4.08E-03	0.00E+00	1.03E-05	0.00E+00	1.03E-05	5.60E-01	2.25E+00	1.8E-05	4.6E-06
ENDOSULFAN SULFATE	2.75E-02	0.00E+00	6.93E-05	0.00E+00	6.93E-05	1.00E+01	1.00E+02	6.9E-06	6.9E-07
GAMMA-CHLORDANE	2.73E-02	0.00E+00	6.88E-05	0.00E+00	6.88E-05	2.14E+00	1.07E+01	3.2E-05	6.4E-06
TOTAL CHLORDANE	2.58E-02	0.00E+00	6.50E-05	0.00E+00	6.50E-05	2.14E+00	1.07E+01	3.0E-05	6.1E-06
PCBS									
TOTAL AROCLOR	1.62E+00	8.08E-02	4.08E-03	1.66E-02	2.07E-02	1.80E-01	1.80E+00	1.1E-01	1.1E-02
PCB HOMOLOGS									
TOTAL PCB HOMOLOGS	4.12E-01	4.38E-02	1.04E-03	8.98E-03	1.00E-02	1.80E-01	1.80E+00	5.6E-02	5.6E-03
METALS									
ALUMINUM	5.41E+03	9.06E+00	1.36E+01	1.86E+00	1.55E+01	1.10E+02	1.10E+03	1.4E-01	1.4E-02
ANTIMONY	9.92E-01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	NV	NV	#VALUE!	#VALUE!
ARSENIC	3.05E+00	2.36E+00	7.69E-03	4.84E-01	4.92E-01	2.24E+00	4.51E+00	2.2E-01	1.1E-01
BARIUM	1.33E+01	3.72E-01	3.35E-02	7.63E-02	1.10E-01	2.08E+01	4.17E+01	5.3E-03	2.6E-03
BERYLLIUM	2.96E-01	1.84E-02	7.46E-04	3.77E-03	4.52E-03	NV	NV	#VALUE!	#VALUE!
CADMIUM	2.48E+00	1.49E-01	6.25E-03	3.06E-02	3.68E-02	1.47E+00	6.35E+00	2.5E-02	5.8E-03
CHROMIUM	3.57E+01	5.01E-01	9.00E-02	1.03E-01	1.93E-01	2.66E+00	1.56E+01	7.3E-02	1.2E-02
COBALT	3.53E+00	9.12E-02	8.90E-03	1.87E-02	2.76E-02	7.61E+00	1.83E+01	3.6E-03	1.5E-03
COPPER	2.55E+01	1.31E+00	6.43E-02	2.69E-01	3.33E-01	4.05E+00	3.49E+01	8.2E-02	9.5E-03
IRON	1.70E+04	3.80E+01	4.28E+01	7.79E+00	5.06E+01	1.00E+02	1.00E+03	5.1E-01	5.1E-02
LEAD	1.49E+02	2.44E-01	3.76E-01	5.01E-02	4.26E-01	1.63E+00	4.46E+01	2.6E-01	9.5E-03
MANGANESE	1.39E+02	5.79E+00	3.50E-01	1.19E+00	1.54E+00	1.79E+02	3.77E+02	8.6E-03	4.1E-03
MERCURY	5.88E-02	9.59E-03	1.48E-04	1.97E-03	2.12E-03	6.40E-03	6.40E-02	3.3E-01	3.3E-02
NICKEL	9.47E+00	2.98E-01	2.39E-02	6.11E-02	8.50E-02	6.71E+00	1.86E+01	1.3E-02	4.6E-03
SELENIUM	1.01E+00	5.40E-01	2.55E-03	1.11E-01	1.13E-01	2.90E-01	8.19E-01	3.9E-01	1.4E-01
SILVER	6.14E-02	8.68E-02	1.55E-04	1.78E-02	1.80E-02	2.02E+00	6.05E+01	8.9E-03	3.0E-04
THALLIUM	3.94E-01	0.00E+00	9.93E-04	0.00E+00	9.93E-04	NV	NV	#VALUE!	#VALUE!
VANADIUM	1.54E+01	2.60E-01	3.88E-02	5.33E-02	9.21E-02	3.44E-01	1.69E+00	2.7E-01	5.5E-02
ZINC	5.92E+01	1.55E+01	1.49E-01	3.18E+00	3.33E+00	6.61E+01	1.71E+02	5.0E-02	1.9E-02

Cells are shaded if the value is greater than 1.0

Body Weight = (BW)	1.09E+00	kg
Wet Food Ingestion Rate = (If)	2.24E-01	kg/day
Sediment Ingestion Rate = (Is)	2.75E-03	kg/day
Home Range = (HR)	1.00E+01	km-radius
Contaminated Area = (CA)	Assume equal to home range	

Dose (sediment) = (Cs * Is)(H)/BW
Dose (fish) = (Cf * If)(H)/BW
Cf = Contaminant concentration in fish
Cs = Contaminant concentration in sediment

Total Dose = Dose (sediment) + Dose (fish)
H=CA/HR (Assume = to 1)

Conc = Concentration
LOAEL = Lowest Observed Adverse Effects Concentration
NOAEL = No Observed Adverse Effects Concentration
Sed = Sediment

APPENDIX G.4

RACCOON- CONSERVATIVE INPUTS
TERRESTRIAL WILDLIFE MODEL ECOLOGICAL EFFECTS QUOTIENT CALCULATION - SEDIMENT
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT
JAMESTOWN, RHODE ISLAND

Chemical	Max Sed. Conc. (mg/kg)	ShellFish Conc. (mg/kg)	Dose (mg/kg/d) from: Sediment	Dose (mg/kg/d) from: ShellFish	Total Dose (mg/kg/d)	NOAEL (mg/kg/d)	LOAEL (mg/kg/d)	Hazard Quotients NOAEL	Hazard Quotients LOAEL
SEMIVOLATILES									
2-METHYLNAPHTHALENE	2.80E-01	0.00E+00	1.70E-03	0.00E+00	1.70E-03	6.56E+01	3.56E+02	2.6E-05	4.8E-06
2-METHYLPHENOL	0.00E+00	6.00E-01	0.00E+00	2.58E-01	2.58E-01	5.00E+00	1.50E+01	5.2E-02	1.7E-02
ACENAPHTHENE	1.30E+00	0.00E+00	7.89E-03	0.00E+00	7.89E-03	6.56E+01	3.56E+02	1.2E-04	2.2E-05
ACENAPHTHYLENE	8.10E-01	0.00E+00	4.92E-03	0.00E+00	4.92E-03	6.56E+01	3.56E+02	7.5E-05	1.4E-05
ANTHRACENE	4.40E+00	0.00E+00	2.67E-02	0.00E+00	2.67E-02	6.56E+01	3.56E+02	4.1E-04	7.5E-05
BENZALDEHYDE	0.00E+00	3.70E+01	0.00E+00	1.59E+01	1.59E+01	2.00E+01	4.00E+01	8.0E-01	4.0E-01
BENZO(A)ANTHRACENE	5.40E+00	0.00E+00	3.28E-02	0.00E+00	3.28E-02	6.15E-01	3.84E+01	5.3E-02	8.5E-04
BENZO(A)PYRENE	3.80E+00	0.00E+00	2.31E-02	0.00E+00	2.31E-02	6.15E-01	3.84E+01	3.8E-02	6.0E-04
BENZO(B)FLUORANTHENE	4.90E+00	0.00E+00	2.97E-02	0.00E+00	2.97E-02	6.15E-01	3.84E+01	4.8E-02	7.7E-04
BENZO(G,H,I)PERYLENE	1.60E+00	0.00E+00	9.71E-03	0.00E+00	9.71E-03	6.15E-01	3.84E+01	1.6E-02	2.5E-04
BENZO(K)FLUORANTHENE	3.90E+00	0.00E+00	2.37E-02	0.00E+00	2.37E-02	6.15E-01	3.84E+01	3.8E-02	6.2E-04
CARBAZOLE	1.40E+00	0.00E+00	8.50E-03	0.00E+00	8.50E-03	6.56E+01	3.56E+02	1.3E-04	2.4E-05
CHRYSENE	8.70E+00	0.00E+00	5.28E-02	0.00E+00	5.28E-02	6.15E-01	3.84E+01	8.6E-02	1.4E-03
DIBENZO(A,H)ANTHRACENE	5.80E-01	0.00E+00	3.52E-03	0.00E+00	3.52E-03	6.15E-01	3.84E+01	5.7E-03	9.2E-05
DIBENZOFURAN	5.10E-01	0.00E+00	3.10E-03	0.00E+00	3.10E-03	NV	NV	#VALUE!	#VALUE!
FLUORANTHENE	2.80E+01	0.00E+00	1.70E-01	0.00E+00	1.70E-01	6.56E+01	3.56E+02	2.6E-03	4.8E-04
FLUORENE	8.20E-01	0.00E+00	4.98E-03	0.00E+00	4.98E-03	6.56E+01	3.56E+02	7.6E-05	1.4E-05
INDENO(1,2,3-CD)PYRENE	1.60E+00	0.00E+00	9.71E-03	0.00E+00	9.71E-03	6.15E-01	3.84E+01	1.6E-02	2.5E-04
NAPHTHALENE	7.30E-01	0.00E+00	4.43E-03	0.00E+00	4.43E-03	6.56E+01	3.56E+02	6.8E-05	1.2E-05
PHENANTHRENE	7.20E+00	0.00E+00	4.37E-02	0.00E+00	4.37E-02	6.56E+01	3.56E+02	6.7E-04	1.2E-04
PYRENE	2.20E+01	0.00E+00	1.34E-01	0.00E+00	1.34E-01	6.15E-01	3.84E+01	2.2E-01	3.5E-03
PESTICIDES									
BETA-BHC	5.70E-02	0.00E+00	3.46E-04	0.00E+00	3.46E-04	4.00E-01	2.00E+00	8.7E-04	1.7E-04
ENDOSULFAN SULFATE	6.40E-01	0.00E+00	3.89E-03	0.00E+00	3.89E-03	1.50E-01	1.50E+00	2.6E-02	2.6E-03
GAMMA-CHLORDANE	6.00E-01	0.00E+00	3.64E-03	0.00E+00	3.64E-03	4.58E+00	9.16E+00	8.0E-04	4.0E-04
TOTAL CHLORDANE	6.00E-01	0.00E+00	3.64E-03	0.00E+00	3.64E-03	4.58E+00	9.16E+00	8.0E-04	4.0E-04
PCBS									
TOTAL AROCLOR	5.50E+01	4.40E-01	3.34E-01	1.90E-01	5.23E-01	6.80E-02	6.80E-01	7.7E+00	7.7E-01
PCB HOMOLOGS									
TOTAL PCB HOMOLOGS	2.72E+00	8.10E-02	1.65E-02	3.49E-02	5.14E-02	6.80E-02	6.80E-01	7.6E-01	7.6E-02
METALS									
ALUMINUM	9.10E+03	4.26E+01	5.52E+01	1.84E+01	7.36E+01	1.93E+00	1.93E+01	3.8E+01	3.8E+00
ANTIMONY	4.35E+01	0.00E+00	2.64E-01	0.00E+00	2.64E-01	5.90E-02	2.76E+00	4.5E+00	9.6E-02
ARSENIC	1.13E+01	4.20E+00	6.86E-02	1.81E+00	1.88E+00	1.04E+00	4.55E+00	1.8E+00	4.1E-01
BARIUM	3.25E+01	7.54E-01	1.97E-01	3.25E-01	5.22E-01	5.18E+01	8.27E+01	1.0E-02	6.3E-03
BERYLLIUM	7.90E-01	1.20E-02	4.80E-03	5.17E-03	9.97E-03	5.32E-01	6.73E-01	1.9E-02	1.5E-02
CADMIUM	3.98E+02	7.30E-01	2.42E+00	3.14E-01	2.73E+00	7.70E-01	6.90E+00	3.5E+00	4.0E-01
CHROMIUM	3.91E+03	6.10E+00	2.37E+01	2.63E+00	2.64E+01	2.40E+00	5.82E+01	1.1E+01	4.5E-01
COBALT	1.08E+01	2.10E-01	6.56E-02	9.05E-02	1.56E-01	7.33E+00	1.89E+01	2.1E-02	8.3E-03
COPPER	4.97E+02	2.70E+00	3.02E+00	1.16E+00	4.18E+00	5.60E+00	8.27E+01	7.5E-01	5.1E-02
IRON	7.21E+04	1.02E+02	4.38E+02	4.39E+01	4.82E+02	5.00E+01	5.00E+02	9.6E+00	9.6E-01
LEAD	2.12E+04	1.40E+00	1.29E+02	6.03E-01	1.29E+02	4.70E+00	1.86E+02	2.8E+01	6.9E-01
MANGANESE	4.18E+02	3.86E+01	2.54E+00	1.66E+01	1.92E+01	5.15E+01	1.46E+02	3.7E-01	1.3E-01
MERCURY	9.40E-01	2.20E-02	5.71E-03	9.48E-03	1.52E-02	3.20E-02	1.60E-01	4.7E-01	9.5E-02
NICKEL	4.74E+01	5.90E-01	2.88E-01	2.54E-01	5.42E-01	1.70E+00	1.48E+01	3.2E-01	3.7E-02
SELENIUM	7.90E+00	9.42E-01	4.80E-02	4.06E-01	4.54E-01	1.43E-01	6.61E-01	3.2E+00	6.9E-01
SILVER	6.08E-01	4.80E-01	3.69E-03	2.07E-01	2.10E-01	6.02E+00	1.19E+02	3.5E-02	1.8E-03
THALLIUM	4.90E+00	0.00E+00	2.97E-02	0.00E+00	2.97E-02	7.40E-03	7.40E-02	4.0E+00	4.0E-01
VANADIUM	2.84E+01	1.20E+00	1.72E-01	5.17E-01	6.89E-01	4.16E+00	9.44E+00	1.7E-01	7.3E-02
ZINC	1.16E+03	3.61E+01	7.04E+00	1.56E+01	2.26E+01	7.54E+01	2.98E+02	3.0E-01	7.6E-02

Cells are shaded if the value is greater than 1.0

Body Weight = (BW)	3.670E+00	kg
Wet Food Ingestion Rate = (If)	1.581E-01	kg/day
Sediment Ingestion Rate = (Is)	2.228E-02	kg/day
Home Range = (HR)	Assume 100% on site	
Contaminated Area = (CA)	Assume equal to home range	

Dose (sediment) = (Cs * Is)(H)/BW
Dose (fish) = (Cf * If)(H)/BW
Cf = Contaminant concentration in fish
Cs = Contaminant concentration in sediment

Total Dose = Dose (sediment) + Dose (invertebrate)
H=CA/HR (Assume = to 1)

Conc = Concentration
LOAEL = Lowest Observed Adverse Effects Concentration
NOAEL = No Observed Adverse Effects Concentration
Sed = Sediment

APPENDIX G.4

RACCOON - AVERAGE INPUTS
TERRESTRIAL WILDLIFE MODEL ECOLOGICAL EFFECTS QUOTIENT CALCULATION - SEDIMENT
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT
JAMESTOWN, RHODE ISLAND

Chemical	Avg Sed. Conc. (mg/kg)	ShellFish Conc. (mg/kg)	Dose (mg/kg/d) from: Sediment	Dose (mg/kg/d) from: ShellFish	Total Dose (mg/kg/d)	NOAEL (mg/kg/d)	LOAEL (mg/kg/d)	Hazard Quotients NOAEL	Hazard Quotients LOAEL
SEMIVOLATILES									
2-METHYLNAPHTHALENE	1.56E-02	0.00E+00	4.79E-05	0.00E+00	4.79E-05	6.56E+01	3.56E+02	7.3E-07	1.3E-07
2-METHYLPHENOL	0.00E+00	7.97E-01	0.00E+00	1.74E-01	1.74E-01	5.00E+00	1.50E+01	3.5E-02	1.2E-02
ACENAPHTHENE	5.59E-02	0.00E+00	1.72E-04	0.00E+00	1.72E-04	6.56E+01	3.56E+02	2.6E-06	4.8E-07
ACENAPHTHYLENE	3.06E-02	0.00E+00	9.39E-05	0.00E+00	9.39E-05	6.56E+01	3.56E+02	1.4E-06	2.6E-07
ANTHRACENE	2.07E-01	0.00E+00	6.35E-04	0.00E+00	6.35E-04	6.56E+01	3.56E+02	9.7E-06	1.8E-06
BENZALDEHYDE	0.00E+00	8.96E+00	0.00E+00	1.95E+00	1.95E+00	2.00E+01	4.00E+01	9.8E-02	4.9E-02
BENZO(A)ANTHRACENE	3.53E-01	0.00E+00	1.08E-03	0.00E+00	1.08E-03	6.15E-01	3.84E+01	1.8E-03	2.8E-05
BENZO(A)PYRENE	2.68E-01	0.00E+00	8.23E-04	0.00E+00	8.23E-04	6.15E-01	3.84E+01	1.3E-03	2.1E-05
BENZO(B)FLUORANTHENE	3.63E-01	0.00E+00	1.11E-03	0.00E+00	1.11E-03	6.15E-01	3.84E+01	1.8E-03	2.9E-05
BENZO(G,H,I)PERYLENE	1.32E-01	0.00E+00	4.05E-04	0.00E+00	4.05E-04	6.15E-01	3.84E+01	6.6E-04	1.1E-05
BENZO(K)FLUORANTHENE	2.03E-01	0.00E+00	6.23E-04	0.00E+00	6.23E-04	6.15E-01	3.84E+01	1.0E-03	1.6E-05
CARBAZOLE	2.00E-01	0.00E+00	6.14E-04	0.00E+00	6.14E-04	6.56E+01	3.56E+02	9.4E-06	1.7E-06
CHRYSENE	4.50E-01	0.00E+00	1.38E-03	0.00E+00	1.38E-03	6.15E-01	3.84E+01	2.2E-03	3.6E-05
DIBENZO(A,H)ANTHRACENE	4.60E-02	0.00E+00	1.41E-04	0.00E+00	1.41E-04	6.15E-01	3.84E+01	2.3E-04	3.7E-06
DIBENZOFURAN	1.63E-01	0.00E+00	5.00E-04	0.00E+00	5.00E-04	NV	NV	#VALUE!	#VALUE!
FLUORANTHENE	1.10E+00	0.00E+00	3.38E-03	0.00E+00	3.38E-03	6.56E+01	3.56E+02	5.1E-05	9.5E-06
FLUORENE	5.74E-02	0.00E+00	1.76E-04	0.00E+00	1.76E-04	6.56E+01	3.56E+02	2.7E-06	4.9E-07
INDENO(1,2,3-CD)PYRENE	1.30E-01	0.00E+00	3.99E-04	0.00E+00	3.99E-04	6.15E-01	3.84E+01	6.5E-04	1.0E-05
NAPHTHALENE	2.81E-02	0.00E+00	8.63E-05	0.00E+00	8.63E-05	6.56E+01	3.56E+02	1.3E-06	2.4E-07
PHENANTHRENE	4.21E-01	0.00E+00	1.29E-03	0.00E+00	1.29E-03	6.56E+01	3.56E+02	2.0E-05	3.6E-06
PYRENE	9.66E-01	0.00E+00	2.97E-03	0.00E+00	2.97E-03	6.15E-01	3.84E+01	4.8E-03	7.7E-05
PESTICIDES									
BETA-BHC	4.08E-03	0.00E+00	1.25E-05	0.00E+00	1.25E-05	4.00E-01	2.00E+00	3.1E-05	6.3E-06
ENDOSULFAN SULFATE	2.75E-02	0.00E+00	8.44E-05	0.00E+00	8.44E-05	1.50E-01	1.50E+00	5.6E-04	5.6E-05
GAMMA-CHLORDANE	2.73E-02	0.00E+00	8.38E-05	0.00E+00	8.38E-05	4.58E+00	9.16E+00	1.8E-05	9.1E-06
TOTAL CHLORDANE	2.58E-02	0.00E+00	7.92E-05	0.00E+00	7.92E-05	4.58E+00	9.16E+00	1.7E-05	8.6E-06
PCBS									
TOTAL AROCLOR	1.62E+00	8.08E-02	4.97E-03	1.76E-02	2.26E-02	6.80E-02	6.80E-01	3.3E-01	3.3E-02
PCB HOMOLOGS									
TOTAL PCB HOMOLOGS	4.12E-01	4.38E-02	1.26E-03	9.54E-03	1.08E-02	6.80E-02	6.80E-01	1.6E-01	1.6E-02
METALS									
ALUMINUM	5.41E+03	9.06E+00	1.66E+01	1.97E+00	1.86E+01	1.93E+00	1.93E+01	9.6E+00	9.6E-01
ANTIMONY	9.92E-01	0.00E+00	3.04E-03	0.00E+00	3.04E-03	5.90E-02	2.76E+00	5.2E-02	1.1E-03
ARSENIC	3.05E+00	2.36E+00	9.36E-03	5.14E-01	5.23E-01	1.04E+00	4.55E+00	5.0E-01	1.1E-01
BARIUM	1.33E+01	3.72E-01	4.08E-02	8.10E-02	1.22E-01	5.18E+01	8.27E+01	2.4E-03	1.5E-03
BERYLLIUM	2.96E-01	1.84E-02	9.09E-04	4.01E-03	4.91E-03	5.32E-01	6.73E-01	9.2E-03	7.3E-03
CADMIUM	2.48E+00	1.49E-01	7.61E-03	3.24E-02	4.01E-02	7.70E-01	6.90E+00	5.2E-02	5.8E-03
CHROMIUM	3.57E+01	5.01E-01	1.10E-01	1.09E-01	2.19E-01	2.40E+00	5.82E+01	9.1E-02	3.8E-03
COBALT	3.53E+00	9.12E-02	1.08E-02	1.99E-02	3.07E-02	7.33E+00	1.89E+01	4.2E-03	1.6E-03
COPPER	2.55E+01	1.31E+00	7.83E-02	2.85E-01	3.63E-01	5.60E+00	8.27E+01	6.5E-02	4.4E-03
IRON	1.70E+04	3.80E+01	5.22E+01	8.27E+00	6.05E+01	5.00E+01	5.00E+02	1.2E+00	1.2E-01
LEAD	1.49E+02	2.44E-01	4.57E-01	5.31E-02	5.10E-01	4.70E+00	1.86E+02	1.1E-01	2.7E-03
MANGANESE	1.39E+02	5.79E+00	4.27E-01	1.26E+00	1.69E+00	5.15E+01	1.46E+02	3.3E-02	1.2E-02
MERCURY	5.88E-02	9.59E-03	1.80E-04	2.09E-03	2.27E-03	3.20E-02	1.60E-01	7.1E-02	1.4E-02
NICKEL	9.47E+00	2.98E-01	2.91E-02	6.49E-02	9.39E-02	1.70E+00	1.48E+01	5.5E-02	6.4E-03
SELENIUM	1.01E+00	5.40E-01	3.10E-03	1.18E-01	1.21E-01	1.43E-01	6.61E-01	8.4E-01	1.8E-01
SILVER	6.14E-02	8.68E-02	1.88E-04	1.89E-02	1.91E-02	6.02E+00	1.19E+02	3.2E-03	1.6E-04
THALLIUM	3.94E-01	0.00E+00	1.21E-03	0.00E+00	1.21E-03	7.40E-03	7.40E-02	1.6E-01	1.6E-02
VANADIUM	1.54E+01	2.60E-01	4.73E-02	5.66E-02	1.04E-01	4.16E+00	9.44E+00	2.5E-02	1.1E-02
ZINC	5.92E+01	1.55E+01	1.82E-01	3.37E+00	3.56E+00	7.54E+01	2.98E+02	4.7E-02	1.2E-02

Cells are shaded if the value is greater than 1.0

Body Weight = (BW)	5.636E+00	kg	Dose (sediment) = (Cs * Is)(H)/BW	Conc = Concentration
Wet Food Ingestion Rate = (If)	1.227E+00	kg/day	Dose (fish) = (Cf * If)(H)/BW	LOAEL = Lowest Observed Adverse Effects Concentration
Sediment Ingestion Rate = (Is)	1.730E-02	kg/day	Cf = Contaminant concentration in fish	NOAEL = No Observed Adverse Effects Concentration
Home Range = (HR)	1.00E+01	km-radius	Cs = Contaminant concentration in sediment	Sed = Sediment
Contaminated Area = (CA)	Assume equal to home range			
			Total Dose = Dose (sediment) + Dose (fish)	
			H=CA/HR (Assume = to 1)	

APPENDIX G.4

CHEMICAL CONCENTRATIONS IN SEDIMENT AND TISSUE - SEDIMENT
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT
JAMESTOWN, RHODE ISLAND

Chemical	Sediment Concentrations (mg/kg)				Crab Concentrations (mg/kg)	
	Maximum Detection	Average All	Average of Positive Detections	Average [1]	Maximum Detection	Average
SEMIVOLATILES						
2-METHYLNAPHTHALENE	0.28	0.0156	0.0182	1.56E-02		
ACENAPHTHENE	1.3	0.0559	0.0689	5.59E-02		
ACENAPHTHYLENE	0.81	0.0306	0.0394	3.06E-02		
ANTHRACENE	4.4	0.207	0.231	2.07E-01		
BENZO(A)ANTHRACENE	5.4	0.353	0.369	3.53E-01		
BENZO(A)PYRENE	3.8	0.268	0.285	2.68E-01		
BENZO(B)FLUORANTHENE	4.9	0.363	0.377	3.63E-01		
BENZO(G,H,I)PERYLENE	1.6	0.132	0.143	1.32E-01		
BENZO(K)FLUORANTHENE	3.9	0.203	0.217	2.03E-01		
CARBAZOLE	1.4	0.2	0.254	2.00E-01		
CHRYSENE	8.7	0.45	0.473	4.50E-01		
DIBENZO(A,H)ANTHRACENE	0.58	0.046	0.0532	4.60E-02		
DIBENZOFURAN	0.51	0.163	0.157	1.63E-01		
FLUORANTHENE	28	1.1	1.15	1.10E+00		
FLUORENE	0.82	0.0574	0.0681	5.74E-02		
INDENO(1,2,3-CD)PYRENE	1.6	0.13	0.141	1.30E-01		
NAPHTHALENE	0.73	0.0281	0.0349	2.81E-02		
PHENANTHRENE	7.2	0.421	0.449	4.21E-01		
PYRENE	22	0.966	0.998	9.66E-01		
PESTICIDES						
BETA-BHC	0.057	0.00408	0.00644	4.08E-03		
ENDOSULFAN SULFATE	0.64	0.0275	0.096	2.75E-02		
GAMMA-CHLORDANE	0.6	0.0273	0.125	2.73E-02		
TOTAL CHLORDANE	0.6	0.0258	0.125	2.58E-02		
PCBS						
TOTAL AROCLOR	55	1.62	2.93	1.62E+00		
PCB HOMOLOGS						
TOTAL PCB HOMOLOGS	2.72	0.412	0.468	4.12E-01	1.20E-01	7.86E-02
METALS						
ALUMINUM	9100	5410	5410	5.41E+03	4.68E+02	3.55E+02
ANTIMONY	43.5	0.992	1.76	9.92E-01		
ARSENIC	11.3	3.05	3.11	3.05E+00	8.90E+00	7.85E+00
BARIUM	32.5	13.3	13.3	1.33E+01	6.20E+00	5.51E+00
BERYLLIUM	0.79	0.296	0.296	2.96E-01	7.20E-02	6.27E-02
CADMIUM	398	2.48	3.47	2.48E+00	2.89E-01	9.62E-02
CHROMIUM	3910	35.7	35.7	3.57E+01	3.40E+00	1.93E+00
COBALT	10.8	3.53	3.53	3.53E+00	3.83E-01	3.21E-01
COPPER	497	25.5	25.5	2.55E+01	3.66E+01	3.13E+01
IRON	72100	17000	17000	1.70E+04	8.80E+02	7.07E+02
LEAD	21200	149	149	1.49E+02	2.35E+00	1.75E+00
MANGANESE	418	139	139	1.39E+02	1.33E+02	9.74E+01
MERCURY	0.94	0.0588	0.0686	5.88E-02	6.60E-02	4.22E-02
NICKEL	47.4	9.47	9.47	9.47E+00	4.50E+00	2.45E+00
SELENIUM	7.9	1.01	2.04	1.01E+00	1.30E+00	1.14E+00
SILVER	0.608	0.0614	0.245	6.14E-02	2.96E-01	2.36E-01
THALLIUM	4.9	0.394	0.639	3.94E-01	4.00E-03	2.55E+00
VANADIUM	28.4	15.4	15.4	1.54E+01	1.90E+00	1.50E+00
ZINC	1160	59.2	59.2	5.92E+01	3.75E+01	3.40E+01

1 - If the average of all value is the greater than the maximum detection, the average of the positive detections was used as the average value.

APPENDIX G.4

HERRING GULL - CONSERVATIVE INPUTS
TERRESTRIAL WILDLIFE MODEL ECOLOGICAL EFFECTS QUOTIENT CALCULATION - SEDIMENT
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT
JAMESTOWN, RHODE ISLAND

Chemical	Max Sed. Conc. (mg/kg)	ShellFish Conc. (mg/kg)	Dose (mg/kg/d) from: Sediment	Dose (mg/kg/d) from: ShellFish	Total Dose (mg/kg/d)	NOAEL (mg/kg/d)	LOAEL (mg/kg/d)	Hazard Quotients NOAEL	Hazard Quotients LOAEL
SEMIVOLATILES									
2-METHYLNAPHTHALENE	2.80E-01	0.00E+00	8.30E-04	0.00E+00	8.30E-04	2.00E+00	2.00E+01	4.1E-04	4.1E-05
ACENAPHTHENE	1.30E+00	0.00E+00	3.85E-03	0.00E+00	3.85E-03	2.00E+00	2.00E+01	1.9E-03	1.9E-04
ACENAPHTHYLENE	8.10E-01	0.00E+00	2.40E-03	0.00E+00	2.40E-03	2.00E+00	2.00E+01	1.2E-03	1.2E-04
ANTHRACENE	4.40E+00	0.00E+00	1.30E-02	0.00E+00	1.30E-02	2.00E+00	2.00E+01	6.5E-03	6.5E-04
BENZO(A)ANTHRACENE	5.40E+00	0.00E+00	1.60E-02	0.00E+00	1.60E-02	2.00E+00	2.00E+01	8.0E-03	8.0E-04
BENZO(A)PYRENE	3.80E+00	0.00E+00	1.13E-02	0.00E+00	1.13E-02	2.00E+00	2.00E+01	5.6E-03	5.6E-04
BENZO(B)FLUORANTHENE	4.90E+00	0.00E+00	1.45E-02	0.00E+00	1.45E-02	2.00E+00	2.00E+01	7.3E-03	7.3E-04
BENZO(G,H,I)PERYLENE	1.60E+00	0.00E+00	4.74E-03	0.00E+00	4.74E-03	2.00E+00	2.00E+01	2.4E-03	2.4E-04
BENZO(K)FLUORANTHENE	3.90E+00	0.00E+00	1.16E-02	0.00E+00	1.16E-02	2.00E+00	2.00E+01	5.8E-03	5.8E-04
CARBAZOLE	1.40E+00	0.00E+00	4.15E-03	0.00E+00	4.15E-03	2.00E+00	2.00E+01	2.1E-03	2.1E-04
CHRYSENE	8.70E+00	0.00E+00	2.58E-02	0.00E+00	2.58E-02	2.00E+00	2.00E+01	1.3E-02	1.3E-03
DIBENZO(A,H)ANTHRACENE	5.80E-01	0.00E+00	1.72E-03	0.00E+00	1.72E-03	2.00E+00	2.00E+01	8.6E-04	8.6E-05
DIBENZOFURAN	5.10E-01	0.00E+00	1.51E-03	0.00E+00	1.51E-03	2.00E+00	2.00E+01	7.6E-04	7.6E-05
FLUORANTHENE	2.80E+01	0.00E+00	8.30E-02	0.00E+00	8.30E-02	2.00E+00	2.00E+01	4.1E-02	4.1E-03
FLUORENE	8.20E-01	0.00E+00	2.43E-03	0.00E+00	2.43E-03	2.00E+00	2.00E+01	1.2E-03	1.2E-04
INDENO(1,2,3-CD)PYRENE	1.60E+00	0.00E+00	4.74E-03	0.00E+00	4.74E-03	2.00E+00	2.00E+01	2.4E-03	2.4E-04
NAPHTHALENE	7.30E-01	0.00E+00	2.16E-03	0.00E+00	2.16E-03	2.00E+00	2.00E+01	1.1E-03	1.1E-04
PHENANTHRENE	7.20E+00	0.00E+00	2.13E-02	0.00E+00	2.13E-02	2.00E+00	2.00E+01	1.1E-02	1.1E-03
PYRENE	2.20E+01	0.00E+00	6.52E-02	0.00E+00	6.52E-02	2.00E+00	2.00E+01	3.3E-02	3.3E-03
PESTICIDES									
BETA-BHC	5.70E-02	0.00E+00	1.69E-04	0.00E+00	1.69E-04	5.60E-01	2.25E+00	3.0E-04	7.5E-05
ENDOSULFAN SULFATE	6.40E-01	0.00E+00	1.90E-03	0.00E+00	1.90E-03	1.00E+01	1.00E+02	1.9E-04	1.9E-05
GAMMA-CHLORDANE	6.00E-01	0.00E+00	1.78E-03	0.00E+00	1.78E-03	2.14E+00	1.07E+01	8.3E-04	1.7E-04
TOTAL CHLORDANE	6.00E-01	0.00E+00	1.78E-03	0.00E+00	1.78E-03	2.14E+00	1.07E+01	8.3E-04	1.7E-04
PCBS									
TOTAL AROCLOR	5.50E+01	0.00E+00	1.63E-01	0.00E+00	1.63E-01	1.80E-01	1.80E+00	9.1E-01	9.1E-02
PCB HOMOLOGS									
TOTAL PCB HOMOLOGS	2.72E+00	1.20E-01	8.06E-03	2.89E-02	3.70E-02	1.80E-01	1.80E+00	2.1E-01	2.1E-02
METALS									
ALUMINUM	9.10E+03	4.68E+02	2.70E+01	1.13E+02	1.40E+02	1.10E+02	1.10E+03	1.3E+00	1.3E-01
ANTIMONY	4.35E+01	0.00E+00	1.29E-01	0.00E+00	1.29E-01	NV	NV	#VALUE!	#VALUE!
ARSENIC	1.13E+01	8.90E+00	3.35E-02	2.14E+00	2.18E+00	2.24E+00	4.51E+00	9.7E-01	4.8E-01
BARIUM	3.25E+01	6.20E+00	9.63E-02	1.49E+00	1.59E+00	2.08E+01	4.17E+01	7.6E-02	3.8E-02
BERYLLIUM	7.90E-01	7.20E-02	2.34E-03	1.73E-02	1.97E-02	NV	NV	#VALUE!	#VALUE!
CADMIUM	3.98E+02	2.89E-01	1.18E+00	6.96E-02	1.25E+00	1.47E+00	6.35E+00	8.5E-01	2.0E-01
CHROMIUM	3.91E+03	3.40E+00	1.16E+01	8.19E-01	1.24E+01	2.66E+00	1.56E+01	4.7E+00	7.9E-01
COBALT	1.08E+01	3.83E-01	3.20E-02	9.22E-02	1.24E-01	7.61E+00	1.83E+01	1.6E-02	6.8E-03
COPPER	4.97E+02	3.66E+01	1.47E+00	8.81E+00	1.03E+01	4.05E+00	3.49E+01	2.5E+00	2.9E-01
IRON	7.21E+04	8.80E+02	2.14E+02	2.12E+02	4.26E+02	1.00E+02	1.00E+03	4.3E+00	4.3E-01
LEAD	2.12E+04	2.35E+00	6.28E+01	5.66E-01	6.34E+01	1.63E+00	4.46E+01	3.9E+01	1.4E+00
MANGANESE	4.18E+02	1.33E+02	1.24E+00	3.20E+01	3.33E+01	1.79E+02	3.77E+02	1.9E-01	8.8E-02
MERCURY	9.40E-01	6.60E-02	2.79E-03	1.59E-02	1.87E-02	6.40E-03	6.40E-02	2.9E+00	2.9E-01
NICKEL	4.74E+01	4.50E+00	1.41E-01	1.08E+00	1.22E+00	6.71E+00	1.86E+01	1.8E-01	6.6E-02
SELENIUM	7.90E+00	1.30E+00	2.34E-02	3.13E-01	3.36E-01	2.90E-01	8.19E-01	1.2E+00	4.1E-01
SILVER	6.08E-01	2.96E-01	1.80E-03	7.13E-02	7.31E-02	2.02E+00	6.05E+01	3.6E-02	1.2E-03
THALLIUM	4.90E+00	4.00E-03	1.45E-02	9.63E-04	1.55E-02	NV	NV	#VALUE!	#VALUE!
VANADIUM	2.84E+01	1.90E+00	8.42E-02	4.58E-01	5.42E-01	3.44E-01	1.69E+00	1.6E+00	3.2E-01
ZINC	1.16E+03	3.75E+01	3.44E+00	9.03E+00	1.25E+01	6.61E+01	1.71E+02	1.9E-01	7.3E-02

Cells are shaded if the value is greater than 1.0

Body Weight = (BW)	9.51E-01	kg
Wet Food Ingestion Rate = (If)	2.29E-01	kg/day
Sediment Ingestion Rate = (Is)	2.82E-03	kg/day
Home Range = (HR)	Assume 100% on site	
Contaminated Area = (CA)	Assume equal to home range	

Dose (sediment) = (Cs * Is)(H)/BW
Dose (fish) = (Cf * If)(H)/BW
Cf = Contaminant concentration in fish
Cs = Contaminant concentration in sediment

Total Dose = Dose (sediment) + Dose (invertebrate)
H=CA/HR (Assume = to 1)

Conc = Concentration
LOAEL = Lowest Observed Adverse Effects Concentration
NOAEL = No Observed Adverse Effects Concentration
Sed = Sediment

APPENDIX G.4

HERRING GULL - AVERAGE INPUTS
TERRESTRIAL WILDLIFE MODEL ECOLOGICAL EFFECTS QUOTIENT CALCULATION - SEDIMENT
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT
JAMESTOWN, RHODE ISLAND

Chemical	Avg Sed. Conc. (mg/kg)	ShellFish Conc. (mg/kg)	Dose (mg/kg/d) from: Sediment	Dose (mg/kg/d) from: ShellFish	Total Dose (mg/kg/d)	NOAEL (mg/kg/d)	LOAEL (mg/kg/d)	Hazard Quotients NOAEL	Hazard Quotients LOAEL
SEMIVOLATILES									
2-METHYLNAPHTHALENE	1.56E-02	0.00E+00	3.93E-05	0.00E+00	3.93E-05	2.00E+00	2.00E+01	2.0E-05	2.0E-06
ACENAPHTHENE	5.59E-02	0.00E+00	1.41E-04	0.00E+00	1.41E-04	2.00E+00	2.00E+01	7.0E-05	7.0E-06
ACENAPHTHYLENE	3.06E-02	0.00E+00	7.71E-05	0.00E+00	7.71E-05	2.00E+00	2.00E+01	3.9E-05	3.9E-06
ANTHRACENE	2.07E-01	0.00E+00	5.22E-04	0.00E+00	5.22E-04	2.00E+00	2.00E+01	2.6E-04	2.6E-05
BENZO(A)ANTHRACENE	3.53E-01	0.00E+00	8.90E-04	0.00E+00	8.90E-04	2.00E+00	2.00E+01	4.4E-04	4.4E-05
BENZO(A)PYRENE	2.68E-01	0.00E+00	6.75E-04	0.00E+00	6.75E-04	2.00E+00	2.00E+01	3.4E-04	3.4E-05
BENZO(B)FLUORANTHENE	3.63E-01	0.00E+00	9.15E-04	0.00E+00	9.15E-04	2.00E+00	2.00E+01	4.6E-04	4.6E-05
BENZO(G,H,I)PERYLENE	1.32E-01	0.00E+00	3.33E-04	0.00E+00	3.33E-04	2.00E+00	2.00E+01	1.7E-04	1.7E-05
BENZO(K)FLUORANTHENE	2.03E-01	0.00E+00	5.12E-04	0.00E+00	5.12E-04	2.00E+00	2.00E+01	2.6E-04	2.6E-05
CARBAZOLE	2.00E-01	0.00E+00	5.04E-04	0.00E+00	5.04E-04	2.00E+00	2.00E+01	2.5E-04	2.5E-05
CHRYSENE	4.50E-01	0.00E+00	1.13E-03	0.00E+00	1.13E-03	2.00E+00	2.00E+01	5.7E-04	5.7E-05
DIBENZO(A,H)ANTHRACENE	4.60E-02	0.00E+00	1.16E-04	0.00E+00	1.16E-04	2.00E+00	2.00E+01	5.8E-05	5.8E-06
DIBENZOFURAN	1.63E-01	0.00E+00	4.11E-04	0.00E+00	4.11E-04	2.00E+00	2.00E+01	2.1E-04	2.1E-05
FLUORANTHENE	1.10E+00	0.00E+00	2.77E-03	0.00E+00	2.77E-03	2.00E+00	2.00E+01	1.4E-03	1.4E-04
FLUORENE	5.74E-02	0.00E+00	1.45E-04	0.00E+00	1.45E-04	2.00E+00	2.00E+01	7.2E-05	7.2E-06
INDENO(1,2,3-CD)PYRENE	1.30E-01	0.00E+00	3.28E-04	0.00E+00	3.28E-04	2.00E+00	2.00E+01	1.6E-04	1.6E-05
NAPHTHALENE	2.81E-02	0.00E+00	7.08E-05	0.00E+00	7.08E-05	2.00E+00	2.00E+01	3.5E-05	3.5E-06
PHENANTHRENE	4.21E-01	0.00E+00	1.06E-03	0.00E+00	1.06E-03	2.00E+00	2.00E+01	5.3E-04	5.3E-05
PYRENE	9.66E-01	0.00E+00	2.43E-03	0.00E+00	2.43E-03	2.00E+00	2.00E+01	1.2E-03	1.2E-04
PESTICIDES									
BETA-BHC	4.08E-03	0.00E+00	1.03E-05	0.00E+00	1.03E-05	5.60E-01	2.25E+00	1.8E-05	4.6E-06
ENDOSULFAN SULFATE	2.75E-02	0.00E+00	6.93E-05	0.00E+00	6.93E-05	1.00E+01	1.00E+02	6.9E-06	6.9E-07
GAMMA-CHLORDANE	2.73E-02	0.00E+00	6.88E-05	0.00E+00	6.88E-05	2.14E+00	1.07E+01	3.2E-05	6.4E-06
TOTAL CHLORDANE	2.58E-02	0.00E+00	6.50E-05	0.00E+00	6.50E-05	2.14E+00	1.07E+01	3.0E-05	6.1E-06
PCBS									
TOTAL AROCLOR	1.62E+00	0.00E+00	4.08E-03	0.00E+00	4.08E-03	1.80E-01	1.80E+00	2.3E-02	2.3E-03
PCB HOMOLOGS									
TOTAL PCB HOMOLOGS	4.12E-01	7.86E-02	1.04E-03	1.61E-02	1.72E-02	1.80E-01	1.80E+00	9.5E-02	9.5E-03
METALS									
ALUMINUM	5.41E+03	3.55E+02	1.36E+01	7.28E+01	8.65E+01	1.10E+02	1.10E+03	7.9E-01	7.9E-02
ANTIMONY	9.92E-01	0.00E+00	2.50E-03	0.00E+00	2.50E-03	NV	NV	#VALUE!	#VALUE!
ARSENIC	3.05E+00	7.85E+00	7.69E-03	1.61E+00	1.62E+00	2.24E+00	4.51E+00	7.2E-01	3.6E-01
BARIUM	1.33E+01	5.51E+00	3.35E-02	1.13E+00	1.16E+00	2.08E+01	4.17E+01	5.6E-02	2.8E-02
BERYLLIUM	2.96E-01	6.27E-02	7.46E-04	1.29E-02	1.36E-02	NV	NV	#VALUE!	#VALUE!
CADMIUM	2.48E+00	9.62E-02	6.25E-03	1.97E-02	2.60E-02	1.47E+00	6.35E+00	1.8E-02	4.1E-03
CHROMIUM	3.57E+01	1.93E+00	9.00E-02	3.96E-01	4.86E-01	2.66E+00	1.56E+01	1.8E-01	3.1E-02
COBALT	3.53E+00	3.21E-01	8.90E-03	6.58E-02	7.47E-02	7.61E+00	1.83E+01	9.8E-03	4.1E-03
COPPER	2.55E+01	3.13E+01	6.43E-02	6.42E+00	6.48E+00	4.05E+00	3.49E+01	1.6E+00	1.9E-01
IRON	1.70E+04	7.07E+02	4.28E+01	1.45E+02	1.88E+02	1.00E+02	1.00E+03	1.9E+00	1.9E-01
LEAD	1.49E+02	1.75E+00	3.76E-01	3.59E-01	7.34E-01	1.63E+00	4.46E+01	4.5E-01	1.6E-02
MANGANESE	1.39E+02	9.74E+01	3.50E-01	2.00E+01	2.03E+01	1.79E+02	3.77E+02	1.1E-01	5.4E-02
MERCURY	5.88E-02	4.22E-02	1.48E-04	8.66E-03	8.80E-03	6.40E-03	6.40E-02	1.4E+00	1.4E-01
NICKEL	9.47E+00	2.45E+00	2.39E-02	5.03E-01	5.26E-01	6.71E+00	1.86E+01	7.8E-02	2.8E-02
SELENIUM	1.01E+00	1.14E+00	2.55E-03	2.34E-01	2.36E-01	2.90E-01	8.19E-01	8.2E-01	2.9E-01
SILVER	6.14E-02	2.36E-01	1.55E-04	4.84E-02	4.86E-02	2.02E+00	6.05E+01	2.4E-02	8.0E-04
THALLIUM	3.94E-01	2.55E+00	9.93E-04	5.23E-01	5.24E-01	NV	NV	#VALUE!	#VALUE!
VANADIUM	1.54E+01	1.50E+00	3.88E-02	3.08E-01	3.47E-01	3.44E-01	1.69E+00	1.0E+00	2.1E-01
ZINC	5.92E+01	3.40E+01	1.49E-01	6.97E+00	7.12E+00	6.61E+01	1.71E+02	1.1E-01	4.2E-02

Cells are shaded if the value is greater than 1.0

Body Weight = (BW)	1.09E+00	kg
Wet Food Ingestion Rate = (If)	2.24E-01	kg/day
Sediment Ingestion Rate = (Is)	2.75E-03	kg/day
Home Range = (HR)	1.00E+01	km-radius
Contaminated Area = (CA)	Assume equal to home range	

Dose (sediment) = (Cs * Is)(H)/BW
Dose (fish) = (Cf * If)(H)/BW
Cf = Contaminant concentration in fish
Cs = Contaminant concentration in sediment

Total Dose = Dose (sediment) + Dose (fish)
H=CA/HR (Assume = to 1)

Conc = Concentration
LOAEL = Lowest Observed Adverse Effects Concentration
NOAEL = No Observed Adverse Effects Concentration
Sed = Sediment

APPENDIX G.4

RACCOON- CONSERVATIVE INPUTS
TERRESTRIAL WILDLIFE MODEL ECOLOGICAL EFFECTS QUOTIENT CALCULATION - SEDIMENT
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT
JAMESTOWN, RHODE ISLAND

Chemical	Max Sed. Conc. (mg/kg)	ShellFish Conc. (mg/kg)	Dose (mg/kg/d) from: Sediment	Dose (mg/kg/d) from: ShellFish	Total Dose (mg/kg/d)	NOAEL (mg/kg/d)	LOAEL (mg/kg/d)	Hazard Quotients NOAEL	Hazard Quotients LOAEL
SEMIVOLATILES									
2-METHYLNAPHTHALENE	2.80E-01	0.00E+00	1.70E-03	0.00E+00	1.70E-03	6.56E+01	3.56E+02	2.6E-05	4.8E-06
ACENAPHTHENE	1.30E+00	0.00E+00	7.89E-03	0.00E+00	7.89E-03	6.56E+01	3.56E+02	1.2E-04	2.2E-05
ACENAPHTHYLENE	8.10E-01	0.00E+00	4.92E-03	0.00E+00	4.92E-03	6.56E+01	3.56E+02	7.5E-05	1.4E-05
ANTHRACENE	4.40E+00	0.00E+00	2.67E-02	0.00E+00	2.67E-02	6.56E+01	3.56E+02	4.1E-04	7.5E-05
BENZO(A)ANTHRACENE	5.40E+00	0.00E+00	3.28E-02	0.00E+00	3.28E-02	6.15E-01	3.84E+01	5.3E-02	8.5E-04
BENZO(A)PYRENE	3.80E+00	0.00E+00	2.31E-02	0.00E+00	2.31E-02	6.15E-01	3.84E+01	3.8E-02	6.0E-04
BENZO(B)FLUORANTHENE	4.90E+00	0.00E+00	2.97E-02	0.00E+00	2.97E-02	6.15E-01	3.84E+01	4.8E-02	7.7E-04
BENZO(G,H,I)PERYLENE	1.60E+00	0.00E+00	9.71E-03	0.00E+00	9.71E-03	6.15E-01	3.84E+01	1.6E-02	2.5E-04
BENZO(K)FLUORANTHENE	3.90E+00	0.00E+00	2.37E-02	0.00E+00	2.37E-02	6.15E-01	3.84E+01	3.8E-02	6.2E-04
CARBAZOLE	1.40E+00	0.00E+00	8.50E-03	0.00E+00	8.50E-03	6.56E+01	3.56E+02	1.3E-04	2.4E-05
CHRYSENE	8.70E+00	0.00E+00	5.28E-02	0.00E+00	5.28E-02	6.15E-01	3.84E+01	8.6E-02	1.4E-03
DIBENZO(A,H)ANTHRACENE	5.80E-01	0.00E+00	3.52E-03	0.00E+00	3.52E-03	6.15E-01	3.84E+01	5.7E-03	9.2E-05
DIBENZOFURAN	5.10E-01	0.00E+00	3.10E-03	0.00E+00	3.10E-03	NV	NV	#VALUE!	#VALUE!
FLUORANTHENE	2.80E+01	0.00E+00	1.70E-01	0.00E+00	1.70E-01	6.56E+01	3.56E+02	2.6E-03	4.8E-04
FLUORENE	8.20E-01	0.00E+00	4.98E-03	0.00E+00	4.98E-03	6.56E+01	3.56E+02	7.6E-05	1.4E-05
INDENO(1,2,3-CD)PYRENE	1.60E+00	0.00E+00	9.71E-03	0.00E+00	9.71E-03	6.15E-01	3.84E+01	1.6E-02	2.5E-04
NAPHTHALENE	7.30E-01	0.00E+00	4.43E-03	0.00E+00	4.43E-03	6.56E+01	3.56E+02	6.8E-05	1.2E-05
PHENANTHRENE	7.20E+00	0.00E+00	4.37E-02	0.00E+00	4.37E-02	6.56E+01	3.56E+02	6.7E-04	1.2E-04
PYRENE	2.20E+01	0.00E+00	1.34E-01	0.00E+00	1.34E-01	6.15E-01	3.84E+01	2.2E-01	3.5E-03
PESTICIDES									
BETA-BHC	5.70E-02	0.00E+00	3.46E-04	0.00E+00	3.46E-04	4.00E-01	2.00E+00	8.7E-04	1.7E-04
ENDOSULFAN SULFATE	6.40E-01	0.00E+00	3.89E-03	0.00E+00	3.89E-03	1.50E-01	1.50E+00	2.6E-02	2.6E-03
GAMMA-CHLORDANE	6.00E-01	0.00E+00	3.64E-03	0.00E+00	3.64E-03	4.58E+00	9.16E+00	8.0E-04	4.0E-04
TOTAL CHLORDANE	6.00E-01	0.00E+00	3.64E-03	0.00E+00	3.64E-03	4.58E+00	9.16E+00	8.0E-04	4.0E-04
PCBS									
TOTAL AROCLOR	5.50E+01	0.00E+00	3.34E-01	0.00E+00	3.34E-01	6.80E-02	6.80E-01	4.9E+00	4.9E-01
PCB HOMOLOGS									
TOTAL PCB HOMOLOGS	2.72E+00	1.20E-01	1.65E-02	5.17E-02	6.82E-02	6.80E-02	6.80E-01	1.0E+00	1.0E-01
METALS									
ALUMINUM	9.10E+03	4.68E+02	5.52E+01	2.02E+02	2.57E+02	1.93E+00	1.93E+01	1.3E+02	1.3E+01
ANTIMONY	4.35E+01	0.00E+00	2.64E-01	0.00E+00	2.64E-01	5.90E-02	2.76E+00	4.5E+00	9.6E-02
ARSENIC	1.13E+01	8.90E+00	6.86E-02	3.83E+00	3.90E+00	1.04E+00	4.55E+00	3.8E+00	8.6E-01
BARIUM	3.25E+01	6.20E+00	1.97E-01	2.67E+00	2.87E+00	5.18E+01	8.27E+01	5.5E-02	3.5E-02
BERYLLIUM	7.90E-01	7.20E-02	4.80E-03	3.10E-02	3.58E-02	5.32E-01	6.73E-01	6.7E-02	5.3E-02
CADMIUM	3.98E+02	2.89E-01	2.42E+00	1.24E-01	2.54E+00	7.70E-01	6.90E+00	3.3E+00	3.7E-01
CHROMIUM	3.91E+03	3.40E+00	2.37E+01	1.46E+00	2.52E+01	2.40E+00	5.82E+01	1.0E+01	4.3E-01
COBALT	1.08E+01	3.83E-01	6.56E-02	1.65E-01	2.31E-01	7.33E+00	1.89E+01	3.1E-02	1.2E-02
COPPER	4.97E+02	3.66E+01	3.02E+00	1.58E+01	1.88E+01	5.60E+00	8.27E+01	3.4E+00	2.3E-01
IRON	7.21E+04	8.80E+02	4.38E+02	3.79E+02	8.17E+02	5.00E+01	5.00E+02	1.6E+01	1.6E+00
LEAD	2.12E+04	2.35E+00	1.29E+02	1.01E+00	1.30E+02	4.70E+00	1.86E+02	2.8E+01	7.0E-01
MANGANESE	4.18E+02	1.33E+02	2.54E+00	5.73E+01	5.98E+01	5.15E+01	1.46E+02	1.2E+00	4.1E-01
MERCURY	9.40E-01	6.60E-02	5.71E-03	2.84E-02	3.41E-02	3.20E-02	1.60E-01	1.1E+00	2.1E-01
NICKEL	4.74E+01	4.50E+00	2.88E-01	1.94E+00	2.23E+00	1.70E+00	1.48E+01	1.3E+00	1.5E-01
SELENIUM	7.90E+00	1.30E+00	4.80E-02	5.60E-01	6.08E-01	1.43E-01	6.61E-01	4.3E+00	9.2E-01
SILVER	6.08E-01	2.96E-01	3.69E-03	1.28E-01	1.31E-01	6.02E+00	1.19E+02	2.2E-02	1.1E-03
THALLIUM	4.90E+00	4.00E-03	2.97E-02	1.72E-03	3.15E-02	7.40E-03	7.40E-02	4.3E+00	4.3E-01
VANADIUM	2.84E+01	1.90E+00	1.72E-01	8.19E-01	9.91E-01	4.16E+00	9.44E+00	2.4E-01	1.0E-01
ZINC	1.16E+03	3.75E+01	7.04E+00	1.62E+01	2.32E+01	7.54E+01	2.98E+02	3.1E-01	7.8E-02

Cells are shaded if the value is greater than 1.0

Body Weight = (BW)	3.670E+00	kg
Wet Food Ingestion Rate = (If)	1.581E+00	kg/day
Sediment Ingestion Rate = (Is)	2.228E-02	kg/day
Home Range = (HR)	Assume 100% on site	
Contaminated Area = (CA)	Assume equal to home range	

Dose (sediment) = (Cs * Is)(H)/BW
Dose (fish) = (Cf * If)(H)/BW
Cf = Contaminant concentration in fish
Cs = Contaminant concentration in sediment

Total Dose = Dose (sediment) + Dose (invertebrate)
H=CA/HR (Assume = to 1)

Conc = Concentration
LOAEL = Lowest Observed Adverse Effects Concentration
NOAEL = No Observed Adverse Effects Concentration
Sed = Sediment

APPENDIX G.4

RACCOON - AVERAGE INPUTS
TERRESTRIAL WILDLIFE MODEL ECOLOGICAL EFFECTS QUOTIENT CALCULATION - SEDIMENT
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT
JAMESTOWN, RHODE ISLAND

Chemical	Avg Sed. Conc. (mg/kg)	ShellFish Conc. (mg/kg)	Dose (mg/kg/d) from: Sediment	Dose (mg/kg/d) from: ShellFish	Total Dose (mg/kg/d)	NOAEL (mg/kg/d)	LOAEL (mg/kg/d)	Hazard Quotients NOAEL	Hazard Quotients LOAEL
SEMIVOLATILES									
2-METHYLNAPHTHALENE	1.56E-02	0.00E+00	4.79E-05	0.00E+00	4.79E-05	6.56E+01	3.56E+02	7.3E-07	1.3E-07
ACENAPHTHENE	5.59E-02	0.00E+00	1.72E-04	0.00E+00	1.72E-04	6.56E+01	3.56E+02	2.6E-06	4.8E-07
ACENAPHTHYLENE	3.06E-02	0.00E+00	9.39E-05	0.00E+00	9.39E-05	6.56E+01	3.56E+02	1.4E-06	2.6E-07
ANTHRACENE	2.07E-01	0.00E+00	6.35E-04	0.00E+00	6.35E-04	6.56E+01	3.56E+02	9.7E-06	1.8E-06
BENZO(A)ANTHRACENE	3.53E-01	0.00E+00	1.08E-03	0.00E+00	1.08E-03	6.15E-01	3.84E+01	1.8E-03	2.8E-05
BENZO(A)PYRENE	2.68E-01	0.00E+00	8.23E-04	0.00E+00	8.23E-04	6.15E-01	3.84E+01	1.3E-03	2.1E-05
BENZO(B)FLUORANTHENE	3.63E-01	0.00E+00	1.11E-03	0.00E+00	1.11E-03	6.15E-01	3.84E+01	1.8E-03	2.9E-05
BENZO(G,H,I)PERYLENE	1.32E-01	0.00E+00	4.05E-04	0.00E+00	4.05E-04	6.15E-01	3.84E+01	6.6E-04	1.1E-05
BENZO(K)FLUORANTHENE	2.03E-01	0.00E+00	6.23E-04	0.00E+00	6.23E-04	6.15E-01	3.84E+01	1.0E-03	1.6E-05
CARBAZOLE	2.00E-01	0.00E+00	6.14E-04	0.00E+00	6.14E-04	6.56E+01	3.56E+02	9.4E-06	1.7E-06
CHRYSENE	4.50E-01	0.00E+00	1.38E-03	0.00E+00	1.38E-03	6.15E-01	3.84E+01	2.2E-03	3.6E-05
DIBENZO(A,H)ANTHRACENE	4.60E-02	0.00E+00	1.41E-04	0.00E+00	1.41E-04	6.15E-01	3.84E+01	2.3E-04	3.7E-06
DIBENZOFURAN	1.63E-01	0.00E+00	5.00E-04	0.00E+00	5.00E-04	NV	NV	#VALUE!	#VALUE!
FLUORANTHENE	1.10E+00	0.00E+00	3.38E-03	0.00E+00	3.38E-03	6.56E+01	3.56E+02	5.1E-05	9.5E-06
FLUORENE	5.74E-02	0.00E+00	1.76E-04	0.00E+00	1.76E-04	6.56E+01	3.56E+02	2.7E-06	4.9E-07
INDENO(1,2,3-CD)PYRENE	1.30E-01	0.00E+00	3.99E-04	0.00E+00	3.99E-04	6.15E-01	3.84E+01	6.5E-04	1.0E-05
NAPHTHALENE	2.81E-02	0.00E+00	8.63E-05	0.00E+00	8.63E-05	6.56E+01	3.56E+02	1.3E-06	2.4E-07
PHENANTHRENE	4.21E-01	0.00E+00	1.29E-03	0.00E+00	1.29E-03	6.56E+01	3.56E+02	2.0E-05	3.6E-06
PYRENE	9.66E-01	0.00E+00	2.97E-03	0.00E+00	2.97E-03	6.15E-01	3.84E+01	4.8E-03	7.7E-05
PESTICIDES									
BETA-BHC	4.08E-03	0.00E+00	1.25E-05	0.00E+00	1.25E-05	4.00E-01	2.00E+00	3.1E-05	6.3E-06
ENDOSULFAN SULFATE	2.75E-02	0.00E+00	8.44E-05	0.00E+00	8.44E-05	1.50E-01	1.50E+00	5.6E-04	5.6E-05
GAMMA-CHLORDANE	2.73E-02	0.00E+00	8.38E-05	0.00E+00	8.38E-05	4.58E+00	9.16E+00	1.8E-05	9.1E-06
TOTAL CHLORDANE	2.58E-02	0.00E+00	7.92E-05	0.00E+00	7.92E-05	4.58E+00	9.16E+00	1.7E-05	8.6E-06
PCBS									
TOTAL AROCLOR	1.62E+00	0.00E+00	4.97E-03	0.00E+00	4.97E-03	6.80E-02	6.80E-01	7.3E-02	7.3E-03
PCB HOMOLOGS									
TOTAL PCB HOMOLOGS	4.12E-01	7.86E-02	1.26E-03	1.71E-02	1.84E-02	6.80E-02	6.80E-01	2.7E-01	2.7E-02
METALS									
ALUMINUM	5.41E+03	3.55E+02	1.66E+01	7.73E+01	9.39E+01	1.93E+00	1.93E+01	4.9E+01	4.9E+00
ANTIMONY	9.92E-01	0.00E+00	3.04E-03	0.00E+00	3.04E-03	5.90E-02	2.76E+00	5.2E-02	1.1E-03
ARSENIC	3.05E+00	7.85E+00	9.36E-03	1.71E+00	1.72E+00	1.04E+00	4.55E+00	1.7E+00	3.8E-01
BARIUM	1.33E+01	5.51E+00	4.08E-02	1.20E+00	1.24E+00	5.18E+01	8.27E+01	2.4E-02	1.5E-02
BERYLLIUM	2.96E-01	6.27E-02	9.09E-04	1.37E-02	1.46E-02	5.32E-01	6.73E-01	2.7E-02	2.2E-02
CADMIUM	2.48E+00	9.62E-02	7.61E-03	2.09E-02	2.86E-02	7.70E-01	6.90E+00	3.7E-02	4.1E-03
CHROMIUM	3.57E+01	1.93E+00	1.10E-01	4.20E-01	5.30E-01	2.40E+00	5.82E+01	2.2E-01	9.1E-03
COBALT	3.53E+00	3.21E-01	1.08E-02	6.99E-02	8.07E-02	7.33E+00	1.89E+01	1.1E-02	4.3E-03
COPPER	2.55E+01	3.13E+01	7.83E-02	6.81E+00	6.89E+00	5.60E+00	8.27E+01	1.2E+00	8.3E-02
IRON	1.70E+04	7.07E+02	5.22E+01	1.54E+02	2.06E+02	5.00E+01	5.00E+02	4.1E+00	4.1E-01
LEAD	1.49E+02	1.75E+00	4.57E-01	3.81E-01	8.38E-01	4.70E+00	1.86E+02	1.8E-01	4.5E-03
MANGANESE	1.39E+02	9.74E+01	4.27E-01	2.12E+01	2.16E+01	5.15E+01	1.46E+02	4.2E-01	1.5E-01
MERCURY	5.88E-02	4.22E-02	1.80E-04	9.19E-03	9.37E-03	3.20E-02	1.60E-01	2.9E-01	5.9E-02
NICKEL	9.47E+00	2.45E+00	2.91E-02	5.33E-01	5.62E-01	1.70E+00	1.48E+01	3.3E-01	3.8E-02
SELENIUM	1.01E+00	1.14E+00	3.10E-03	2.48E-01	2.51E-01	1.43E-01	6.61E-01	1.8E+00	3.8E-01
SILVER	6.14E-02	2.36E-01	1.88E-04	5.14E-02	5.16E-02	6.02E+00	1.19E+02	8.6E-03	4.3E-04
THALLIUM	3.94E-01	2.55E+00	1.21E-03	5.55E-01	5.56E-01	7.40E-03	7.40E-02	7.5E+01	7.5E+00
VANADIUM	1.54E+01	1.50E+00	4.73E-02	3.27E-01	3.74E-01	4.16E+00	9.44E+00	9.0E-02	4.0E-02
ZINC	5.92E+01	3.40E+01	1.82E-01	7.40E+00	7.58E+00	7.54E+01	2.98E+02	1.0E-01	2.5E-02

Cells are shaded if the value is greater than 1.0

Body Weight = (BW)	5.636E+00	kg
Wet Food Ingestion Rate = (If)	1.227E+00	kg/day
Sediment Ingestion Rate = (Is)	1.730E-02	kg/day
Home Range = (HR)	1.00E+01	km-radius
Contaminated Area = (CA)	Assume equal to home range	

Dose (sediment) = (Cs * Is)(H)/BW
Dose (fish) = (Cf * If)(H)/BW
Cf = Contaminant concentration in fish
Cs = Contaminant concentration in sediment

Total Dose = Dose (sediment) + Dose (fish)
H=CA/HR (Assume = to 1)

Conc = Concentration
LOAEL = Lowest Observed Adverse Effects Concentration
NOAEL = No Observed Adverse Effects Concentration
Sed = Sediment

APPENDIX G.5

LABORATORY REPORT OF TOXICITY TESTS

TOXICOLOGICAL EVALUATION
OF SEDIMENT SAMPLES

Site 17, Gould Island
Naval Station Newport, Jamestown, Rhode Island
Comprehensive Long-Term Environmental Action-Navy (CLEAN)
Contract N62467-04-D-0055, Contract Task Order (CTO) NO. 0458

28 Day *Leptocheirus plumulosus*
Survival, Growth and Reproduction Toxicity Tests

Prepared For:

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June 2010
Reference 19685-10-06

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TOXICOLOGICAL EVALUATION
OF SEDIMENT SAMPLES

Site 17, Gould Island
Naval Station Newport, Jamestown, Rhode Island
Comprehensive Long-Term Environmental Action-Navy (CLEAN)
Contract N62467-04-D-0055, Contract Task Order (CTO) NO. 0458

28 Day *Leptocheirus plumulosus*
Survival, Growth and Reproduction Toxicity Tests

1.0 INTRODUCTION

This report presents the results of toxicity tests carried out on sediment samples collected from Site 17, Gould Island at Naval Station Newport located in Jamestown, Rhode Island. Samples were provided by Tetra Tech NUS, Inc., Wilmington, Massachusetts. Biological testing was based on programs and protocols developed by the U.S. Environmental Protection Agency, (U.S. EPA 2001, 1994) and ASTM (2009). Potential toxicological impacts of the samples were determined by conducting 28 day toxicity tests with the estuarine amphipod, *Leptocheirus plumulosus*. All testing, toxicological and analytical, was performed at EnviroSystems, Incorporated (ESI), Hampton, New Hampshire.

Toxicity tests expose groups of organisms to environmental samples, reference sites and laboratory control samples for a specified period to assess potential impacts. Endpoints evaluated as part of these assays may include survival, growth and/or reproduction. Analysis of variance techniques are used to determine if differences in a measured endpoint for organisms exposed to a test sample are significantly different from responses obtained from organisms exposed to field reference sites or laboratory control samples.

2.0 MATERIALS AND METHODS

2.1 General Methods, Biological Evaluations

Toxicological and analytical protocols used in this program follow procedures outlined in *Standard Test Method for Measuring the Toxicity of Sediment-Associated Contaminants with Estuarine and Marine Invertebrates* (ASTM 2009), *Methods for Assessing the Chronic Toxicity of Marine and Estuarine Sediment-associated Contaminants with the Amphipod, Leptocheirus plumulosus* (U.S. EPA 2001), *Methods for Assessing the Toxicity of Sediment-Associated Contaminants with Estuarine and Marine Amphipods* (U.S. EPA 1994), and *Standard Methods for the Examination of Water and Wastewater*, 20th Edition (APHA 1998). These protocols provide standard approaches for physical and chemical analyses and for the evaluation of toxicological effects of sediments on aquatic invertebrates.

2.2 Test Species

Leptocheirus plumulosus were obtained from cultures maintained by Aquatic Research Organism, Inc. (ARO) of Hampton, New Hampshire. Amphipods used in the assay were approximately ≤24 hours old or selected from those that pass through a 600µm sieve and are retained by a 250 µm screen at the start of the test.

2.3 Test Samples

Sediment samples collected from the Gould Island project site were received at ESI under chain of custody. Once received, samples were inspected to determine integrity, given unique sample numbers and logged into the laboratory sample management database. Once logged in, the samples were placed in a secure refrigerated, 2 - 4 °C, storage area. A listing of sample sites, sample collection, and receipt information is summarized in Table 1.

Sediment for the laboratory control treatment was collected from the Hampton Estuary, Hampton, New Hampshire. The area is not known to receive any direct industrial inputs and has been used as a laboratory reference sediment in the testing of marine sediments for over 25 years. Overlying seawater was also obtained from the Hampton Estuary. Water from the estuary has been used for the culture and maintenance of test organisms at ESI since 1978. Seawater is obtained through a filter system located on the bottom of the estuary at a point approximately 1 mile from the open ocean. The water is classified as SA-1.

2.4 *L. plumulosus* 28 Day Survival, Growth and Reproduction Toxicity Tests

The 28 day amphipod sediment tests were conducted according to the methods provided in ASTM (2009) and U.S. EPA (2001, 1994). Endpoints measured at the completion of the assay were survival, growth and reproduction. Growth was measured as dry weight and dry biomass. Reproduction was measured as overall juvenile production and juvenile production per surviving female amphipod.

Prior to testing samples, the salinity of the pore water was measured in order to determine the appropriate salinity for the overlying water to be used during the test. Then the samples were press sieved through a 2-mm stainless steel screen to remove large stones, sticks, roots, man-made material and any indigenous organisms. Once sieved, the sediment was homogenized and placed in test chambers. Overlying water was added immediately and then the chambers were allowed to stabilize. During this period, the chambers received one volume addition daily and the pore water was measured for ammonia. Once the pore water ammonia levels were acceptable, the assay was allowed to proceed.

Test vessels were 1000 mL glass beakers containing 175 mL of sediment and approximately 725 mL of overlying water. Test vessels were drilled at a consistent height, approximately 3 cm below the lip, and the drilled hole covered with Nitex® screen to facilitate water exchange without the loss of test organisms. Vessels were maintained in a water bath during the test. Depth of the water in the bath was set below the drain hole in the test vessel to eliminate flow of water from the bath into the test vessel. Test chambers were randomly placed in the water bath after addition of test sediments. Placement locations were generated by the CETIS® software program. The randomization work sheets are included in the data appendix. The water bath was maintained in a limited access, temperature controlled room. Temperatures in the room and water bath were independently set at a temperature of 25°C. Temperature was recorded on an hourly frequency using a temperature logger placed in a surrogate vessel. The photoperiod in the test chamber was set at 16:8 hour light:dark. Lighting was supplied by cool white florescent bulbs.

A total of 20 amphipods were randomly selected from the pool of organisms and added to each treatment. Each treatment group included five replicates and a surrogate test chamber that was used to obtain water qualities during the assay without disturbing the test animals. The surrogate chamber was treated the same as actual test chambers with the addition of animals and food, but was not used to determine endpoint data. Organisms were added once the pore water ammonia levels had reached acceptable levels.

Each day during the test, chambers received approximately 1 volume addition daily of seawater having similar salinity and temperature. Water temperature was maintained at 25±1°C, and the salinity was established at 20±3 ‰ based on initial pore water salinity. Water exchanges were facilitated by use of a distribution system designed to provide equal, regulated, flow to each chamber. The system was activated manually by the addition of water during the test. Salinity, pH, dissolved oxygen, and temperature were measured daily in a surrogate chamber for each treatment. Test chambers were aerated in order to maintain dissolved oxygen levels at ≥60% saturation. Water quality measurements were completed prior to overlying water renewals. Pore water and overlying water ammonia concentrations were measured on days 0, 7, 14, 21 and 28.

Test chambers were observed daily and any organisms found floating on the surface were noted on the data sheets. Dead amphipods were removed from the test chambers and live amphipods were countersunk. Organisms were fed three times weekly with a mixture of Tetramin® flake fish food, dried alfalfa leaves, wheat grass powder and shrimp maturation feed. During the first 14 days of the assay test vessels were fed 20 mg of the mixture at each feeding. The amount fed was increased to 40 mg for the last 14 days of the assay.

After 28 days exposure, the organisms were recovered from the sediments. Each test chamber was gently swirled to loosen the sediments and the test material was dumped into stacked 8" stainless steel sieves with 750 and 350 µm mesh screens. The sediments were washed through the sieve using water and material left on the screen was sorted to recover all living and dead adults and juveniles. This process was continued until the entire sample was evaluated. Adult organisms were differentiated from juveniles based on a visual inspection of size. Juvenile *L. plumulosus* were discarded once they were counted. Adult *L. plumulosus* were preserved with formalin solution and sexed. Adults were then placed on tared weighing pans and dried overnight at 104°C to obtain dry weight to the nearest 0.01 mg. The mean weight of surviving adult organisms was determined to assess growth.

2.5 Statistical Analysis

Survival, growth and reproduction data were analyzed using CETIS® software to determine significant differences between the test sediments and the associated reference sediments, as well as the laboratory control. Data sets were evaluated to determine normality of distribution and homogeneity of sample variance. Data sets were subsequently evaluated using the appropriate parametric or non-parametric Analysis of Variance (ANOVA) statistic. Statistical comparisons were made for the following endpoints: survival, dry weight, dry biomass, overall reproduction and juvenile production per surviving female. Pair-wise comparisons were made using the appropriate statistical evaluation. Statistical difference was evaluated at α=0.05.

2.6 Reference Toxicant Evaluation

As part of the laboratory quality control program, reference toxicant evaluations are conducted by ESI on a regular basis for each test species. These results provide relative health and response data while allowing for comparison with historic data sets. Results are summarized in Table 2.

2.7 Protocol Deviations

Review of data collected during this assay documented the following protocol deviation.

There were some replicates that had more than 20 animals added to test vessels at the assay start. It is the opinion of ESI's study director that this deviation did not adversely affect the outcome of the assay.

Table 1. Sample Collection and Receipt Summary. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

			Sample Collected		Sample Received	
Sample ID	ESI Code	Sample Type	Date	Time	Date	Time
GI-SD509-0006	19685-001	Project Sediment	04/30/10	0955	05/03/10	1415
GI-SD511-0006	19685-002	Project Sediment	04/30/10	1415	05/03/10	1415
GI-SD527-0006	19685-003	Project Sediment	04/30/10	0810	05/03/10	1415
GI-SD566-0006	19685-004	Project Sediment	04/30/10	1400	05/03/10	1415
GI-SD514-0006	19685-005	Project Sediment	04/30/10	1320	05/03/10	1415
GI-SD515-0006	19685-006	Project Sediment	04/30/10	1345	05/03/10	1415
GI-SD503-0006	19685-007	Project Sediment	04/30/10	1045	05/03/10	1415
GI-SD510-0006	19685-008	Project Sediment	04/30/10	1135	05/03/10	1415
GI-SD501-0006	19685-009	Project Sediment	04/30/10	1025	05/03/10	1415
GI-SD507-0006	19685-010	Project Sediment	04/30/10	0840	05/03/10	1415
GI-SD504-0006	19685-011	Project Sediment	04/30/10	0825	05/03/10	1415
GI-SD-DUP01-043010	19685-012	Project Sediment	04/30/10	0000	05/03/10	1415
GI-SD532-0006	19685-013	Project Sediment	05/03/10	0850	05/07/10	1300
GI-SD518-0006	19685-014	Project Sediment	05/03/10	0830	05/07/10	1300

Sample ID	ESI Code	Sample Type	Sample Collected Date	Sample Collected Time	Sample Received Date	Sample Received Time
GI-SD526-0006	19685-015	Reference Site	05/03/10	1205	05/07/10	1300
GI-SD525-0006	19685-016	Reference Site	05/03/10	1135	05/07/10	1300
GI-SD524-0006	19685-017	Reference Site	05/03/10	1115	05/07/10	1300
GI-SD502-0006	19685-018	Project Sediment	05/03/10	0910	05/07/10	1300
GI-SD508-0006	19685-019	Project Sediment	05/03/10	0940	05/07/10	1300
GI-SD529-0006	19685-020	Project Sediment	05/04/10	0910	05/07/10	1300
GI-SD506-0006	19685-021	Project Sediment	05/04/10	0750	05/07/10	1300
GI-SD519-0006	19685-022	Project Sediment	05/04/10	0855	05/07/10	1300
GI-SD505-0006	19685-023	Project Sediment	05/04/10	0805*	05/07/10	1300
GI-SD531-0006	19685-024	Project Sediment	05/13/10	1135	05/14/10	1130
GI-SD528-0006	19685-025	Project Sediment	05/13/10	1145	05/14/10	1130
GI-SD530-0006	19685-026	Project Sediment	05/13/10	1240	05/14/10	1130
GI-SD521-0006	19685-027	Project Sediment	05/13/10	1305	05/14/10	1130
GI-SD512-0006	19685-028	Project Sediment	05/13/10	1100	05/14/10	1130
GI-SD513-0006	19685-029	Project Sediment	05/13/10	1110	05/14/10	1130
GI-SD517-0006	19685-030	Project Sediment	05/13/10	1200	05/14/10	1130
GI-SD520-0006	19685-031	Project Sediment	05/13/10	1315	05/14/10	1130
GI-SD523-0006	19685-032	Project Sediment	05/13/10	1345	05/14/10	1130
GI-SD522-0006	19685-033	Project Sediment	05/13/10	1335	05/14/10	1130

*per e-mail communication dated 05/10/10.

Table 2. Reference Toxicant Evaluation. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Date	Endpoint		Value	Historic Mean/ Central Tendency	Acceptable Range	Reference Toxicant
Leptocheirus plumulosus						
05/03/10	Survival	LC-50	0.24	1.15	0.0 - 2.9	Cadmium (mg/L)

3.0 RESULTS AND DISCUSSION

Table 6 summarizes *L. plumulosus* survival data. Tables 7 and 8 provide summaries of *L. plumulosus* growth data (dry weight and dry biomass). Tables 9 and 10 provide summaries of *L. plumulosus* reproduction data (overall reproduction and production per female). Table 11 summarizes water quality data. Support data, including copies of laboratory bench sheets and statistics are included in Appendix A.

Mean temperature recorded hourly throughout the test with the assistance of a temperature logger was 25.2°C, with a range of 22.4 to 26.9 °C. Acceptable criteria are a mean temperature value of 25±1°C with maximum temporary fluctuations of 25±3°C. Temperature values collected during daily observations showed a range of 22.62 to 25.95°C with a mean value of 24.71°C. Protocol specifies a mean salinity of 20±2‰ with maximum temporary fluctuations of 20±3‰. Daily water quality observations demonstrated a mean salinity value of20.58‰ with a range of 18.11 to22.73‰.

3.1 Laboratory Control Performance

Review of the laboratory control data indicates that amphipod performance for all endpoints met the minimum acceptability criteria specified by protocol (ASTM, U.S. EPA). Mean control survival was 85.0% with an inter-replicate survival range of 70 to 100%. The coefficient of variation (CV) was computed to be 15.0%. At the end of the assay, the mean dry weight of surviving amphipods was 1.466 mg/organism. The mean dry

weight of 40 randomly selected amphipods at the start of the assay was 0.052 mg/organism. The overall mean juvenile production was calculated to be 5.95 juveniles/amphipod. Minimum acceptable performance for the laboratory control is specified as ≥80% survival on day 28, with no individual replicate having less than 60% survival, and organisms must show some evidence of growth and reproduction.

Table 3. Summary of Acceptable Endpoints and Measurements. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Endpoint / Measurement	Protocol Criteria		Study 19685
Survival	lab mean ≥ 80% and no replicates <60%	Mean Survival %	85.0
		Minimum Survival %	70.0
		Protocol Met	Yes
Growth	Measured Growth	start dry wt. (mg)	0.052
		end dry wt. (mg)	1.466
		Protocol Met	Yes
Reproduction	Juvenile Production	Overall Mean Reproduction	5.95
		Protocol Met	Yes
Mean Temperature	25 ±1°C	daily / hourly	24.71 / 25.2
		Protocol Met	Yes / Yes
Minimum Temperature	22°C	daily / hourly	22.62 / 22.4
		Protocol Met	Yes / Yes
Maximum Temperature	28°C	daily / hourly	25.95 / 26.9
		Protocol Met	Yes / Yes
Mean Salinity	20 ±2‰	Mean Salinity	20.58
		Protocol Met	Yes
Minimum Salinity	17‰	Minimum Salinity	18.11
		Protocol Met	Yes
Maximum Salinity	23‰	Maximum Salinity	22.73
		Protocol Met	Yes

3.2 Project Reference Site Performance

Mean survival, growth and reproduction in the project reference sites are summarized in Table 4.

Table 4. Summary of Project Reference Site Performance. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Reference Site	ESI Code	Mean Survival (%)	Mean Dry Weight (mg)	Mean Dry Biomass (mg)	Mean Overall Juvenile Production	Mean Juvenile Production per Surviving Female
GI-SD526-0006	19685-015	83.00%	1.402	1.120	6.92	13.13
GI-SD525-0006	19685-016	84.00%	1.477	1.356	6.02	13.73
GI-SD524-0006	19685-017	80.00%	1.516	1.258	5.67	11.50

3.3 Summary

Tables 6 through 10 provide summaries of assay endpoints and detailed statistical results for each sample location. Table 5 provides a summary of sample sites that demonstrated a negative effect based on the finding of a statistically significant reduction in an endpoint as compared to the laboratory control or reference site.

Table 5. Summary of Significant Endpoints. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

		Laboratory Control 19685-000					GI-SD526-0006 19685-015					GI-SD525-0006 19685-016					GI-SD524-0006 19685-017				
		survival	growth		reproduction		survival	growth		reproduction		survival	growth		reproduction		survival	growth		reproduction	
Field ID	ESI Code		wt	bio	over	j/fem		wt	bio	over	j/fem		wt	bio	over	j/fem		wt	bio	over	j/fem
GI-SD526-0006	19685-015																				
GI-SD525-0006	19685-016																				
GI-SD524-0006	19685-017																				
GI-SD509-0006	19685-001	Yes	Yes	Yes				Yes	Yes					Yes				Yes	Yes		
GI-SD511-0006	19685-002																				
GI-SD527-0006	19685-003																				
GI-SD566-0006	19685-004	Yes		Yes			Yes					Yes					Yes		Yes		
GI-SD514-0006	19685-005																				
GI-SD515-0006	19685-006																				
GI-SD503-0006	19685-007		Yes	Yes				Yes										Yes	Yes		
GI-SD510-0006	19685-008			Yes																	
GI-SD501-0006	19685-009				Yes	Yes				Yes					Yes	Yes				Yes	Yes
GI-SD507-0006	19685-010																				
GI-SD504-0006	19685-011																				
GI-SD-DUP01-043010	19685-012	Yes	Yes	Yes		Yes	Yes	Yes	Yes			Yes		Yes		Yes		Yes	Yes		Yes
GI-SD532-0006	19685-013																				
GI-SD518-0006	19685-014		Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
GI-SD502-0006	19685-018																				
GI-SD508-0006	19685-019				Yes										Yes	Yes				Yes	
GI-SD529-0006	19685-020																				
GI-SD506-0006	19685-021																	Yes			
GI-SD519-0006	19685-022																				
GI-SD505-0006	19685-023		Yes					Yes										Yes			
GI-SD531-0006	19685-024		Yes															Yes			
GI-SD528-0006	19685-025			Yes																	
GI-SD530-0006	19685-026																				
GI-SD521-0006	19685-027		Yes	Yes														Yes			
GI-SD512-0006	19685-028		Yes	Yes				Yes	Yes									Yes	Yes		
GI-SD513-0006	19685-029																				
GI-SD517-0006	19685-030																				
GI-SD520-0006	19685-031	Yes		Yes	Yes		Yes					Yes			Yes		Yes			Yes	
GI-SD523-0006	19685-032				Yes										Yes					Yes	
GI-SD522-0006	19685-033																				

4.0 LITERATURE CITED

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ASTM. 2009. *Standard Test Method for Measuring the Toxicity of Sediment-Associated Contaminants with Estuarine and Marine Invertebrates*. Method E 1367-03, re-approved 2008. ASTM Annual Book of Standards, Volume 11.06.

U.S. EPA. 1994. *Methods for Assessing the Toxicity of Sediment-Associated Contaminants with Estuarine and Marine Amphipods*. EPA 600/R-94/025.

U.S. EPA. 2001. *Methods for Assessing the Chronic Toxicity of Marine and Estuarine Sediment- Associated Contaminants with the Amphipod, Leptocheirus plumulosus.* EPA 600/R-01/020.

Table 6. *L. plumulosus* Day 28 Survival Summary. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Day 28 Survival Summary

Sample ID	ESI Code	Reps	Mean	Minimum	Maximum	CV
Laboratory Control	19685-000	5	85.0%	70.0%	100.0%	15.00%
GI-SD526-0006	19685-015	5	83.0%	55.0%	100.0%	21.97%
GI-SD525-0006	19685-016	5	84.0%	45.0%	100.0%	28.98%
GI-SD524-0006	19685-017	5	80.0%	30.0%	95.0%	35.36%
GI-SD509-0006	19685-001	5	63.0%	45.0%	90.0%	30.01%
GI-SD511-0006	19685-002	5	77.0%	55.0%	85.0%	16.30%
GI-SD527-0006	19685-003	5	81.0%	60.0%	100.0%	18.21%
GI-SD566-0006	19685-004	5	53.0%	40.0%	70.0%	26.35%
GI-SD514-0006	19685-005	5	71.0%	35.0%	90.0%	32.81%
GI-SD515-0006	19685-006	5	75.0%	50.0%	100.0%	29.06%
GI-SD503-0006	19685-007	5	71.0%	50.0%	85.0%	19.54%
GI-SD510-0006	19685-008	5	77.0%	55.0%	95.0%	19.80%
GI-SD501-0006	19685-009	5	84.0%	75.0%	100.0%	11.45%
GI-SD507-0006	19685-010	5	67.0%	50.0%	100.0%	29.66%
GI-SD504-0006	19685-011	5	93.0%	75.0%	100.0%	11.78%
GI-SD-DUP01-043010	19685-012	5	54.0%	30.0%	85.0%	48.73%
GI-SD532-0006	19685-013	5	88.0%	55.0%	100.0%	22.22%
GI-SD518-0006	19685-014	5	81.0%	60.0%	100.0%	17.68%
GI-SD502-0006	19685-018	5	92.0%	85.0%	100.0%	6.20%
GI-SD508-0006	19685-019	5	74.0%	50.0%	90.0%	23.11%
GI-SD529-0006	19685-020	5	88.0%	75.0%	100.0%	14.26%
GI-SD506-0006	19685-021	5	74.0%	40.0%	100.0%	37.74%
GI-SD519-0006	19685-022	5	63.0%	40.0%	95.0%	34.87%
GI-SD505-0006	19685-023	5	85.0%	75.0%	95.0%	11.76%
GI-SD531-0006	19685-024	5	79.0%	40.0%	100.0%	32.70%
GI-SD528-0006	19685-025	5	81.0%	40.0%	100.0%	29.08%
GI-SD530-0006	19685-026	5	84.0%	65.0%	90.0%	12.90%
GI-SD521-0006	19685-027	5	73.0%	55.0%	80.0%	14.20%
GI-SD512-0006	19685-028	5	74.0%	70.0%	80.0%	5.65%
GI-SD513-0006	19685-029	5	93.0%	80.0%	100.0%	9.00%
GI-SD517-0006	19685-030	5	80.0%	55.0%	100.0%	23.80%
GI-SD520-0006	19685-031	5	50.0%	25.0%	80.0%	40.62%
GI-SD523-0006	19685-032	5	85.0%	75.0%	100.0%	11.00%
GI-SD522-0006	19685-033	5	87.0%	75.0%	100.0%	10.44%

Table 6. *L. plumulosus* Day 28 Survival Summary. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Day 28 Survival Analysis			Statistically Significant Difference, "<" as Compared to:							
			Lab (-000)		SD526 (-015)		SD525 (-016)		SD524 (-017)	
Sample ID	ESI Code	Mean	p Value		p Value		p Value		p Value	
Laboratory Control	19685-000	85.0%	-	-	-	-	-	-	-	-
GI-SD526-0006	19685-015	83.0%	0.4552	No	-	-	-	-	-	-
GI-SD525-0006	19685-016	84.0%	0.5640	No	0.5935	No	-	-	-	-
GI-SD524-0006	19685-017	80.0%	0.3986	No	0.4388	No	0.2103	No	-	-
GI-SD509-0006	19685-001	63.0%	0.0348	Yes	0.0589	No	0.0624	No	0.1170	No
GI-SD511-0006	19685-002	77.0%	0.1424	No	0.2106	No	0.1840	No	0.1111	No
GI-SD527-0006	19685-003	81.0%	0.3380	No	0.3963	No	0.3208	No	0.4778	No
GI-SD566-0006	19685-004	53.0%	0.0038	Yes	0.0100	Yes	0.0162	Yes	0.0338	Yes
GI-SD514-0006	19685-005	71.0%	0.1248	No	0.1675	No	0.1482	No	0.1548	No
GI-SD515-0006	19685-006	75.0%	0.2531	No	0.3001	No	0.2510	No	0.3768	No
GI-SD503-0006	19685-007	71.0%	0.0609	No	0.1055	No	0.1046	No	0.1962	No
GI-SD510-0006	19685-008	77.0%	0.1927	No	0.2548	No	0.2151	No	0.3524	No
GI-SD501-0006	19685-009	84.0%	0.4166	No	0.4753	No	0.3765	No	0.5489	No
GI-SD507-0006	19685-010	67.0%	0.0992	No	0.1354	No	0.1227	No	0.2067	No
GI-SD504-0006	19685-011	93.0%	0.8457	No	0.8425	No	0.7205	No	0.8452	No
GI-SD-DUP01-043010	19685-012	54.0%	0.0219	Yes	0.0347	Yes	0.0376	Yes	0.0681	No
GI-SD532-0006	19685-013	88.0%	0.6836	No	0.7026	No	0.5000	No	0.7897	No
GI-SD518-0006	19685-014	81.0%	0.3331	No	0.3923	No	0.3175	No	0.4750	No
GI-SD502-0006	19685-018	92.0%	0.8032	No	0.8001	No	0.6513	No	0.5794	No
GI-SD508-0006	19685-019	74.0%	0.1345	No	0.1886	No	0.1659	No	0.2826	No
GI-SD529-0006	19685-020	88.0%	0.6444	No	0.6692	No	0.5452	No	0.6993	No
GI-SD506-0006	19685-021	74.0%	0.2949	No	0.3341	No	0.2813	No	0.3991	No
GI-SD519-0006	19685-022	63.0%	0.0552	No	0.0819	No	0.0797	No	0.1411	No
GI-SD505-0006	19685-023	85.0%	0.4582	No	0.5133	No	0.4041	No	0.5799	No
GI-SD531-0006	19685-024	79.0%	0.3907	No	0.4316	No	0.3591	No	0.4938	No
GI-SD528-0006	19685-025	81.0%	0.4005	No	0.4451	No	0.3662	No	0.5103	No
GI-SD530-0006	19685-026	84.0%	0.3863	No	0.4525	No	0.3567	No	0.2103	No
GI-SD521-0006	19685-027	73.0%	0.0622	No	0.1147	No	0.1142	No	0.0754	No
GI-SD512-0006	19685-028	74.0%	0.0524	No	0.1270	No	0.1302	No	0.0754	No
GI-SD513-0006	19685-029	93.0%	0.8460	No	0.8402	No	0.7078	No	0.8325	No
GI-SD517-0006	19685-030	80.0%	0.3531	No	0.4039	No	0.3302	No	0.4780	No
GI-SD520-0006	19685-031	50.0%	0.0064	Yes	0.0130	Yes	0.0178	Yes	0.0347	Yes
GI-SD523-0006	19685-032	85.0%	0.4599	No	0.5138	No	0.4056	No	0.5797	No
GI-SD522-0006	19685-033	87.0%	0.5573	No	0.5972	No	0.4713	No	0.6443	No

Table 7. L. plumulosus Day 28 Growth, Mean Dry Weight, Summary. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Mean Dry Weight (mg) Summary

Sample ID	ESI Code	Reps	Mean	Minimum	Maximum	CV
Laboratory Control	19685-000	5	1.466	1.308	1.641	9.48%
GI-SD526-0006	19685-015	5	1.402	1.071	2.040	27.41%
GI-SD525-0006	19685-016	5	1.477	0.584	2.067	41.31%
GI-SD524-0006	19685-017	5	1.516	1.188	1.747	14.99%
GI-SD509-0006	19685-001	5	0.990	0.623	1.251	28.54%
GI-SD511-0006	19685-002	5	1.568	1.108	2.403	33.49%
GI-SD527-0006	19685-003	5	1.273	0.668	1.857	42.71%
GI-SD566-0006	19685-004	5	1.302	0.943	1.966	32.10%
GI-SD514-0006	19685-005	5	1.551	1.023	2.120	27.54%
GI-SD515-0006	19685-006	5	1.614	1.162	2.223	25.32%
GI-SD503-0006	19685-007	5	0.979	0.740	1.382	26.72%
GI-SD510-0006	19685-008	5	1.262	0.938	1.685	25.98%
GI-SD501-0006	19685-009	5	1.162	0.861	1.906	36.64%
GI-SD507-0006	19685-010	5	1.040	0.514	1.909	53.70%
GI-SD504-0006	19685-011	5	1.675	1.237	1.975	16.14%
GI-SD-DUP01-043010	19685-012	5	0.857	0.373	1.458	53.93%
GI-SD532-0006	19685-013	5	1.525	1.241	1.790	14.10%
GI-SD518-0006	19685-014	5	0.480	0.272	0.811	47.54%
GI-SD502-0006	19685-018	5	1.799	1.495	1.944	10.10%
GI-SD508-0006	19685-019	5	1.374	0.741	1.958	31.52%
GI-SD529-0006	19685-020	5	1.898	1.729	2.077	7.68%
GI-SD506-0006	19685-021	5	0.981	0.429	1.759	58.91%
GI-SD519-0006	19685-022	5	1.779	1.335	2.166	16.69%
GI-SD505-0006	19685-023	5	1.031	0.757	1.741	39.21%
GI-SD531-0006	19685-024	5	1.220	1.023	1.503	14.60%
GI-SD528-0006	19685-025	5	1.157	0.616	1.562	32.25%
GI-SD530-0006	19685-026	5	2.140	1.722	2.303	11.25%
GI-SD521-0006	19685-027	5	1.237	1.124	1.425	10.01%
GI-SD512-0006	19685-028	5	1.029	0.818	1.221	17.36%
GI-SD513-0006	19685-029	5	1.344	1.171	1.497	10.08%
GI-SD517-0006	19685-030	5	1.624	1.166	2.063	21.50%
GI-SD520-0006	19685-031	5	1.344	0.791	1.829	32.87%
GI-SD523-0006	19685-032	5	1.216	0.783	1.578	30.77%
GI-SD522-0006	19685-033	5	1.802	1.394	2.088	15.67%

Table 7. *L. plumulosus* Day 28 Growth, Mean Dry Weight, Summary. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Day 28 Mean Dry Weight Analysis			Statistically Significant Difference, "<" as Compared to:							
			Lab (-000)		SD526 (-015)		SD525 (-016)		SD524 (-017)	
Sample ID	ESI Code	Mean	p Value		p Value		p Value		p Value	
Laboratory Control	19685-000	1.466	-	-	-	-	-	-	-	-
GI-SD526-0006	19685-015	1.402	0.3688	No	-	-	-	-	-	-
GI-SD525-0006	19685-016	1.477	0.5152	No	0.5884	No	-	-	-	-
GI-SD524-0006	19685-017	1.516	0.6591	No	0.7082	No	0.5525	No	-	-
GI-SD509-0006	19685-001	0.990	0.0048	Yes	0.0445	Yes	0.0719	No	0.0059	Yes
GI-SD511-0006	19685-002	1.568	0.6577	No	0.7077	No	0.5970	No	0.5775	No
GI-SD527-0006	19685-003	1.273	0.2325	No	0.3380	No	0.2964	No	0.1915	No
GI-SD566-0006	19685-004	1.302	0.2154	No	0.3520	No	0.3061	No	0.1719	No
GI-SD514-0006	19685-005	1.551	0.6597	No	0.7112	No	0.5860	No	0.5625	No
GI-SD515-0006	19685-006	1.614	0.7676	No	0.7882	No	0.6564	No	0.6732	No
GI-SD503-0006	19685-007	0.979	0.0031	Yes	0.0379	Yes	0.0659	No	0.0042	Yes
GI-SD510-0006	19685-008	1.262	0.1182	No	0.2758	No	0.2538	No	0.0958	No
GI-SD501-0006	19685-009	1.162	0.0838	No	0.0754	No	0.1857	No	0.0695	No
GI-SD507-0006	19685-010	1.040	0.0686	No	0.1335	No	0.1361	No	0.0578	No
GI-SD504-0006	19685-011	1.675	0.9189	No	0.8847	No	0.7374	No	0.8276	No
GI-SD-DUP01-043010	19685-012	0.857	0.0113	Yes	0.0386	Yes	0.0540	No	0.0106	Yes
GI-SD532-0006	19685-013	1.525	0.6916	No	0.7251	No	0.5646	No	0.5247	No
GI-SD518-0006	19685-014	0.480	<0.0001	Yes	0.0009	Yes	0.0045	Yes	<0.0001	Yes
GI-SD502-0006	19685-018	1.799	0.9942	No	0.9647	No	0.8546	No	0.9691	No
GI-SD508-0006	19685-019	1.374	0.3322	No	0.4580	No	0.3834	No	0.2668	No
GI-SD529-0006	19685-020	1.898	0.9993	No	0.9864	No	0.9143	No	0.9933	No
GI-SD506-0006	19685-021	0.981	0.0530	No	0.1061	No	0.1120	No	0.0452	Yes
GI-SD519-0006	19685-022	1.779	0.9673	No	0.9393	No	0.8256	No	0.9223	No
GI-SD505-0006	19685-023	1.031	0.0262	Yes	0.0476	Yes	0.1050	No	0.0236	Yes
GI-SD531-0006	19685-024	1.220	0.0208	Yes	0.1828	No	0.1969	No	0.0256	Yes
GI-SD528-0006	19685-025	1.157	0.0610	No	0.1685	No	0.1738	No	0.0518	No
GI-SD530-0006	19685-026	2.140	0.9997	No	0.9967	No	0.9732	No	0.9985	No
GI-SD521-0006	19685-027	1.237	0.0125	Yes	0.1929	No	0.2185	No	0.0210	Yes
GI-SD512-0006	19685-028	1.029	0.0013	Yes	0.0421	Yes	0.0768	No	0.0027	Yes
GI-SD513-0006	19685-029	1.344	0.0990	No	0.3784	No	0.3236	No	0.0915	No
GI-SD517-0006	19685-030	1.624	0.8126	No	0.8158	No	0.6737	No	0.7097	No
GI-SD520-0006	19685-031	1.344	0.2860	No	0.4143	No	0.3516	No	0.2296	No
GI-SD523-0006	19685-032	1.216	0.0999	No	0.2302	No	0.2196	No	0.0819	No
GI-SD522-0006	19685-033	1.802	0.9781	No	0.9512	No	0.8448	No	0.9421	No

Table 8. *L. plumulosus* Day 28 Growth, Mean Dry Biomass, Summary. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Mean Dry Biomass (mg) Summary

Sample ID	ESI Code	Reps	Mean	Minimum	Maximum	CV
Laboratory Control	19685-000	5	1.237	1.072	1.395	11.40%
GI-SD526-0006	19685-015	5	1.120	0.623	1.530	36.23%
GI-SD525-0006	19685-016	5	1.356	0.263	2.067	56.75%
GI-SD524-0006	19685-017	5	1.258	0.357	1.660	42.57%
GI-SD509-0006	19685-001	5	0.631	0.312	1.079	48.74%
GI-SD511-0006	19685-002	5	1.164	0.887	1.490	20.54%
GI-SD527-0006	19685-003	5	1.028	0.568	1.857	49.38%
GI-SD566-0006	19685-004	5	0.706	0.377	0.994	43.29%
GI-SD514-0006	19685-005	5	1.168	0.358	1.802	50.46%
GI-SD515-0006	19685-006	5	1.249	0.581	2.111	46.48%
GI-SD503-0006	19685-007	5	0.714	0.423	1.175	43.16%
GI-SD510-0006	19685-008	5	0.948	0.751	1.296	22.37%
GI-SD501-0006	19685-009	5	0.965	0.722	1.524	33.59%
GI-SD507-0006	19685-010	5	0.785	0.257	1.909	85.32%
GI-SD504-0006	19685-011	5	1.565	1.113	1.975	23.02%
GI-SD-DUP01-043010	19685-012	5	0.491	0.112	1.046	74.92%
GI-SD532-0006	19685-013	5	1.321	0.920	1.521	18.96%
GI-SD518-0006	19685-014	5	0.392	0.163	0.649	48.35%
GI-SD502-0006	19685-018	5	1.660	1.271	1.929	14.55%
GI-SD508-0006	19685-019	5	1.002	0.556	1.273	33.87%
GI-SD529-0006	19685-020	5	1.670	1.297	2.015	16.05%
GI-SD506-0006	19685-021	5	0.819	0.215	1.759	87.59%
GI-SD519-0006	19685-022	5	1.110	0.734	1.677	36.20%
GI-SD505-0006	19685-023	5	0.890	0.643	1.653	48.27%
GI-SD531-0006	19685-024	5	0.986	0.409	1.428	40.33%
GI-SD528-0006	19685-025	5	0.907	0.554	1.406	39.03%
GI-SD530-0006	19685-026	5	1.794	1.409	2.069	16.42%
GI-SD521-0006	19685-027	5	0.893	0.784	0.974	8.11%
GI-SD512-0006	19685-028	5	0.760	0.573	0.856	16.50%
GI-SD513-0006	19685-029	5	1.248	1.075	1.454	12.09%
GI-SD517-0006	19685-030	5	1.318	0.642	1.857	34.48%
GI-SD520-0006	19685-031	5	0.717	0.298	1.464	68.61%
GI-SD523-0006	19685-032	5	1.020	0.626	1.263	26.76%
GI-SD522-0006	19685-033	5	1.574	1.185	2.088	21.85%

Table 8. *L. plumulosus* Day 28 Growth, Mean Dry Biomass, Summary. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Day 28 Mean Dry Biomass Analysis			Statistically Significant Difference, "<" as Compared to:							
			Lab (-000)		SD526 (-015)		SD525 (-016)		SD524 (-017)	
Sample ID	ESI Code	Mean	p Value		p Value		p Value		p Value	
Laboratory Control	19685-000	1.237	-	-	-	-	-	-	-	-
GI-SD526-0006	19685-015	1.120	0.2805	No	-	-	-	-	-	-
GI-SD525-0006	19685-016	1.356	0.6248	No	0.7194	No	-	-	-	-
GI-SD524-0006	19685-017	1.258	0.5332	No	0.6706	No	0.4105	No	-	-
GI-SD509-0006	19685-001	0.631	0.0020	Yes	0.0319	Yes	0.0430	Yes	0.0264	Yes
GI-SD511-0006	19685-002	1.164	0.2879	No	0.5803	No	0.3046	No	0.3651	No
GI-SD527-0006	19685-003	1.028	0.2003	No	0.3792	No	0.2244	No	0.2525	No
GI-SD566-0006	19685-004	0.706	0.0039	Yes	0.0528	No	0.0586	No	0.0401	Yes
GI-SD514-0006	19685-005	1.168	0.4028	No	0.5573	No	0.3378	No	0.4032	No
GI-SD515-0006	19685-006	1.249	0.5186	No	0.6532	No	0.4057	No	0.4908	No
GI-SD503-0006	19685-007	0.714	0.0043	Yes	0.0561	No	0.0607	No	0.0422	Yes
GI-SD510-0006	19685-008	0.948	0.0174	Yes	0.2119	No	0.1428	No	0.1313	No
GI-SD501-0006	19685-009	0.965	0.0623	No	0.2620	No	0.1631	No	0.1633	No
GI-SD507-0006	19685-010	0.785	0.0891	No	0.1832	No	0.1230	No	0.1262	No
GI-SD504-0006	19685-011	1.565	0.9530	No	0.9481	No	0.7019	No	0.8411	No
GI-SD-DUP01-043010	19685-012	0.491	0.0014	Yes	0.0166	Yes	0.0266	Yes	0.0149	Yes
GI-SD532-0006	19685-013	1.321	0.7350	No	0.8131	No	0.4628	No	0.5913	No
GI-SD518-0006	19685-014	0.392	<0.0001	Yes	0.0033	Yes	0.0131	Yes	0.0046	Yes
GI-SD502-0006	19685-018	1.660	0.9952	No	0.9831	No	0.7883	No	0.9179	No
GI-SD508-0006	19685-019	1.002	0.0951	No	0.3148	No	0.1868	No	0.1961	No
GI-SD529-0006	19685-020	1.670	0.9937	No	0.9824	No	0.7934	No	0.9189	No
GI-SD506-0006	19685-021	0.819	0.1352	No	0.2187	No	0.1433	No	0.1523	No
GI-SD519-0006	19685-022	1.110	0.2633	No	0.4855	No	0.2725	No	0.3179	No
GI-SD505-0006	19685-023	0.890	0.0754	No	0.2050	No	0.1357	No	0.1328	No
GI-SD531-0006	19685-024	0.986	0.1106	No	0.3063	No	0.1839	No	0.1945	No
GI-SD528-0006	19685-025	0.907	0.0443	Yes	0.2004	No	0.1347	No	0.1279	No
GI-SD530-0006	19685-026	1.794	0.9974	No	0.9916	No	0.8659	No	0.9573	No
GI-SD521-0006	19685-027	0.893	0.0006	Yes	0.1431	No	0.1259	No	0.1030	No
GI-SD512-0006	19685-028	0.760	0.0002	Yes	0.0471	Yes	0.0812	No	0.0387	Yes
GI-SD513-0006	19685-029	1.248	0.5458	No	0.7356	No	0.3864	No	0.4840	No
GI-SD517-0006	19685-030	1.318	0.6443	No	0.7560	No	0.4636	No	0.5737	No
GI-SD520-0006	19685-031	0.717	0.0264	Yes	0.0975	No	0.0781	No	0.0673	No
GI-SD523-0006	19685-032	1.020	0.0765	No	0.3292	No	0.1921	No	0.2007	No
GI-SD522-0006	19685-033	1.574	0.9615	No	0.9535	No	0.7104	No	0.8503	No

Table 9. *L. plumulosus* Overall Reproduction Summary. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Overall Reproduction Summary

Sample ID	ESI Code	Reps	Mean	Minimum	Maximum	CV
Laboratory Control	19685-000	5	5.95	2.76	8.36	34.64%
GI-SD526-0006	19685-015	5	6.92	2.32	12.64	60.26%
GI-SD525-0006	19685-016	5	6.02	2.75	8.07	33.12%
GI-SD524-0006	19685-017	5	5.67	3.67	6.79	20.75%
GI-SD509-0006	19685-001	5	5.63	2.46	12.22	67.49%
GI-SD511-0006	19685-002	5	4.59	2.31	5.77	30.24%
GI-SD527-0006	19685-003	5	4.58	1.35	7.50	47.83%
GI-SD566-0006	19685-004	5	7.37	4.36	9.60	28.56%
GI-SD514-0006	19685-005	5	8.52	6.06	10.71	19.76%
GI-SD515-0006	19685-006	5	5.97	3.86	7.68	32.13%
GI-SD503-0006	19685-007	5	4.38	2.00	6.82	44.60%
GI-SD510-0006	19685-008	4	5.82	2.69	7.84	38.00%
GI-SD501-0006	19685-009	5	2.92	0.60	5.25	64.35%
GI-SD507-0006	19685-010	5	6.71	2.60	9.33	38.90%
GI-SD504-0006	19685-011	5	6.01	2.39	8.10	38.60%
GI-SD-DUP01-043010	19685-012	5	4.05	0.00	8.71	85.48%
GI-SD532-0006	19685-013	5	7.02	2.19	12.64	53.17%
GI-SD518-0006	19685-014	5	1.40	0.10	4.19	117.10%
GI-SD502-0006	19685-018	5	7.27	4.11	12.88	45.95%
GI-SD508-0006	19685-019	5	3.26	1.44	5.72	54.70%
GI-SD529-0006	19685-020	5	8.22	6.87	11.05	19.83%
GI-SD506-0006	19685-021	5	5.23	0.80	9.85	61.88%
GI-SD519-0006	19685-022	5	4.08	1.50	5.58	38.79%
GI-SD505-0006	19685-023	5	6.12	4.90	7.90	19.55%
GI-SD531-0006	19685-024	5	6.71	3.32	9.62	35.14%
GI-SD528-0006	19685-025	5	7.11	6.00	9.94	22.64%
GI-SD530-0006	19685-026	5	8.01	4.89	13.72	43.10%
GI-SD521-0006	19685-027	5	5.65	4.31	7.19	19.15%
GI-SD512-0006	19685-028	5	5.56	4.79	6.21	9.51%
GI-SD513-0006	19685-029	5	7.00	6.00	8.94	17.25%
GI-SD517-0006	19685-030	5	5.98	0.91	16.45	112.60%
GI-SD520-0006	19685-031	5	3.18	0.63	4.94	63.36%
GI-SD523-0006	19685-032	5	3.16	1.25	6.53	68.06%
GI-SD522-0006	19685-033	5	4.74	2.77	6.67	34.06%

Table 9. *L. plumulosus* Overall Reproduction Summary. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Day 28 Overall Reproduction Analysis			Statistically Significant Difference, "<" as Compared to:							
			Lab (-000)		SD526 (-015)		SD525 (-016)		SD524 (-017)	
Sample ID	ESI Code	Mean	p Value		p Value		p Value		p Value	
Laboratory Control	19685-000	5.95	-	-	-	-	-	-	-	-
GI-SD526-0006	19685-015	6.92	0.6721	No	-	-	-	-	-	-
GI-SD525-0006	19685-016	6.02	0.5207	No	0.3384	No	-	-	-	-
GI-SD524-0006	19685-017	5.67	0.3978	No	0.2689	No	0.3710	No	-	-
GI-SD509-0006	19685-001	5.63	0.4356	No	0.3120	No	0.4216	No	0.4915	No
GI-SD511-0006	19685-002	4.59	0.1264	No	0.1346	No	0.1110	No	0.1093	No
GI-SD527-0006	19685-003	4.58	0.1683	No	0.1496	No	0.1537	No	0.1776	No
GI-SD566-0006	19685-004	7.37	0.8433	No	0.5835	No	0.8356	No	0.9234	No
GI-SD514-0006	19685-005	8.52	0.9685	No	0.7763	No	0.9677	No	0.9927	No
GI-SD515-0006	19685-006	5.97	0.5032	No	0.3275	No	0.4818	No	0.6115	No
GI-SD503-0006	19685-007	4.38	0.1254	No	0.1266	No	0.1125	No	0.1210	No
GI-SD510-0006	19685-008	5.82	0.4627	No	0.3251	No	0.4433	No	0.5491	No
GI-SD501-0006	19685-009	2.92	0.0204	Yes	0.0431	Yes	0.0175	Yes	0.0120	Yes
GI-SD507-0006	19685-010	6.71	0.6878	No	0.4640	No	0.6741	No	0.7803	No
GI-SD504-0006	19685-011	6.01	0.5164	No	0.3416	No	0.4972	No	0.6122	No
GI-SD-DUP01-043010	19685-012	4.05	0.1604	No	0.1352	No	0.1505	No	0.1750	No
GI-SD532-0006	19685-013	7.02	0.7041	No	0.5159	No	0.6936	No	0.7686	No
GI-SD518-0006	19685-014	1.40	0.0024	Yes	0.0124	Yes	0.0020	Yes	0.0007	Yes
GI-SD502-0006	19685-018	7.27	0.7618	No	0.5562	No	0.7523	No	0.8285	No
GI-SD508-0006	19685-019	3.26	0.0289	Yes	0.0543	No	0.0248	Yes	0.0177	Yes
GI-SD529-0006	19685-020	8.22	0.9548	No	0.7329	No	0.9533	No	0.9890	No
GI-SD506-0006	19685-021	5.23	0.3424	No	0.2478	No	0.3270	No	0.3916	No
GI-SD519-0006	19685-022	4.08	0.0724	No	0.0961	No	0.0629	No	0.0541	No
GI-SD505-0006	19685-023	6.12	0.5587	No	0.3454	No	0.5348	No	0.7161	No
GI-SD531-0006	19685-024	6.71	0.6969	No	0.4619	No	0.6828	No	0.7975	No
GI-SD528-0006	19685-025	7.11	0.8244	No	0.5378	No	0.8151	No	0.9278	No
GI-SD530-0006	19685-026	8.01	0.8569	No	0.6681	No	0.8512	No	0.9053	No
GI-SD521-0006	19685-027	5.65	0.3876	No	0.2640	No	0.3601	No	0.4873	No
GI-SD512-0006	19685-028	5.56	0.3457	No	0.2554	No	0.3155	No	0.4283	No
GI-SD513-0006	19685-029	7.00	0.8214	No	0.5162	No	0.8115	No	0.9420	No
GI-SD517-0006	19685-030	5.98	0.5027	No	0.3986	No	0.4942	No	0.5375	No
GI-SD520-0006	19685-031	3.18	0.0317	Yes	0.0543	No	0.0275	Yes	0.0219	Yes
GI-SD523-0006	19685-032	3.16	0.0347	Yes	0.0556	No	0.0304	Yes	0.0257	Yes
GI-SD522-0006	19685-033	4.74	0.1650	No	0.1539	No	0.1480	No	0.1641	No

Table 10. *L. plumulosus* Juvenile Production per Female Summary. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Juvenile Production per Female Summary

Sample ID	ESI Code	Reps	Mean	Minimum	Maximum	CV
Laboratory Control	19685-000	5	12.53	5.27	16.17	34.02%
GI-SD526-0006	19685-015	5	13.13	5.47	27.80	73.43%
GI-SD525-0006	19685-016	5	13.73	7.88	17.29	26.02%
GI-SD524-0006	19685-017	5	11.50	9.50	14.33	16.77%
GI-SD509-0006	19685-001	5	11.59	5.40	27.50	78.39%
GI-SD511-0006	19685-002	5	17.16	4.11	51.00	111.70%
GI-SD527-0006	19685-003	5	9.40	2.56	15.00	48.15%
GI-SD566-0006	19685-004	5	13.19	7.63	24.00	48.28%
GI-SD514-0006	19685-005	5	16.53	12.88	20.22	16.92%
GI-SD515-0006	19685-006	5	11.74	7.80	20.86	44.48%
GI-SD503-0006	19685-007	5	9.98	4.57	19.00	59.11%
GI-SD510-0006	19685-008	4	11.50	4.78	18.60	49.11%
GI-SD501-0006	19685-009	5	5.93	1.29	9.33	49.24%
GI-SD507-0006	19685-010	5	10.34	3.71	16.70	46.33%
GI-SD504-0006	19685-011	5	12.11	7.17	14.83	23.95%
GI-SD-DUP01-043010	19685-012	5	6.49	0.00	11.13	64.45%
GI-SD532-0006	19685-013	5	14.14	4.60	19.86	43.79%
GI-SD518-0006	19685-014	5	2.39	0.14	6.70	111.60%
GI-SD502-0006	19685-018	5	12.44	6.73	21.90	46.29%
GI-SD508-0006	19685-019	5	7.58	2.27	13.50	61.90%
GI-SD529-0006	19685-020	5	19.00	17.17	20.29	6.03%
GI-SD506-0006	19685-021	5	19.29	2.67	35.00	61.37%
GI-SD519-0006	19685-022	5	17.88	6.00	26.50	49.56%
GI-SD505-0006	19685-023	5	12.17	7.83	16.67	26.39%
GI-SD531-0006	19685-024	5	20.15	15.75	32.00	33.51%
GI-SD528-0006	19685-025	5	19.88	13.63	25.57	27.08%
GI-SD530-0006	19685-026	5	20.74	15.86	24.70	15.53%
GI-SD521-0006	19685-027	5	29.48	17.40	38.33	27.00%
GI-SD512-0006	19685-028	5	27.60	16.75	40.50	32.91%
GI-SD513-0006	19685-029	5	16.14	13.20	17.88	11.25%
GI-SD517-0006	19685-030	5	13.02	3.80	27.85	88.44%
GI-SD520-0006	19685-031	5	10.26	1.67	17.33	59.61%
GI-SD523-0006	19685-032	5	13.46	3.33	27.75	91.56%
GI-SD522-0006	19685-033	5	14.27	6.71	24.00	43.79%

Table 10. *L. plumulosus* Juvenile Production per Female Summary. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Day 28 Juvenile Production/Female Analysis			Statistically Significant Difference, "<" as Compared to:							
			Lab (-000)		SD526 (-015)		SD525 (-016)		SD524 (-017)	
Sample ID	ESI Code	Mean	p Value		p Value		p Value		p Value	
Laboratory Control	19685-000	12.53	-	-	-	-	-	-	-	-
GI-SD526-0006	19685-015	13.13	0.5491	No	-	-	-	-	-	-
GI-SD525-0006	19685-016	13.73	0.6794	No	0.5506	No	-	-	-	-
GI-SD524-0006	19685-017	11.50	0.3175	No	0.3646	No	0.1265	No	-	-
GI-SD509-0006	19685-001	11.59	0.4195	No	0.4006	No	0.3181	No	0.1111	No
GI-SD511-0006	19685-002	17.16	0.2103	No	0.5000	No	0.2103	No	0.3452	No
GI-SD527-0006	19685-003	9.40	0.1465	No	0.2281	No	0.0657	No	0.1842	No
GI-SD566-0006	19685-004	13.19	0.5740	No	0.5045	No	0.4359	No	0.7075	No
GI-SD514-0006	19685-005	16.53	0.9412	No	0.7645	No	0.8970	No	0.9947	No
GI-SD515-0006	19685-006	11.74	0.4005	No	0.3923	No	0.2510	No	0.5382	No
GI-SD503-0006	19685-007	9.98	0.2280	No	0.2753	No	0.1292	No	0.2998	No
GI-SD510-0006	19685-008	11.50	0.3821	No	0.3876	No	0.2457	No	0.5009	No
GI-SD501-0006	19685-009	5.93	0.0106	Yes	0.0743	No	0.0027	Yes	0.0037	Yes
GI-SD507-0006	19685-010	10.34	0.2339	No	0.2893	No	0.1202	No	0.3154	No
GI-SD504-0006	19685-011	12.11	0.4305	No	0.4135	No	0.2268	No	0.6485	No
GI-SD-DUP01-043010	19685-012	6.49	0.0267	Yes	0.0976	No	0.0093	Yes	0.0205	Yes
GI-SD532-0006	19685-013	14.14	0.6781	No	0.5760	No	0.5495	No	0.8060	No
GI-SD518-0006	19685-014	2.39	0.0010	Yes	0.0215	Yes	0.0002	Yes	0.0001	Yes
GI-SD502-0006	19685-018	12.44	0.4893	No	0.4471	No	0.3405	No	0.6314	No
GI-SD508-0006	19685-019	7.58	0.0597	No	0.1404	No	0.0241	Yes	0.0615	No
GI-SD529-0006	19685-020	19.00	0.9944	No	0.8761	No	0.9931	No	1.0000	No
GI-SD506-0006	19685-021	19.29	0.8680	No	0.8033	No	0.8277	No	0.8900	No
GI-SD519-0006	19685-022	17.88	0.8710	No	0.7798	No	0.8201	No	0.9230	No
GI-SD505-0006	19685-023	12.17	0.4427	No	0.4194	No	0.2444	No	0.6517	No
GI-SD531-0006	19685-024	20.15	0.9673	No	0.8905	No	0.9514	No	0.9960	No
GI-SD528-0006	19685-025	19.88	0.9782	No	0.8957	No	0.9670	No	0.9944	No
GI-SD530-0006	19685-026	20.74	0.9956	No	0.9338	No	0.9942	No	0.9997	No
GI-SD521-0006	19685-027	29.48	0.9985	No	0.9904	No	0.9981	No	0.9994	No
GI-SD512-0006	19685-028	27.60	0.9950	No	0.9798	No	0.9935	No	0.9977	No
GI-SD513-0006	19685-029	16.14	0.9404	No	0.7352	No	0.8923	No	0.9978	No
GI-SD517-0006	19685-030	13.02	0.5349	No	0.4940	No	0.4494	No	0.6079	No
GI-SD520-0006	19685-031	10.26	0.2575	No	0.2946	No	0.1522	No	0.3386	No
GI-SD523-0006	19685-032	13.46	0.5615	No	0.5183	No	0.4816	No	0.6287	No
GI-SD522-0006	19685-033	14.27	0.6896	No	0.5850	No	0.5640	No	0.8146	No

Table 11. Summary of Water Qualities. Site 17, Gould Island, Jamestown, Rhode Island. CTO-0458. June 2010.

Sample ID	Sample Number	Day	Overlying Water			Pore Water	
			Salinity (‰)	Ammonia (mg/L)	Unionized Ammonia (mg/L)	Ammonia (mg/L)	Unionized Ammonia (mg/L)
Laboratory Control	000	0	19.68	<0.1	<0.001	9.9	0.042
GI-SD509-0006	001	0	19.58	<0.1	<0.003	1.8	0.007
GI-SD511-0006	002	0	19.67	1.1	0.133	5.9	0.101
GI-SD527-0006	003	0	19.51	<0.1	<0.003	0.97	0.014
GI-SD566-0006	004	0	19.36	<0.1	<0.006	0.18	0.011
GI-SD514-0006	005	0	19.55	1.7	0.207	3.6	0.243
GI-SD515-0006	006	0	19.54	0.9	0.093	15	0.086
GI-SD503-0006	007	0	19.69	<0.1	<0.004	18	0.195
GI-SD510-0006	008	0	19.82	<0.1	<0.003	2.9	0.035
GI-SD501-0006	009	0	19.63	2	0.175	6	0.274
GI-SD507-0006	010	0	19.95	0.37	0.029	2.7	0.038
GI-SD504-0006	011	0	19.88	0.5	0.046	4.7	0.058
GI-SD-DUP01-043010	012	0	19.87	<0.1	<0.005	1.4	0.033
GI-SD532-0006	013	0	19.85	<0.1	<0.003	4.4	0.064
GI-SD518-0006	014	0	19.99	<0.1	<0.003	0.21	0.002
GI-SD526-0006	015	0	19.91	0.11	0.006	4.7	0.023
GI-SD525-0006	016	0	20.00	0.83	0.090	13	0.073
GI-SD524-0006	017	0	19.91	<0.1	<0.004	4.2	0.026
GI-SD502-0006	018	0	19.92	<0.1	<0.004	11	0.091
GI-SD508-0006	019	0	20.14	<0.1	<0.003	11	0.100
GI-SD529-0006	020	0	19.94	3.3	0.353	9	0.184
GI-SD506-0006	021	0	20.18	0.12	0.009	4.3	0.043
GI-SD519-0006	022	0	20.03	1.9	0.106	7.3	0.049
GI-SD505-0006	023	0	20.23	0.23	0.011	2.3	0.039
GI-SD531-0006	024	0	20.00	1	0.060	6.6	0.029
GI-SD528-0006	025	0	19.83	0.16	0.009	2.4	0.037
GI-SD530-0006	026	0	19.88	3.8	0.338	4	0.506
GI-SD521-0006	027	0	19.29	<0.1	<0.004	0.65	0.018
GI-SD512-0006	028	0	19.41	0.53	0.024	1.1	0.023
GI-SD513-0006	029	0	18.97	<0.1	<0.002	5.9	0.060
GI-SD517-0006	030	0	18.54	2.2	0.160	3.9	0.120
GI-SD520-0006	031	0	19.53	<0.1	<0.004	3.7	0.043
GI-SD523-0006	032	0	19.52	0.4	0.034	0.47	0.014
GI-SD522-0006	033	0	19.10	3.7	0.255	6.6	0.169
Laboratory Control	000	7	22.65	0.12	0.004	7.3	0.018
GI-SD509-0006	001	7	22.73	<0.1	<0.003	0.52	0.002
GI-SD511-0006	002	7	22.16	<0.1	<0.003	1.4	0.007
GI-SD527-0006	003	7	21.77	<0.1	<0.005	<0.1	<0.001
GI-SD566-0006	004	7	21.66	<0.1	<0.003	0.3	0.004
GI-SD514-0006	005	7	20.97	<0.1	<0.004	0.94	0.042
GI-SD515-0006	006	7	21.56	<0.1	<0.004	6.9	0.024
GI-SD503-0006	007	7	21.30	<0.1	<0.004	12	0.111

Sample ID	Sample Number	Day	Overlying Water			Pore Water	
			Salinity (‰)	Ammonia (mg/L)	Unionized Ammonia (mg/L)	Ammonia (mg/L)	Unionized Ammonia (mg/L)
GI-SD510-0006	008	7	21.55	<0.1	<0.003	1.5	0.020
GI-SD501-0006	009	7	21.32	<0.1	<0.004	7.2	0.062
GI-SD507-0006	010	7	21.26	<0.1	<0.004	1.1	0.009
GI-SD504-0006	011	7	21.79	<0.1	<0.004	0.59	0.015
GI-SD-DUP01-043010	012	7	21.39	<0.1	<0.004	0.31	0.007
GI-SD532-0006	013	7	21.52	<0.1	<0.003	0.61	0.013
GI-SD518-0006	014	7	21.63	<0.1	<0.002	0.14	0.001
GI-SD526-0006	015	7	21.59	<0.1	<0.003	1.9	0.010
GI-SD525-0006	016	7	22.07	<0.1	<0.003	11	0.089
GI-SD524-0006	017	7	21.63	<0.1	<0.003	2	0.009
GI-SD502-0006	018	7	21.74	0.16	0.012	4.4	0.043
GI-SD508-0006	019	7	21.97	<0.1	<0.003	7.2	0.044
GI-SD529-0006	020	7	21.50	<0.1	<0.004	2.2	0.018
GI-SD506-0006	021	7	21.96	<0.1	<0.003	2	0.013
GI-SD519-0006	022	7	21.81	<0.1	<0.003	1.2	0.033
GI-SD505-0006	023	7	21.94	<0.1	<0.003	3.3	0.046
GI-SD531-0006	024	7	21.76	<0.1	<0.003	1	0.016
GI-SD528-0006	025	7	21.48	<0.1	<0.003	0.9	0.024
GI-SD530-0006	026	7	21.69	1.7	0.117	2.5	0.113
GI-SD521-0006	027	7	21.48	<0.1	<0.003	1.2	0.015
GI-SD512-0006	028	7	21.45	<0.1	<0.002	0.72	0.007
GI-SD513-0006	029	7	21.62	<0.1	<0.002	0.81	0.013
GI-SD517-0006	030	7	21.93	<0.1	<0.003	1.7	0.014
GI-SD520-0006	031	7	21.23	<0.1	<0.003	1.5	0.019
GI-SD523-0006	032	7	21.15	<0.1	<0.002	0.14	0.004
GI-SD522-0006	033	7	21.53	<0.1	<0.004	0.61	0.010
Laboratory Control	000	14	20.73	<0.1	<0.001	4	0.015
GI-SD509-0006	001	14	20.68	<0.1	<0.002	0.21	0.001
GI-SD511-0006	002	14	20.56	<0.1	<0.003	0.42	0.004
GI-SD527-0006	003	14	20.49	<0.1	<0.002	<0.1	<0.002
GI-SD566-0006	004	14	20.06	<0.1	<0.002	<0.1	<0.002
GI-SD514-0006	005	14	19.81	<0.1	<0.003	0.69	0.023
GI-SD515-0006	006	14	20.22	<0.1	<0.003	3.3	0.010
GI-SD503-0006	007	14	20.23	<0.1	<0.003	7.2	0.082
GI-SD510-0006	008	14	20.39	<0.1	<0.002	0.19	0.004
GI-SD501-0006	009	14	20.18	<0.1	<0.003	3.8	0.057
GI-SD507-0006	010	14	19.75	<0.1	<0.003	0.32	0.003
GI-SD504-0006	011	14	20.22	<0.1	<0.003	0.15	0.006
GI-SD-DUP01-043010	012	14	20.23	<0.1	<0.003	<0.1	<0.002
GI-SD532-0006	013	14	20.45	<0.1	<0.003	0.38	0.006
GI-SD518-0006	014	14	20.27	<0.1	<0.002	<0.1	<0.001
GI-SD526-0006	015	14	19.89	<0.1	<0.002	0.74	0.004
GI-SD525-0006	016	14	20.51	<0.1	<0.003	3.9	0.028
GI-SD524-0006	017	14	20.31	<0.1	<0.002	0.65	0.002
GI-SD502-0006	018	14	20.46	<0.1	<0.003	2.4	0.033

Sample ID	Sample Number	Day	Overlying Water			Pore Water	
			Salinity (‰)	Ammonia (mg/L)	Unionized Ammonia (mg/L)	Ammonia (mg/L)	Unionized Ammonia (mg/L)
GI-SD508-0006	019	14	20.74	<0.1	<0.003	3	0.016
GI-SD529-0006	020	14	20.27	<0.1	<0.003	0.46	0.010
GI-SD506-0006	021	14	20.52	<0.1	<0.003	0.68	0.005
GI-SD519-0006	022	14	20.41	<0.1	<0.003	0.24	0.008
GI-SD505-0006	023	14	20.66	<0.1	<0.002	0.81	0.011
GI-SD531-0006	024	14	20.73	<0.1	<0.002	0.42	0.010
GI-SD528-0006	025	14	20.36	<0.1	<0.002	0.3	0.006
GI-SD530-0006	026	14	20.75	<0.1	<0.003	0.1	0.006
GI-SD521-0006	027	14	20.30	<0.1	<0.002	0.38	0.009
GI-SD512-0006	028	14	20.22	<0.1	<0.002	<0.1	<0.002
GI-SD513-0006	029	14	20.58	<0.1	<0.002	0.46	0.009
GI-SD517-0006	030	14	20.45	<0.1	<0.003	0.28	0.006
GI-SD520-0006	031	14	20.22	<0.1	<0.003	0.33	0.010
GI-SD523-0006	032	14	20.39	<0.1	<0.002	<0.1	<0.002
GI-SD522-0006	033	14	21.03	<0.1	<0.003	<0.1	<0.003
Laboratory Control	000	21	19.97	0.19	0.004	3.2	0.004
GI-SD509-0006	001	21	19.51	<0.1	<0.001	0.5	0.001
GI-SD511-0006	002	21	18.62	<0.1	<0.002	0.55	0.002
GI-SD527-0006	003	21	19.49	<0.1	<0.002	<0.1	<0.001
GI-SD566-0006	004	21	19.55	<0.1	<0.002	<0.1	<0.001
GI-SD514-0006	005	21	19.66	0.1	0.005	0.16	0.001
GI-SD515-0006	006	21	19.43	<0.1	<0.003	2	0.003
GI-SD503-0006	007	21	18.62	<0.1	<0.003	5.7	0.031
GI-SD510-0006	008	21	19.15	<0.1	<0.002	<0.1	<0.001
GI-SD501-0006	009	21	19.55	<0.1	<0.002	3.9	0.016
GI-SD507-0006	010	21	19.95	<0.1	<0.002	0.48	0.001
GI-SD504-0006	011	21	19.72	<0.1	<0.002	0.91	0.003
GI-SD-DUP01-043010	012	21	19.55	<0.1	<0.003	<0.1	<0.001
GI-SD532-0006	013	21	19.62	<0.1	<0.002	0.48	0.003
GI-SD518-0006	014	21	19.65	0.11	0.004	0.25	0.001
GI-SD526-0006	015	21	20.19	<0.1	<0.002	0.71	0.001
GI-SD525-0006	016	21	20.13	<0.1	<0.003	2	0.004
GI-SD524-0006	017	21	19.94	<0.1	<0.002	0.63	0.001
GI-SD502-0006	018	21	20.02	0.1	0.004	2.1	0.008
GI-SD508-0006	019	21	20.21	<0.1	<0.002	1	0.004
GI-SD529-0006	020	21	19.99	0.15	0.006	0.42	0.002
GI-SD506-0006	021	21	19.95	<0.1	<0.002	0.38	0.002
GI-SD519-0006	022	21	20.11	0.22	0.011	0.3	0.003
GI-SD505-0006	023	21	20.29	<0.1	<0.002	1	0.008
GI-SD531-0006	024	21	20.22	<0.1	<0.002	0.42	0.005
GI-SD528-0006	025	21	20.40	<0.1	<0.002	0.27	0.003
GI-SD530-0006	026	21	20.49	<0.1	<0.003	<0.1	<0.001
GI-SD521-0006	027	21	20.27	<0.1	<0.002	0.31	0.003
GI-SD512-0006	028	21	20.67	0.1	0.004	<0.1	<0.001
GI-SD513-0006	029	21	20.37	<0.1	<0.002	<0.1	<0.001

Sample ID	Sample Number	Day	Overlying Water			Pore Water	
			Salinity (‰)	Ammonia (mg/L)	Unionized Ammonia (mg/L)	Ammonia (mg/L)	Unionized Ammonia (mg/L)
GI-SD517-0006	030	21	20.36	<0.1	<0.002	0.41	0.003
GI-SD520-0006	031	21	20.14	0.13	0.004	0.22	0.002
GI-SD523-0006	032	21	20.26	<0.1	<0.002	0.11	0.001
GI-SD522-0006	033	21	20.15	<0.1	<0.003	<0.1	<0.001
Laboratory Control	000	28	20.04	<0.1	<0.002	2.7	0.009
GI-SD509-0006	001	28	19.74	<0.1	<0.002	1.2	0.010
GI-SD511-0006	002	28	19.77	<0.1	<0.002	0.86	0.009
GI-SD527-0006	003	28	19.87	<0.1	<0.002	<0.1	<0.001
GI-SD566-0006	004	28	19.65	<0.1	<0.002	<0.1	<0.001
GI-SD514-0006	005	28	19.65	<0.1	<0.003	<0.1	<0.001
GI-SD515-0006	006	28	19.68	<0.1	<0.002	1.9	0.008
GI-SD503-0006	007	28	19.54	<0.1	<0.003	4.3	0.049
GI-SD510-0006	008	28	19.78	<0.1	<0.002	<0.1	<0.001
GI-SD501-0006	009	28	19.63	<0.1	<0.003	1.3	0.019
GI-SD507-0006	010	28	19.84	<0.1	<0.003	0.49	0.004
GI-SD504-0006	011	28	19.89	<0.1	<0.003	1.1	0.007
GI-SD-DUP01-043010	012	28	19.97	<0.1	<0.003	0.25	0.002
GI-SD532-0006	013	28	20.12	<0.1	<0.002	0.41	0.009
GI-SD518-0006	014	28	20.08	<0.1	<0.002	0.15	0.003
GI-SD526-0006	015	28	19.78	<0.1	<0.002	0.99	0.006
GI-SD525-0006	016	28	19.69	<0.1	<0.002	1.6	0.024
GI-SD524-0006	017	28	19.86	<0.1	<0.002	0.57	0.003
GI-SD502-0006	018	28	19.89	<0.1	<0.002	1.1	0.023
GI-SD508-0006	019	28	19.99	<0.1	<0.003	1.1	0.010
GI-SD529-0006	020	28	20.30	<0.1	<0.004	0.21	0.002
GI-SD506-0006	021	28	20.29	<0.1	<0.003	0.4	0.003
GI-SD519-0006	022	28	20.28	<0.1	<0.003	<0.1	<0.001
GI-SD505-0006	023	28	20.61	<0.1	<0.003	0.6	0.006
GI-SD531-0006	024	28	20.41	<0.1	<0.002	0.41	0.009
GI-SD528-0006	025	28	20.39	<0.1	<0.002	<0.1	<0.001
GI-SD530-0006	026	28	20.17	<0.1	<0.003	<0.1	<0.001
GI-SD521-0006	027	28	20.06	<0.1	<0.002	0.11	0.003
GI-SD512-0006	028	28	20.24	<0.1	<0.002	<0.1	<0.001
GI-SD513-0006	029	28	20.02	<0.1	<0.002	<0.1	<0.001
GI-SD517-0006	030	28	20.06	<0.1	<0.002	<0.1	<0.002
GI-SD520-0006	031	28	19.92	<0.1	<0.002	<0.1	<0.001
GI-SD523-0006	032	28	20.09	<0.1	<0.002	<0.1	<0.002
GI-SD522-0006	033	28	20.02	<0.1	<0.003	<0.1	<0.001

Additional water quality and analytical support data provided in Appendix A.

APPENDIX A
RAW DATA AND STATISTICAL SUPPORT

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Leptocheirus plumulosus 28 Day Sediment Assay

Study #: 19685 **Client: Tetra Tech NUS** **Project: CTO 458 - Gould Island**

Day	Date	Renew	Fed		Initial
0	6/2/10	✓	1m/L	✓	AM
1	6/3/10	✓	1m/L	–	AM
2	6/4/10	✓	1m/L	✓	AM
3	6/5/10	✓	1m/L	–	WM
4	6/6/10	✓	1m/L	–	AM
5	6/7/10 ①	✓	1m/L	✓	AM/JTP
6	6/8/10	✓	1m/L	–	AM/JTP
7	6/9/10	✓	1m/L	✓	AM/JTP
8	6/10/10	✓	1m/L	–	AM/JTP
9	6/11/10	✓	1m/L	✓	JTP
10	6/12/10	✓	1m/L	–	NL
11	6·13	✓	1m/L	–	DM
12	6/14/10	✓	1m/L	✓	JTP/AM
13	6/15/10 ②	✓	1m/L	–	JTP/AM
14	6/16/10	✓	1m/L	✓	JTP/AM
15	6/17/10 ③	✓	2m/L	–	JTP
16	6/18/10	✓	2m/L	✓	JTP/AM
17	6/19/10	✓	2m/L	–	JTP
18	6·20·10	✓	2m/L	–	DM
19	6/21/10	✓	2m/L	✓	JTP
20	6/22/10	✓	2m/L	–	AM
21	6/23/10	✓	2m/L	✓	AM/JTP
22	6/24/10	✓	2m/L	–	AM
23	6/25/10	✓	2m/L	✓	JTP/AM
24	6/26/10	✓	2m/L	–	JQ/WM
25	6/27/10	✓	2m/L	–	JQ/DM
26	6/28/10 ④	✓	2m/L	✓	JTP/JZ
27	6/29/10	✓	2m/L	–	JTP/JZ
28	6/30/10	–	2m/L	–	JTP

Pore Water collected for pH and Ammonia
Overlying Water collected for Ammonia

Day 0	Initial: AM
Day 7	Initial: AM
Day 14	Initial: JTP/AM
Day 21	Initial: AM/JTP
Day 28	Initial: JTP/JQ

Feed on Monday/Wednesday/Friday | **Overlying Salinity: 20ppt** | **Temperature: 25°C**

④ Noticed broken screen B020 JTP 6/28/10

① Lights were off due to a tripped breaker. Estimated time of failure was 4:30 AM. Lights were turned back on and time was reset to 16:8 L/D cycle. AM 6/8/10

② IID has a broken screen which may affect recovery AM 6/15 ③ AM 6/7/10

③ Aeration was removed on day 14 and was not replaced until day 15 for blank 20-27 and 27-31

YSI 556 MPS Sample Reading Order

Study Number: 19685

Client: Tetra Tech NUS

Project: CTO 458 - Gould Island

Reading Number	Test Code	Sample Number
0	19685-000	000
1	19685-001	001
2	19685-002	002
3	19685-003	003
4	19685-004	004
5	19685-005	005
6	19685-006	006
7	19685-007	007
8	19685-008	008
9	19685-009	009
10	19685-010	010
11	19685-011	011
12	19685-012	012
13	19685-013	013
14	19685-014	014
15	19685-015	015
16	19685-016	016
17	19685-017	017
18	19685-018	018
19	19685-019	019
20	19685-020	020
21	19685-021	021
22	19685-022	022
23	19685-023	023
24	19685-024	024
25	19685-025	025
26	19685-026	026
27	19685-027	027
28	19685-028	028
29	19685-029	029
30	19685-030	030
31	19685-031	031
32	19685-032	032
33	19685-033	033

STUDY: 19685
CLIENT: Tetra Tech NUS, Inc.
PROJECT: Gould Island, CTO 458
ASSAY: 28 Day Leptocheirus plumulosus
TASK: Daily Overlying Water Qualities

	Temp	DO Conc	pH	SpCond	Salinity
Minimum:	22.62	4.27	7.48	29323	18.11
Mean:	24.71	6.85		32916	20.58
Maximum:	25.95	7.92	8.44	36021	22.73

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
Laboratory Control	000	0	06/02/10 11:42:16	23.75	6.70	7.76	31598	19.68
GI-SD509-0006	001	0	06/02/10 11:42:55	23.69	6.78	8.08	31444	19.58
GI-SD511-0006	002	0	06/02/10 11:43:18	23.55	6.98	8.43	31578	19.67
GI-SD527-0006	003	0	06/02/10 11:44:08	23.38	6.85	8.08	31337	19.51
GI-SD566-0006	004	0	06/02/10 11:44:38	23.40	7.20	8.40	31120	19.36
GI-SD514-0006	005	0	06/02/10 11:45:02	23.36	6.88	8.44	31400	19.55
GI-SD515-0006	006	0	06/02/10 11:45:18	23.30	6.82	8.36	31379	19.54
GI-SD503-0006	007	0	06/02/10 11:45:35	23.32	6.93	8.24	31598	19.69
GI-SD510-0006	008	0	06/02/10 11:45:50	23.30	7.10	8.15	31784	19.82
GI-SD501-0006	009	0	06/02/10 11:46:07	23.31	7.18	8.28	31512	19.63
GI-SD507-0006	010	0	06/02/10 11:46:20	23.28	7.07	8.23	31969	19.95
GI-SD504-0006	011	0	06/02/10 11:46:35	23.28	7.08	8.30	31876	19.88
GI-SD-DUP01-043010	012	0	06/02/10 11:46:46	23.25	7.05	8.30	31863	19.87
GI-SD532-0006	013	0	06/02/10 11:46:58	23.31	7.11	8.17	31831	19.85
GI-SD518-0006	014	0	06/02/10 11:47:09	23.40	7.14	8.06	32030	19.99
GI-SD526-0006	015	0	06/02/10 11:47:33	22.94	7.42	8.09	31906	19.91
GI-SD525-0006	016	0	06/02/10 11:47:55	22.84	7.24	8.40	32044	20.00
GI-SD524-0006	017	0	06/02/10 11:48:11	22.83	7.23	8.28	31909	19.91
GI-SD502-0006	018	0	06/02/10 11:48:42	22.84	7.29	8.20	31920	19.92
GI-SD508-0006	019	0	06/02/10 11:49:06	22.89	7.22	8.06	32248	20.14
GI-SD529-0006	020	0	06/02/10 11:49:30	22.87	7.07	8.39	31959	19.94
GI-SD506-0006	021	0	06/02/10 11:49:45	22.83	7.09	8.23	32305	20.18
GI-SD519-0006	022	0	06/02/10 11:49:58	22.72	7.24	8.09	32077	20.03
GI-SD505-0006	023	0	06/02/10 11:50:11	22.62	7.30	8.02	32365	20.23
GI-SD531-0006	024	0	06/02/10 11:50:31	22.77	7.22	8.12	32037	20.00
GI-SD528-0006	025	0	06/02/10 11:50:50	23.05	7.17	8.07	31799	19.83
GI-SD530-0006	026	0	06/02/10 11:51:11	23.27	6.72	8.29	31869	19.88
GI-SD521-0006	027	0	06/02/10 11:51:29	23.31	6.71	8.21	31018	19.29
GI-SD512-0006	028	0	06/02/10 11:51:57	23.41	6.60	7.97	31186	19.41
GI-SD513-0006	029	0	06/02/10 11:52:24	23.50	7.06	7.99	30556	18.97
GI-SD517-0006	030	0	06/02/10 11:52:47	23.42	7.07	8.19	29910	18.54
GI-SD520-0006	031	0	06/02/10 11:53:15	23.62	7.04	8.19	31366	19.53
GI-SD523-0006	032	0	06/02/10 11:53:31	23.65	6.91	8.25	31352	19.52
GI-SD522-0006	033	0	06/02/10 11:53:45	23.57	6.88	8.16	30748	19.10
Laboratory Control	000	1	06/03/10 08:53:27	24.12	6.99	7.51	33076	20.70
GI-SD509-0006	001	1	06/03/10 08:54:20	24.15	6.88	7.88	33016	20.65
GI-SD511-0006	002	1	06/03/10 08:54:50	24.13	7.04	8.20	32856	20.54
GI-SD527-0006	003	1	06/03/10 08:55:24	24.02	6.76	7.90	32629	20.39
GI-SD566-0006	004	1	06/03/10 08:55:45	23.94	7.11	8.00	32404	20.24
GI-SD514-0006	005	1	06/03/10 08:56:03	23.90	7.08	8.09	32494	20.30
GI-SD515-0006	006	1	06/03/10 08:56:20	23.85	6.94	8.06	32682	20.43

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD503-0006	007	1	06/03/10 08:56:44	23.86	7.03	7.96	32672	20.42
GI-SD510-0006	008	1	06/03/10 08:57:11	23.94	7.28	7.83	32844	20.54
GI-SD501-0006	009	1	06/03/10 08:57:40	24.11	6.98	8.06	32708	20.44
GI-SD507-0006	010	1	06/03/10 08:58:03	24.30	6.94	7.87	32704	20.44
GI-SD504-0006	011	1	06/03/10 08:58:26	24.36	6.92	7.99	33108	20.71
GI-SD-DUP01-043010	012	1	06/03/10 08:58:44	24.42	6.89	7.93	32845	20.53
GI-SD532-0006	013	1	06/03/10 08:59:12	24.47	6.89	7.79	32906	20.57
GI-SD518-0006	014	1	06/03/10 08:59:31	24.38	6.96	7.72	32926	20.59
GI-SD526-0006	015	1	06/03/10 09:44:07	24.43	7.07	7.70	32949	20.60
GI-SD525-0006	016	1	06/03/10 09:44:35	24.69	6.88	8.12	33491	20.97
GI-SD524-0006	017	1	06/03/10 09:44:57	24.70	6.88	7.86	33126	20.72
GI-SD502-0006	018	1	06/03/10 09:45:22	24.89	6.94	7.92	33126	20.72
GI-SD508-0006	019	1	06/03/10 09:45:44	25.10	6.97	7.86	33509	20.98
GI-SD529-0006	020	1	06/03/10 09:46:10	24.81	6.83	8.19	32854	20.53
GI-SD506-0006	021	1	06/03/10 09:46:37	24.71	6.96	7.89	33461	20.95
GI-SD519-0006	022	1	06/03/10 09:47:06	24.87	7.09	7.81	32883	20.55
GI-SD505-0006	023	1	06/03/10 09:47:20	24.78	7.09	7.79	33111	20.71
GI-SD531-0006	024	1	06/03/10 09:47:34	24.77	7.07	7.84	32805	20.50
GI-SD528-0006	025	1	06/03/10 09:47:48	24.87	7.07	7.84	33462	20.95
GI-SD530-0006	026	1	06/03/10 09:48:05	24.94	6.98	7.94	33505	20.98
GI-SD521-0006	027	1	06/03/10 09:48:48	25.02	7.01	7.81	33037	20.65
GI-SD512-0006	028	1	06/03/10 09:49:18	25.21	6.76	7.70	33203	20.76
GI-SD513-0006	029	1	06/03/10 09:49:41	25.31	6.96	7.78	32792	20.48
GI-SD517-0006	030	1	06/03/10 09:50:16	25.68	6.92	8.01	32487	20.26
GI-SD520-0006	031	1	06/03/10 09:50:44	25.84	6.94	8.03	33397	20.89
GI-SD523-0006	032	1	06/03/10 09:51:10	25.61	7.03	7.83	32384	20.19
GI-SD522-0006	033	1	06/03/10 09:51:39	25.95	6.76	8.01	33179	20.73
Laboratory Control	000	2	06/04/10 09:42:55	25.18	6.69	7.58	35403	22.29
GI-SD509-0006	001	2	06/04/10 09:43:51	25.28	6.53	7.95	34845	21.90
GI-SD511-0006	002	2	06/04/10 09:44:10	25.31	6.71	8.18	35006	22.01
GI-SD527-0006	003	2	06/04/10 09:44:34	25.26	6.69	8.07	34705	21.80
GI-SD566-0006	004	2	06/04/10 09:44:58	25.24	6.93	8.06	34613	21.74
GI-SD514-0006	005	2	06/04/10 09:45:12	25.23	7.01	8.09	34012	21.32
GI-SD515-0006	006	2	06/04/10 09:45:32	25.16	6.83	8.09	34102	21.39
GI-SD503-0006	007	2	06/04/10 09:45:51	25.13	6.83	8.07	33928	21.27
GI-SD510-0006	008	2	06/04/10 09:46:06	25.11	6.91	8.00	34131	21.41
GI-SD501-0006	009	2	06/04/10 09:46:25	25.16	6.92	8.13	34035	21.34
GI-SD507-0006	010	2	06/04/10 09:46:47	25.13	6.89	8.03	33408	20.91
GI-SD504-0006	011	2	06/04/10 09:47:02	25.09	6.90	8.08	34199	21.46
GI-SD-DUP01-043010	012	2	06/04/10 09:47:19	25.02	6.93	8.06	33578	21.03
GI-SD532-0006	013	2	06/04/10 09:47:34	25.03	6.96	7.96	33751	21.15
GI-SD518-0006	014	2	06/04/10 09:47:58	25.10	6.93	7.82	33732	21.13
GI-SD526-0006	015	2	06/04/10 09:48:23	24.83	7.20	7.91	33713	21.12
GI-SD525-0006	016	2	06/04/10 09:48:43	24.71	7.11	8.15	34347	21.57
GI-SD524-0006	017	2	06/04/10 09:48:59	24.72	7.12	8.06	33720	21.13
GI-SD502-0006	018	2	06/04/10 09:49:14	24.70	7.17	8.06	33893	21.25
GI-SD508-0006	019	2	06/04/10 09:49:32	24.72	7.16	8.02	34162	21.44
GI-SD529-0006	020	2	06/04/10 09:49:45	24.72	7.12	8.18	33635	21.07
GI-SD506-0006	021	2	06/04/10 09:49:58	24.72	7.00	8.13	34529	21.69
GI-SD519-0006	022	2	06/04/10 09:50:09	24.73	7.04	8.01	33814	21.20
GI-SD505-0006	023	2	06/04/10 09:50:21	24.70	7.11	7.94	34012	21.33
GI-SD531-0006	024	2	06/04/10 09:50:41	24.80	7.05	7.96	33847	21.22
GI-SD528-0006	025	2	06/04/10 09:50:54	24.83	7.03	7.95	33987	21.31

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD530-0006	026	2	06/04/10 09:51:06	24.87	7.01	8.05	34548	21.70
GI-SD521-0006	027	2	06/04/10 09:51:18	24.91	6.86	8.05	33697	21.11
GI-SD512-0006	028	2	06/04/10 09:51:34	25.00	6.78	7.85	33803	21.18
GI-SD513-0006	029	2	06/04/10 09:53:34	24.91	7.13	7.88	33646	21.08
GI-SD517-0006	030	2	06/04/10 09:54:03	24.93	6.98	8.11	33715	21.12
GI-SD520-0006	031	2	06/04/10 09:54:16	24.99	6.91	8.11	33945	21.28
GI-SD523-0006	032	2	06/04/10 09:54:47	25.04	6.99	7.87	33065	20.67
GI-SD522-0006	033	2	06/04/10 09:54:56	25.05	6.94	7.95	33827	21.20
Laboratory Control	000	3	06/05/10 11:25:04	25.27	7.64	7.71	34385	21.58
GI-SD509-0006	001	3	06/05/10 11:26:28	25.29	7.47	8.06	34499	21.66
GI-SD511-0006	002	3	06/05/10 11:26:59	25.33	7.70	8.17	34034	21.34
GI-SD527-0006	003	3	06/05/10 11:27:47	25.27	7.31	8.15	33796	21.17
GI-SD566-0006	004	3	06/05/10 11:28:30	25.26	7.58	7.98	33548	21.00
GI-SD514-0006	005	3	06/05/10 11:29:09	25.23	7.44	8.09	33653	21.07
GI-SD515-0006	006	3	06/05/10 11:29:39	25.14	7.48	8.09	33998	21.32
GI-SD503-0006	007	3	06/05/10 11:30:00	25.09	7.54	8.07	33862	21.22
GI-SD510-0006	008	3	06/05/10 11:30:38	25.04	7.80	7.83	33853	21.22
GI-SD501-0006	009	3	06/05/10 11:31:33	25.12	7.62	8.19	33846	21.21
GI-SD507-0006	010	3	06/05/10 11:31:59	25.12	7.69	8.00	32442	20.24
GI-SD504-0006	011	3	06/05/10 11:32:27	25.02	7.58	8.13	33617	21.05
GI-SD-DUP01-043010	012	3	06/05/10 11:32:47	24.95	7.62	8.05	32765	20.47
GI-SD532-0006	013	3	06/05/10 11:33:07	25.01	7.64	7.88	32965	20.60
GI-SD518-0006	014	3	06/05/10 11:33:29	25.06	7.72	7.75	32932	20.58
GI-SD526-0006	015	3	06/05/10 11:34:03	24.67	7.92	7.86	32916	20.58
GI-SD525-0006	016	3	06/05/10 11:34:39	24.62	7.71	8.12	33978	21.31
GI-SD524-0006	017	3	06/05/10 11:35:21	24.67	7.75	7.89	32990	20.63
GI-SD502-0006	018	3	06/05/10 11:35:56	24.63	7.63	8.07	33155	20.74
GI-SD508-0006	019	3	06/05/10 11:36:27	24.67	7.70	7.97	33448	20.94
GI-SD529-0006	020	3	06/05/10 11:36:53	24.66	7.63	8.30	32736	20.45
GI-SD506-0006	021	3	06/05/10 11:37:32	24.65	7.78	7.96	33959	21.30
GI-SD519-0006	022	3	06/05/10 11:38:04	24.68	7.79	7.91	33061	20.68
GI-SD505-0006	023	3	06/05/10 11:38:27	24.64	7.85	7.88	32942	20.59
GI-SD531-0006	024	3	06/05/10 11:39:00	24.76	7.68	7.97	32888	20.56
GI-SD528-0006	025	3	06/05/10 11:39:34	24.84	7.66	7.89	33909	21.26
GI-SD530-0006	026	3	06/05/10 11:40:03	24.89	7.43	8.15	34412	21.61
GI-SD521-0006	027	3	06/05/10 11:40:34	24.87	7.62	7.85	33801	21.18
GI-SD512-0006	028	3	06/05/10 11:41:16	24.93	7.05	7.64	33874	21.23
GI-SD513-0006	029	3	06/05/10 11:42:37	24.87	7.80	7.85	33928	21.27
GI-SD517-0006	030	3	06/05/10 11:43:08	24.94	7.71	8.11	34323	21.54
GI-SD520-0006	031	3	06/05/10 11:43:39	24.87	7.44	8.02	34011	21.33
GI-SD523-0006	032	3	06/05/10 11:44:05	25.06	7.63	7.80	33630	21.06
GI-SD522-0006	033	3	06/05/10 11:44:45	25.02	6.80	8.12	34156	21.43
Laboratory Control	000	4	06/06/10 10:56:34	25.00	6.60	7.67	32533	20.31
GI-SD509-0006	001	4	06/06/10 10:57:30	25.11	6.85	8.07	34112	21.39
GI-SD511-0006	002	4	06/06/10 10:57:47	25.11	7.04	8.07	32429	20.23
GI-SD527-0006	003	4	06/06/10 10:58:02	25.07	7.06	8.14	32350	20.18
GI-SD566-0006	004	4	06/06/10 10:58:17	25.06	6.97	8.00	32202	20.08
GI-SD514-0006	005	4	06/06/10 10:58:35	24.98	7.06	7.96	31796	19.80
GI-SD515-0006	006	4	06/06/10 10:58:54	24.96	7.05	8.09	33337	20.86
GI-SD503-0006	007	4	06/06/10 10:59:19	24.90	7.09	8.05	32235	20.10
GI-SD510-0006	008	4	06/06/10 10:59:34	24.86	7.06	7.89	32578	20.34
GI-SD501-0006	009	4	06/06/10 10:59:58	24.98	7.02	8.12	32273	20.13

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD507-0006	010	4	06/06/10 11:00:12	24.96	6.99	8.04	32623	20.37
GI-SD504-0006	011	4	06/06/10 11:00:35	24.88	7.04	8.09	33560	21.02
GI-SD-DUP01-043010	012	4	06/06/10 11:00:50	24.83	7.13	8.07	32717	20.44
GI-SD532-0006	013	4	06/06/10 11:01:08	24.86	7.18	7.92	32882	20.55
GI-SD518-0006	014	4	06/06/10 11:01:25	24.92	7.11	7.76	32891	20.55
GI-SD526-0006	015	4	06/06/10 11:01:51	24.56	7.34	7.92	32851	20.53
GI-SD525-0006	016	4	06/06/10 11:02:14	24.51	7.25	8.07	33806	21.19
GI-SD524-0006	017	4	06/06/10 11:02:42	24.59	7.26	7.96	32642	20.39
GI-SD502-0006	018	4	06/06/10 11:02:59	24.54	7.27	8.10	32766	20.48
GI-SD508-0006	019	4	06/06/10 11:03:10	24.51	7.33	8.05	33140	20.73
GI-SD529-0006	020	4	06/06/10 11:03:22	24.52	7.32	8.18	31815	19.82
GI-SD506-0006	021	4	06/06/10 11:03:38	24.59	7.15	8.06	33502	20.98
GI-SD519-0006	022	4	06/06/10 11:03:55	24.57	7.17	7.96	32084	20.01
GI-SD505-0006	023	4	06/06/10 11:04:13	24.51	7.15	7.92	32292	20.15
GI-SD531-0006	024	4	06/06/10 11:04:26	24.56	7.15	7.96	32130	20.04
GI-SD528-0006	025	4	06/06/10 11:04:43	24.69	7.20	7.95	32717	20.44
GI-SD530-0006	026	4	06/06/10 11:04:56	24.73	7.11	8.08	33891	21.25
GI-SD521-0006	027	4	06/06/10 11:05:11	24.76	6.97	7.94	32709	20.43
GI-SD512-0006	028	4	06/06/10 11:05:30	24.85	6.89	7.71	32676	20.41
GI-SD513-0006	029	4	06/06/10 11:05:41	24.85	6.76	7.80	32845	20.52
GI-SD517-0006	030	4	06/06/10 11:05:57	24.85	7.02	8.05	33276	20.82
GI-SD520-0006	031	4	06/06/10 11:06:16	24.82	6.99	8.02	32825	20.51
GI-SD523-0006	032	4	06/06/10 11:06:30	24.96	6.96	7.87	32679	20.41
GI-SD522-0006	033	4	06/06/10 11:06:40	24.97	7.02	8.04	33138	20.72
Laboratory Control	000	5	06/07/10 08:57:32	24.91	6.77	7.73	33238	20.79
GI-SD509-0006	001	5	06/07/10 08:58:37	25.07	6.92	8.15	34981	22.00
GI-SD511-0006	002	5	06/07/10 08:59:28	25.17	7.12	8.09	32801	20.49
GI-SD527-0006	003	5	06/07/10 09:00:06	25.17	6.81	8.34	32560	20.32
GI-SD566-0006	004	5	06/07/10 09:00:27	25.19	6.98	8.04	32441	20.24
GI-SD514-0006	005	5	06/07/10 09:01:20	25.09	7.10	8.03	31799	19.80
GI-SD515-0006	006	5	06/07/10 09:02:04	25.09	7.03	8.23	33845	21.21
GI-SD503-0006	007	5	06/07/10 09:02:27	25.04	7.06	8.11	32211	20.08
GI-SD510-0006	008	5	06/07/10 09:02:49	24.96	7.18	7.89	32663	20.40
GI-SD501-0006	009	5	06/07/10 09:03:03	25.06	7.17	8.10	32235	20.10
GI-SD507-0006	010	5	06/07/10 09:03:41	25.08	7.10	8.10	32326	20.16
GI-SD504-0006	011	5	06/07/10 09:03:59	24.97	7.09	8.17	34142	21.42
GI-SD-DUP01-043010	012	5	06/07/10 09:04:09	24.90	7.14	8.19	32508	20.29
GI-SD532-0006	013	5	06/07/10 09:04:25	24.91	7.17	8.01	32763	20.47
GI-SD518-0006	014	5	06/07/10 09:04:49	24.98	7.09	7.80	32825	20.51
GI-SD526-0006	015	5	06/07/10 09:05:23	24.65	7.36	7.95	32996	20.63
GI-SD525-0006	016	5	06/07/10 09:05:46	24.64	7.28	8.07	33793	21.18
GI-SD524-0006	017	5	06/07/10 09:06:09	24.72	7.29	8.03	32773	20.48
GI-SD502-0006	018	5	06/07/10 09:06:51	24.66	7.18	8.19	32845	20.53
GI-SD508-0006	019	5	06/07/10 09:07:05	24.68	7.19	8.10	33216	20.78
GI-SD529-0006	020	5	06/07/10 09:07:25	24.71	7.22	8.26	32117	20.03
GI-SD506-0006	021	5	06/07/10 09:07:40	24.72	7.16	8.07	33226	20.79
GI-SD519-0006	022	5	06/07/10 09:07:58	24.70	7.19	8.02	32505	20.29
GI-SD505-0006	023	5	06/07/10 09:08:27	24.62	7.20	7.99	32605	20.36
GI-SD531-0006	024	5	06/07/10 09:08:42	24.72	7.19	8.01	32346	20.18
GI-SD528-0006	025	5	06/07/10 09:08:57	24.81	7.17	7.99	32004	19.95
GI-SD530-0006	026	5	06/07/10 09:09:18	24.86	6.93	8.13	32743	20.45
GI-SD521-0006	027	5	06/07/10 09:09:44	24.85	7.06	7.93	31969	19.92
GI-SD512-0006	028	5	06/07/10 09:10:03	24.91	6.91	7.77	31916	19.88

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD513-0006	029	5	06/07/10 09:10:22	24.91	6.98	7.86	32226	20.10
GI-SD517-0006	030	5	06/07/10 09:10:48	24.84	7.08	8.12	32765	20.47
GI-SD520-0006	031	5	06/07/10 09:11:05	24.83	7.04	7.98	32121	20.03
GI-SD523-0006	032	5	06/07/10 09:11:32	25.02	7.01	7.85	32189	20.07
GI-SD522-0006	033	5	06/07/10 09:11:59	24.98	6.61	8.21	32646	20.38
Laboratory Control	000	6	06/08/10 08:30:20	24.51	6.87	7.69	34092	21.39
GI-SD509-0006	001	6	06/08/10 08:33:30	24.62	6.32	8.01	34758	21.85
GI-SD511-0006	002	6	06/08/10 08:34:36	24.76	6.57	8.00	33531	21.00
GI-SD527-0006	003	6	06/08/10 08:35:41	24.86	6.21	8.24	33101	20.70
GI-SD566-0006	004	6	06/08/10 08:36:17	24.83	6.55	7.92	32995	20.63
GI-SD514-0006	005	6	06/08/10 08:37:20	24.80	6.39	7.92	32450	20.25
GI-SD515-0006	006	6	06/08/10 08:39:00	24.79	6.47	8.09	33157	20.74
GI-SD503-0006	007	6	06/08/10 08:40:37	24.72	6.61	8.01	32662	20.40
GI-SD510-0006	008	6	06/08/10 08:41:15	24.67	7.06	7.88	32914	20.57
GI-SD501-0006	009	6	06/08/10 08:42:10	24.85	6.5	8.07	32689	20.42
GI-SD507-0006	010	6	06/08/10 08:43:15	24.80	6.71	8.02	32836	20.52
GI-SD504-0006	011	6	06/08/10 08:44:34	24.70	6.73	8.06	33813	21.19
GI-SD-DUP01-043010	012	6	06/08/10 08:46:51	24.61	6.03	8.06	32936	20.59
GI-SD532-0006	013	6	06/08/10 08:48:20	24.67	6.36	7.91	33063	20.68
GI-SD518-0006	014	6	06/08/10 08:50:00	24.73	6.36	7.73	33203	20.77
GI-SD526-0006	015	6	06/08/10 08:51:25	24.40	6.81	7.94	33138	20.73
GI-SD525-0006	016	6	06/08/10 08:52:48	24.39	6.73	8.02	33683	21.11
GI-SD524-0006	017	6	06/08/10 08:55:15	24.48	6.85	7.98	33050	20.67
GI-SD502-0006	018	6	06/08/10 08:56:28	24.37	6.67	8.08	33153	20.74
GI-SD508-0006	019	6	06/08/10 08:57:30	24.36	6.91	8.00	33468	20.96
GI-SD529-0006	020	6	06/08/10 09:00:22	24.36	6.53	8.13	32958	20.61
GI-SD506-0006	021	6	06/08/10 09:01:56	24.35	6.70	7.95	33629	21.07
GI-SD519-0006	022	6	06/08/10 09:02:54	24.32	6.62	7.98	33342	20.88
GI-SD505-0006	023	6	06/08/10 09:04:05	24.19	6.64	7.97	33394	20.91
GI-SD531-0006	024	6	06/08/10 09:05:28	24.38	6.33	7.94	33198	20.78
GI-SD528-0006	025	6	06/08/10 09:06:59	24.50	6.84	7.94	32659	20.40
GI-SD530-0006	026	6	06/08/10 09:08:00	24.51	6.33	8.03	33096	20.70
GI-SD521-0006	027	6	06/08/10 09:09:17	24.51	6.33	7.88	32637	20.39
GI-SD512-0006	028	6	06/08/10 09:11:01	24.62	5.73	7.64	32576	20.34
GI-SD513-0006	029	6	06/08/10 09:12:16	24.64	6.36	7.90	32660	20.40
GI-SD517-0006	030	6	06/08/10 09:15:56	24.58	6.84	8.09	33434	20.94
GI-SD520-0006	031	6	06/08/10 09:17:28	24.65	6.20	7.91	32680	20.41
GI-SD523-0006	032	6	06/08/10 09:18:22	24.84	6.54	7.81	32504	20.29
GI-SD522-0006	033	6	06/08/10 09:19:55	24.76	6.17	8.13	33089	20.69
Laboratory Control	000	7	06/09/10 08:22:58	24.54	6.37	7.81	35899	22.65
GI-SD509-0006	001	7	06/09/10 08:24:54	24.72	6.19	8.11	36021	22.73
GI-SD511-0006	002	7	06/09/10 08:25:52	24.72	6.32	8.09	35207	22.16
GI-SD527-0006	003	7	06/09/10 08:26:51	24.80	6.34	8.34	34651	21.77
GI-SD566-0006	004	7	06/09/10 08:27:57	24.80	6.24	7.98	34489	21.66
GI-SD514-0006	005	7	06/09/10 08:30:11	24.77	6.12	8.16	33490	20.97
GI-SD515-0006	006	7	06/09/10 08:34:01	24.73	6.63	8.20	34347	21.56
GI-SD503-0006	007	7	06/09/10 08:35:49	24.66	6.67	8.14	33970	21.30
GI-SD510-0006	008	7	06/09/10 08:36:47	24.63	6.99	7.98	34324	21.55
GI-SD501-0006	009	7	06/09/10 08:37:36	24.77	6.98	8.21	33989	21.32
GI-SD507-0006	010	7	06/09/10 08:38:57	24.71	6.96	8.15	33912	21.26
GI-SD504-0006	011	7	06/09/10 08:39:46	24.61	7.02	8.18	34672	21.79
GI-SD-DUP01-043010	012	7	06/09/10 08:40:33	24.53	7.12	8.16	34094	21.39

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD532-0006	013	7	06/09/10 08:42:16	24.61	6.96	8.04	34286	21.52
GI-SD518-0006	014	7	06/09/10 08:43:33	24.67	6.82	7.83	34435	21.63
GI-SD526-0006	015	7	06/09/10 08:45:34	24.34	7.16	8.01	34369	21.59
GI-SD525-0006	016	7	06/09/10 08:46:32	24.31	7.22	8.11	35068	22.07
GI-SD524-0006	017	7	06/09/10 08:49:09	24.39	6.56	8.10	34439	21.63
GI-SD502-0006	018	7	06/09/10 08:50:58	24.30	6.38	8.18	34590	21.74
GI-SD508-0006	019	7	06/09/10 08:52:33	24.31	6.46	8.11	34926	21.97
GI-SD529-0006	020	7	06/09/10 08:53:13	24.29	6.62	8.19	34237	21.50
GI-SD506-0006	021	7	06/09/10 08:53:49	24.28	6.75	8.10	34899	21.96
GI-SD519-0006	022	7	06/09/10 08:54:29	24.32	6.73	8.10	34686	21.81
GI-SD505-0006	023	7	06/09/10 08:55:33	24.25	6.60	8.09	34874	21.94
GI-SD531-0006	024	7	06/09/10 08:56:21	24.38	6.76	8.08	34613	21.76
GI-SD528-0006	025	7	06/09/10 08:56:59	24.48	6.75	8.09	34214	21.48
GI-SD530-0006	026	7	06/09/10 08:57:59	24.50	6.00	8.13	34517	21.69
GI-SD521-0006	027	7	06/09/10 08:58:31	24.50	6.57	8.00	34214	21.48
GI-SD512-0006	028	7	06/09/10 08:59:04	24.69	6.59	7.85	34182	21.45
GI-SD513-0006	029	7	06/09/10 08:59:54	24.65	6.66	7.96	34431	21.62
GI-SD517-0006	030	7	06/09/10 09:00:44	24.55	6.74	8.11	34873	21.93
GI-SD520-0006	031	7	06/09/10 09:01:46	24.73	6.37	8.03	33865	21.23
GI-SD523-0006	032	7	06/09/10 09:03:28	24.89	6.38	7.86	33751	21.15
GI-SD522-0006	033	7	06/09/10 09:04:00	24.73	6.56	8.19	34301	21.53
Laboratory Control	000	8	06/10/10 08:52:17	24.61	6.46	7.72	33586	21.04
GI-SD509-0006	001	8	06/10/10 08:55:16	24.73	6.98	8.02	33750	21.15
GI-SD511-0006	002	8	06/10/10 08:56:37	24.80	6.94	8.03	33137	20.73
GI-SD527-0006	003	8	06/10/10 08:58:12	24.92	6.13	8.11	32546	20.32
GI-SD566-0006	004	8	06/10/10 08:58:54	24.90	6.45	7.90	32449	20.25
GI-SD514-0006	005	8	06/10/10 08:59:49	24.78	6.72	8.06	31755	19.78
GI-SD515-0006	006	8	06/10/10 09:00:38	24.81	6.58	8.13	32339	20.18
GI-SD503-0006	007	8	06/10/10 09:02:06	24.67	7.12	8.08	32209	20.09
GI-SD510-0006	008	8	06/10/10 09:03:47	24.72	7.25	7.92	32340	20.18
GI-SD501-0006	009	8	06/10/10 09:05:24	24.84	7.13	8.14	32195	20.08
GI-SD507-0006	010	8	06/10/10 09:06:20	24.79	7.20	8.05	31817	19.82
GI-SD504-0006	011	8	06/10/10 09:08:37	24.70	6.53	8.05	32443	20.25
GI-SD-DUP01-043010	012	8	06/10/10 09:09:45	24.63	7.01	8.04	32243	20.11
GI-SD532-0006	013	8	06/10/10 09:10:21	24.70	7.03	8.00	32346	20.18
GI-SD518-0006	014	8	06/10/10 09:11:20	24.84	6.51	7.77	32380	20.2
GI-SD526-0006	015	8	06/10/10 09:12:10	24.48	7.23	7.98	32429	20.24
GI-SD525-0006	016	8	06/10/10 09:13:02	24.24	7.00	8.07	33156	20.75
GI-SD524-0006	017	8	06/10/10 09:14:29	24.31	6.70	8.02	32773	20.48
GI-SD502-0006	018	8	06/10/10 09:15:35	24.45	6.21	7.96	32836	20.52
GI-SD508-0006	019	8	06/10/10 09:16:47	24.47	6.81	8.04	33171	20.76
GI-SD529-0006	020	8	06/10/10 09:17:42	24.41	7.07	8.07	32651	20.40
GI-SD506-0006	021	8	06/10/10 09:18:28	24.33	6.90	8.03	33109	20.72
GI-SD519-0006	022	8	06/10/10 09:19:25	24.39	6.48	8.03	32951	20.60
GI-SD505-0006	023	8	06/10/10 09:20:37	24.52	7.10	7.99	33151	20.74
GI-SD531-0006	024	8	06/10/10 09:21:31	24.44	7.16	8.01	33066	20.68
GI-SD528-0006	025	8	06/10/10 09:22:15	24.57	7.05	8.00	32563	20.33
GI-SD530-0006	026	8	06/10/10 09:23:36	24.59	6.84	8.01	32920	20.58
GI-SD521-0006	027	8	06/10/10 09:24:15	24.69	7.07	7.91	32506	20.29
GI-SD512-0006	028	8	06/10/10 09:25:23	24.82	6.31	7.76	32552	20.32
GI-SD513-0006	029	8	06/10/10 09:26:18	24.85	6.92	7.94	32715	20.43
GI-SD517-0006	030	8	06/10/10 09:27:43	24.69	6.75	7.99	32935	20.59
GI-SD520-0006	031	8	06/10/10 09:28:27	24.86	6.75	7.93	32334	20.17

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD523-0006	032	8	06/10/10 09:29:26	24.86	6.69	7.86	32336	20.17
GI-SD522-0006	033	8	06/10/10 09:30:14	24.88	6.58	8.10	32678	20.41
Laboratory Control	000	9	06/11/10 10:10:16	24.85	6.13	7.48	34739	21.83
GI-SD509-0006	001	9	06/11/10 10:11:49	24.89	6.19	8.08	34854	21.91
GI-SD511-0006	002	9	06/11/10 10:12:47	24.93	6.84	8.10	34409	21.60
GI-SD527-0006	003	9	06/11/10 10:13:18	25.01	7.05	8.16	33761	21.15
GI-SD566-0006	004	9	06/11/10 10:13:36	25.02	6.96	8.01	33412	20.91
GI-SD514-0006	005	9	06/11/10 10:14:09	24.91	7.13	8.22	33248	20.80
GI-SD515-0006	006	9	06/11/10 10:15:00	24.94	7.01	8.17	33963	21.29
GI-SD503-0006	007	9	06/11/10 10:15:20	24.85	6.98	8.16	33864	21.23
GI-SD510-0006	008	9	06/11/10 10:16:18	24.88	7.01	8.00	34034	21.35
GI-SD501-0006	009	9	06/11/10 10:16:55	24.96	6.96	8.20	33778	21.17
GI-SD507-0006	010	9	06/11/10 10:17:19	24.89	7.16	8.20	32710	20.43
GI-SD504-0006	011	9	06/11/10 10:17:40	24.80	7.16	8.21	33527	21.00
GI-SD-DUP01-043010	012	9	06/11/10 10:18:02	24.75	7.07	8.12	33436	20.93
GI-SD532-0006	013	9	06/11/10 10:18:41	24.81	7.07	8.11	33615	21.06
GI-SD518-0006	014	9	06/11/10 10:19:25	24.95	6.83	7.83	33540	21.00
GI-SD526-0006	015	9	06/11/10 10:20:25	24.54	7.07	8.06	33471	20.96
GI-SD525-0006	016	9	06/11/10 10:21:05	24.32	6.99	8.14	34350	21.57
GI-SD524-0006	017	9	06/11/10 10:21:46	24.35	7.16	8.11	34108	21.41
GI-SD502-0006	018	9	06/11/10 10:22:24	24.44	7.06	8.14	34218	21.48
GI-SD508-0006	019	9	06/11/10 10:25:00	24.40	7.13	8.13	34639	21.77
GI-SD529-0006	020	9	06/11/10 10:26:01	24.43	7.04	8.16	33147	20.74
GI-SD506-0006	021	9	06/11/10 10:26:28	24.36	7.16	8.11	33856	21.23
GI-SD519-0006	022	9	06/11/10 10:27:20	24.44	6.54	8.12	33703	21.12
GI-SD505-0006	023	9	06/11/10 10:27:47	24.50	6.90	8.11	34028	21.35
GI-SD531-0006	024	9	06/11/10 10:28:33	24.44	6.97	8.09	33913	21.27
GI-SD528-0006	025	9	06/11/10 10:29:02	24.59	7.09	8.07	34095	21.39
GI-SD530-0006	026	9	06/11/10 10:29:36	24.60	6.67	8.09	34508	21.68
GI-SD521-0006	027	9	06/11/10 10:30:16	24.67	6.77	8.00	34084	21.38
GI-SD512-0006	028	9	06/11/10 10:30:37	24.77	6.84	7.88	34083	21.38
GI-SD513-0006	029	9	06/11/10 10:31:17	24.76	6.76	8.00	34498	21.67
GI-SD517-0006	030	9	06/11/10 10:32:23	24.69	6.51	8.06	34472	21.65
GI-SD520-0006	031	9	06/11/10 10:32:50	24.80	6.87	8.07	33933	21.28
GI-SD523-0006	032	9	06/11/10 10:33:29	24.83	6.75	7.93	34052	21.36
GI-SD522-0006	033	9	06/11/10 10:33:50	24.83	6.87	8.08	34378	21.58
Laboratory Control	000	10	06/12/10 09:39:28	25.00	6.65	7.82	34919	21.96
GI-SD509-0006	001	10	06/12/10 09:40:18	25.12	6.89	8.09	34825	21.89
GI-SD511-0006	002	10	06/12/10 09:41:09	25.16	6.93	8.14	34538	21.69
GI-SD527-0006	003	10	06/12/10 09:41:45	25.18	7.14	8.18	33998	21.31
GI-SD566-0006	004	10	06/12/10 09:42:14	25.17	6.92	8.07	33690	21.10
GI-SD514-0006	005	10	06/12/10 09:42:48	25.06	7.08	8.25	33567	21.02
GI-SD515-0006	006	10	06/12/10 09:43:31	25.05	7.01	8.22	34153	21.42
GI-SD503-0006	007	10	06/12/10 09:43:51	24.96	7.04	8.21	34163	21.43
GI-SD510-0006	008	10	06/12/10 09:44:14	25.01	7.12	8.08	34181	21.44
GI-SD501-0006	009	10	06/12/10 09:44:52	25.01	7.06	8.27	34120	21.40
GI-SD507-0006	010	10	06/12/10 09:45:08	24.96	7.13	8.25	33038	20.65
GI-SD504-0006	011	10	06/12/10 09:45:37	24.92	7.12	8.25	33584	21.03
GI-SD-DUP01-043010	012	10	06/12/10 09:46:15	24.85	7.04	8.17	33682	21.10
GI-SD532-0006	013	10	06/12/10 09:46:37	24.91	7.07	8.18	33796	21.18
GI-SD518-0006	014	10	06/12/10 09:47:03	25.02	7.00	7.92	33618	21.05
GI-SD526-0006	015	10	06/12/10 09:47:25	24.65	7.22	8.11	33877	21.24

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD525-0006	016	10	06/12/10 09:48:08	24.41	7.29	8.26	34714	21.82
GI-SD524-0006	017	10	06/12/10 09:48:39	24.45	7.22	8.17	34551	21.71
GI-SD502-0006	018	10	06/12/10 09:49:11	24.51	7.29	8.24	34537	21.70
GI-SD508-0006	019	10	06/12/10 09:49:44	24.48	7.17	8.20	34976	22.01
GI-SD529-0006	020	10	06/12/10 09:50:08	24.50	7.17	8.24	33823	21.21
GI-SD506-0006	021	10	06/12/10 09:50:31	24.43	7.19	8.20	34283	21.53
GI-SD519-0006	022	10	06/12/10 09:51:09	24.51	7.01	8.20	34219	21.48
GI-SD505-0006	023	10	06/12/10 09:51:54	24.57	7.06	8.14	34413	21.61
GI-SD531-0006	024	10	06/12/10 09:52:29	24.54	7.14	8.17	34446	21.64
GI-SD528-0006	025	10	06/12/10 09:53:01	24.65	7.18	8.16	34257	21.50
GI-SD530-0006	026	10	06/12/10 09:53:32	24.65	6.93	8.22	34676	21.79
GI-SD521-0006	027	10	06/12/10 09:54:18	24.73	7.09	8.08	34166	21.44
GI-SD512-0006	028	10	06/12/10 09:54:46	24.81	6.94	7.96	34184	21.45
GI-SD513-0006	029	10	06/12/10 09:55:13	24.79	6.94	8.06	34534	21.69
GI-SD517-0006	030	10	06/12/10 09:55:35	24.72	7.00	8.11	34474	21.65
GI-SD520-0006	031	10	06/12/10 09:56:04	24.81	7.08	8.18	34078	21.38
GI-SD523-0006	032	10	06/12/10 09:56:32	24.78	7.02	8.03	34137	21.42
GI-SD522-0006	033	10	06/12/10 09:57:01	24.79	6.91	8.21	34433	21.62
Laboratory Control	000	11	06/13/10 13:22:32	24.90	6.90	7.82	30849	19.15
GI-SD509-0006	001	11	06/13/10 13:23:29	25.01	6.76	8.11	30822	19.13
GI-SD511-0006	002	11	06/13/10 13:23:49	25.00	6.96	8.17	30385	18.83
GI-SD527-0006	003	11	06/13/10 13:24:14	25.01	7.33	8.16	30233	18.73
GI-SD566-0006	004	11	06/13/10 13:24:42	25.02	7.19	8.10	29904	18.51
GI-SD514-0006	005	11	06/13/10 13:25:15	24.87	7.43	8.31	29495	18.23
GI-SD515-0006	006	11	06/13/10 13:25:37	24.91	7.24	8.29	30401	18.85
GI-SD503-0006	007	11	06/13/10 13:26:01	24.84	7.18	8.27	30452	18.88
GI-SD510-0006	008	11	06/13/10 13:26:36	24.90	7.18	8.16	30546	18.95
GI-SD501-0006	009	11	06/13/10 13:27:03	24.91	7.30	8.34	30357	18.82
GI-SD507-0006	010	11	06/13/10 13:27:28	24.86	7.25	8.29	29323	18.11
GI-SD504-0006	011	11	06/13/10 13:27:52	24.81	7.28	8.37	30130	18.66
GI-SD-DUP01-043010	012	11	06/13/10 13:28:14	24.77	7.35	8.25	30193	18.71
GI-SD532-0006	013	11	06/13/10 13:28:39	24.85	7.39	8.29	30374	18.83
GI-SD518-0006	014	11	06/13/10 13:29:21	24.97	7.14	7.91	30178	18.69
GI-SD526-0006	015	11	06/13/10 13:29:55	24.54	7.51	8.25	29469	18.22
GI-SD525-0006	016	11	06/13/10 13:30:18	24.39	7.54	8.36	30548	18.96
GI-SD524-0006	017	11	06/13/10 13:30:41	24.39	7.41	8.29	30512	18.93
GI-SD502-0006	018	11	06/13/10 13:31:02	24.44	7.56	8.35	30538	18.95
GI-SD508-0006	019	11	06/13/10 13:31:24	24.44	7.43	8.29	31021	19.28
GI-SD529-0006	020	11	06/13/10 13:31:50	24.44	7.42	8.32	30151	18.68
GI-SD506-0006	021	11	06/13/10 13:32:07	24.39	7.45	8.30	30744	19.09
GI-SD519-0006	022	11	06/13/10 13:32:27	24.42	7.37	8.28	30559	18.96
GI-SD505-0006	023	11	06/13/10 13:32:47	24.46	7.32	8.27	30735	19.08
GI-SD531-0006	024	11	06/13/10 13:33:05	24.46	7.41	8.25	30806	19.13
GI-SD528-0006	025	11	06/13/10 13:33:27	24.57	7.43	8.27	30721	19.07
GI-SD530-0006	026	11	06/13/10 13:33:51	24.62	7.09	8.27	31142	19.36
GI-SD521-0006	027	11	06/13/10 13:34:15	24.72	7.31	8.21	30610	18.99
GI-SD512-0006	028	11	06/13/10 13:34:34	24.82	7.35	8.09	30654	19.02
GI-SD513-0006	029	11	06/13/10 13:34:58	24.84	7.17	8.10	31015	19.27
GI-SD517-0006	030	11	06/13/10 13:35:22	24.75	7.21	8.19	30822	19.14
GI-SD520-0006	031	11	06/13/10 13:35:43	24.82	7.36	8.33	30552	18.95
GI-SD523-0006	032	11	06/13/10 13:36:13	24.87	7.14	8.09	30867	19.17
GI-SD522-0006	033	11	06/13/10 13:36:38	24.92	7.11	8.26	30994	19.25

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
Laboratory Control	000	12	06/14/10 08:07:19	24.69	6.79	7.73	32845	20.53
GI-SD509-0006	001	12	06/14/10 08:08:26	24.87	6.75	7.98	32802	20.49
GI-SD511-0006	002	12	06/14/10 08:08:59	24.92	6.73	8.04	32530	20.31
GI-SD527-0006	003	12	06/14/10 08:09:58	24.99	6.70	8.04	32301	20.15
GI-SD566-0006	004	12	06/14/10 08:10:48	25.00	6.46	7.99	31967	19.92
GI-SD514-0006	005	12	06/14/10 08:11:41	24.87	6.72	8.15	31714	19.75
GI-SD515-0006	006	12	06/14/10 08:12:28	24.89	6.68	8.12	32274	20.13
GI-SD503-0006	007	12	06/14/10 08:13:18	24.84	6.82	8.11	32341	20.18
GI-SD510-0006	008	12	06/14/10 08:13:57	24.89	6.61	7.93	32673	20.40
GI-SD501-0006	009	12	06/14/10 08:14:42	24.88	6.78	8.17	32249	20.11
GI-SD507-0006	010	12	06/14/10 08:15:21	24.82	6.79	8.08	31608	19.67
GI-SD504-0006	011	12	06/14/10 08:15:44	24.76	6.91	8.17	32130	20.03
GI-SD-DUP01-043010	012	12	06/14/10 08:16:06	24.70	6.87	8.09	32190	20.08
GI-SD532-0006	013	12	06/14/10 08:16:57	24.78	6.71	8.09	32353	20.19
GI-SD518-0006	014	12	06/14/10 08:17:47	24.92	6.32	7.81	32131	20.03
GI-SD526-0006	015	12	06/14/10 08:18:59	24.54	6.72	7.99	32474	20.27
GI-SD525-0006	016	12	06/14/10 08:19:57	24.34	6.85	8.15	33181	20.76
GI-SD524-0006	017	12	06/14/10 08:20:41	24.35	6.81	8.07	33100	20.71
GI-SD502-0006	018	12	06/14/10 08:21:32	24.44	6.79	8.09	33134	20.73
GI-SD508-0006	019	12	06/14/10 08:22:05	24.43	6.89	8.10	33628	21.07
GI-SD529-0006	020	12	06/14/10 08:22:57	24.45	6.69	8.14	32112	20.03
GI-SD506-0006	021	12	06/14/10 08:24:13	24.37	6.81	8.10	32587	20.35
GI-SD519-0006	022	12	06/14/10 08:25:07	24.45	6.56	8.10	32389	20.22
GI-SD505-0006	023	12	06/14/10 08:25:31	24.46	6.77	8.07	32608	20.37
GI-SD531-0006	024	12	06/14/10 08:25:51	24.44	6.79	8.05	32702	20.43
GI-SD528-0006	025	12	06/14/10 08:26:52	24.61	6.60	8.07	33042	20.66
GI-SD530-0006	026	12	06/14/10 08:27:36	24.61	6.41	8.16	33431	20.93
GI-SD521-0006	027	12	06/14/10 08:28:08	24.69	6.88	7.98	32929	20.58
GI-SD512-0006	028	12	06/14/10 08:28:39	24.78	6.85	7.91	32949	20.60
GI-SD513-0006	029	12	06/14/10 08:29:01	24.77	6.79	7.95	33263	20.81
GI-SD517-0006	030	12	06/14/10 08:29:53	24.67	6.40	8.05	33114	20.71
GI-SD520-0006	031	12	06/14/10 08:30:58	24.79	6.78	8.07	32867	20.54
GI-SD523-0006	032	12	06/14/10 08:31:28	24.80	6.79	7.92	33082	20.69
GI-SD522-0006	033	12	06/14/10 08:31:57	24.79	6.69	8.14	33418	20.92
Laboratory Control	000	13	06/15/10 08:10:14	24.56	6.58	7.65	35917	22.66
GI-SD509-0006	001	13	06/15/10 08:11:58	24.81	6.38	7.88	35286	22.22
GI-SD511-0006	002	13	06/15/10 08:12:22	24.81	6.60	7.93	35448	22.33
GI-SD527-0006	003	13	06/15/10 08:12:54	24.90	6.86	7.91	34795	21.87
GI-SD566-0006	004	13	06/15/10 08:13:35	24.95	6.50	7.90	34624	21.75
GI-SD514-0006	005	13	06/15/10 08:14:32	24.84	6.53	8.03	34822	21.89
GI-SD515-0006	006	13	06/15/10 08:15:00	24.82	6.76	7.98	34859	21.92
GI-SD503-0006	007	13	06/15/10 08:16:07	24.77	6.57	8.01	34808	21.88
GI-SD510-0006	008	13	06/15/10 08:17:09	24.76	6.51	7.85	34592	21.73
GI-SD501-0006	009	13	06/15/10 08:18:06	24.76	6.64	8.05	34959	21.99
GI-SD507-0006	010	13	06/15/10 08:18:54	24.73	6.53	7.96	34849	21.91
GI-SD504-0006	011	13	06/15/10 08:19:26	24.67	6.71	8.02	35012	22.03
GI-SD-DUP01-043010	012	13	06/15/10 08:19:51	24.61	6.81	7.99	34885	21.94
GI-SD532-0006	013	13	06/15/10 08:20:18	24.71	6.79	7.99	34855	21.92
GI-SD518-0006	014	13	06/15/10 08:21:01	24.87	6.53	7.73	34817	21.89
GI-SD526-0006	015	13	06/15/10 08:21:53	24.51	6.51	7.85	35076	22.07
GI-SD525-0006	016	13	06/15/10 08:22:36	24.30	6.89	8.06	35297	22.23
GI-SD524-0006	017	13	06/15/10 08:23:12	24.30	6.92	7.93	35147	22.13
GI-SD502-0006	018	13	06/15/10 08:23:57	24.37	6.59	7.96	35082	22.08

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD508-0006	019	13	06/15/10 08:24:45	24.37	6.92	7.98	35556	22.41
GI-SD529-0006	020	13	06/15/10 08:25:37	24.39	6.69	8.01	34749	21.85
GI-SD506-0006	021	13	06/15/10 08:26:00	24.31	6.85	8.00	34953	21.99
GI-SD519-0006	022	13	06/15/10 08:27:17	24.43	6.38	7.96	34850	21.92
GI-SD505-0006	023	13	06/15/10 08:28:18	24.42	6.67	7.93	34935	21.98
GI-SD531-0006	024	13	06/15/10 08:29:07	24.44	6.46	7.95	35205	22.17
GI-SD528-0006	025	13	06/15/10 08:30:16	24.61	6.50	7.94	35457	22.34
GI-SD530-0006	026	13	06/15/10 08:30:45	24.63	6.81	8.03	35775	22.56
GI-SD521-0006	027	13	06/15/10 08:31:24	24.70	6.58	7.86	35289	22.22
GI-SD512-0006	028	13	06/15/10 08:32:12	24.89	6.30	7.74	35305	22.23
GI-SD513-0006	029	13	06/15/10 08:32:44	24.87	6.65	7.86	35540	22.39
GI-SD517-0006	030	13	06/15/10 08:34:09	24.80	6.36	7.95	35528	22.38
GI-SD520-0006	031	13	06/15/10 08:34:37	24.91	6.66	7.93	35340	22.25
GI-SD523-0006	032	13	06/15/10 08:35:38	24.99	6.48	7.84	35298	22.22
GI-SD522-0006	033	13	06/15/10 08:36:45	25.03	6.12	8.05	35335	22.25
Laboratory Control	000	14	06/16/10 08:20:37	24.74	6.76	7.68	33140	20.73
GI-SD509-0006	001	14	06/16/10 08:21:57	24.93	6.56	7.90	33067	20.68
GI-SD511-0006	002	14	06/16/10 08:22:24	24.97	6.61	7.97	32894	20.56
GI-SD527-0006	003	14	06/16/10 08:22:57	25.05	7.00	7.95	32803	20.49
GI-SD566-0006	004	14	06/16/10 08:23:48	25.06	6.47	7.94	32170	20.06
GI-SD514-0006	005	14	06/16/10 08:24:13	24.95	6.69	8.06	31807	19.81
GI-SD515-0006	006	14	06/16/10 08:24:46	24.93	6.61	8.03	32411	20.22
GI-SD503-0006	007	14	06/16/10 08:25:29	24.84	6.49	8.03	32424	20.23
GI-SD510-0006	008	14	06/16/10 08:25:56	24.76	6.67	7.90	32647	20.39
GI-SD501-0006	009	14	06/16/10 08:26:31	24.75	6.57	8.07	32343	20.18
GI-SD507-0006	010	14	06/16/10 08:27:08	24.73	6.58	7.99	31712	19.75
GI-SD504-0006	011	14	06/16/10 08:27:32	24.66	6.73	8.06	32394	20.22
GI-SD-DUP01-043010	012	14	06/16/10 08:28:58	24.60	6.53	8.01	32414	20.23
GI-SD532-0006	013	14	06/16/10 08:29:28	24.71	6.77	8.04	32734	20.45
GI-SD518-0006	014	14	06/16/10 08:30:02	24.85	6.64	7.77	32470	20.27
GI-SD526-0006	015	14	06/16/10 08:30:54	24.43	6.53	7.90	31910	19.89
GI-SD525-0006	016	14	06/16/10 08:31:29	24.24	6.69	8.08	32804	20.51
GI-SD524-0006	017	14	06/16/10 08:31:54	24.28	6.79	7.97	32518	20.31
GI-SD502-0006	018	14	06/16/10 08:32:37	24.40	6.69	8.04	32737	20.46
GI-SD508-0006	019	14	06/16/10 08:33:03	24.40	6.75	8.02	33140	20.74
GI-SD529-0006	020	14	06/16/10 08:33:36	24.41	6.75	8.08	32461	20.27
GI-SD506-0006	021	14	06/16/10 08:33:59	24.32	6.90	8.02	32825	20.52
GI-SD519-0006	022	14	06/16/10 08:34:35	24.42	6.67	7.99	32672	20.41
GI-SD505-0006	023	14	06/16/10 08:34:56	24.36	6.75	7.95	33030	20.66
GI-SD531-0006	024	14	06/16/10 08:35:33	24.37	6.66	7.97	33128	20.73
GI-SD528-0006	025	14	06/16/10 08:36:22	24.64	6.61	7.96	32606	20.36
GI-SD530-0006	026	14	06/16/10 08:36:56	24.68	6.59	8.09	33174	20.75
GI-SD521-0006	027	14	06/16/10 08:37:32	24.78	6.61	7.90	32523	20.30
GI-SD512-0006	028	14	06/16/10 08:38:13	24.96	6.58	7.84	32402	20.22
GI-SD513-0006	029	14	06/16/10 08:38:33	24.94	6.64	7.88	32928	20.58
GI-SD517-0006	030	14	06/16/10 08:39:09	24.87	6.47	8.00	32732	20.45
GI-SD520-0006	031	14	06/16/10 08:39:50	24.96	6.63	7.97	32403	20.22
GI-SD523-0006	032	14	06/16/10 08:40:33	25.04	6.53	7.88	32659	20.39
GI-SD522-0006	033	14	06/16/10 08:41:32	25.07	6.54	8.07	33578	21.03
Laboratory Control	000	15	06/17/10 08:09:03	25.02	6.16	7.55	31565	19.64
GI-SD509-0006	001	15	06/17/10 08:10:18	25.15	6.28	7.79	31829	19.82
GI-SD511-0006	002	15	06/17/10 08:11:02	25.22	6.43	7.91	31535	19.62

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD527-0006	003	15	06/17/10 08:11:55	25.26	6.37	7.86	31655	19.70
GI-SD566-0006	004	15	06/17/10 08:12:44	25.28	6.35	7.86	31073	19.30
GI-SD514-0006	005	15	06/17/10 08:13:13	25.23	6.51	7.94	30257	18.74
GI-SD515-0006	006	15	06/17/10 08:13:47	25.22	6.57	7.99	30935	19.21
GI-SD503-0006	007	15	06/17/10 08:14:27	25.13	6.61	7.99	30965	19.23
GI-SD510-0006	008	15	06/17/10 08:15:17	25.11	6.72	7.83	31440	19.55
GI-SD501-0006	009	15	06/17/10 08:16:06	25.11	6.59	8.02	30838	19.14
GI-SD507-0006	010	15	06/17/10 08:17:00	25.06	6.75	7.95	29911	18.51
GI-SD504-0006	011	15	06/17/10 08:17:22	25.01	6.81	7.98	30784	19.11
GI-SD-DUP01-043010	012	15	06/17/10 08:18:05	25.00	6.66	7.91	30799	19.12
GI-SD532-0006	013	15	06/17/10 08:18:54	25.02	6.73	7.97	31353	19.50
GI-SD518-0006	014	15	06/17/10 08:19:47	25.21	6.47	7.71	30913	19.19
GI-SD526-0006	015	15	06/17/10 08:20:34	24.77	6.79	7.80	30245	18.74
GI-SD525-0006	016	15	06/17/10 08:21:23	24.63	6.83	8.06	31346	19.50
GI-SD524-0006	017	15	06/17/10 08:21:53	24.61	6.89	7.89	30942	19.22
GI-SD502-0006	018	15	06/17/10 08:22:36	24.61	6.69	7.98	31359	19.51
GI-SD508-0006	019	15	06/17/10 08:23:17	24.72	6.81	7.95	31684	19.73
GI-SD529-0006	020	15	06/17/10 08:26:39	24.71	4.27	7.88	30877	19.18
GI-SD506-0006	021	15	06/17/10 08:27:12	24.71	4.83	7.92	31343	19.49
GI-SD519-0006	022	15	06/17/10 08:28:04	24.74	4.44	7.80	31173	19.38
GI-SD505-0006	023	15	06/17/10 08:28:37	24.57	4.76	7.79	31570	19.65
GI-SD531-0006	024	15	06/17/10 08:29:00	24.59	4.65	7.67	31514	19.61
GI-SD528-0006	025	15	06/17/10 08:29:54	24.82	4.36	7.78	31199	19.39
GI-SD530-0006	026	15	06/17/10 08:30:45	24.87	4.79	7.91	31665	19.71
GI-SD521-0006	027	15	06/17/10 08:31:30	24.94	4.76	7.63	31183	19.38
GI-SD512-0006	028	15	06/17/10 08:32:11	25.03	6.36	7.74	31221	19.41
GI-SD513-0006	029	15	06/17/10 08:33:03	25.04	4.44	7.53	31530	19.62
GI-SD517-0006	030	15	06/17/10 08:33:42	24.96	6.47	7.99	31541	19.63
GI-SD520-0006	031	15	06/17/10 08:34:29	25.00	4.76	7.61	30960	19.23
GI-SD523-0006	032	15	06/17/10 08:36:11	25.06	4.47	7.56	31293	19.45
GI-SD522-0006	033	15	06/17/10 08:36:48	25.01	5.21	7.73	31982	19.93
Laboratory Control	000	16	06/18/10 08:13:16	25.04	6.37	7.70	32191	20.07
GI-SD509-0006	001	16	06/18/10 08:14:34	25.13	6.41	7.90	32149	20.04
GI-SD511-0006	002	16	06/18/10 08:14:57	25.19	6.57	7.98	31923	19.88
GI-SD527-0006	003	16	06/18/10 08:15:40	25.24	6.56	7.96	31730	19.75
GI-SD566-0006	004	16	06/18/10 08:16:36	25.28	6.49	7.96	31433	19.55
GI-SD514-0006	005	16	06/18/10 08:17:04	25.19	6.64	8.10	30714	19.06
GI-SD515-0006	006	16	06/18/10 08:17:42	25.19	6.46	8.09	31166	19.36
GI-SD503-0006	007	16	06/18/10 08:18:08	25.10	6.66	8.07	31325	19.48
GI-SD510-0006	008	16	06/18/10 08:18:33	25.07	6.78	7.95	31402	19.53
GI-SD501-0006	009	16	06/18/10 08:19:54	25.11	6.37	8.12	31087	19.31
GI-SD507-0006	010	16	06/18/10 08:20:53	25.05	6.48	8.05	31896	19.87
GI-SD504-0006	011	16	06/18/10 08:21:33	25.01	6.54	8.08	32284	20.14
GI-SD-DUP01-043010	012	16	06/18/10 08:22:11	24.97	6.55	8.01	32053	19.98
GI-SD532-0006	013	16	06/18/10 08:22:43	25.02	6.95	8.07	32428	20.23
GI-SD518-0006	014	16	06/18/10 08:23:12	25.19	6.61	7.82	32249	20.11
GI-SD526-0006	015	16	06/18/10 08:25:13	24.72	6.45	7.93	30852	19.16
GI-SD525-0006	016	16	06/18/10 08:25:46	24.64	6.70	8.16	31742	19.77
GI-SD524-0006	017	16	06/18/10 08:26:44	24.62	6.63	7.96	31314	19.48
GI-SD502-0006	018	16	06/18/10 08:27:26	24.61	6.63	8.07	31648	19.71
GI-SD508-0006	019	16	06/18/10 08:28:14	24.70	6.63	8.03	31955	19.91
GI-SD529-0006	020	16	06/18/10 08:28:36	24.76	6.73	8.11	31219	19.41
GI-SD506-0006	021	16	06/18/10 08:29:00	24.76	6.82	8.05	31553	19.64

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD519-0006	022	16	06/18/10 08:29:39	24.80	6.73	8.02	31486	19.59
GI-SD505-0006	023	16	06/18/10 08:30:28	24.60	6.47	8.00	31908	19.88
GI-SD531-0006	024	16	06/18/10 08:31:21	24.66	6.57	7.99	31827	19.83
GI-SD528-0006	025	16	06/18/10 08:32:18	24.87	6.60	7.98	31856	19.84
GI-SD530-0006	026	16	06/18/10 08:33:02	24.89	6.65	8.16	32129	20.03
GI-SD521-0006	027	16	06/18/10 08:33:47	24.93	6.48	7.93	31718	19.75
GI-SD512-0006	028	16	06/18/10 08:34:42	24.99	6.63	7.91	31959	19.91
GI-SD513-0006	029	16	06/18/10 08:35:09	25.04	6.57	7.90	31967	19.92
GI-SD517-0006	030	16	06/18/10 08:35:38	24.96	6.58	8.01	31960	19.91
GI-SD520-0006	031	16	06/18/10 08:36:22	25.04	6.47	7.90	31552	19.63
GI-SD523-0006	032	16	06/18/10 08:37:17	25.08	6.26	7.89	31804	19.80
GI-SD522-0006	033	16	06/18/10 08:38:06	25.06	6.54	8.12	32443	20.24
Laboratory Control	000	17	06/19/10 08:50:38	24.85	6.36	7.50	32432	20.24
GI-SD509-0006	001	17	06/19/10 08:51:37	24.97	6.32	7.67	32373	20.20
GI-SD511-0006	002	17	06/19/10 08:52:11	24.98	6.41	7.80	32370	20.19
GI-SD527-0006	003	17	06/19/10 08:52:55	25.01	6.30	7.75	32162	20.05
GI-SD566-0006	004	17	06/19/10 08:53:31	25.04	6.29	7.79	31941	19.90
GI-SD514-0006	005	17	06/19/10 08:54:04	24.97	6.62	7.85	31392	19.52
GI-SD515-0006	006	17	06/19/10 08:54:44	24.94	6.58	7.93	31735	19.76
GI-SD503-0006	007	17	06/19/10 08:55:17	24.82	6.68	7.93	31800	19.81
GI-SD510-0006	008	17	06/19/10 08:55:43	24.83	6.85	7.75	31755	19.77
GI-SD501-0006	009	17	06/19/10 08:56:12	24.89	6.73	7.87	31694	19.73
GI-SD507-0006	010	17	06/19/10 08:56:36	24.85	6.89	7.85	32247	20.11
GI-SD504-0006	011	17	06/19/10 08:57:02	24.80	6.92	7.88	32477	20.27
GI-SD-DUP01-043010	012	17	06/19/10 08:57:28	24.76	6.93	7.84	32360	20.19
GI-SD532-0006	013	17	06/19/10 08:57:51	24.80	6.90	7.85	32636	20.38
GI-SD518-0006	014	17	06/19/10 08:58:13	24.93	6.95	7.72	32575	20.34
GI-SD526-0006	015	17	06/19/10 08:58:33	24.58	7.07	7.71	31529	19.62
GI-SD525-0006	016	17	06/19/10 08:59:03	24.40	7.12	7.96	32125	20.04
GI-SD524-0006	017	17	06/19/10 08:59:34	24.38	6.96	7.68	31754	19.78
GI-SD502-0006	018	17	06/19/10 08:59:57	24.39	7.05	7.85	32044	19.98
GI-SD508-0006	019	17	06/19/10 09:00:16	24.47	7.08	7.85	32360	20.20
GI-SD529-0006	020	17	06/19/10 09:00:42	24.54	7.05	7.84	31841	19.84
GI-SD506-0006	021	17	06/19/10 09:01:04	24.54	7.08	7.83	32114	20.03
GI-SD519-0006	022	17	06/19/10 09:01:27	24.55	7.06	7.81	32093	20.01
GI-SD505-0006	023	17	06/19/10 09:01:56	24.32	7.11	7.80	32494	20.29
GI-SD531-0006	024	17	06/19/10 09:02:18	24.39	7.03	7.75	32450	20.26
GI-SD528-0006	025	17	06/19/10 09:02:51	24.60	6.94	7.78	32328	20.17
GI-SD530-0006	026	17	06/19/10 09:03:19	24.64	6.97	7.93	32548	20.32
GI-SD521-0006	027	17	06/19/10 09:03:50	24.65	6.98	7.72	32180	20.07
GI-SD512-0006	028	17	06/19/10 09:04:35	24.78	6.85	7.70	32464	20.26
GI-SD513-0006	029	17	06/19/10 09:05:00	24.79	6.95	7.74	32353	20.19
GI-SD517-0006	030	17	06/19/10 09:05:26	24.69	6.98	7.77	32362	20.19
GI-SD520-0006	031	17	06/19/10 09:05:55	24.84	6.80	7.71	32107	20.02
GI-SD523-0006	032	17	06/19/10 09:06:26	24.91	6.93	7.76	32272	20.13
GI-SD522-0006	033	17	06/19/10 09:07:00	24.91	7.12	7.93	32805	20.50
Laboratory Control	000	18	06/20/10 12:43:42	25.45	6.72	7.74	33574	21.02
GI-SD509-0006	001	18	06/20/10 12:45:10	25.43	6.87	7.98	33241	20.79
GI-SD511-0006	002	18	06/20/10 12:45:39	25.40	6.83	8.09	33430	20.92
GI-SD527-0006	003	18	06/20/10 12:46:11	25.36	6.91	8.08	33167	20.74
GI-SD566-0006	004	18	06/20/10 12:46:33	25.40	6.95	8.08	32970	20.60
GI-SD514-0006	005	18	06/20/10 12:47:00	25.38	7.01	8.23	33023	20.64

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD515-0006	006	18	06/20/10 12:47:38	25.35	6.96	8.19	33390	20.89
GI-SD503-0006	007	18	06/20/10 12:48:04	25.31	6.97	8.20	33408	20.90
GI-SD510-0006	008	18	06/20/10 12:48:40	25.33	7.10	8.06	33101	20.69
GI-SD501-0006	009	18	06/20/10 12:49:12	25.32	6.99	8.15	33400	20.90
GI-SD507-0006	010	18	06/20/10 12:49:32	25.29	6.95	8.16	33400	20.90
GI-SD504-0006	011	18	06/20/10 12:49:56	25.23	7.01	8.19	33417	20.91
GI-SD-DUP01-043010	012	18	06/20/10 12:50:23	25.22	6.86	8.16	33316	20.84
GI-SD532-0006	013	18	06/20/10 12:50:47	25.27	6.82	8.10	32869	20.53
GI-SD518-0006	014	18	06/20/10 12:51:23	25.35	6.79	7.83	33561	21.01
GI-SD526-0006	015	18	06/20/10 12:51:58	25.01	7.17	8.09	33034	20.65
GI-SD525-0006	016	18	06/20/10 12:52:29	24.90	6.98	8.24	33380	20.89
GI-SD524-0006	017	18	06/20/10 12:52:53	24.93	7.11	8.07	33073	20.68
GI-SD502-0006	018	18	06/20/10 12:53:12	24.93	7.06	8.14	33337	20.86
GI-SD508-0006	019	18	06/20/10 12:53:42	24.96	6.88	8.10	33398	20.90
GI-SD529-0006	020	18	06/20/10 12:54:09	24.96	7.00	8.20	33297	20.83
GI-SD506-0006	021	18	06/20/10 12:54:33	24.95	7.03	8.17	33505	20.98
GI-SD519-0006	022	18	06/20/10 12:54:56	24.96	7.08	8.14	33638	21.07
GI-SD505-0006	023	18	06/20/10 12:55:12	24.84	7.10	8.11	34056	21.36
GI-SD531-0006	024	18	06/20/10 12:55:47	24.91	6.81	8.00	33842	21.21
GI-SD528-0006	025	18	06/20/10 12:56:03	25.01	6.91	8.04	33579	21.03
GI-SD530-0006	026	18	06/20/10 12:56:26	25.07	7.05	8.28	33652	21.08
GI-SD521-0006	027	18	06/20/10 12:56:54	25.08	7.16	8.09	33318	20.85
GI-SD512-0006	028	18	06/20/10 12:57:20	25.10	6.84	7.93	33718	21.12
GI-SD513-0006	029	18	06/20/10 12:57:43	25.08	6.95	7.95	33464	20.95
GI-SD517-0006	030	18	06/20/10 12:58:07	25.01	6.71	7.95	33411	20.91
GI-SD520-0006	031	18	06/20/10 12:58:25	25.08	6.71	7.95	33204	20.77
GI-SD523-0006	032	18	06/20/10 12:58:40	25.11	6.84	7.95	33331	20.85
GI-SD522-0006	033	18	06/20/10 12:59:07	25.07	6.88	8.13	33538	21.00
Laboratory Control	000	19	06/21/10 09:17:55	25.10	6.99	7.66	29483	18.22
GI-SD509-0006	001	19	06/21/10 09:19:22	25.15	6.44	7.82	29021	17.90
GI-SD511-0006	002	19	06/21/10 09:19:47	25.09	6.83	7.95	29347	18.13
GI-SD527-0006	003	19	06/21/10 09:20:14	25.08	6.94	7.94	29275	18.08
GI-SD566-0006	004	19	06/21/10 09:20:36	25.07	6.99	7.96	29092	17.95
GI-SD514-0006	005	19	06/21/10 09:20:56	25.02	7.05	8.09	29246	18.06
GI-SD515-0006	006	19	06/21/10 09:21:16	25.03	7.13	8.10	29393	18.16
GI-SD503-0006	007	19	06/21/10 09:21:38	24.98	7.19	8.11	29131	17.98
GI-SD510-0006	008	19	06/21/10 09:22:01	25.00	7.22	7.95	29223	18.04
GI-SD501-0006	009	19	06/21/10 09:22:22	25.05	7.19	8.05	29097	17.96
GI-SD507-0006	010	19	06/21/10 09:23:07	25.00	7.09	8.08	29656	18.34
GI-SD504-0006	011	19	06/21/10 09:23:32	24.93	7.15	8.09	29388	18.16
GI-SD-DUP01-043010	012	19	06/21/10 09:24:02	24.92	7.14	8.08	29436	18.19
GI-SD532-0006	013	19	06/21/10 09:24:36	24.99	6.90	8.02	29658	18.34
GI-SD518-0006	014	19	06/21/10 09:25:03	25.09	6.98	7.82	29488	18.22
GI-SD526-0006	015	19	06/21/10 09:26:00	24.72	7.24	8.00	29125	17.98
GI-SD525-0006	016	19	06/21/10 09:26:37	24.57	7.15	8.11	29060	17.94
GI-SD524-0006	017	19	06/21/10 09:27:27	24.57	7.28	7.95	28881	17.82
GI-SD502-0006	018	19	06/21/10 09:28:16	24.57	7.10	8.06	29149	18.00
GI-SD508-0006	019	19	06/21/10 09:28:58	24.62	7.18	8.04	29481	18.23
GI-SD529-0006	020	19	06/21/10 09:29:38	24.66	7.08	8.11	29651	18.34
GI-SD506-0006	021	19	06/21/10 09:30:16	24.67	7.19	8.08	29509	18.24
GI-SD519-0006	022	19	06/21/10 09:31:10	24.70	6.73	8.08	29567	18.28
GI-SD505-0006	023	19	06/21/10 09:31:39	24.53	7.00	8.03	29898	18.51
GI-SD531-0006	024	19	06/21/10 09:32:05	24.59	6.89	7.93	29755	18.41

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD528-0006	025	19	06/21/10 09:32:30	24.76	7.03	7.98	30348	18.81
GI-SD530-0006	026	19	06/21/10 09:33:10	24.81	6.87	8.23	30258	18.75
GI-SD521-0006	027	19	06/21/10 09:33:38	24.79	7.11	7.96	30053	18.61
GI-SD512-0006	028	19	06/21/10 09:34:13	24.83	6.83	7.91	30417	18.86
GI-SD513-0006	029	19	06/21/10 09:34:40	24.86	7.05	7.94	30192	18.71
GI-SD517-0006	030	19	06/21/10 09:35:06	24.72	6.94	7.92	30109	18.65
GI-SD520-0006	031	19	06/21/10 09:35:45	24.85	6.89	7.90	29923	18.52
GI-SD523-0006	032	19	06/21/10 09:36:12	24.89	7.06	7.90	30060	18.62
GI-SD522-0006	033	19	06/21/10 09:36:47	24.81	7.12	8.12	30189	18.70
Laboratory Control	000	20	06/22/10 07:25:20	24.78	6.78	7.46	29381	18.16
GI-SD509-0006	001	20	06/22/10 07:26:51	24.91	6.69	7.58	29033	17.92
GI-SD511-0006	002	20	06/22/10 07:27:23	24.89	6.69	7.73	29241	18.06
GI-SD527-0006	003	20	06/22/10 07:27:42	24.91	6.70	7.69	29193	18.02
GI-SD566-0006	004	20	06/22/10 07:28:04	24.91	6.68	7.71	29030	17.91
GI-SD514-0006	005	20	06/22/10 07:28:25	24.87	6.83	7.82	27951	17.19
GI-SD515-0006	006	20	06/22/10 07:28:42	24.87	6.98	7.84	28472	17.54
GI-SD503-0006	007	20	06/22/10 07:29:13	24.79	6.99	7.82	28060	17.26
GI-SD510-0006	008	20	06/22/10 07:29:28	24.78	6.98	7.71	28437	17.52
GI-SD501-0006	009	20	06/22/10 07:30:00	24.81	6.98	7.80	28106	17.29
GI-SD507-0006	010	20	06/22/10 07:30:15	24.77	7.03	7.80	29001	17.90
GI-SD504-0006	011	20	06/22/10 07:30:37	24.70	7.05	7.79	29092	17.96
GI-SD-DUP01-043010	012	20	06/22/10 07:31:29	24.66	7.05	7.81	29141	17.99
GI-SD532-0006	013	20	06/22/10 07:31:44	24.69	7.01	7.80	29480	18.22
GI-SD518-0006	014	20	06/22/10 07:32:00	24.83	6.91	7.67	29289	18.09
GI-SD526-0006	015	20	06/22/10 07:32:35	24.54	7.09	7.67	30049	18.61
GI-SD525-0006	016	20	06/22/10 07:32:55	24.38	7.02	7.82	30124	18.67
GI-SD524-0006	017	20	06/22/10 07:33:08	24.32	6.97	7.69	29917	18.53
GI-SD502-0006	018	20	06/22/10 07:33:22	24.31	6.99	7.75	30132	18.67
GI-SD508-0006	019	20	06/22/10 07:33:41	24.38	6.97	7.78	30450	18.89
GI-SD529-0006	020	20	06/22/10 07:34:10	24.44	6.78	7.76	29996	18.58
GI-SD506-0006	021	20	06/22/10 07:34:30	24.45	6.88	7.79	29986	18.57
GI-SD519-0006	022	20	06/22/10 07:34:46	24.48	6.98	7.77	30042	18.61
GI-SD505-0006	023	20	06/22/10 07:35:10	24.29	7.02	7.75	30331	18.81
GI-SD531-0006	024	20	06/22/10 07:35:36	24.34	6.81	7.68	30210	18.73
GI-SD528-0006	025	20	06/22/10 07:35:49	24.52	6.78	7.70	30695	19.05
GI-SD530-0006	026	20	06/22/10 07:36:02	24.58	6.88	7.85	30746	19.09
GI-SD521-0006	027	20	06/22/10 07:36:24	24.62	7.01	7.68	30417	18.86
GI-SD512-0006	028	20	06/22/10 07:36:47	24.69	6.92	7.70	30799	19.12
GI-SD513-0006	029	20	06/22/10 07:37:12	24.71	6.91	7.72	30520	18.93
GI-SD517-0006	030	20	06/22/10 07:37:30	24.58	6.83	7.68	30443	18.88
GI-SD520-0006	031	20	06/22/10 07:37:52	24.73	6.76	7.61	30254	18.75
GI-SD523-0006	032	20	06/22/10 07:38:05	24.76	6.80	7.66	30381	18.84
GI-SD522-0006	033	20	06/22/10 07:38:19	24.74	6.89	7.82	30787	19.11
Laboratory Control	000	21	06/23/10 07:15:59	25.23	6.72	7.60	32047	19.97
GI-SD509-0006	001	21	06/23/10 07:17:04	25.35	6.59	7.71	31381	19.51
GI-SD511-0006	002	21	06/23/10 07:17:50	25.31	6.74	7.95	30078	18.62
GI-SD527-0006	003	21	06/23/10 07:18:27	25.31	6.70	7.86	31347	19.49
GI-SD566-0006	004	21	06/23/10 07:18:59	25.30	6.82	7.90	31441	19.55
GI-SD514-0006	005	21	06/23/10 07:19:36	25.21	6.99	8.00	31600	19.66
GI-SD515-0006	006	21	06/23/10 07:20:07	25.19	6.98	8.00	31254	19.43
GI-SD503-0006	007	21	06/23/10 07:20:50	25.10	6.98	8.01	30078	18.62
GI-SD510-0006	008	21	06/23/10 07:21:30	25.07	7.12	7.79	30841	19.15

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD501-0006	009	21	06/23/10 07:21:59	25.13	7.06	7.95	31435	19.55
GI-SD507-0006	010	21	06/23/10 07:22:28	25.07	7.08	7.96	32012	19.95
GI-SD504-0006	011	21	06/23/10 07:23:18	25.02	6.98	7.94	31685	19.72
GI-SD-DUP01-043010	012	21	06/23/10 07:23:59	24.95	7.02	7.97	31436	19.55
GI-SD532-0006	013	21	06/23/10 07:24:34	25.02	6.94	7.95	31541	19.62
GI-SD518-0006	014	21	06/23/10 07:25:18	25.17	6.96	7.77	31581	19.65
GI-SD526-0006	015	21	06/23/10 07:26:17	24.78	7.09	7.81	32352	20.19
GI-SD525-0006	016	21	06/23/10 07:27:00	24.61	7.00	8.04	32261	20.13
GI-SD524-0006	017	21	06/23/10 07:27:43	24.58	7.02	7.80	31987	19.94
GI-SD502-0006	018	21	06/23/10 07:28:41	24.58	6.88	7.89	32111	20.02
GI-SD508-0006	019	21	06/23/10 07:29:12	24.65	7.01	7.90	32388	20.21
GI-SD529-0006	020	21	06/23/10 07:29:49	24.70	6.76	7.90	32058	19.99
GI-SD506-0006	021	21	06/23/10 07:30:33	24.72	7.19	7.97	32015	19.95
GI-SD519-0006	022	21	06/23/10 07:31:11	24.79	7.09	7.96	32248	20.11
GI-SD505-0006	023	21	06/23/10 07:32:02	24.63	7.10	7.94	32505	20.29
GI-SD531-0006	024	21	06/23/10 07:32:53	24.68	6.84	7.85	32393	20.22
GI-SD528-0006	025	21	06/23/10 07:33:30	24.86	7.04	7.84	32666	20.40
GI-SD530-0006	026	21	06/23/10 07:33:58	24.86	7.08	8.03	32801	20.49
GI-SD521-0006	027	21	06/23/10 07:34:30	24.86	7.22	7.82	32475	20.27
GI-SD512-0006	028	21	06/23/10 07:35:03	24.93	7.05	7.81	33056	20.67
GI-SD513-0006	029	21	06/23/10 07:35:23	24.94	7.05	7.82	32628	20.37
GI-SD517-0006	030	21	06/23/10 07:35:50	24.84	6.76	7.82	32607	20.36
GI-SD520-0006	031	21	06/23/10 07:36:15	24.97	6.90	7.77	32297	20.14
GI-SD523-0006	032	21	06/23/10 07:36:41	25.00	7.00	7.82	32465	20.26
GI-SD522-0006	033	21	06/23/10 07:37:15	24.98	7.05	8.01	32308	20.15
Laboratory Control	000	22	06/24/10 07:54:27	25.14	6.92	7.75	32595	20.35
GI-SD509-0006	001	22	06/24/10 07:55:34	25.22	6.83	7.81	31997	19.93
GI-SD511-0006	002	22	06/24/10 07:56:00	25.21	6.89	7.96	31427	19.54
GI-SD527-0006	003	22	06/24/10 07:56:39	25.21	7.05	7.96	32070	19.98
GI-SD566-0006	004	22	06/24/10 07:57:00	25.16	7.03	7.97	31992	19.93
GI-SD514-0006	005	22	06/24/10 07:57:28	25.07	7.06	8.05	31863	19.84
GI-SD515-0006	006	22	06/24/10 07:57:56	25.05	7.09	8.07	31715	19.74
GI-SD503-0006	007	22	06/24/10 07:58:19	24.98	7.13	8.03	31146	19.35
GI-SD510-0006	008	22	06/24/10 07:58:37	24.99	7.22	7.95	31414	19.54
GI-SD501-0006	009	22	06/24/10 07:58:53	25.00	7.24	8.00	31836	19.83
GI-SD507-0006	010	22	06/24/10 07:59:11	25.05	7.15	8.02	32236	20.10
GI-SD504-0006	011	22	06/24/10 07:59:48	24.98	7.08	8.00	31968	19.92
GI-SD-DUP01-043010	012	22	06/24/10 08:00:10	24.94	7.15	8.02	31827	19.82
GI-SD532-0006	013	22	06/24/10 08:00:21	24.99	7.15	8.00	31817	19.81
GI-SD518-0006	014	22	06/24/10 08:00:42	25.11	6.95	7.90	31828	19.82
GI-SD526-0006	015	22	06/24/10 08:01:37	24.45	7.10	7.84	32455	20.26
GI-SD525-0006	016	22	06/24/10 08:02:24	24.38	6.90	8.07	32228	20.11
GI-SD524-0006	017	22	06/24/10 08:02:55	24.48	6.77	7.91	32168	20.06
GI-SD502-0006	018	22	06/24/10 08:03:33	24.50	6.79	7.95	32271	20.13
GI-SD508-0006	019	22	06/24/10 08:04:05	24.58	6.90	8.03	32557	20.33
GI-SD529-0006	020	22	06/24/10 08:04:23	24.62	6.82	8.03	32336	20.18
GI-SD506-0006	021	22	06/24/10 08:04:51	24.64	7.16	8.04	32247	20.12
GI-SD519-0006	022	22	06/24/10 08:05:38	24.70	7.09	8.02	32401	20.22
GI-SD505-0006	023	22	06/24/10 08:06:12	24.60	7.02	8.01	32656	20.40
GI-SD531-0006	024	22	06/24/10 08:06:36	24.69	6.94	7.94	32569	20.34
GI-SD528-0006	025	22	06/24/10 08:06:51	24.78	6.92	7.91	32233	20.10
GI-SD530-0006	026	22	06/24/10 08:07:14	24.80	7.04	8.06	32023	19.96
GI-SD521-0006	027	22	06/24/10 08:07:36	24.83	7.08	7.92	31731	19.76

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD512-0006	028	22	06/24/10 08:08:27	24.86	6.91	7.93	31904	19.88
GI-SD513-0006	029	22	06/24/10 08:08:50	24.77	6.67	7.89	31891	19.87
GI-SD517-0006	030	22	06/24/10 08:09:40	24.86	5.01	7.60	31639	19.69
GI-SD520-0006	031	22	06/24/10 08:10:26	24.31	7.15	8.03	33583	21.04
GI-SD523-0006	032	22	06/24/10 08:11:05	24.85	7.07	7.91	31717	19.75
GI-SD522-0006	033	22	06/24/10 08:11:31	24.86	7.08	8.06	32077	20.00
Laboratory Control	000	23	06/25/10 08:41:48	25.10	6.82	7.85	31845	19.83
GI-SD509-0006	001	23	06/25/10 08:42:39	25.21	6.66	7.91	31554	19.63
GI-SD511-0006	002	23	06/25/10 08:43:20	25.18	6.66	8.04	31122	19.34
GI-SD527-0006	003	23	06/25/10 08:44:17	25.21	7.03	8.09	31587	19.65
GI-SD566-0006	004	23	06/25/10 08:45:04	25.14	6.95	8.12	31472	19.58
GI-SD514-0006	005	23	06/25/10 08:45:41	25.07	7.07	8.21	30875	19.17
GI-SD515-0006	006	23	06/25/10 08:46:05	25.04	6.99	8.19	31075	19.31
GI-SD503-0006	007	23	06/25/10 08:46:37	24.97	6.98	8.11	30725	19.07
GI-SD510-0006	008	23	06/25/10 08:47:11	24.98	7.16	8.05	30979	19.24
GI-SD501-0006	009	23	06/25/10 08:47:46	25.00	7.04	8.15	31037	19.28
GI-SD507-0006	010	23	06/25/10 08:48:07	25.03	7.04	8.14	32079	19.99
GI-SD504-0006	011	23	06/25/10 08:48:44	24.95	7.01	8.11	32049	19.97
GI-SD-DUP01-043010	012	23	06/25/10 08:49:14	24.87	7.11	8.16	31993	19.94
GI-SD532-0006	013	23	06/25/10 08:50:00	24.95	6.87	8.10	32012	19.95
GI-SD518-0006	014	23	06/25/10 08:50:56	25.00	6.77	7.94	32063	19.98
GI-SD526-0006	015	23	06/25/10 08:51:47	24.54	7.04	7.98	31148	19.36
GI-SD525-0006	016	23	06/25/10 08:52:22	24.43	6.96	8.18	31323	19.49
GI-SD524-0006	017	23	06/25/10 08:52:59	24.55	6.96	8.01	31328	19.49
GI-SD502-0006	018	23	06/25/10 08:53:42	24.52	6.77	8.02	31495	19.60
GI-SD508-0006	019	23	06/25/10 08:54:12	24.55	6.93	8.15	31783	19.80
GI-SD529-0006	020	23	06/25/10 08:54:55	24.58	6.67	8.16	31800	19.81
GI-SD506-0006	021	23	06/25/10 08:55:33	24.57	7.00	8.17	31899	19.88
GI-SD519-0006	022	23	06/25/10 08:56:23	24.56	7.09	8.16	31938	19.90
GI-SD505-0006	023	23	06/25/10 08:57:06	24.33	7.04	8.15	32232	20.11
GI-SD531-0006	024	23	06/25/10 08:57:59	24.45	6.81	8.03	32051	19.98
GI-SD528-0006	025	23	06/25/10 08:58:45	24.59	6.93	8.03	31362	19.51
GI-SD530-0006	026	23	06/25/10 08:59:21	24.60	7.06	8.22	31385	19.53
GI-SD521-0006	027	23	06/25/10 08:59:58	24.64	7.10	8.04	31111	19.34
GI-SD512-0006	028	23	06/25/10 09:00:37	24.75	6.80	7.98	31488	19.59
GI-SD513-0006	029	23	06/25/10 09:01:30	24.80	6.85	7.98	31286	19.45
GI-SD517-0006	030	23	06/25/10 09:02:20	24.63	6.56	7.98	31239	19.42
GI-SD520-0006	031	23	06/25/10 09:02:56	24.82	6.88	7.96	31007	19.26
GI-SD523-0006	032	23	06/25/10 09:03:51	24.86	6.87	8.01	30999	19.26
GI-SD522-0006	033	23	06/25/10 09:04:29	24.80	7.00	8.17	31618	19.68
Laboratory Control	000	24	06/26/10 12:19:17	25.15	6.89	7.86	32216	20.09
GI-SD509-0006	001	24	06/26/10 12:20:13	25.18	6.56	7.88	31973	19.92
GI-SD511-0006	002	24	06/26/10 12:20:55	25.13	6.72	8.05	31677	19.72
GI-SD527-0006	003	24	06/26/10 12:21:42	25.12	7.05	8.10	31948	19.90
GI-SD566-0006	004	24	06/26/10 12:22:07	25.11	7.07	8.15	31792	19.80
GI-SD514-0006	005	24	06/26/10 12:22:30	25.09	7.12	8.22	31600	19.66
GI-SD515-0006	006	24	06/26/10 12:22:54	25.08	7.04	8.22	31835	19.83
GI-SD503-0006	007	24	06/26/10 12:23:22	25.07	6.97	8.12	31594	19.66
GI-SD510-0006	008	24	06/26/10 12:24:04	25.10	7.23	8.14	31649	19.70
GI-SD501-0006	009	24	06/26/10 12:24:39	25.09	7.05	8.21	31810	19.81
GI-SD507-0006	010	24	06/26/10 12:25:12	25.10	7.00	8.17	31858	19.84
GI-SD504-0006	011	24	06/26/10 12:25:40	25.04	7.05	8.16	32032	19.96

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD-DUP01-043010	012	24	06/26/10 12:26:07	24.98	7.10	8.20	32021	19.95
GI-SD532-0006	013	24	06/26/10 12:26:48	25.05	6.91	8.13	32080	19.99
GI-SD518-0006	014	24	06/26/10 12:27:15	25.11	6.85	7.95	32123	20.02
GI-SD526-0006	015	24	06/26/10 12:27:49	24.75	7.19	8.11	31790	19.80
GI-SD525-0006	016	24	06/26/10 12:28:20	24.63	7.15	8.27	31978	19.93
GI-SD524-0006	017	24	06/26/10 12:28:52	24.73	7.09	8.10	32000	19.94
GI-SD502-0006	018	24	06/26/10 12:29:31	24.72	6.75	8.04	32051	19.98
GI-SD508-0006	019	24	06/26/10 12:30:03	24.72	7.04	8.24	32347	20.18
GI-SD529-0006	020	24	06/26/10 12:30:47	24.75	6.75	8.23	32002	19.95
GI-SD506-0006	021	24	06/26/10 12:31:28	24.72	7.12	8.24	32141	20.04
GI-SD519-0006	022	24	06/26/10 12:32:01	24.76	7.11	8.25	32202	20.08
GI-SD505-0006	023	24	06/26/10 12:32:30	24.59	7.10	8.20	32642	20.39
GI-SD531-0006	024	24	06/26/10 12:33:05	24.73	7.01	8.11	32384	20.21
GI-SD528-0006	025	24	06/26/10 12:33:33	24.90	7.01	8.11	32060	19.98
GI-SD530-0006	026	24	06/26/10 12:34:00	24.91	7.02	8.25	32071	19.99
GI-SD521-0006	027	24	06/26/10 12:34:25	24.98	7.09	8.12	31925	19.89
GI-SD512-0006	028	24	06/26/10 12:35:18	25.00	6.61	7.95	32017	19.95
GI-SD513-0006	029	24	06/26/10 12:35:38	25.00	6.69	7.98	31759	19.78
GI-SD517-0006	030	24	06/26/10 12:36:28	24.86	6.57	8.01	31893	19.87
GI-SD520-0006	031	24	06/26/10 12:37:03	25.11	6.81	7.98	31578	19.65
GI-SD523-0006	032	24	06/26/10 12:37:35	25.14	6.86	8.03	31530	19.62
GI-SD522-0006	033	24	06/26/10 12:38:11	25.09	6.98	8.26	32077	19.99
Laboratory Control	000	25	06/27/10 15:31:50	25.01	7.37	7.88	31810	19.81
GI-SD509-0006	001	25	06/27/10 15:32:48	25.13	6.69	7.85	31453	19.56
GI-SD511-0006	002	25	06/27/10 15:33:28	25.12	6.96	8.07	31354	19.50
GI-SD527-0006	003	25	06/27/10 15:34:06	25.13	7.14	8.13	31397	19.52
GI-SD566-0006	004	25	06/27/10 15:34:45	25.12	7.25	8.25	31329	19.48
GI-SD514-0006	005	25	06/27/10 15:35:39	25.09	7.41	8.30	30965	19.23
GI-SD515-0006	006	25	06/27/10 15:36:32	25.07	7.11	8.26	31249	19.42
GI-SD503-0006	007	25	06/27/10 15:37:03	25.07	7.14	8.15	31011	19.26
GI-SD510-0006	008	25	06/27/10 15:37:41	25.04	7.38	8.18	31020	19.27
GI-SD501-0006	009	25	06/27/10 15:38:20	25.07	7.21	8.25	31173	19.37
GI-SD507-0006	010	25	06/27/10 15:38:56	25.09	7.19	8.20	31081	19.31
GI-SD504-0006	011	25	06/27/10 15:39:26	25.04	7.21	8.21	31229	19.41
GI-SD-DUP01-043010	012	25	06/27/10 15:39:55	24.98	7.30	8.21	31169	19.37
GI-SD532-0006	013	25	06/27/10 15:40:29	25.04	7.27	8.17	31216	19.40
GI-SD518-0006	014	25	06/27/10 15:41:17	25.10	7.02	7.91	31275	19.44
GI-SD526-0006	015	25	06/27/10 15:42:11	24.76	7.52	8.21	30502	18.92
GI-SD525-0006	016	25	06/27/10 15:42:52	24.66	7.39	8.32	30610	18.99
GI-SD524-0006	017	25	06/27/10 15:43:41	24.77	7.27	8.13	30566	18.96
GI-SD502-0006	018	25	06/27/10 15:44:22	24.81	7.00	8.07	30693	19.05
GI-SD508-0006	019	25	06/27/10 15:45:06	24.84	7.25	8.26	30821	19.14
GI-SD529-0006	020	25	06/27/10 15:45:47	24.85	6.99	8.28	31276	19.45
GI-SD506-0006	021	25	06/27/10 15:46:24	24.83	7.27	8.25	31532	19.62
GI-SD519-0006	022	25	06/27/10 15:46:53	24.79	7.24	8.22	31430	19.55
GI-SD505-0006	023	25	06/27/10 15:47:23	24.65	7.21	8.17	31710	19.75
GI-SD531-0006	024	25	06/27/10 15:47:54	24.71	7.17	8.07	31581	19.66
GI-SD528-0006	025	25	06/27/10 15:48:21	24.83	7.12	8.05	30835	19.15
GI-SD530-0006	026	25	06/27/10 15:48:45	24.85	7.11	8.19	30928	19.21
GI-SD521-0006	027	25	06/27/10 15:49:27	24.90	7.38	8.14	30886	19.18
GI-SD512-0006	028	25	06/27/10 15:51:01	24.99	7.05	7.96	31044	19.28
GI-SD513-0006	029	25	06/27/10 15:52:32	24.99	6.84	7.94	30807	19.12
GI-SD517-0006	030	25	06/27/10 15:53:10	24.89	6.78	7.97	30937	19.21

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD520-0006	031	25	06/27/10 15:53:46	25.08	6.97	7.98	30802	19.12
GI-SD523-0006	032	25	06/27/10 15:54:14	25.14	7.05	8.01	30642	19.01
GI-SD522-0006	033	25	06/27/10 15:54:59	25.08	7.26	8.28	31180	19.38
Laboratory Control	000	26	06/28/10 08:45:57	25.22	7.27	7.94	32791	20.48
GI-SD509-0006	001	26	06/28/10 08:47:36	25.25	6.78	7.85	32501	20.28
GI-SD511-0006	002	26	06/28/10 08:48:48	25.23	6.94	8.05	32389	20.20
GI-SD527-0006	003	26	06/28/10 08:50:42	25.24	7.27	8.09	32383	20.20
GI-SD566-0006	004	26	06/28/10 08:51:44	25.22	7.35	8.16	32262	20.12
GI-SD514-0006	005	26	06/28/10 08:52:07	25.17	7.34	8.20	32464	20.26
GI-SD515-0006	006	26	06/28/10 08:52:44	25.15	7.18	8.14	32626	20.37
GI-SD503-0006	007	26	06/28/10 08:53:46	25.14	7.13	8.08	32444	20.24
GI-SD510-0006	008	26	06/28/10 08:54:29	25.09	7.39	8.04	32452	20.25
GI-SD501-0006	009	26	06/28/10 08:54:59	25.12	7.27	8.17	32550	20.32
GI-SD507-0006	010	26	06/28/10 08:56:21	25.12	7.23	8.15	32127	20.03
GI-SD504-0006	011	26	06/28/10 08:57:09	25.11	7.28	8.14	32260	20.12
GI-SD-DUP01-043010	012	26	06/28/10 08:57:49	25.07	7.35	8.12	32155	20.05
GI-SD532-0006	013	26	06/28/10 08:59:03	25.06	7.28	8.08	32271	20.12
GI-SD518-0006	014	26	06/28/10 08:59:50	25.06	7.19	7.97	32310	20.15
GI-SD526-0006	015	26	06/28/10 09:00:50	24.84	7.43	8.03	32304	20.15
GI-SD525-0006	016	26	06/28/10 09:01:29	24.72	7.33	8.16	32477	20.27
GI-SD524-0006	017	26	06/28/10 09:03:09	24.78	7.29	8.02	32379	20.20
GI-SD502-0006	018	26	06/28/10 09:04:16	24.84	6.85	7.99	32405	20.22
GI-SD508-0006	019	26	06/28/10 09:05:01	24.83	7.17	8.17	32600	20.36
GI-SD529-0006	020	26	06/28/10 09:05:35	24.81	7.05	8.25	32415	20.23
GI-SD506-0006	021	26	06/28/10 09:06:47	24.81	7.37	8.21	32627	20.37
GI-SD519-0006	022	26	06/28/10 09:07:24	24.83	7.42	8.21	32579	20.34
GI-SD505-0006	023	26	06/28/10 09:08:28	24.68	7.32	8.18	32815	20.51
GI-SD531-0006	024	26	06/28/10 09:09:04	24.77	7.27	8.06	32632	20.38
GI-SD528-0006	025	26	06/28/10 09:09:37	24.91	7.23	8.00	32592	20.35
GI-SD530-0006	026	26	06/28/10 09:10:25	24.93	7.09	8.12	32644	20.38
GI-SD521-0006	027	26	06/28/10 09:11:00	24.96	7.29	8.01	32596	20.35
GI-SD512-0006	028	26	06/28/10 09:11:33	24.97	7.02	7.96	32767	20.47
GI-SD513-0006	029	26	06/28/10 09:12:23	25.02	6.94	7.91	32535	20.31
GI-SD517-0006	030	26	06/28/10 09:12:55	24.91	6.81	7.97	32696	20.42
GI-SD520-0006	031	26	06/28/10 09:13:32	25.05	6.99	7.92	32610	20.36
GI-SD523-0006	032	26	06/28/10 09:14:11	25.04	7.10	8.01	32579	20.34
GI-SD522-0006	033	26	06/28/10 09:14:44	25.01	7.09	8.14	32850	20.52
Laboratory Control	000	27	06/29/10 08:40:08	25.49	6.68	7.82	32069	19.98
GI-SD509-0006	001	27	06/29/10 08:41:21	25.47	6.03	7.77	31755	19.76
GI-SD511-0006	002	27	06/29/10 08:41:56	25.45	6.30	7.94	31694	19.72
GI-SD527-0006	003	27	06/29/10 08:42:32	25.44	6.61	7.96	31931	19.88
GI-SD566-0006	004	27	06/29/10 08:43:05	25.40	6.49	8.02	31577	19.64
GI-SD514-0006	005	27	06/29/10 08:43:44	25.34	6.23	8.05	31712	19.74
GI-SD515-0006	006	27	06/29/10 08:44:16	25.33	6.39	8.04	31768	19.78
GI-SD503-0006	007	27	06/29/10 08:44:41	25.29	6.49	8.00	31545	19.62
GI-SD510-0006	008	27	06/29/10 08:45:11	25.24	6.61	7.92	31829	19.82
GI-SD501-0006	009	27	06/29/10 08:45:49	25.28	6.61	8.05	31684	19.72
GI-SD507-0006	010	27	06/29/10 08:46:12	25.30	6.59	8.03	32467	20.26
GI-SD504-0006	011	27	06/29/10 08:46:42	25.31	6.62	8.01	32550	20.31
GI-SD-DUP01-043010	012	27	06/29/10 08:47:11	25.27	6.66	8.01	32503	20.28
GI-SD532-0006	013	27	06/29/10 08:47:55	25.26	6.67	8.01	32618	20.36
GI-SD518-0006	014	27	06/29/10 08:49:02	25.27	6.52	7.89	32625	20.37

Field ID	Sample Number	Day	DateTime M/D/Y	Temp C	DO Conc mg/L	pH SU	SpCond uS/cm	Salinity ppt
GI-SD526-0006	015	27	06/29/10 08:49:54	24.97	6.73	7.91	32558	20.32
GI-SD525-0006	016	27	06/29/10 08:50:21	24.82	6.67	8.01	32681	20.41
GI-SD524-0006	017	27	06/29/10 08:50:55	24.88	6.62	7.91	32706	20.43
GI-SD502-0006	018	27	06/29/10 08:51:27	24.91	6.27	7.93	32694	20.42
GI-SD508-0006	019	27	06/29/10 08:52:11	24.99	6.43	8.05	32895	20.56
GI-SD529-0006	020	27	06/29/10 08:53:00	25.01	6.37	8.11	32754	20.46
GI-SD506-0006	021	27	06/29/10 08:53:49	25.03	6.62	8.08	32846	20.52
GI-SD519-0006	022	27	06/29/10 08:54:27	25.08	6.69	8.09	32825	20.51
GI-SD505-0006	023	27	06/29/10 08:55:46	24.94	6.63	8.04	33123	20.71
GI-SD531-0006	024	27	06/29/10 08:56:53	25.05	6.65	7.98	32986	20.62
GI-SD528-0006	025	27	06/29/10 08:57:34	25.19	6.60	7.93	32848	20.52
GI-SD530-0006	026	27	06/29/10 08:58:44	25.22	6.52	8.04	32789	20.48
GI-SD521-0006	027	27	06/29/10 08:59:25	25.24	6.54	7.94	32625	20.37
GI-SD512-0006	028	27	06/29/10 09:00:10	25.28	6.20	7.90	32841	20.51
GI-SD513-0006	029	27	06/29/10 09:00:29	25.27	6.16	7.87	32607	20.35
GI-SD517-0006	030	27	06/29/10 09:01:02	25.14	6.16	7.92	32774	20.47
GI-SD520-0006	031	27	06/29/10 09:01:33	25.29	6.32	7.88	32590	20.34
GI-SD523-0006	032	27	06/29/10 09:02:05	25.28	6.52	7.97	32704	20.42
GI-SD522-0006	033	27	06/29/10 09:02:40	25.22	6.48	8.03	32776	20.47
Laboratory Control	000	28	06/30/10 07:05:59	24.58	6.67	7.81	32128	20.04
GI-SD509-0006	001	28	06/30/10 07:07:09	24.78	6.10	7.76	31707	19.74
GI-SD511-0006	002	28	06/30/10 07:07:52	24.77	6.44	7.95	31753	19.77
GI-SD527-0006	003	28	06/30/10 07:08:22	24.87	6.78	7.97	31900	19.87
GI-SD566-0006	004	28	06/30/10 07:09:02	24.81	6.75	7.96	31573	19.65
GI-SD514-0006	005	28	06/30/10 07:09:44	24.76	6.71	8.07	31566	19.65
GI-SD515-0006	006	28	06/30/10 07:10:23	24.76	6.44	7.97	31615	19.68
GI-SD503-0006	007	28	06/30/10 07:10:58	24.70	6.91	8.01	31411	19.54
GI-SD510-0006	008	28	06/30/10 07:11:31	24.66	6.92	7.90	31753	19.78
GI-SD501-0006	009	28	06/30/10 07:12:19	24.70	6.72	8.06	31546	19.63
GI-SD507-0006	010	28	06/30/10 07:13:01	24.72	6.80	8.02	31853	19.84
GI-SD504-0006	011	28	06/30/10 07:13:32	24.71	6.75	7.98	31925	19.89
GI-SD-DUP01-043010	012	28	06/30/10 07:13:53	24.67	6.82	7.99	32035	19.97
GI-SD532-0006	013	28	06/30/10 07:14:21	24.67	6.81	7.97	32249	20.12
GI-SD518-0006	014	28	06/30/10 07:14:42	24.68	6.82	7.93	32195	20.08
GI-SD526-0006	015	28	06/30/10 07:15:10	24.47	6.87	7.85	31750	19.78
GI-SD525-0006	016	28	06/30/10 07:15:41	24.28	6.82	7.98	31611	19.69
GI-SD524-0006	017	28	06/30/10 07:16:12	24.34	6.78	7.90	31862	19.86
GI-SD502-0006	018	28	06/30/10 07:16:58	24.37	6.44	7.93	31906	19.89
GI-SD508-0006	019	28	06/30/10 07:17:36	24.41	6.63	8.01	32062	19.99
GI-SD529-0006	020	28	06/30/10 07:18:05	24.45	6.57	8.14	32516	20.30
GI-SD506-0006	021	28	06/30/10 07:18:46	24.46	6.92	8.06	32502	20.29
GI-SD519-0006	022	28	06/30/10 07:19:19	24.46	6.96	8.07	32477	20.28
GI-SD505-0006	023	28	06/30/10 07:20:02	24.26	6.94	8.07	32950	20.61
GI-SD531-0006	024	28	06/30/10 07:20:28	24.40	6.97	7.98	32675	20.41
GI-SD528-0006	025	28	06/30/10 07:20:57	24.63	6.77	7.89	32647	20.39
GI-SD530-0006	026	28	06/30/10 07:21:25	24.67	6.67	8.02	32326	20.17
GI-SD521-0006	027	28	06/30/10 07:22:18	24.76	6.84	7.92	32172	20.06
GI-SD512-0006	028	28	06/30/10 07:22:55	24.76	6.56	7.93	32425	20.24
GI-SD513-0006	029	28	06/30/10 07:23:17	24.77	6.56	7.91	32117	20.02
GI-SD517-0006	030	28	06/30/10 07:23:51	24.59	6.46	7.96	32170	20.06
GI-SD520-0006	031	28	06/30/10 07:24:26	24.87	6.45	7.86	31966	19.92
GI-SD523-0006	032	28	06/30/10 07:25:00	24.87	6.70	7.97	32217	20.09
GI-SD522-0006	033	28	06/30/10 07:25:30	24.79	6.56	7.98	32107	20.02

Leptocheirus plumulosus 28 Day Survival

Study Number: 19685 **Client: Tetra Tech NUS**

ESI SAMPLE ID	REP	# Alive				ESI SAMPLE ID	REP	# Alive			
		total	juvenile	male	female			total	juvenile	male	female
Lab	A	14	119	5	9	006	A	20	146	6	14 / BE3 RAM
	B	21	58	10	11		B	14	54	8	6
	C	19	132	9	10		C	19 RAM	146	12	7
	D	17	97	11	6		D	E3 10	39	5	5
	E	15	90	9	6		E	12	85	4	8
001 (14 in pan)	A	18	89	9	9	007	A	~~14~~ E3 13	44	4	9
	B	15	62	8	7		B	10	59	4	6
	C	11	27	6	5		C	E3 7/11/10 ~~15~~ 17 ~~9~~ 116		7	10
	D	9	110	5	4		D	16	32	9	7
	E	10	44	3	7		E	15	57	12	3
002 (7/11/10 E3 30)	A	16	73	9	7 ~~16~~ E3 RAM	008	A	11	61	5	6
	B	~~12~~ 11	51	8	1		B	16	43	7	9
	C	17	98	9	8		C	E3 7/11/10 ~~15~~ 14	93	9	5
	D	16	37	7	9		D	~~18~~ 19	149	6	~~12~~ 13
	E	~~10~~ 17	~~5~~ 96	5	12		E	17		10	7
003	A	17	23	8	~~9~~ 12 E3	009	A	16	24	12	4
	B	17	86	7	10		B	20	80	7	13
	C	15	68	8	7		C	16	84	7	9
	D	20	89	12	8		D	17	55	9	8
	E	12	90	6	6		E	15	9	8	7
004	A	8	53	3	5	010	A	10	26	3	7
	B	13	93	6	7		B	14	82	6	8
	C	14	61	6	8		C	E3 7/11/10 ~~20~~ 21	167	11	10
	D	10	96	6	4		D	11	86	1	10
	E	8	73	1	7		E	12	112	3	9
005	A	17	182	8	9	011	A	21	168	8	13
	B	18	163	9	9		B	15	89	9	6
	C	17	103	9	8		C	21	170	8	13
	D	12	97	6	6		D	18	43	12	6
	E	E3 ~~8~~ 7	61	3	4		E	20	113	11	9

RECORDED BY:

DATE:

NOTES:

Leptocheirus plumulosus 28 Day Survival

Study Number: 19685 **Client: Tetra Tech NUS**

ESI SAMPLE ID	REP	# Alive			
		total	juvenile	male	female
012	A	6	0	1	5
	B	17	78	6	11
	C	~~17~~ 16	89	8	8
	D	8	11	6	2
	E	7	61	0	7
013	A	~~14~~	177	9	15
	B	20	125	12	8
	C	17	113	11	6
	D	~~21 24~~	146	11	10
	E	11	139	4	7
014	A	16	21	9	7
	B	12	4	3	9
	C	16	67	6	10
	D	20	2	6	14
	E	17	18	6	11
015	A	20	~~8~~ 7	5	15
	B	~~18~~	108	6	12
	C	15	143	7	8
	D	19	44	11	8
	E	11	139	6	5
016	A	20	55	16	4
	B	20	126	12	8
	C	~~15~~	121	8	7
	D	~~21~~ 20	126	~~13~~ 12	9
	E	9	63	1	8
017	A	19	114	7	12
	B	19	129	10	9
	C	17	102	7	10
	D	19	112	10	9
	E	6	22	4	2

ESI SAMPLE ID	REP	# Alive			
		total	juvenile	male	female
018	A	18	74	7	11
	B	18	131	8	10
	C	19	117	8	11
	D	20	118	~~8~~	12
	E	17	219	7	10
019	A	10	33	4	6
	B	18	103	9	9
	C	18	26	13	5
	D	~~14~~ 15	25	4	11
	E	13	54	9	4
020	A	20	151	12	8
	B	18	142	11	7
	C	15	103	9	6
	D	15	116	9	6
	E	21	232	9	12
021	A	21	117	13	8
	B	~~14~~ 16	89	12	4
	C	10	8	7	3
	D	20	197	11	9
	E	8	35	8	1
022	A	15	~~5~~ 9	12	3
	B	11	47	7	4
	C	19	106	15	4
	D	8	12	6	2
	E	10	51*	8	2
023	A	19	93	12	7
	B	15	101	6	9
	C	19	150	10	9
	D	17	94	9	12
	E	15	83	8	7

RECORDED BY:

DATE:

NOTES: ~~*no juveniles recorded~~ (E3) RAM 07/01/10

Leptocheirus plumulosus 28 Day Survival

Study Number: 19685 **Client: Tetra Tech NUS**

ESI SAMPLE ID	REP	# Alive				ESI SAMPLE ID	REP	# Alive			
		total	juvenile	male	female			total	juvenile	male	female
024	A	20	133	13	7	030	A	22	362	9	13
	B	19	113	12	7		B	11	10	9	2
	C	13	125	6	7		C	18	162	11	7
	D	8	64	16	2		D	13	32	7	6
	E	19	63	15	4		E	18	19	13	5
025	A	18	179	11	7	031	A	11	52	8	3
	B	~~18~~ 18 (B)	123	11	7		B	8	5	5	3
	C	17	169	9	8		C (ST 7/1/10)	~~18~~ 16 (B)	79	9	7
	D	8	51	6	~~2~~ 2 (C)		D	10	42	7	3
	E	20	120	13	7		E	5	7	4	1
026	A	17	105	12	5	032	A	16	20	10	6
	B	18	88	14	4		B	20	78	17	3
	C	18	121	12	6		C (A)	~~15~~ 17	~~39~~ 26	10	7
	D	18	247	8	10		D (B)	* 15	39	9	6
	E	13	111	6	7		E	17	111	13	~~8~~ 4 (C)
027	A	~~13~~ 11 (B)	55	9	2	033	A	18	120	13	5
	B	15	87	10	5		B	17	47	10	7
	C	15	89	12	3		C	17	104	10	7
	D	16	69	14	2		D	20	79	14	6
	E	16	115	13	3		E	~~16~~ 15 (B)	63	10	5
028	A	14	67	10	4		A				
	B	15	81	13	2		B				
	C	15	84	12	3		C				
	D	14	87	10	4		D				
	E	16	93	13	3		E				
029	A	20	120	13	7		A				
	B (ST 7/1/10)	~~21~~ 22 (B)	134	14	8		B				
	C	19	126	11	8		C				
	D	16 (JOG 7/11/10)	143	8	8		D				
	E	18	132	8	10		E				
RECORDED BY:											
DATE:											

NOTES: ~~Initial counts were not recorded. Therefore the number of juveniles is unknown.~~ (B) ST 7/1/10 Data found

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test **EnviroSystems, Inc.**

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Sample Code	Sample ID	Sample Date	Receive Date	Sample Age	Client Name	Project
19685-000	12-5060-9435	14 May-10 16:00	14 May-10 16:00	18d 20h	Tetra Tech NUS	Ecological Risk Assessm
19685-015	01-9319-2395	03 May-10 12:05	07 May-10 13:00	30d		
19685-016	17-1774-7631	03 May-10 11:35	07 May-10 13:00	30d 0h		
19685-017	18-8322-4778	03 May-10 11:15	07 May-10 13:00	30d 1h		
19685-001	13-7811-5067	30 Apr-10 09:55	03 May-10 14:15	33d 2h		
19685-002	08-1351-4071	30 Apr-10 14:15	03 May-10 14:15	32d 22h		
19685-003	17-4261-4499	30 Apr-10 08:10	03 May-10 14:15	33d 4h		
19685-004	06-6755-5646	30 Apr-10 14:00	03 May-10 14:15	32d 22h		
19685-005	01-6268-3206	30 Apr-10 13:20	03 May-10 14:15	32d 23h		
19685-006	18-4531-5058	30 Apr-10 13:45	03 May-10 14:15	32d 22h		
19685-007	07-1114-6226	30 Apr-10 10:45	03 May-10 14:15	33d 1h		
19685-008	14-7328-9208	30 Apr-10 11:35	03 May-10 14:15	33d 0h		
19685-009	21-2710-6646	30 Apr-10 10:25	03 May-10 14:15	33d 2h		
19685-010	21-0497-2918	30 Apr-10 08:40	03 May-10 14:15	33d 3h		
19685-011	21-1978-5969	30 Apr-10 08:25	03 May-10 14:15	33d 4h		
19685-012	14-3944-5496	30 Apr-10	03 May-10 14:15	33d 12h		
19685-013	14-6375-2279	03 May-10 08:50	07 May-10 13:00	30d 3h		
19685-014	03-6744-8493	03 May-10 08:30	07 May-10 13:00	30d 4h		
19685-018	21-0820-2163	03 May-10 09:10	07 May-10 13:00	30d 3h		
19685-019	11-9755-0402	03 May-10 09:40	07 May-10 13:00	30d 2h		
19685-020	15-5089-8574	04 May-10 09:10	07 May-10 13:00	29d 3h		
19685-021	13-6453-0405	04 May-10 07:50	07 May-10 13:00	29d 4h		
19685-022	17-9831-1826	04 May-10 08:55	07 May-10 13:00	29d 3h		
19685-023	05-2703-3929	04 May-10 08:05	07 May-10 13:00	29d 4h		
19685-024	08-1853-7556	13 May-10 11:35	14 May-10 11:30	20d 0h		
19685-025	07-9978-8301	13 May-10 11:45	14 May-10 11:30	20d 0h		
19685-026	18-4884-3750	13 May-10 12:40	14 May-10 11:30	19d 23h		
19685-027	15-1783-1227	13 May-10 13:05	14 May-10 11:30	19d 23h		
19685-028	07-2260-7490	13 May-10 11:00	14 May-10 11:30	20d 1h		
19685-029	19-6539-1492	13 May-10 11:10	14 May-10 11:30	20d 1h		
19685-030	14-5171-3063	14 May-10 12:00	14 May-10 11:30	19d 0h		
19685-031	05-5621-0086	13 May-10 13:15	14 May-10 11:30	19d 23h		
19685-032	06-6972-5927	13 May-10 13:45	14 May-10 11:30	19d 22h		
19685-033	12-6820-3025	13 May-10 13:35	14 May-10 11:30	19d 22h		

Sample Code	Material Type	Sample Source	Station Location	Latitude	Longitude
19685-000	Marine Sediment	Gould Island, Rhode Island	Laboratory Control; 19685-000		
19685-015	Marine Sediment	Gould Island, Rhode Island	GI-SD526-0006; 19685-015		
19685-016	Marine Sediment	Gould Island, Rhode Island	GI-SD525-0006; 19685-016		
19685-017	Marine Sediment	Gould Island, Rhode Island	GI-SD524-0006; 19685-017		
19685-001	Marine Sediment	Gould Island, Rhode Island	GI-SD509-0006; 19685-001		
19685-002	Marine Sediment	Gould Island, Rhode Island	GI-SD511-0006; 19685-002		
19685-003	Marine Sediment	Gould Island, Rhode Island	GI-SD527-0006; 19685-003		
19685-004	Marine Sediment	Gould Island, Rhode Island	GI-SD566-0006; 19685-004		
19685-005	Marine Sediment	Gould Island, Rhode Island	GI-SD514-0006; 19685-005		
19685-006	Marine Sediment	Gould Island, Rhode Island	GI-SD515-0006; 19685-006		
19685-007	Marine Sediment	Gould Island, Rhode Island	GI-SD503-0006; 19685-007		
19685-008	Marine Sediment	Gould Island, Rhode Island	GI-SD510-0006; 19685-008		
19685-009	Marine Sediment	Gould Island, Rhode Island	GI-SD501-0006; 19685-009		
19685-010	Marine Sediment	Gould Island, Rhode Island	GI-SD507-0006; 19685-010		

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test **EnviroSystems, Inc.**

Sample Code	Material Type	Sample Source	Station Location	Latitude	Longitude
19685-011	Marine Sediment	Gould Island, Rhode Island	GI-SD504-0006; 19685-011		
19685-012	Marine Sediment	Gould Island, Rhode Island	GI-SD-DUP01-043010; 19685-0		
19685-013	Marine Sediment	Gould Island, Rhode Island	GI-SD532-0006; 19685-013		
19685-014	Marine Sediment	Gould Island, Rhode Island	GI-SD518-0006; 19685-014		
19685-018	Marine Sediment	Gould Island, Rhode Island	GI-SD502-0006; 19685-018		
19685-019	Marine Sediment	Gould Island, Rhode Island	GI-SD508-0006; 19685-019		
19685-020	Marine Sediment	Gould Island, Rhode Island	GI-SD529-0006; 19685-020		
19685-021	Marine Sediment	Gould Island, Rhode Island	GI-SD506-0006; 19685-021		
19685-022	Marine Sediment	Gould Island, Rhode Island	GI-SD519-0006; 19685-022		
19685-023	Marine Sediment	Gould Island, Rhode Island	GI-SD505-0006; 19685-023		
19685-024	Marine Sediment	Gould Island, Rhode Island	GI-SD531-0006; 19685-024		
19685-025	Marine Sediment	Gould Island, Rhode Island	GI-SD528-0006; 19685-025		
19685-026	Marine Sediment	Gould Island, Rhode Island	GI-SD530-0006; 19685-026		
19685-027	Marine Sediment	Gould Island, Rhode Island	GI-SD521-0006; 19685-027		
19685-028	Marine Sediment	Gould Island, Rhode Island	GI-SD512-0006; 19685-028		
19685-029	Marine Sediment	Gould Island, Rhode Island	GI-SD513-0006; 19685-029		
19685-030	Marine Sediment	Gould Island, Rhode Island	GI-SD517-0006; 19685-030		
19685-031	Marine Sediment	Gould Island, Rhode Island	GI-SD520-0006; 19685-031		
19685-032	Marine Sediment	Gould Island, Rhode Island	GI-SD523-0006; 19685-032		
19685-033	Marine Sediment	Gould Island, Rhode Island	GI-SD522-0006; 19685-033		

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.184	1.289	1.072	1.395	0.02574	0.141	11.4%	0.0%
19685-015	5	1.12	0.9686	1.272	0.6225	1.53	0.07409	0.4058	36.23%	9.42%
19685-016	5	1.356	1.069	1.643	0.263	2.067	0.1405	0.7695	56.75%	-9.64%
19685-017	5	1.258	1.058	1.458	0.3565	1.66	0.09778	0.5356	42.57%	-1.72%
19685-001	5	0.6305	0.5157	0.7453	0.3115	1.079	0.05611	0.3073	48.74%	49.01%
19685-002	5	1.164	1.075	1.253	0.8865	1.49	0.04366	0.2391	20.54%	5.86%
19685-003	5	1.028	0.8381	1.217	0.5675	1.857	0.09264	0.5074	49.38%	16.9%
19685-004	5	0.7057	0.5916	0.8198	0.377	0.9935	0.05578	0.3055	43.29%	42.93%
19685-005	5	1.168	0.9477	1.388	0.358	1.802	0.1076	0.5892	50.46%	5.57%
19685-006	5	1.249	1.033	1.466	0.581	2.111	0.106	0.5807	46.48%	-1.04%
19685-007	5	0.7136	0.5986	0.8286	0.423	1.175	0.05623	0.308	43.16%	42.29%
19685-008	5	0.9475	0.8683	1.027	0.7505	1.296	0.0387	0.212	22.37%	23.38%
19685-009	5	0.9653	0.8442	1.086	0.722	1.524	0.05921	0.3243	33.59%	21.94%
19685-010	5	0.7849	0.5349	1.035	0.257	1.909	0.1223	0.6697	85.32%	36.53%
19685-011	5	1.565	1.431	1.7	1.113	1.975	0.06581	0.3604	23.02%	-26.59%
19685-012	5	0.4912	0.3538	0.6286	0.112	1.046	0.06719	0.368	74.92%	60.28%
19685-013	5	1.321	1.227	1.414	0.92	1.521	0.04573	0.2505	18.96%	-6.82%
19685-014	5	0.3916	0.3209	0.4623	0.163	0.649	0.03457	0.1893	48.35%	68.33%
19685-018	5	1.66	1.57	1.75	1.271	1.929	0.04411	0.2416	14.55%	-34.25%
19685-019	5	1.002	0.8748	1.128	0.5555	1.273	0.06193	0.3392	33.87%	19.01%
19685-020	5	1.67	1.57	1.77	1.297	2.015	0.04895	0.2681	16.05%	-35.07%
19685-021	5	0.8188	0.551	1.087	0.2145	1.759	0.131	0.7173	87.59%	33.78%
19685-022	5	1.11	0.9604	1.261	0.734	1.677	0.07339	0.402	36.2%	10.2%
19685-023	5	0.8903	0.7298	1.051	0.643	1.653	0.07846	0.4298	48.27%	28.01%
19685-024	5	0.9862	0.8377	1.135	0.409	1.428	0.07261	0.3977	40.33%	20.25%
19685-025	5	0.9065	0.7744	1.039	0.554	1.406	0.06459	0.3538	39.03%	26.7%
19685-026	5	1.794	1.684	1.904	1.409	2.069	0.05379	0.2946	16.42%	-45.11%
19685-027	5	0.8934	0.8663	0.9205	0.7835	0.974	0.01323	0.07245	8.11%	27.75%
19685-028	5	0.7596	0.7128	0.8064	0.5725	0.8555	0.02288	0.1253	16.5%	38.57%
19685-029	5	1.248	1.191	1.304	1.075	1.454	0.02753	0.1508	12.09%	-0.89%
19685-030	5	1.318	1.148	1.488	0.6415	1.857	0.08299	0.4546	34.48%	-6.6%
19685-031	5	0.7168	0.5332	0.9004	0.2975	1.464	0.08979	0.4918	68.61%	42.04%

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test **EnviroSystems, Inc.**

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-032	5	1.02	0.9178	1.122	0.626	1.263	0.04982	0.2729	26.76%	17.54%
19685-033	5	1.574	1.445	1.702	1.185	2.088	0.06277	0.3438	21.85%	-27.26%

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.414	1.518	1.308	1.641	0.02538	0.139	9.48%	0.0%
19685-015	5	1.402	1.259	1.546	1.071	2.04	0.07018	0.3844	27.41%	4.33%
19685-016	5	1.477	1.249	1.704	0.5844	2.067	0.1114	0.61	41.31%	-0.75%
19685-017	5	1.516	1.431	1.601	1.188	1.747	0.0415	0.2273	14.99%	-3.46%
19685-001	5	0.9895	0.884	1.095	0.623	1.251	0.05155	0.2823	28.54%	32.49%
19685-002	5	1.568	1.372	1.764	1.108	2.403	0.09587	0.5251	33.49%	-6.99%
19685-003	5	1.273	1.07	1.476	0.6676	1.857	0.09928	0.5438	42.71%	13.14%
19685-004	5	1.302	1.146	1.458	0.9425	1.966	0.07632	0.418	32.1%	11.15%
19685-005	5	1.551	1.392	1.711	1.023	2.12	0.07802	0.4273	27.54%	-5.86%
19685-006	5	1.614	1.461	1.766	1.162	2.223	0.07461	0.4086	25.32%	-10.11%
19685-007	5	0.9785	0.8809	1.076	0.74	1.382	0.04773	0.2614	26.72%	33.24%
19685-008	5	1.262	1.139	1.384	0.9381	1.685	0.05984	0.3278	25.98%	13.91%
19685-009	5	1.162	1.003	1.321	0.861	1.906	0.07771	0.4256	36.64%	20.74%
19685-010	5	1.04	0.8317	1.249	0.514	1.909	0.102	0.5587	53.7%	29.02%
19685-011	5	1.675	1.574	1.776	1.237	1.975	0.04935	0.2703	16.14%	-14.28%
19685-012	5	0.8572	0.6846	1.03	0.3733	1.458	0.0844	0.4623	53.93%	41.51%
19685-013	5	1.525	1.445	1.606	1.241	1.79	0.03927	0.2151	14.1%	-4.07%
19685-014	5	0.4803	0.3951	0.5656	0.2717	0.8113	0.04169	0.2283	47.54%	67.23%
19685-018	5	1.799	1.731	1.866	1.495	1.944	0.03317	0.1817	10.1%	-22.72%
19685-019	5	1.374	1.212	1.536	0.7407	1.958	0.07908	0.4331	31.52%	6.25%
19685-020	5	1.898	1.844	1.953	1.729	2.077	0.02662	0.1458	7.68%	-29.51%
19685-021	5	0.9813	0.7655	1.197	0.429	1.759	0.1055	0.5781	58.91%	33.04%
19685-022	5	1.779	1.668	1.889	1.335	2.166	0.0542	0.2968	16.69%	-21.35%
19685-023	5	1.031	0.8797	1.182	0.7565	1.741	0.07378	0.4041	39.21%	29.68%
19685-024	5	1.22	1.154	1.287	1.023	1.503	0.03254	0.1782	14.6%	16.73%
19685-025	5	1.157	1.018	1.297	0.6156	1.562	0.06816	0.3733	32.25%	21.03%
19685-026	5	2.14	2.05	2.23	1.722	2.303	0.04394	0.2407	11.25%	-46.0%
19685-027	5	1.237	1.19	1.283	1.124	1.425	0.02261	0.1238	10.01%	15.63%
19685-028	5	1.029	0.9618	1.095	0.8179	1.221	0.03261	0.1786	17.36%	29.82%
19685-029	5	1.344	1.293	1.394	1.171	1.497	0.02472	0.1354	10.08%	8.31%
19685-030	5	1.624	1.493	1.754	1.166	2.063	0.06374	0.3491	21.5%	-10.78%
19685-031	5	1.344	1.179	1.509	0.791	1.829	0.08062	0.4416	32.87%	8.32%
19685-032	5	1.216	1.076	1.356	0.7825	1.578	0.06832	0.3742	30.77%	17.02%
19685-033	5	1.802	1.697	1.908	1.394	2.088	0.05157	0.2825	15.67%	-22.97%

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test **EnviroSystems, Inc.**

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.94	14.12	5.273	16.17	0.7782	4.262	34.02%	0.0%
19685-015	5	13.13	9.529	16.73	5.467	27.8	1.76	9.64	73.43%	-4.79%
19685-016	5	13.73	12.4	15.07	7.875	17.29	0.6524	3.573	26.02%	-9.61%
19685-017	5	11.5	10.78	12.22	9.5	14.33	0.3519	1.927	16.77%	8.24%
19685-001	5	11.59	8.195	14.98	5.4	27.5	1.658	9.082	78.39%	7.52%
19685-002	5	17.16	10	24.31	4.111	51	3.499	19.16	111.7%	-36.96%
19685-003	5	9.399	7.709	11.09	2.556	15	0.8262	4.526	48.15%	24.98%
19685-004	5	13.19	10.81	15.57	7.625	24	1.162	6.367	48.28%	-5.27%
19685-005	5	16.53	15.48	17.57	12.88	20.22	0.5104	2.796	16.92%	-31.91%
19685-006	5	11.74	9.792	13.69	7.8	20.86	0.9536	5.223	44.48%	6.27%
19685-007	5	9.979	7.776	12.18	4.571	19	1.077	5.899	59.11%	20.35%
19685-008	4	11.5	9.392	13.61	4.778	18.6	1.031	5.648	49.11%	8.19%
19685-009	5	5.93	4.839	7.02	1.286	9.333	0.5331	2.92	49.24%	52.67%
19685-010	5	10.34	8.553	12.13	3.714	16.7	0.8747	4.791	46.33%	17.45%
19685-011	5	12.11	11.03	13.19	7.167	14.83	0.5295	2.9	23.95%	3.33%
19685-012	5	6.486	4.925	8.047	0	11.13	0.7632	4.18	64.45%	48.23%
19685-013	5	14.14	11.83	16.46	4.6	19.86	1.131	6.193	43.79%	-12.89%
19685-014	5	2.385	1.391	3.379	0.1429	6.7	0.4861	2.662	111.6%	80.96%
19685-018	5	12.44	10.29	14.59	6.727	21.9	1.051	5.758	46.29%	0.71%
19685-019	5	7.583	5.831	9.336	2.273	13.5	0.857	4.694	61.9%	39.47%
19685-020	5	19	18.57	19.43	17.17	20.29	0.2092	1.146	6.03%	-51.65%
19685-021	5	19.29	14.87	23.71	2.667	35	2.161	11.84	61.37%	-53.95%
19685-022	5	17.88	14.57	21.19	6	26.5	1.618	8.864	49.56%	-42.75%
19685-023	5	12.17	10.97	13.37	7.833	16.67	0.5864	3.212	26.39%	2.83%
19685-024	5	20.15	17.63	22.67	15.75	32	1.233	6.753	33.51%	-60.84%
19685-025	5	19.88	17.87	21.89	13.63	25.57	0.9829	5.383	27.08%	-58.7%
19685-026	5	20.74	19.54	21.95	15.86	24.7	0.5881	3.221	15.53%	-65.59%
19685-027	5	29.48	26.51	32.45	17.4	38.33	1.453	7.96	27.0%	-135.3%
19685-028	5	27.6	24.21	30.99	16.75	40.5	1.659	9.084	32.91%	-120.3%
19685-029	5	16.14	15.47	16.82	13.2	17.88	0.3315	1.815	11.25%	-28.86%
19685-030	5	13.02	8.723	17.33	3.8	27.85	2.103	11.52	88.44%	-3.96%
19685-031	5	10.26	7.974	12.54	1.667	17.33	1.116	6.114	59.61%	18.13%
19685-032	5	13.46	8.858	18.06	3.333	27.75	2.25	12.32	91.56%	-7.44%
19685-033	5	14.27	11.93	16.6	6.714	24	1.141	6.247	43.79%	-13.89%

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test **EnviroSystems, Inc.**

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8024	0.8976	0.7	1	0.02327	0.1275	15.0%	0.0%
19685-015	5	0.83	0.7619	0.8981	0.55	1	0.03329	0.1823	21.97%	2.35%
19685-016	5	0.84	0.7491	0.9309	0.45	1	0.04444	0.2434	28.98%	1.18%
19685-017	5	0.8	0.6944	0.9056	0.3	0.95	0.05164	0.2828	35.36%	5.88%
19685-001	5	0.63	0.5594	0.7006	0.45	0.9	0.03452	0.1891	30.01%	25.88%
19685-002	5	0.77	0.7231	0.8169	0.55	0.85	0.02291	0.1255	16.3%	9.41%
19685-003	5	0.81	0.7549	0.8651	0.6	1	0.02693	0.1475	18.21%	4.71%
19685-004	5	0.53	0.4779	0.5821	0.4	0.7	0.0255	0.1396	26.35%	37.65%
19685-005	5	0.71	0.623	0.797	0.35	0.9	0.04252	0.2329	32.81%	16.47%
19685-006	5	0.75	0.6686	0.8314	0.5	1	0.03979	0.2179	29.06%	11.76%
19685-007	5	0.71	0.6582	0.7618	0.5	0.85	0.02533	0.1387	19.54%	16.47%
19685-008	5	0.77	0.7131	0.8269	0.55	0.95	0.02784	0.1525	19.8%	9.41%
19685-009	5	0.84	0.8041	0.8759	0.75	1	0.01756	0.09618	11.45%	1.18%
19685-010	5	0.67	0.5958	0.7442	0.5	1	0.03629	0.1987	29.66%	21.18%
19685-011	5	0.93	0.8891	0.9709	0.75	1	0.02	0.1095	11.78%	-9.41%
19685-012	5	0.54	0.4417	0.6383	0.3	0.85	0.04805	0.2632	48.73%	36.47%
19685-013	5	0.88	0.807	0.953	0.55	1	0.03571	0.1956	22.22%	-3.53%
19685-014	5	0.81	0.7565	0.8635	0.6	1	0.02614	0.1432	17.68%	4.71%
19685-018	5	0.92	0.8987	0.9413	0.85	1	0.01041	0.05701	6.2%	-8.24%
19685-019	5	0.74	0.6761	0.8039	0.5	0.9	0.03122	0.171	23.11%	12.94%
19685-020	5	0.88	0.8331	0.9269	0.75	1	0.02291	0.1255	14.26%	-3.53%
19685-021	5	0.74	0.6357	0.8443	0.4	1	0.05099	0.2793	37.74%	12.94%
19685-022	5	0.63	0.548	0.712	0.4	0.95	0.0401	0.2197	34.87%	25.88%
19685-023	5	0.85	0.8127	0.8873	0.75	0.95	0.01826	0.1	11.76%	0.0%
19685-024	5	0.79	0.6935	0.8865	0.4	1	0.04717	0.2584	32.7%	7.06%
19685-025	5	0.81	0.722	0.898	0.4	1	0.04301	0.2356	29.08%	4.71%
19685-026	5	0.84	0.7995	0.8805	0.65	0.9	0.01979	0.1084	12.9%	1.18%
19685-027	5	0.73	0.6913	0.7687	0.55	0.8	0.01893	0.1037	14.2%	14.12%
19685-028	5	0.74	0.7244	0.7556	0.7	0.8	0.007638	0.04183	5.65%	12.94%
19685-029	5	0.93	0.8988	0.9612	0.8	1	0.01528	0.08367	9.0%	-9.41%
19685-030	5	0.8	0.7289	0.8711	0.55	1	0.03476	0.1904	23.8%	5.88%
19685-031	5	0.5	0.4242	0.5758	0.25	0.8	0.03708	0.2031	40.62%	41.18%
19685-032	5	0.85	0.8151	0.8849	0.75	1	0.01708	0.09354	11.0%	0.0%
19685-033	5	0.87	0.8361	0.9039	0.75	1	0.01658	0.09083	10.44%	-2.35%

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test **EnviroSystems, Inc.**

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.184	6.725	2.762	8.357	0.3766	2.062	34.64%	0.0%
19685-015	5	6.917	5.361	8.474	2.316	12.64	0.7611	4.168	60.26%	-16.17%
19685-016	5	6.023	5.278	6.768	2.75	8.067	0.3642	1.995	33.12%	-1.16%
19685-017	5	5.67	5.231	6.109	3.667	6.789	0.2148	1.176	20.75%	4.77%
19685-001	5	5.631	4.212	7.05	2.455	12.22	0.6938	3.8	67.49%	5.43%
19685-002	5	4.585	4.067	5.102	2.313	5.765	0.2531	1.386	30.24%	23.01%
19685-003	5	4.579	3.761	5.397	1.353	7.5	0.3999	2.19	47.83%	23.1%
19685-004	5	7.372	6.586	8.158	4.357	9.6	0.3844	2.105	28.56%	-23.81%
19685-005	5	8.524	7.895	9.153	6.059	10.71	0.3076	1.685	19.76%	-43.15%
19685-006	5	5.965	5.249	6.681	3.857	7.684	0.35	1.917	32.13%	-0.18%
19685-007	5	4.382	3.652	5.111	2	6.824	0.3568	1.954	44.6%	26.41%
19685-008	4	5.816	4.991	6.641	2.688	7.842	0.4035	2.21	38.0%	2.33%
19685-009	5	2.917	2.216	3.618	0.6	5.25	0.3427	1.877	64.35%	51.01%
19685-010	5	6.712	5.737	7.687	2.6	9.333	0.4767	2.611	38.9%	-12.73%
19685-011	5	6.013	5.147	6.88	2.389	8.095	0.4238	2.321	38.6%	-0.99%
19685-012	5	4.048	2.756	5.34	0	8.714	0.6317	3.46	85.48%	32.02%
19685-013	5	7.02	5.626	8.414	2.19	12.64	0.6815	3.732	53.17%	-17.89%
19685-014	5	1.398	0.7871	2.01	0.1	4.188	0.2989	1.637	117.1%	76.51%
19685-018	5	7.266	6.019	8.513	4.111	12.88	0.6096	3.339	45.95%	-22.02%
19685-019	5	3.257	2.592	3.923	1.444	5.722	0.3253	1.782	54.7%	45.29%
19685-020	5	8.217	7.609	8.826	6.867	11.05	0.2975	1.63	19.83%	-38.0%
19685-021	5	5.232	4.023	6.441	0.8	9.85	0.5911	3.238	61.88%	12.14%
19685-022	5	4.077	3.487	4.667	1.5	5.579	0.2887	1.581	38.79%	31.53%
19685-023	5	6.117	5.671	6.564	4.895	7.895	0.2183	1.196	19.55%	-2.73%
19685-024	5	6.706	5.826	7.586	3.316	9.615	0.4302	2.356	35.14%	-12.62%
19685-025	5	7.113	6.512	7.714	6	9.944	0.294	1.61	22.64%	-19.46%
19685-026	5	8.01	6.721	9.299	4.889	13.72	0.6303	3.452	43.1%	-34.52%
19685-027	5	5.647	5.243	6.05	4.313	7.188	0.1974	1.081	19.15%	5.17%
19685-028	5	5.563	5.365	5.76	4.786	6.214	0.09655	0.5288	9.51%	6.58%
19685-029	5	6.999	6.548	7.449	6	8.938	0.2204	1.207	17.25%	-17.54%
19685-030	5	5.976	3.463	8.489	0.9091	16.45	1.229	6.73	112.6%	-0.36%
19685-031	5	3.178	2.426	3.93	0.625	4.938	0.3676	2.014	63.36%	46.63%
19685-032	5	3.162	2.358	3.965	1.25	6.529	0.3929	2.152	68.06%	46.9%
19685-033	5	4.74	4.137	5.343	2.765	6.667	0.2948	1.615	34.06%	20.4%

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test **EnviroSystems, Inc.**

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.072
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-016	2.067	1.879	0.847	1.722	0.263
19685-017	1.66	1.611	1.194	1.468	0.3565
19685-001	1.079	0.7835	0.415	0.563	0.3115
19685-002	1.068	1.321	1.49	0.8865	1.056
19685-003	0.9195	0.5675	0.6925	1.857	1.101
19685-004	0.3905	0.7845	0.9935	0.983	0.377
19685-005	1.802	1.389	1.52	0.77	0.358
19685-006	1.412	1.258	2.111	0.581	0.8855
19685-007	0.539	0.423	1.175	0.876	0.555
19685-008	0.927	0.7505	0.8085	0.956	1.296
19685-009	1.524	0.861	0.7715	0.9475	0.722
19685-010	0.257	0.863	1.909	0.3495	0.5465
19685-011	1.698	1.27	1.975	1.113	1.772
19685-012	0.112	1.046	0.509	0.583	0.206
19685-013	1.241	1.415	1.521	1.508	0.92
19685-014	0.649	0.163	0.4965	0.3745	0.275
19685-018	1.75	1.653	1.7	1.929	1.271
19685-019	0.7185	1.192	1.269	0.5555	1.273
19685-020	1.799	1.683	1.558	1.297	2.015
19685-021	1.416	0.442	0.2145	1.759	0.2625
19685-022	1.386	0.734	1.677	0.8665	0.8895
19685-023	0.7735	0.721	1.653	0.643	0.6605
19685-024	1.229	1.074	0.7915	0.409	1.428
19685-025	1.406	0.554	0.984	0.5755	1.013
19685-026	1.957	2.069	1.986	1.55	1.409
19685-027	0.7835	0.8725	0.974	0.8995	0.9375
19685-028	0.8545	0.827	0.8555	0.5725	0.6885
19685-029	1.454	1.171	1.19	1.075	1.347
19685-030	1.395	0.6415	1.857	1.161	1.538
19685-031	0.9695	0.458	1.464	0.3955	0.2975
19685-032	0.626	0.8445	1.263	1.183	1.182
19685-033	1.709	1.394	1.185	2.088	1.492

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test **EnviroSystems, Inc.**

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-015	1.368	1.071	2.04	1.401	1.132
19685-016	2.067	1.879	1.129	1.722	0.5844
19685-017	1.747	1.696	1.405	1.545	1.188
19685-001	1.199	1.119	0.7545	1.251	0.623
19685-002	1.334	2.403	1.752	1.108	1.242
19685-003	1.082	0.6676	0.9233	1.857	1.835
19685-004	0.9762	1.207	1.419	1.966	0.9425
19685-005	2.12	1.543	1.788	1.283	1.023
19685-006	1.412	1.796	2.223	1.162	1.476
19685-007	0.8292	0.846	1.382	1.095	0.74
19685-008	1.685	0.9381	1.155	1.006	1.524
19685-009	1.906	0.861	0.9644	1.115	0.9627
19685-010	0.514	1.233	1.909	0.6355	0.9108
19685-011	1.698	1.693	1.975	1.237	1.772
19685-012	0.3733	1.231	0.6362	1.458	0.5886
19685-013	1.241	1.415	1.79	1.508	1.673
19685-014	0.8113	0.2717	0.6206	0.3745	0.3235
19685-018	1.944	1.836	1.789	1.929	1.495
19685-019	1.437	1.324	1.409	0.7407	1.958
19685-020	1.799	1.87	2.077	1.729	2.015
19685-021	1.416	0.5525	0.429	1.759	0.75
19685-022	1.848	1.335	1.765	2.166	1.779
19685-023	0.8142	0.9613	1.741	0.7565	0.8807
19685-024	1.229	1.13	1.218	1.023	1.503
19685-025	1.562	0.6156	1.158	1.439	1.013
19685-026	2.303	2.299	2.207	1.722	2.168
19685-027	1.425	1.163	1.299	1.124	1.172
19685-028	1.221	1.103	1.141	0.8179	0.8606
19685-029	1.454	1.171	1.253	1.344	1.497
19685-030	1.395	1.166	2.063	1.785	1.708
19685-031	1.763	1.145	1.829	0.791	1.19
19685-032	0.7825	0.8445	1.486	1.578	1.39
19685-033	1.899	1.64	1.394	2.088	1.99

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test **EnviroSystems, Inc.**

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-015	5.467	9	17.88	5.5	27.8
19685-016	13.75	15.75	17.29	14	7.875
19685-017	9.5	14.33	10.2	12.44	11
19685-001	9.889	8.857	5.4	27.5	6.286
19685-002	10.43	51	12.25	4.111	8
19685-003	2.556	8.6	9.714	11.13	15
19685-004	10.6	13.29	7.625	24	10.43
19685-005	20.22	18.11	12.88	16.17	15.25
19685-006	10.43	9	20.86	7.8	10.63
19685-007	4.889	9.833	11.6	4.571	19
19685-008	11.17	4.778	18.6	11.46	
19685-009	6	6.154	9.333	6.875	1.286
19685-010	3.714	10.25	16.7	8.6	12.44
19685-011	12.92	14.83	13.08	7.167	12.56
19685-012	0	7.091	11.13	5.5	8.714
19685-013	11.8	15.63	18.83	4.6	19.86
19685-014	3	0.4444	6.7	0.1429	1.636
19685-018	6.727	13.1	10.64	9.833	21.9
19685-019	5.5	11.44	5.2	2.273	13.5
19685-020	18.88	20.29	17.17	19.33	19.33
19685-021	14.63	22.25	2.667	21.89	35
19685-022	19.67	11.75	26.5	6	25.5
19685-023	13.29	11.22	16.67	7.833	11.86
19685-024	19	16.14	17.86	32	15.75
19685-025	25.57	17.57	13.63	25.5	17.14
19685-026	21	22	20.17	24.7	15.86
19685-027	27.5	17.4	29.67	34.5	38.33
19685-028	16.75	40.5	28	21.75	31
19685-029	17.14	16.75	15.75	17.88	13.2
19685-030	27.85	5	23.14	5.333	3.8
19685-031	17.33	1.667	11.29	14	7
19685-032	3.333	26	3.714	6.5	27.75
19685-033	24	6.714	14.86	13.17	12.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test **EnviroSystems, Inc.**

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-015	1	0.9	0.75	0.95	0.55
19685-016	1	1	0.75	1	0.45
19685-017	0.95	0.95	0.85	0.95	0.3
19685-001	0.9	0.75	0.55	0.45	0.5
19685-002	0.8	0.55	0.85	0.8	0.85
19685-003	0.85	0.85	0.75	1	0.6
19685-004	0.4	0.65	0.7	0.5	0.4
19685-005	0.85	0.9	0.85	0.6	0.35
19685-006	1	0.7	0.95	0.5	0.6
19685-007	0.65	0.5	0.85	0.8	0.75
19685-008	0.55	0.8	0.7	0.95	0.85
19685-009	0.8	1	0.8	0.85	0.75
19685-010	0.5	0.7	1	0.55	0.6
19685-011	1	0.75	1	0.9	1
19685-012	0.3	0.85	0.8	0.4	0.35
19685-013	1	1	0.85	1	0.55
19685-014	0.8	0.6	0.8	1	0.85
19685-018	0.9	0.9	0.95	1	0.85
19685-019	0.5	0.9	0.9	0.75	0.65
19685-020	1	0.9	0.75	0.75	1
19685-021	1	0.8	0.5	1	0.4
19685-022	0.75	0.55	0.95	0.4	0.5
19685-023	0.95	0.75	0.95	0.85	0.75
19685-024	1	0.95	0.65	0.4	0.95
19685-025	0.9	0.9	0.85	0.4	1
19685-026	0.85	0.9	0.9	0.9	0.65
19685-027	0.55	0.75	0.75	0.8	0.8
19685-028	0.7	0.75	0.75	0.7	0.8
19685-029	1	1	0.95	0.8	0.9
19685-030	1	0.55	0.9	0.65	0.9
19685-031	0.55	0.4	0.8	0.5	0.25
19685-032	0.8	1	0.85	0.75	0.85
19685-033	0.9	0.85	0.85	1	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test **EnviroSystems, Inc.**

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-015	4.1	6	9.533	2.316	12.64
19685-016	2.75	6.3	8.067	6	7
19685-017	6	6.789	6	5.895	3.667
19685-001	4.944	4.133	2.455	12.22	4.4
19685-002	4.563	4.636	5.765	2.313	5.647
19685-003	1.353	5.059	4.533	4.45	7.5
19685-004	6.625	7.154	4.357	9.6	9.125
19685-005	10.71	9.056	6.059	8.083	8.714
19685-006	7.3	3.857	7.684	3.9	7.083
19685-007	3.385	5.9	6.824	2	3.8
19685-008	6.091	2.688	6.643	7.842	
19685-009	1.5	4	5.25	3.235	0.6
19685-010	2.6	5.857	7.952	7.818	9.333
19685-011	8	5.933	8.095	2.389	5.65
19685-012	0	4.588	5.563	1.375	8.714
19685-013	7.375	6.25	6.647	2.19	12.64
19685-014	1.313	0.3333	4.188	0.1	1.059
19685-018	4.111	7.278	6.158	5.9	12.88
19685-019	3.3	5.722	1.444	1.667	4.154
19685-020	7.55	7.889	6.867	7.733	11.05
19685-021	5.571	5.563	0.8	9.85	4.375
19685-022	3.933	4.273	5.579	1.5	5.1
19685-023	4.895	6.733	7.895	5.529	5.533
19685-024	6.65	5.947	9.615	8	3.316
19685-025	9.944	6.833	6.412	6.375	6
19685-026	6.176	4.889	6.722	13.72	8.538
19685-027	5	5.8	5.933	4.313	7.188
19685-028	4.786	5.4	5.6	6.214	5.813
19685-029	6	6.091	6.632	8.938	7.333
19685-030	16.45	0.9091	9	2.462	1.056
19685-031	4.727	0.625	4.938	4.2	1.4
19685-032	1.25	3.9	1.529	2.6	6.529
19685-033	6.667	2.765	6.118	3.95	4.2

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-5416-3311	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:54	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					28.9%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-033	-0.3833	1.86	0.3033	0.6443	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.009772527	0.009772527	1	0.1469	0.7115	Non-Significant Effect
Error	0.5320624	0.06650779	8			
Total	0.5418349	0.07628032	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.776	23.15	0.1591	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8356		0.0391	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-033	5	0.87	0.8355	0.9045	0.75	1	0.01687	0.09083	10.44%	-8.75%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-033	5	1.22	1.163	1.278	1.047	1.459	0.02818	0.1517	12.44%	-5.4%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-033	0.9	0.85	0.85	1	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-5783-9332	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:54	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					29.18%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-032	-0.2078	1.86	0.3056	0.5797	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.002914305	0.002914305	1	0.04318	0.8406	Non-Significant Effect
Error	0.539995	0.06749938	8			
Total	0.5429093	0.07041368	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.398	23.15	0.1805	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8541		0.0650	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-032	5	0.85	0.8144	0.8856	0.75	1	0.01737	0.09354	11.0%	-6.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-032	5	1.192	1.132	1.252	1.047	1.459	0.02937	0.1581	13.27%	-2.95%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-032	0.8	1	0.85	0.75	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-3970-8557	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:54	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					32.05%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-031	2.096	1.86	0.3286	0.0347	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3430788	0.3430788	1	4.394	0.0693	Non-Significant Effect
Error	0.6246423	0.07808028	8			
Total	0.9677211	0.4211591	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.382	23.15	0.4211	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9014		0.2271	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-031	5	0.5	0.4227	0.5773	0.25	0.8	0.03771	0.2031	40.62%	37.5%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-031	5	0.7873	0.7055	0.869	0.5236	1.107	0.0399	0.2149	27.29%	32.0%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-031	0.55	0.4	0.8	0.5	0.25

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-9533-4592	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:54	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					34.51%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-030	0.05687	1.86	0.3484	0.4780	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0002838169	0.0002838169	1	0.003234	0.9560	Non-Significant Effect
Error	0.7020954	0.08776193	8			
Total	0.7023793	0.08804575	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.678	23.15	0.6282	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8752		0.1150	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-030	5	0.8	0.7276	0.8724	0.55	1	0.03536	0.1904	23.8%	0.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-030	5	1.147	1.05	1.244	0.8355	1.464	0.04754	0.256	22.32%	0.92%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-030	1	0.55	0.9	0.65	0.9

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-5483-0793	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:54	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					28.86%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-029	-1.026	1.86	0.3029	0.8325	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.06983005	0.06983005	1	1.052	0.3350	Non-Significant Effect
Error	0.5308027	0.06635034	8			
Total	0.6006328	0.1361804	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.843	23.15	0.1557	Equal Variances
Distribution	Shapiro-Wilk Normality	0.793		0.0119	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-029	5	0.93	0.8982	0.9618	0.8	1	0.01554	0.08367	9.0%	-16.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-029	5	1.325	1.268	1.382	1.107	1.464	0.02799	0.1507	11.38%	-14.44%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-029	1	1	0.95	0.8	0.9

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-4412-3267	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:54	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					25.87%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-017		19685-028	20		0	0.0754	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03656965	0.03656965	1	0.6512	0.4430	Non-Significant Effect
Error	0.4492846	0.05616057	8			
Total	0.4858542	0.09273022	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	47.15	23.15	0.0026	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.7321		0.0022	Non-normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-028	5	0.74	0.7241	0.7559	0.7	0.8	0.007768	0.04183	5.65%	7.5%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-028	5	1.037	1.018	1.055	0.9912	1.107	0.008969	0.0483	4.66%	10.45%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-028	0.7	0.75	0.75	0.7	0.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-3798-2488	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:54	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					27.4%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-017		19685-027	20		0	0.0754	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04152655	0.04152655	1	0.6776	0.4343	Non-Significant Effect
Error	0.4902787	0.06128483	8			
Total	0.5318052	0.1028114	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.742	23.15	0.0589	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7621		0.0050	Non-normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-027	5	0.73	0.6906	0.7694	0.55	0.8	0.01925	0.1037	14.2%	8.75%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-027	5	1.029	0.9862	1.072	0.8355	1.107	0.02083	0.1122	10.9%	11.13%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-027	0.55	0.75	0.75	0.8	0.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	21-3203-5999	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:54	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					28.21%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-017		19685-026	23.5		1	0.2103	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0004815431	0.0004815431	1	0.007515	0.9331	Non-Significant Effect
Error	0.512637	0.06407962	8			
Total	0.5131185	0.06456117	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.053	23.15	0.1092	Equal Variances
Distribution	Shapiro-Wilk Normality	0.763		0.0051	Non-normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-026	5	0.84	0.7988	0.8812	0.65	0.9	0.02013	0.1084	12.9%	-5.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-026	5	1.172	1.12	1.223	0.9377	1.249	0.02503	0.1348	11.51%	-1.2%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-026	0.85	0.9	0.9	0.9	0.65

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-0081-6312	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					36.6%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-025	-0.02657	1.86	0.3651	0.5103	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	6.802149E-05	6.802149E-05	1	0.0007057	0.9795	Non-Significant Effect
Error	0.7710882	0.09638602	8			
Total	0.7711562	0.09645405	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.329	23.15	0.7897	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7881		0.0104	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-025	5	0.81	0.7204	0.8996	0.4	1	0.04375	0.2356	29.08%	-1.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-025	5	1.163	1.053	1.272	0.6847	1.459	0.05343	0.2877	24.74%	-0.45%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-025	0.9	0.9	0.85	0.4	1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-4465-0067	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					39.52%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-024	0.01608	1.86	0.3885	0.4938	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.821458E-05	2.821458E-05	1	0.0002586	0.9876	Non-Significant Effect
Error	0.8729993	0.1091249	8			
Total	0.8730274	0.1091531	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.016	23.15	0.9881	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7931		0.0120	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-024	5	0.79	0.6917	0.8883	0.4	1	0.04798	0.2584	32.7%	1.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-024	5	1.154	1.029	1.28	0.6847	1.459	0.0611	0.329	28.5%	0.29%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-024	1	0.95	0.65	0.4	0.95

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-3032-6128	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					28.8%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-023	-0.2084	1.86	0.3025	0.5799	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.002872091	0.002872091	1	0.04341	0.8402	Non-Significant Effect
Error	0.5292361	0.06615452	8			
Total	0.5321082	0.0690266	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.928	23.15	0.1516	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7893		0.0107	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-023	5	0.85	0.812	0.888	0.75	0.95	0.01857	0.1	11.76%	-6.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-023	5	1.192	1.135	1.248	1.047	1.345	0.02774	0.1494	12.54%	-2.93%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-023	0.95	0.75	0.95	0.85	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-6764-4030	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					34.93%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-022	1.153	1.86	0.3518	0.1411	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1189203	0.1189203	1	1.329	0.2822	Non-Significant Effect
Error	0.7156917	0.08946146	8			
Total	0.834612	0.2083817	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.596	23.15	0.6619	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9458		0.6186	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-022	5	0.63	0.5464	0.7136	0.4	0.95	0.04079	0.2197	34.87%	21.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-022	5	0.9396	0.8397	1.039	0.6847	1.345	0.04876	0.2626	27.94%	18.84%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-022	0.75	0.55	0.95	0.4	0.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-0184-8909	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					42.17%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-021	0.2642	1.86	0.4097	0.3991	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.008473393	0.008473393	1	0.06983	0.7983	Non-Significant Effect
Error	0.9708033	0.1213504	8			
Total	0.9792767	0.1298238	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.207	23.15	0.8600	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8918		0.1778	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-021	5	0.74	0.6338	0.8462	0.4	1	0.05186	0.2793	37.74%	7.5%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-021	5	1.099	0.9609	1.238	0.6847	1.461	0.06765	0.3643	33.13%	5.03%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-021	1	0.8	0.5	1	0.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-1720-9591	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					31.58%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-020	-0.5439	1.86	0.3249	0.6993	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02257047	0.02257047	1	0.2958	0.6014	Non-Significant Effect
Error	0.6104736	0.0763092	8			
Total	0.6330441	0.09887967	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.58	23.15	0.3810	Equal Variances
Distribution	Shapiro-Wilk Normality	0.806		0.0171	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-020	5	0.88	0.8323	0.9277	0.75	1	0.0233	0.1255	14.26%	-10.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-020	5	1.253	1.174	1.331	1.047	1.461	0.03834	0.2065	16.48%	-8.21%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-020	1	0.9	0.75	0.75	1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-8365-5640	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					31.29%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-019	0.5997	1.86	0.3226	0.2826	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02705598	0.02705598	1	0.3597	0.5653	Non-Significant Effect
Error	0.6017466	0.07521832	8			
Total	0.6288025	0.1022743	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.719	23.15	0.3560	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7959		0.0129	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-019	5	0.74	0.6749	0.8051	0.5	0.9	0.03176	0.171	23.11%	7.5%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-019	5	1.054	0.9772	1.13	0.7854	1.249	0.03735	0.2011	19.09%	8.99%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-019	0.5	0.9	0.9	0.75	0.65

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-6138-1225	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:52	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					27.33%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-017		19685-018	29		2	0.5794	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04714809	0.04714809	1	0.7723	0.4051	Non-Significant Effect
Error	0.488382	0.06104775	8			
Total	0.5355301	0.1081958	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	9.084	23.15	0.0551	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7828		0.0089	Non-normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-018	5	0.92	0.8983	0.9417	0.85	1	0.01059	0.05701	6.2%	-15.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-018	5	1.295	1.253	1.337	1.173	1.459	0.02043	0.11	8.5%	-11.86%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-018	0.9	0.9	0.95	1	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-1855-6661	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:52	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					31.53%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-014	0.06459	1.86	0.3245	0.4750	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0003175915	0.0003175915	1	0.004171	0.9501	Non-Significant Effect
Error	0.6090828	0.07613534	8			
Total	0.6094003	0.07645293	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.601	23.15	0.3770	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8872		0.1579	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-014	5	0.81	0.7555	0.8645	0.6	1	0.02659	0.1432	17.68%	-1.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-014	5	1.146	1.068	1.225	0.8861	1.459	0.03818	0.2056	17.94%	0.97%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-014	0.8	0.6	0.8	1	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-1280-6453	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:52	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					35.96%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-017		19685-013	32.5		1	0.7897	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03706107	0.03706107	1	0.3956	0.5469	Non-Significant Effect
Error	0.7494154	0.09367692	8			
Total	0.7864765	0.130738	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.422	23.15	0.7415	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7153		0.0014	Non-normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-013	5	0.88	0.8056	0.9544	0.55	1	0.03632	0.1956	22.22%	-10.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-013	5	1.279	1.174	1.385	0.8355	1.469	0.05165	0.2781	21.74%	-10.52%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-013	1	1	0.85	1	0.55

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-0820-4489	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:52	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					36.18%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-012	1.656	1.86	0.3618	0.0681	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2595092	0.2595092	1	2.743	0.1363	Non-Significant Effect
Error	0.756902	0.09461275	8			
Total	1.016411	0.354122	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.388	23.15	0.7584	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9122		0.2961	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-012	5	0.54	0.4399	0.6401	0.3	0.85	0.04887	0.2632	48.73%	32.5%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-012	5	0.8355	0.7285	0.9426	0.5796	1.173	0.05227	0.2815	33.69%	27.83%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-012	0.3	0.85	0.8	0.4	0.35

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-0311-8489	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:52	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					30.47%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-017		19685-011	33		0	0.8452	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.07909542	0.07909542	1	1.096	0.3258	Non-Significant Effect
Error	0.5774748	0.07218435	8			
Total	0.6565703	0.1512798	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.199	23.15	0.2863	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7733		0.0069	Non-normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-011	5	0.93	0.8883	0.9717	0.75	1	0.02034	0.1095	11.78%	-16.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-011	5	1.336	1.265	1.406	1.047	1.461	0.03443	0.1854	13.88%	-15.36%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-011	1	0.75	1	0.9	1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-2080-3248	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:52	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					35.63%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-010	0.8627	1.86	0.3574	0.2067	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.06872442	0.06872442	1	0.7442	0.4134	Non-Significant Effect
Error	0.7387572	0.09234465	8			
Total	0.8074816	0.1610691	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.472	23.15	0.7169	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9576		0.7583	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-010	5	0.67	0.5944	0.7456	0.5	1	0.03691	0.1987	29.66%	16.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-010	5	0.9919	0.888	1.096	0.7854	1.461	0.05075	0.2733	27.55%	14.32%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-010	0.5	0.7	1	0.55	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-2801-2631	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:52	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					29.39%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-009	-0.1268	1.86	0.3072	0.5489	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.001097574	0.001097574	1	0.01608	0.9022	Non-Significant Effect
Error	0.5459491	0.06824364	8			
Total	0.5470467	0.06934121	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.151	23.15	0.1969	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8607		0.0777	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-009	5	0.84	0.8034	0.8766	0.75	1	0.01786	0.09618	11.45%	-5.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-009	5	1.179	1.117	1.241	1.047	1.459	0.03023	0.1628	13.81%	-1.81%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-009	0.8	1	0.8	0.85	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-1885-4303	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:52	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					30.79%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-008	0.3928	1.86	0.3185	0.3524	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01131773	0.01131773	1	0.1543	0.7047	Non-Significant Effect
Error	0.5868699	0.07335874	8			
Total	0.5981876	0.08467647	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.995	23.15	0.3133	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8558		0.0681	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-008	5	0.77	0.712	0.828	0.55	0.95	0.02831	0.1525	19.8%	3.75%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-008	5	1.09	1.018	1.163	0.8355	1.345	0.03559	0.1916	17.58%	5.81%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-008	0.55	0.8	0.7	0.95	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-2316-1457	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:51	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					28.93%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-007	0.9041	1.86	0.3036	0.1962	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.05446434	0.05446434	1	0.8174	0.3923	Non-Significant Effect
Error	0.5330417	0.06663021	8			
Total	0.5875061	0.1210946	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.726	23.15	0.1617	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7954		0.0127	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-007	5	0.71	0.6572	0.7628	0.5	0.85	0.02576	0.1387	19.54%	11.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-007	5	1.01	0.9521	1.068	0.7854	1.173	0.02833	0.1526	15.1%	12.75%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-007	0.65	0.5	0.85	0.8	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-5840-7645	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:51	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					37.02%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-006	0.3249	1.86	0.3685	0.3768	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01036273	0.01036273	1	0.1056	0.7536	Non-Significant Effect
Error	0.7851864	0.09814829	8			
Total	0.7955491	0.108511	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.274	23.15	0.8199	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9258		0.4078	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-006	5	0.75	0.6671	0.8329	0.5	1	0.04047	0.2179	29.06%	6.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-006	5	1.093	0.9816	1.205	0.7854	1.459	0.05455	0.2938	26.87%	5.56%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-006	1	0.7	0.95	0.5	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-7396-1086	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:51	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					34.66%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-017		19685-005	22		1	0.1548	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04545684	0.04545684	1	0.5144	0.4936	Non-Significant Effect
Error	0.706915	0.08836438	8			
Total	0.7523718	0.1338212	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.648	23.15	0.6403	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7789		0.0080	Non-normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-005	5	0.71	0.6214	0.7986	0.35	0.9	0.04325	0.2329	32.81%	11.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-005	5	1.023	0.9246	1.121	0.6331	1.249	0.04797	0.2583	25.26%	11.65%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-005	0.85	0.9	0.85	0.6	0.35

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	21-4557-8348	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:51	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					28.5%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-004	2.113	1.86	0.3001	0.0338	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2906506	0.2906506	1	4.464	0.0676	Non-Significant Effect
Error	0.5208573	0.06510717	8			
Total	0.8115079	0.3557578	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.438	23.15	0.1298	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7923		0.0117	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-004	5	0.53	0.4769	0.5831	0.4	0.7	0.02593	0.1396	26.35%	33.75%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-004	5	0.8167	0.7627	0.8708	0.6847	0.9912	0.02641	0.1422	17.41%	29.45%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-004	0.4	0.65	0.7	0.5	0.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-5334-7026	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:51	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					31.78%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-003	0.05736	1.86	0.3265	0.4778	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0002535951	0.0002535951	1	0.003291	0.9557	Non-Significant Effect
Error	0.6165475	0.07706844	8			
Total	0.6168011	0.07732204	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.491	23.15	0.3982	Equal Variances
Distribution	Shapiro-Wilk Normality	0.89		0.1697	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-003	5	0.81	0.7539	0.8661	0.6	1	0.02739	0.1475	18.21%	-1.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-003	5	1.148	1.068	1.228	0.8861	1.459	0.03902	0.2101	18.31%	0.87%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-003	0.85	0.85	0.75	1	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-8383-8181	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:51	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					28.42%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-017		19685-002	21		1	0.1111	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01541444	0.01541444	1	0.2378	0.6389	Non-Significant Effect
Error	0.5185468	0.06481835	8			
Total	0.5339612	0.08023279	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.598	23.15	0.1239	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7625		0.0051	Non-normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-002	5	0.77	0.7223	0.8177	0.55	0.85	0.0233	0.1255	16.3%	3.75%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-002	5	1.079	1.026	1.133	0.8355	1.173	0.02603	0.1402	12.99%	6.78%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-002	0.8	0.55	0.85	0.8	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-4435-1553	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:50	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					32.0%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-001	1.287	1.86	0.3283	0.1170	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1290831	0.1290831	1	1.657	0.2340	Non-Significant Effect
Error	0.6232229	0.07790286	8			
Total	0.752306	0.206986	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.401	23.15	0.4171	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9035		0.2392	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	0.0%
19685-001	5	0.63	0.5581	0.7019	0.45	0.9	0.03511	0.1891	30.01%	21.25%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	0.0%
19685-001	5	0.9305	0.8491	1.012	0.7353	1.249	0.03975	0.2141	23.0%	19.63%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	0.95	0.95	0.85	0.95	0.3
19685-001	0.9	0.75	0.55	0.45	0.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-4094-0787	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:50	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					23.5%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-033	0.0742	1.86	0.3023	0.4713	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0003636484	0.0003636484	1	0.005505	0.9427	Non-Significant Effect
Error	0.5284529	0.06605662	8			
Total	0.5288166	0.06642026	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.737	23.15	0.1611	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8764		0.1185	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-033	5	0.87	0.8355	0.9045	0.75	1	0.01687	0.09083	10.44%	-3.57%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-033	5	1.22	1.163	1.278	1.047	1.459	0.02818	0.1517	12.44%	0.98%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-033	0.9	0.85	0.85	1	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-2070-2098	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:50	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					23.76%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-032	0.2469	1.86	0.3045	0.4056	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.004088497	0.004088497	1	0.06098	0.8112	Non-Significant Effect
Error	0.5363857	0.06704821	8			
Total	0.5404742	0.07113671	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.362	23.15	0.1828	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8935		0.1857	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-032	5	0.85	0.8144	0.8856	0.75	1	0.01737	0.09354	11.0%	-1.19%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-032	5	1.192	1.132	1.252	1.047	1.459	0.02937	0.1581	13.27%	3.28%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-032	0.8	1	0.85	0.75	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-2548-7886	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:50	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					26.42%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-031	2.526	1.86	0.3277	0.0178	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4951303	0.4951303	1	6.378	0.0355	Significant Effect
Error	0.6210328	0.0776291	8			
Total	1.116163	0.5727594	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.363	23.15	0.4254	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9335		0.4832	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-031	5	0.5	0.4227	0.5773	0.25	0.8	0.03771	0.2031	40.62%	40.48%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-031	5	0.7873	0.7055	0.869	0.5236	1.107	0.0399	0.2149	27.29%	36.11%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-031	0.55	0.4	0.8	0.5	0.25

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-2903-8895	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:50	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					28.72%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-030	0.4561	1.86	0.3475	0.3302	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01816363	0.01816363	1	0.208	0.6604	Non-Significant Effect
Error	0.698486	0.08731075	8			
Total	0.7166497	0.1054744	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.665	23.15	0.6337	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8908		0.1730	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-030	5	0.8	0.7276	0.8724	0.55	1	0.03536	0.1904	23.8%	4.76%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-030	5	1.147	1.05	1.244	0.8355	1.464	0.04754	0.256	22.32%	6.92%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-030	1	0.55	0.9	0.65	0.9

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-9989-7762	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:50	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					23.46%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-029	-0.57	1.86	0.3019	0.7078	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02141191	0.02141191	1	0.3249	0.5843	Non-Significant Effect
Error	0.5271934	0.06589917	8			
Total	0.5486053	0.08731108	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.803	23.15	0.1577	Equal Variances
Distribution	Shapiro-Wilk Normality	0.882		0.1374	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-029	5	0.93	0.8982	0.9618	0.8	1	0.01554	0.08367	9.0%	-10.71%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-029	5	1.325	1.268	1.382	1.107	1.464	0.02799	0.1507	11.38%	-7.51%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-029	1	1	0.95	0.8	0.9

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-6982-7692	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					25.33%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-028	1.31	2.132	0.3182	0.1302	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.09557841	0.09557841	1	1.716	0.2266	Non-Significant Effect
Error	0.4456752	0.0557094	8			
Total	0.5412536	0.1512878	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	46.76	23.15	0.0026	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.8752		0.1150	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-028	5	0.74	0.7241	0.7559	0.7	0.8	0.007768	0.04183	5.65%	11.9%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-028	5	1.037	1.018	1.055	0.9912	1.107	0.008969	0.0483	4.66%	15.87%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-028	0.7	0.75	0.75	0.7	0.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-3476-3444	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					22.11%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-027	1.304	1.86	0.2901	0.1142	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1034949	0.1034949	1	1.701	0.2284	Non-Significant Effect
Error	0.4866693	0.06083366	8			
Total	0.5901642	0.1643286	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.67	23.15	0.0597	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8754		0.1154	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-027	5	0.73	0.6906	0.7694	0.55	0.8	0.01925	0.1037	14.2%	13.1%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-027	5	1.029	0.9862	1.072	0.8355	1.107	0.02083	0.1122	10.9%	16.51%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-027	0.55	0.75	0.75	0.8	0.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	21-1208-6245	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					22.86%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-026	0.3805	1.86	0.2967	0.3567	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.009212462	0.009212462	1	0.1448	0.7135	Non-Significant Effect
Error	0.5090275	0.06362844	8			
Total	0.51824	0.07284091	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.003	23.15	0.1107	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8703		0.1007	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-026	5	0.84	0.7988	0.8812	0.65	0.9	0.02013	0.1084	12.9%	0.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-026	5	1.172	1.12	1.223	0.9377	1.249	0.02503	0.1348	11.51%	4.93%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-026	0.85	0.9	0.9	0.9	0.65

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-6566-9353	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					30.68%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-025	0.3541	1.86	0.3643	0.3662	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0120293	0.0120293	1	0.1254	0.7324	Non-Significant Effect
Error	0.7674788	0.09593485	8			
Total	0.7795081	0.1079641	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.318	23.15	0.7957	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8388		0.0426	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-025	5	0.81	0.7204	0.8996	0.4	1	0.04375	0.2356	29.08%	3.57%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-025	5	1.163	1.053	1.272	0.6847	1.459	0.05343	0.2877	24.74%	5.63%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-025	0.9	0.9	0.85	0.4	1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-3816-4057	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					33.45%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-024	0.3738	1.86	0.3877	0.3591	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01518746	0.01518746	1	0.1398	0.7182	Non-Significant Effect
Error	0.8693898	0.1086737	8			
Total	0.8845773	0.1238612	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.008	23.15	0.9943	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8023		0.0155	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-024	5	0.79	0.6917	0.8883	0.4	1	0.04798	0.2584	32.7%	5.95%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-024	5	1.154	1.029	1.28	0.6847	1.459	0.0611	0.329	28.5%	6.33%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-024	1	0.95	0.65	0.4	0.95

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-7113-0129	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					23.4%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-023	0.251	1.86	0.3015	0.4041	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.004138834	0.004138834	1	0.06299	0.8082	Non-Significant Effect
Error	0.5256268	0.06570335	8			
Total	0.5297656	0.06984218	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.887	23.15	0.1535	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8668		0.0918	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-023	5	0.85	0.812	0.888	0.75	0.95	0.01857	0.1	11.76%	-1.19%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-023	5	1.192	1.135	1.248	1.047	1.345	0.02774	0.1494	12.54%	3.3%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-023	0.95	0.75	0.95	0.85	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-2448-6193	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					29.12%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-022	1.551	1.86	0.3509	0.0797	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2141596	0.2141596	1	2.406	0.1595	Non-Significant Effect
Error	0.7120823	0.08901028	8			
Total	0.9262419	0.3031699	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.582	23.15	0.6674	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9456		0.6163	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-022	5	0.63	0.5464	0.7136	0.4	0.95	0.04079	0.2197	34.87%	25.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-022	5	0.9396	0.8397	1.039	0.6847	1.345	0.04876	0.2626	27.94%	23.75%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-022	0.75	0.55	0.95	0.4	0.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-4167-1016	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					35.96%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-021	0.6039	1.86	0.4089	0.2813	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04409021	0.04409021	1	0.3647	0.5626	Non-Significant Effect
Error	0.9671938	0.1208992	8			
Total	1.011284	0.1649894	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.217	23.15	0.8539	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8812		0.1346	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-021	5	0.74	0.6338	0.8462	0.4	1	0.05186	0.2793	37.74%	11.9%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-021	5	1.099	0.9609	1.238	0.6847	1.461	0.06765	0.3643	33.13%	10.78%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-021	1	0.8	0.5	1	0.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-1666-9009	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:48	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					25.98%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-020	-0.1173	1.86	0.3239	0.5452	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.001043875	0.001043875	1	0.01376	0.9095	Non-Significant Effect
Error	0.6068642	0.07585803	8			
Total	0.6079081	0.0769019	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.559	23.15	0.3850	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8262		0.0301	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-020	5	0.88	0.8323	0.9277	0.75	1	0.0233	0.1255	14.26%	-4.76%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-020	5	1.253	1.174	1.331	1.047	1.461	0.03834	0.2065	16.48%	-1.66%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-020	1	0.9	0.75	0.75	1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-4328-3394	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:48	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					25.71%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-019	1.033	1.86	0.3216	0.1659	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.07975693	0.07975693	1	1.067	0.3319	Non-Significant Effect
Error	0.5981371	0.07476714	8			
Total	0.6778941	0.1545241	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.697	23.15	0.3598	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8521		0.0615	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-019	5	0.74	0.6749	0.8051	0.5	0.9	0.03176	0.171	23.11%	11.9%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-019	5	1.054	0.9772	1.13	0.7854	1.249	0.03735	0.2011	19.09%	14.49%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-019	0.5	0.9	0.9	0.75	0.65

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-4161-4926	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:48	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					22.05%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-018	-0.403	1.86	0.2895	0.6513	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.009842712	0.009842712	1	0.1624	0.6975	Non-Significant Effect
Error	0.4847726	0.06059657	8			
Total	0.4946153	0.07043929	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	9.01	23.15	0.0559	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8885		0.1630	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-018	5	0.92	0.8983	0.9417	0.85	1	0.01059	0.05701	6.2%	-9.52%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-018	5	1.295	1.253	1.337	1.173	1.459	0.02043	0.11	8.5%	-5.09%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-018	0.9	0.9	0.95	1	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-5749-8469	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:48	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					25.94%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-014	0.4934	1.86	0.3235	0.3175	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01842718	0.01842718	1	0.2435	0.6350	Non-Significant Effect
Error	0.6054734	0.07568417	8			
Total	0.6239006	0.09411135	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.58	23.15	0.3810	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9262		0.4112	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-014	5	0.81	0.7555	0.8645	0.6	1	0.02659	0.1432	17.68%	3.57%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-014	5	1.146	1.068	1.225	0.8861	1.459	0.03818	0.2056	17.94%	6.97%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-014	0.8	0.6	0.8	1	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-2568-3266	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:48	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					30.08%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-016		19685-013	28.5		1	0.5000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.005563198	0.005563198	1	0.05967	0.8132	Non-Significant Effect
Error	0.745806	0.09322575	8			
Total	0.7513692	0.09878895	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.41	23.15	0.7473	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7781		0.0078	Non-normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-013	5	0.88	0.8056	0.9544	0.55	1	0.03632	0.1956	22.22%	-4.76%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-013	5	1.279	1.174	1.385	0.8355	1.469	0.05165	0.2781	21.74%	-3.83%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-013	1	1	0.85	1	0.55

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-2184-8060	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:48	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					30.29%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-012	2.044	1.86	0.3609	0.0376	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3935632	0.3935632	1	4.18	0.0752	Non-Significant Effect
Error	0.7532927	0.09416158	8			
Total	1.146856	0.4877248	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.377	23.15	0.7642	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8721		0.1057	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-012	5	0.54	0.4399	0.6401	0.3	0.85	0.04887	0.2632	48.73%	35.71%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-012	5	0.8355	0.7285	0.9426	0.5796	1.173	0.05227	0.2815	33.69%	32.2%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-012	0.3	0.85	0.8	0.4	0.35

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-1338-2209	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:48	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					24.95%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-011	-0.6098	1.86	0.315	0.7205	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02667127	0.02667127	1	0.3718	0.5589	Non-Significant Effect
Error	0.5738654	0.07173318	8			
Total	0.6005367	0.09840445	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.173	23.15	0.2895	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8548		0.0662	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-011	5	0.93	0.8883	0.9717	0.75	1	0.02034	0.1095	11.78%	-10.71%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-011	5	1.336	1.265	1.406	1.047	1.461	0.03443	0.1854	13.88%	-8.38%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-011	1	0.75	1	0.9	1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-2658-8380	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					29.77%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-010	1.254	1.86	0.3565	0.1227	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1444601	0.1444601	1	1.572	0.2453	Non-Significant Effect
Error	0.7351478	0.09189347	8			
Total	0.8796079	0.2363536	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.46	23.15	0.7226	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9536		0.7115	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-010	5	0.67	0.5944	0.7456	0.5	1	0.03691	0.1987	29.66%	20.24%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-010	5	0.9919	0.888	1.096	0.7854	1.461	0.05075	0.2733	27.55%	19.51%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-010	0.5	0.7	1	0.55	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-5882-0830	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					23.95%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-009	0.3257	1.86	0.3062	0.3765	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.007190363	0.007190363	1	0.1061	0.7530	Non-Significant Effect
Error	0.5423397	0.06779246	8			
Total	0.54953	0.07498282	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.117	23.15	0.1993	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8985		0.2108	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-009	5	0.84	0.8034	0.8766	0.75	1	0.01786	0.09618	11.45%	0.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-009	5	1.179	1.117	1.241	1.047	1.459	0.03023	0.1628	13.81%	4.35%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-009	0.8	1	0.8	0.85	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-6432-8606	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					25.25%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-008	0.8307	1.86	0.3176	0.2151	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0503152	0.0503152	1	0.6901	0.4302	Non-Significant Effect
Error	0.5832605	0.07290756	8			
Total	0.6335757	0.1232228	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.97	23.15	0.3168	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8924		0.1804	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-008	5	0.77	0.712	0.828	0.55	0.95	0.02831	0.1525	19.8%	8.33%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-008	5	1.09	1.018	1.163	0.8355	1.345	0.03559	0.1916	17.58%	11.51%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-008	0.55	0.8	0.7	0.95	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-8018-1119	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					23.53%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-007	1.366	1.86	0.3026	0.1046	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1234128	0.1234128	1	1.865	0.2092	Non-Significant Effect
Error	0.5294323	0.06617904	8			
Total	0.6528451	0.1895919	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.687	23.15	0.1637	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8851		0.1493	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-007	5	0.71	0.6572	0.7628	0.5	0.85	0.02576	0.1387	19.54%	15.48%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-007	5	1.01	0.9521	1.068	0.7854	1.173	0.02833	0.1526	15.1%	18.03%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-007	0.65	0.5	0.85	0.8	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-7632-0461	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					31.08%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-006	0.703	1.86	0.3676	0.2510	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04827826	0.04827826	1	0.4942	0.5020	Non-Significant Effect
Error	0.7815769	0.09769712	8			
Total	0.8298552	0.1459754	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.264	23.15	0.8259	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8947		0.1914	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-006	5	0.75	0.6671	0.8329	0.5	1	0.04047	0.2179	29.06%	10.71%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-006	5	1.093	0.9816	1.205	0.7854	1.459	0.05455	0.2938	26.87%	11.28%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-006	1	0.7	0.95	0.5	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-8515-4792	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					28.86%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-005	1.117	1.86	0.3487	0.1482	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1096482	0.1096482	1	1.247	0.2965	Non-Significant Effect
Error	0.7033056	0.0879132	8			
Total	0.8129538	0.1975614	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.634	23.15	0.6457	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8043		0.0164	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-005	5	0.71	0.6214	0.7986	0.35	0.9	0.04325	0.2329	32.81%	15.48%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-005	5	1.023	0.9246	1.121	0.6331	1.249	0.04797	0.2583	25.26%	16.99%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-005	0.85	0.9	0.85	0.6	0.35

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-4719-5356	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					23.13%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-004	2.584	1.86	0.299	0.0162	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4317093	0.4317093	1	6.677	0.0324	Significant Effect
Error	0.5172479	0.06465599	8			
Total	0.9489572	0.4963652	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.393	23.15	0.1315	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8745		0.1129	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-004	5	0.53	0.4769	0.5831	0.4	0.7	0.02593	0.1396	26.35%	36.9%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-004	5	0.8167	0.7627	0.8708	0.6847	0.9912	0.02641	0.1422	17.41%	33.72%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-004	0.4	0.65	0.7	0.5	0.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-4581-0096	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					26.17%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-003	0.4836	1.86	0.3255	0.3208	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01791591	0.01791591	1	0.2338	0.6417	Non-Significant Effect
Error	0.6129382	0.07661727	8			
Total	0.6308541	0.09453318	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.471	23.15	0.4024	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9261		0.4105	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-003	5	0.81	0.7539	0.8661	0.6	1	0.02739	0.1475	18.21%	3.57%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-003	5	1.148	1.068	1.228	0.8861	1.459	0.03902	0.2101	18.31%	6.87%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-003	0.85	0.85	0.75	1	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-1755-1190	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					23.05%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-002	0.9542	1.86	0.2984	0.1840	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.058603	0.058603	1	0.9104	0.3679	Non-Significant Effect
Error	0.5149375	0.06436718	8			
Total	0.5735404	0.1229702	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.552	23.15	0.1256	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8724		0.1065	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-002	5	0.77	0.7223	0.8177	0.55	0.85	0.0233	0.1255	16.3%	8.33%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-002	5	1.079	1.026	1.133	0.8355	1.173	0.02603	0.1402	12.99%	12.42%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-002	0.8	0.55	0.85	0.8	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-9935-2739	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					26.37%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-001	1.715	1.86	0.3273	0.0624	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2277266	0.2277266	1	2.94	0.1247	Non-Significant Effect
Error	0.6196135	0.07745168	8			
Total	0.84734	0.3051783	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.381	23.15	0.4214	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9074		0.2634	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-001	5	0.63	0.5581	0.7019	0.45	0.9	0.03511	0.1891	30.01%	25.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-001	5	0.9305	0.8491	1.012	0.7353	1.249	0.03975	0.2141	23.0%	24.49%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-001	0.9	0.75	0.55	0.45	0.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-0187-7455	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:46	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					33.63%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-016		19685-017	23		0	0.2103	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01390646	0.01390646	1	0.127	0.7308	Non-Significant Effect
Error	0.8762962	0.109537	8			
Total	0.8902026	0.1234435	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.008	23.15	0.9938	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7496		0.0035	Non-normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	0.0%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	4.76%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	0.0%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	6.05%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	1	1	0.75	1	0.45
19685-017	0.95	0.95	0.85	0.95	0.3

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-5668-8401	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.81%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-033	-0.2545	1.86	0.2417	0.5972	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.002736676	0.002736676	1	0.06478	0.8055	Non-Significant Effect
Error	0.3379751	0.04224689	8			
Total	0.3407118	0.04498357	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.669	23.15	0.3647	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9725		0.9129	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-033	5	0.87	0.8355	0.9045	0.75	1	0.01687	0.09083	10.44%	-4.82%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-033	5	1.22	1.163	1.278	1.047	1.459	0.02818	0.1517	12.44%	-2.79%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-033	0.9	0.85	0.85	1	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-8978-7664	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					21.13%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-032	-0.03579	1.86	0.2446	0.5138	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	5.537538E-05	5.537538E-05	1	0.001281	0.9723	Non-Significant Effect
Error	0.3459078	0.04323847	8			
Total	0.3459632	0.04329385	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.458	23.15	0.4051	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9554		0.7323	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-032	5	0.85	0.8144	0.8856	0.75	1	0.01737	0.09354	11.0%	-2.41%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-032	5	1.192	1.132	1.252	1.047	1.459	0.02937	0.1581	13.27%	-0.4%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-032	0.8	1	0.85	0.75	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-2377-3002	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:45	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					24.4%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-031	2.725	1.86	0.2728	0.0130	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3997681	0.3997681	1	7.428	0.0260	Significant Effect
Error	0.430555	0.05381938	8			
Total	0.8303231	0.4535874	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.331	23.15	0.7883	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9736		0.9224	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-031	5	0.5	0.4227	0.5773	0.25	0.8	0.03771	0.2031	40.62%	39.76%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-031	5	0.7873	0.7055	0.869	0.5236	1.107	0.0399	0.2149	27.29%	33.68%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-031	0.55	0.4	0.8	0.5	0.25

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-3121-3319	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:45	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					27.16%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-030	0.2516	1.86	0.2964	0.4039	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.004018255	0.004018255	1	0.06328	0.8077	Non-Significant Effect
Error	0.5080082	0.06350102	8			
Total	0.5120264	0.06751928	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.066	23.15	0.9520	Equal Variances
Distribution	Shapiro-Wilk Normality	0.925		0.4010	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-030	5	0.8	0.7276	0.8724	0.55	1	0.03536	0.1904	23.8%	3.61%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-030	5	1.147	1.05	1.244	0.8355	1.464	0.04754	0.256	22.32%	3.38%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-030	1	0.55	0.9	0.65	0.9

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-0776-1055	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:45	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.76%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-029	-1.061	1.86	0.2413	0.8402	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04739804	0.04739804	1	1.126	0.3196	Non-Significant Effect
Error	0.3367155	0.04208944	8			
Total	0.3841135	0.08948748	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.706	23.15	0.3582	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9597		0.7824	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-029	5	0.93	0.8982	0.9618	0.8	1	0.01554	0.08367	9.0%	-12.05%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-029	5	1.325	1.268	1.382	1.107	1.464	0.02799	0.1507	11.38%	-11.6%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-029	1	1	0.95	0.8	0.9

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-1281-5995	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:45	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.7%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-028	1.331	2.132	0.2408	0.1270	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.05653683	0.05653683	1	1.772	0.2198	Non-Significant Effect
Error	0.2551973	0.03189967	8			
Total	0.3117342	0.0884365	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	26.35	23.15	0.0078	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.9551		0.7293	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-028	5	0.74	0.7241	0.7559	0.7	0.8	0.007768	0.04183	5.65%	10.84%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-028	5	1.037	1.018	1.055	0.9912	1.107	0.008969	0.0483	4.66%	12.67%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-028	0.7	0.75	0.75	0.7	0.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-0796-6695	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:45	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					19.05%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-027	1.301	1.86	0.2263	0.1147	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.06266185	0.06266185	1	1.692	0.2295	Non-Significant Effect
Error	0.2961914	0.03702393	8			
Total	0.3588533	0.09968577	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.885	23.15	0.1536	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9452		0.6118	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-027	5	0.73	0.6906	0.7694	0.55	0.8	0.01925	0.1037	14.2%	12.05%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-027	5	1.029	0.9862	1.072	0.8355	1.107	0.02083	0.1122	10.9%	13.34%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-027	0.55	0.75	0.75	0.8	0.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-8424-1594	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:45	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.0%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-026	0.1233	1.86	0.2347	0.4525	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0006050986	0.0006050986	1	0.0152	0.9049	Non-Significant Effect
Error	0.3185497	0.03981872	8			
Total	0.3191548	0.04042381	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.383	23.15	0.2649	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9259		0.4086	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-026	5	0.84	0.7988	0.8812	0.65	0.9	0.02013	0.1084	12.9%	-1.21%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-026	5	1.172	1.12	1.223	0.9377	1.249	0.02503	0.1348	11.51%	1.31%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-026	0.85	0.9	0.9	0.9	0.65

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-9442-3625	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:45	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					29.46%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-025	0.1426	1.86	0.3158	0.4451	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.001466532	0.001466532	1	0.02033	0.8901	Non-Significant Effect
Error	0.5770009	0.07212511	8			
Total	0.5784674	0.07359165	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.347	23.15	0.7799	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9067		0.2592	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-025	5	0.81	0.7204	0.8996	0.4	1	0.04375	0.2356	29.08%	2.41%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-025	5	1.163	1.053	1.272	0.6847	1.459	0.05343	0.2877	24.74%	2.04%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-025	0.9	0.9	0.85	0.4	1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-0037-4269	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					32.65%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-024	0.178	1.86	0.3426	0.4316	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.002688898	0.002688898	1	0.03168	0.8631	Non-Significant Effect
Error	0.678912	0.084864	8			
Total	0.6816009	0.0875529	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.761	23.15	0.5969	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8983		0.2101	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-024	5	0.79	0.6917	0.8883	0.4	1	0.04798	0.2584	32.7%	4.82%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-024	5	1.154	1.029	1.28	0.6847	1.459	0.0611	0.329	28.5%	2.76%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-024	1	0.95	0.65	0.4	0.95

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-2866-2466	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.69%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-023	-0.03444	1.86	0.2407	0.5133	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.96891E-05	4.96891E-05	1	0.001186	0.9734	Non-Significant Effect
Error	0.3351489	0.04189362	8			
Total	0.3351986	0.0419433	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.754	23.15	0.3502	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9367		0.5164	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-023	5	0.85	0.812	0.888	0.75	0.95	0.01857	0.1	11.76%	-2.41%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-023	5	1.192	1.135	1.248	1.047	1.345	0.02774	0.1494	12.54%	-0.38%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-023	0.95	0.75	0.95	0.85	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-9367-0065	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					27.62%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-022	1.533	1.86	0.3003	0.0819	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1531869	0.1531869	1	2.349	0.1639	Non-Significant Effect
Error	0.5216044	0.06520055	8			
Total	0.6747913	0.2183875	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.122	23.15	0.9142	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9711		0.9007	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-022	5	0.63	0.5464	0.7136	0.4	0.95	0.04079	0.2197	34.87%	24.1%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-022	5	0.9396	0.8397	1.039	0.6847	1.345	0.04876	0.2626	27.94%	20.85%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-022	0.75	0.55	0.95	0.4	0.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-9907-4609	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					35.51%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-021	0.4448	1.86	0.3665	0.3341	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01920826	0.01920826	1	0.1978	0.6683	Non-Significant Effect
Error	0.776716	0.0970895	8			
Total	0.7959242	0.1162978	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.159	23.15	0.4743	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9167		0.3306	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-021	5	0.74	0.6338	0.8462	0.4	1	0.05186	0.2793	37.74%	10.84%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-021	5	1.099	0.9609	1.238	0.6847	1.461	0.06765	0.3643	33.13%	7.38%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-021	1	0.8	0.5	1	0.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-4957-7570	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					23.87%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-020	-0.4545	1.86	0.2683	0.6692	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.010752	0.010752	1	0.2066	0.6615	Non-Significant Effect
Error	0.4163864	0.0520483	8			
Total	0.4271384	0.0628003	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.442	23.15	0.7315	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9271		0.4200	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-020	5	0.88	0.8323	0.9277	0.75	1	0.0233	0.1255	14.26%	-6.02%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-020	5	1.253	1.174	1.331	1.047	1.461	0.03834	0.2065	16.48%	-5.52%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-020	1	0.9	0.75	0.75	1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-5852-8257	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					23.54%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-019	0.9348	1.86	0.2655	0.1886	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04453361	0.04453361	1	0.8739	0.3772	Non-Significant Effect
Error	0.4076593	0.05095742	8			
Total	0.4521929	0.09549102	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.52	23.15	0.6950	Equal Variances
Distribution	Shapiro-Wilk Normality	0.938		0.5312	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-019	5	0.74	0.6749	0.8051	0.5	0.9	0.03176	0.171	23.11%	10.84%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-019	5	1.054	0.9772	1.13	0.7854	1.249	0.03735	0.2011	19.09%	11.24%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-019	0.5	0.9	0.9	0.75	0.65

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-3320-1618	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					18.97%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-018	-0.8894	1.86	0.2256	0.8001	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02910206	0.02910206	1	0.7911	0.3997	Non-Significant Effect
Error	0.2942947	0.03678684	8			
Total	0.3233968	0.0658889	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.077	23.15	0.1447	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9712		0.9018	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-018	5	0.92	0.8983	0.9417	0.85	1	0.01059	0.05701	6.2%	-10.84%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-018	5	1.295	1.253	1.337	1.173	1.459	0.02043	0.11	8.5%	-9.09%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-018	0.9	0.9	0.95	1	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-3828-2935	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					23.82%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-014	0.2826	1.86	0.2679	0.3923	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.004142717	0.004142717	1	0.07986	0.7847	Non-Significant Effect
Error	0.4149955	0.05187444	8			
Total	0.4191383	0.05601716	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.454	23.15	0.7258	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9713		0.9030	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-014	5	0.81	0.7555	0.8645	0.6	1	0.02659	0.1432	17.68%	2.41%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-014	5	1.146	1.068	1.225	0.8861	1.459	0.03818	0.2056	17.94%	3.43%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-014	0.8	0.6	0.8	1	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-3731-2932	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					28.75%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-013	-0.554	1.86	0.3099	0.7026	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02130714	0.02130714	1	0.3069	0.5947	Non-Significant Effect
Error	0.5553282	0.06941602	8			
Total	0.5766354	0.09072317	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.259	23.15	0.8290	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8733		0.1091	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-013	5	0.88	0.8056	0.9544	0.55	1	0.03632	0.1956	22.22%	-6.02%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-013	5	1.279	1.174	1.385	0.8355	1.469	0.05165	0.2781	21.74%	-7.78%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-013	1	1	0.85	1	0.55

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-0461-0720	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					29.0%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-012	2.096	1.86	0.3119	0.0347	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3090952	0.3090952	1	4.394	0.0694	Non-Significant Effect
Error	0.5628148	0.07035185	8			
Total	0.87191	0.379447	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.289	23.15	0.8116	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9124		0.2981	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-012	5	0.54	0.4399	0.6401	0.3	0.85	0.04887	0.2632	48.73%	34.94%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-012	5	0.8355	0.7285	0.9426	0.5796	1.173	0.05227	0.2815	33.69%	29.62%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-012	0.3	0.85	0.8	0.4	0.35

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-9909-1983	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					22.61%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-011	-1.072	1.86	0.2575	0.8425	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.05508232	0.05508232	1	1.149	0.3150	Non-Significant Effect
Error	0.3833876	0.04792345	8			
Total	0.4384699	0.1030058	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.788	23.15	0.5874	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9079		0.2672	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-011	5	0.93	0.8883	0.9717	0.75	1	0.02034	0.1095	11.78%	-12.05%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-011	5	1.336	1.265	1.406	1.047	1.461	0.03443	0.1854	13.88%	-12.5%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-011	1	0.75	1	0.9	1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-0627-4792	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					28.4%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-010	1.183	1.86	0.3069	0.1354	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.09529339	0.09529339	1	1.4	0.2707	Non-Significant Effect
Error	0.5446699	0.06808374	8			
Total	0.6399633	0.1633771	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.215	23.15	0.8547	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9647		0.8375	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-010	5	0.67	0.5944	0.7456	0.5	1	0.03691	0.1987	29.66%	19.28%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-010	5	0.9919	0.888	1.096	0.7854	1.461	0.05075	0.2733	27.55%	16.45%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-010	0.5	0.7	1	0.55	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-1206-5721	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					21.37%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-009	0.06396	1.86	0.2466	0.4753	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0001799136	0.0001799136	1	0.004091	0.9506	Non-Significant Effect
Error	0.3518619	0.04398273	8			
Total	0.3520418	0.04416265	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.32	23.15	0.4351	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9526		0.6990	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-009	5	0.84	0.8034	0.8766	0.75	1	0.01786	0.09618	11.45%	-1.21%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-009	5	1.179	1.117	1.241	1.047	1.459	0.03023	0.1628	13.81%	0.71%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-009	0.8	1	0.8	0.85	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-8335-7869	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					22.98%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-008	0.6902	1.86	0.2606	0.2548	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02338688	0.02338688	1	0.4763	0.5096	Non-Significant Effect
Error	0.3927827	0.04909783	8			
Total	0.4161695	0.07248471	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.673	23.15	0.6301	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9577		0.7598	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-008	5	0.77	0.712	0.828	0.55	0.95	0.02831	0.1525	19.8%	7.23%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-008	5	1.09	1.018	1.163	0.8355	1.345	0.03559	0.1916	17.58%	8.15%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-008	0.55	0.8	0.7	0.95	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-4925-0198	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.85%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-007	1.36	1.86	0.2421	0.1055	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.07835454	0.07835454	1	1.849	0.2109	Non-Significant Effect
Error	0.3389544	0.04236931	8			
Total	0.417309	0.1207238	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.641	23.15	0.3697	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9613		0.8003	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-007	5	0.71	0.6572	0.7628	0.5	0.85	0.02576	0.1387	19.54%	14.46%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-007	5	1.01	0.9521	1.068	0.7854	1.173	0.02833	0.1526	15.1%	14.91%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-007	0.65	0.5	0.85	0.8	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-5671-1661	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					29.92%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-006	0.5457	1.86	0.3197	0.3001	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02200485	0.02200485	1	0.2978	0.6001	Non-Significant Effect
Error	0.5910991	0.07388739	8			
Total	0.613104	0.09589225	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.404	23.15	0.7502	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9356		0.5054	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-006	5	0.75	0.6671	0.8329	0.5	1	0.04047	0.2179	29.06%	9.64%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-006	5	1.093	0.9816	1.205	0.7854	1.459	0.05455	0.2938	26.87%	7.9%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-006	1	0.7	0.95	0.5	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-2584-6855	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					27.32%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-005	1.026	1.86	0.2978	0.1675	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.06746951	0.06746951	1	1.053	0.3349	Non-Significant Effect
Error	0.5128278	0.06410347	8			
Total	0.5802972	0.131573	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.086	23.15	0.9383	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8812		0.1347	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-005	5	0.71	0.6214	0.7986	0.35	0.9	0.04325	0.2329	32.81%	14.46%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-005	5	1.023	0.9246	1.121	0.6331	1.249	0.04797	0.2583	25.26%	13.84%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-005	0.85	0.9	0.85	0.6	0.35

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-5892-9398	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.35%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-004	2.898	1.86	0.2377	0.0100	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3430012	0.3430012	1	8.397	0.0200	Significant Effect
Error	0.3267701	0.04084626	8			
Total	0.6697713	0.3838474	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.039	23.15	0.3071	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9529		0.7024	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-004	5	0.53	0.4769	0.5831	0.4	0.7	0.02593	0.1396	26.35%	36.14%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-004	5	0.8167	0.7627	0.8708	0.6847	0.9912	0.02641	0.1422	17.41%	31.2%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-004	0.4	0.65	0.7	0.5	0.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-8228-6654	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					24.1%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-003	0.2718	1.86	0.2703	0.3963	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.00390219	0.00390219	1	0.07389	0.7926	Non-Significant Effect
Error	0.4224603	0.05280754	8			
Total	0.4263625	0.05670973	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.392	23.15	0.7562	Equal Variances
Distribution	Shapiro-Wilk Normality	0.968		0.8714	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-003	5	0.81	0.7539	0.8661	0.6	1	0.02739	0.1475	18.21%	2.41%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-003	5	1.148	1.068	1.228	0.8861	1.459	0.03902	0.2101	18.31%	3.33%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-003	0.85	0.85	0.75	1	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-6954-8840	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.25%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-002	0.8476	1.86	0.2368	0.2106	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02913772	0.02913772	1	0.7184	0.4213	Non-Significant Effect
Error	0.3244596	0.04055745	8			
Total	0.3535973	0.06969517	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.128	23.15	0.2952	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9302		0.4495	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-002	5	0.77	0.7223	0.8177	0.55	0.85	0.0233	0.1255	16.3%	7.23%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-002	5	1.079	1.026	1.133	0.8355	1.173	0.02603	0.1402	12.99%	9.09%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-002	0.8	0.55	0.85	0.8	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-1054-8849	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					24.35%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-001	1.752	1.86	0.2724	0.0589	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1646933	0.1646933	1	3.07	0.1178	Non-Significant Effect
Error	0.4291357	0.05364196	8			
Total	0.593829	0.2183353	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.342	23.15	0.7828	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9571		0.7523	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-001	5	0.63	0.5581	0.7019	0.45	0.9	0.03511	0.1891	30.01%	24.1%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-001	5	0.9305	0.8491	1.012	0.7353	1.249	0.03975	0.2141	23.0%	21.62%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-001	0.9	0.75	0.55	0.45	0.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-4484-6362	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					32.86%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-017	0.159	1.86	0.3443	0.4388	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.002166236	0.002166236	1	0.02527	0.8776	Non-Significant Effect
Error	0.6858183	0.08572729	8			
Total	0.6879845	0.08789352	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.789	23.15	0.5868	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8424		0.0471	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	3.61%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	2.48%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-017	0.95	0.95	0.85	0.95	0.3

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-7475-4985	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					32.75%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-016	-0.2444	1.86	0.3434	0.5935	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.005095507	0.005095507	1	0.05975	0.8130	Non-Significant Effect
Error	0.682209	0.08527612	8			
Total	0.6873044	0.09037162	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.775	23.15	0.5921	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8671		0.0924	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	0.0%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	-1.21%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	0.0%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	-3.8%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1	0.9	0.75	0.95	0.55
19685-016	1	1	0.75	1	0.45

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-3398-6270	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					17.12%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-033	-0.1487	1.86	0.2076	0.5573	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0006887694	0.0006887694	1	0.02211	0.8855	Non-Significant Effect
Error	0.2492048	0.0311506	8			
Total	0.2498935	0.03183937	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.706	23.15	0.6177	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9211		0.3661	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-033	5	0.87	0.8355	0.9045	0.75	1	0.01687	0.09083	10.44%	-2.35%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-033	5	1.22	1.163	1.278	1.047	1.459	0.02818	0.1517	12.44%	-1.38%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-033	0.9	0.85	0.85	1	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-0027-4473	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					17.47%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-032	0.1039	1.86	0.2109	0.4599	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.000346979	0.000346979	1	0.0108	0.9198	Non-Significant Effect
Error	0.2571374	0.03214218	8			
Total	0.2574844	0.03248916	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.57	23.15	0.6726	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9007		0.2230	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-032	5	0.85	0.8144	0.8856	0.75	1	0.01737	0.09354	11.0%	0.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-032	5	1.192	1.132	1.252	1.047	1.459	0.02937	0.1581	13.27%	0.98%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-032	0.8	1	0.85	0.75	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-0052-2839	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.99%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-031	3.185	1.86	0.2431	0.0064	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4334128	0.4334128	1	10.14	0.0129	Significant Effect
Error	0.3417847	0.04272308	8			
Total	0.7751975	0.4761359	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.176	23.15	0.8792	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9609		0.7956	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-031	5	0.5	0.4227	0.5773	0.25	0.8	0.03771	0.2031	40.62%	41.18%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-031	5	0.7873	0.7055	0.869	0.5236	1.107	0.0399	0.2149	27.29%	34.59%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-031	0.55	0.4	0.8	0.5	0.25

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-7640-2271	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					23.9%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-030	0.3908	1.86	0.2692	0.3531	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.008002831	0.008002831	1	0.1527	0.7062	Non-Significant Effect
Error	0.4192379	0.05240473	8			
Total	0.4272407	0.06040756	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.669	23.15	0.6320	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9395		0.5469	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-030	5	0.8	0.7276	0.8724	0.55	1	0.03536	0.1904	23.8%	5.88%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-030	5	1.147	1.05	1.244	0.8355	1.464	0.04754	0.256	22.32%	4.7%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-030	1	0.55	0.9	0.65	0.9

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-7086-4605	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					17.06%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-029	-1.089	1.86	0.207	0.8460	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03672668	0.03672668	1	1.185	0.3080	Non-Significant Effect
Error	0.2479452	0.03099314	8			
Total	0.2846718	0.06771983	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.729	23.15	0.6088	Equal Variances
Distribution	Shapiro-Wilk Normality	0.931		0.4583	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-029	5	0.93	0.8982	0.9618	0.8	1	0.01554	0.08367	9.0%	-9.41%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-029	5	1.325	1.268	1.382	1.107	1.464	0.02799	0.1507	11.38%	-10.07%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-029	1	1	0.95	0.8	0.9

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-2019-9984	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					13.12%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-028	1.829	1.86	0.1696	0.0524	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.06961344	0.06961344	1	3.346	0.1048	Non-Significant Effect
Error	0.166427	0.02080338	8			
Total	0.2360404	0.09041682	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	16.83	23.15	0.0182	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9675		0.8669	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-028	5	0.74	0.7241	0.7559	0.7	0.8	0.007768	0.04183	5.65%	12.94%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-028	5	1.037	1.018	1.055	0.9912	1.107	0.008969	0.0483	4.66%	13.86%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-028	0.7	0.75	0.75	0.7	0.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-4918-9214	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					15.18%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-027	1.717	1.86	0.1894	0.0622	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.07639272	0.07639272	1	2.946	0.1244	Non-Significant Effect
Error	0.2074211	0.02592763	8			
Total	0.2838138	0.1023204	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.122	23.15	0.2961	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9492		0.6590	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-027	5	0.73	0.6906	0.7694	0.55	0.8	0.01925	0.1037	14.2%	14.12%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-027	5	1.029	0.9862	1.072	0.8355	1.107	0.02083	0.1122	10.9%	14.52%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-027	0.55	0.75	0.75	0.8	0.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-7902-3968	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					16.24%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-026	0.299	1.86	0.1993	0.3863	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.002567204	0.002567204	1	0.08938	0.7726	Non-Significant Effect
Error	0.2297794	0.02872242	8			
Total	0.2323466	0.03128963	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.161	23.15	0.4738	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9411		0.5653	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-026	5	0.84	0.7988	0.8812	0.65	0.9	0.02013	0.1084	12.9%	1.18%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-026	5	1.172	1.12	1.223	0.9377	1.249	0.02503	0.1348	11.51%	2.66%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-026	0.85	0.9	0.9	0.9	0.65

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-2836-0048	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					26.32%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-025	0.2605	1.86	0.2905	0.4005	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.004142745	0.004142745	1	0.06788	0.8010	Non-Significant Effect
Error	0.4882306	0.06102883	8			
Total	0.4923733	0.06517157	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.108	23.15	0.4879	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9473		0.6362	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-025	5	0.81	0.7204	0.8996	0.4	1	0.04375	0.2356	29.08%	4.71%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-025	5	1.163	1.053	1.272	0.6847	1.459	0.05343	0.2877	24.74%	3.38%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-025	0.9	0.9	0.85	0.4	1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-4239-7921	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					29.63%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-024	0.2869	1.86	0.3194	0.3907	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.006072059	0.006072059	1	0.08231	0.7815	Non-Significant Effect
Error	0.5901417	0.07376771	8			
Total	0.5962137	0.07983977	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.757	23.15	0.3497	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9184		0.3435	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-024	5	0.79	0.6917	0.8883	0.4	1	0.04798	0.2584	32.7%	7.06%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-024	5	1.154	1.029	1.28	0.6847	1.459	0.0611	0.329	28.5%	4.09%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-024	1	0.95	0.65	0.4	0.95

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-3818-7882	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					16.99%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-023	0.1084	1.86	0.2064	0.4582	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0003617522	0.0003617522	1	0.01175	0.9164	Non-Significant Effect
Error	0.2463786	0.03079732	8			
Total	0.2467403	0.03115907	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.76	23.15	0.5976	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9017		0.2289	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-023	5	0.85	0.812	0.888	0.75	0.95	0.01857	0.1	11.76%	0.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-023	5	1.192	1.135	1.248	1.047	1.345	0.02774	0.1494	12.54%	1.0%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-023	0.95	0.75	0.95	0.85	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-4092-1258	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					24.39%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-022	1.795	1.86	0.2736	0.0552	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1742727	0.1742727	1	3.221	0.1104	Non-Significant Effect
Error	0.4328341	0.05410426	8			
Total	0.6071068	0.228377	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.755	23.15	0.5991	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9248		0.3988	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-022	5	0.63	0.5464	0.7136	0.4	0.95	0.04079	0.2197	34.87%	25.88%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-022	5	0.9396	0.8397	1.039	0.6847	1.345	0.04876	0.2626	27.94%	21.94%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-022	0.75	0.55	0.95	0.4	0.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-1345-9908	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					32.58%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-021	0.5615	1.86	0.3449	0.2949	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02711381	0.02711381	1	0.3153	0.5898	Non-Significant Effect
Error	0.6879457	0.08599321	8			
Total	0.7150595	0.113107	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.379	23.15	0.2652	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9445		0.6044	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-021	5	0.74	0.6338	0.8462	0.4	1	0.05186	0.2793	37.74%	12.94%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-021	5	1.099	0.9609	1.238	0.6847	1.461	0.06765	0.3643	33.13%	8.65%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-021	1	0.8	0.5	1	0.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-9204-1455	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.43%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-020	-0.3836	1.86	0.238	0.6444	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.006025336	0.006025336	1	0.1471	0.7113	Non-Significant Effect
Error	0.327616	0.040952	8			
Total	0.3336414	0.04697734	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.085	23.15	0.9386	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8639		0.0848	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-020	5	0.88	0.8323	0.9277	0.75	1	0.0233	0.1255	14.26%	-3.53%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-020	5	1.253	1.174	1.331	1.047	1.461	0.03834	0.2065	16.48%	-4.08%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-020	1	0.9	0.75	0.75	1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-2297-5074	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.08%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-019	1.188	1.86	0.2348	0.1345	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0562158	0.0562158	1	1.41	0.2691	Non-Significant Effect
Error	0.318889	0.03986112	8			
Total	0.3751048	0.09607692	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.03	23.15	0.9779	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9281		0.4291	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-019	5	0.74	0.6749	0.8051	0.5	0.9	0.03176	0.171	23.11%	12.94%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-019	5	1.054	0.9772	1.13	0.7854	1.249	0.03735	0.2011	19.09%	12.46%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-019	0.5	0.9	0.9	0.75	0.65

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-6320-8898	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					15.09%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-018	-0.9017	1.86	0.1885	0.8032	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02088731	0.02088731	1	0.813	0.3936	Non-Significant Effect
Error	0.2055244	0.02569055	8			
Total	0.2264117	0.04657786	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.244	23.15	0.2808	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9596		0.7807	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-018	5	0.92	0.8983	0.9417	0.85	1	0.01059	0.05701	6.2%	-8.24%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-018	5	1.295	1.253	1.337	1.173	1.459	0.02043	0.11	8.5%	-7.59%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-018	0.9	0.9	0.95	1	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-7850-9638	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.37%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-014	0.4478	1.86	0.2375	0.3331	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.008178087	0.008178087	1	0.2006	0.6662	Non-Significant Effect
Error	0.3262252	0.04077815	8			
Total	0.3344033	0.04895624	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.077	23.15	0.9447	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9463		0.6251	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-014	5	0.81	0.7555	0.8645	0.6	1	0.02659	0.1432	17.68%	4.71%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-014	5	1.146	1.068	1.225	0.8861	1.459	0.03818	0.2056	17.94%	4.75%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-014	0.8	0.6	0.8	1	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-5932-0081	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					25.57%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-013	-0.4965	1.86	0.284	0.6836	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01437621	0.01437621	1	0.2465	0.6329	Non-Significant Effect
Error	0.4665578	0.05831973	8			
Total	0.4809341	0.07269594	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.97	23.15	0.5275	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9035		0.2395	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-013	5	0.88	0.8056	0.9544	0.55	1	0.03632	0.1956	22.22%	-3.53%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-013	5	1.279	1.174	1.385	0.8355	1.469	0.05165	0.2781	21.74%	-6.3%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-013	1	1	0.85	1	0.55

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-8241-1701	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					25.83%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-012	2.391	1.86	0.2863	0.0219	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3387614	0.3387614	1	5.717	0.0438	Significant Effect
Error	0.4740445	0.05925556	8			
Total	0.8128059	0.398017	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.018	23.15	0.5134	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8636		0.0841	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-012	5	0.54	0.4399	0.6401	0.3	0.85	0.04887	0.2632	48.73%	36.47%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-012	5	0.8355	0.7285	0.9426	0.5796	1.173	0.05227	0.2815	33.69%	30.58%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-012	0.3	0.85	0.8	0.4	0.35

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-3573-1763	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					19.08%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-011	-1.087	1.86	0.2257	0.8457	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04352539	0.04352539	1	1.182	0.3086	Non-Significant Effect
Error	0.2946173	0.03682716	8			
Total	0.3381427	0.08035254	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.142	23.15	0.9005	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9271		0.4202	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-011	5	0.93	0.8883	0.9717	0.75	1	0.02034	0.1095	11.78%	-9.41%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-011	5	1.336	1.265	1.406	1.047	1.461	0.03443	0.1854	13.88%	-10.96%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-011	1	0.75	1	0.9	1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-1277-7355	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					25.2%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-010	1.402	1.86	0.2808	0.0992	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1120677	0.1120677	1	1.967	0.1984	Non-Significant Effect
Error	0.4558996	0.05698745	8			
Total	0.5679673	0.1690551	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.902	23.15	0.5488	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8708		0.1022	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-010	5	0.67	0.5944	0.7456	0.5	1	0.03691	0.1987	29.66%	21.18%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-010	5	0.9919	0.888	1.096	0.7854	1.461	0.05075	0.2733	27.55%	17.59%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-010	0.5	0.7	1	0.55	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-7314-5790	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					17.73%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-009	0.2177	1.86	0.2133	0.4166	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.00155883	0.00155883	1	0.0474	0.8331	Non-Significant Effect
Error	0.2630915	0.03288644	8			
Total	0.2646504	0.03444527	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.482	23.15	0.7123	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9021		0.2308	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-009	5	0.84	0.8034	0.8766	0.75	1	0.01786	0.09618	11.45%	1.18%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-009	5	1.179	1.117	1.241	1.047	1.459	0.03023	0.1628	13.81%	2.08%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-009	0.8	1	0.8	0.85	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-2921-6731	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					19.47%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-008	0.9182	1.86	0.2293	0.1927	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03203975	0.03203975	1	0.8431	0.3854	Non-Significant Effect
Error	0.3040123	0.03800154	8			
Total	0.3360521	0.07004129	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.069	23.15	0.9498	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9452		0.6124	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-008	5	0.77	0.712	0.828	0.55	0.95	0.02831	0.1525	19.8%	9.41%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-008	5	1.09	1.018	1.163	0.8355	1.345	0.03559	0.1916	17.58%	9.41%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-008	0.55	0.8	0.7	0.95	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-1743-9493	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					17.16%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-007	1.73	1.86	0.208	0.0609	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.09362844	0.09362844	1	2.994	0.1218	Non-Significant Effect
Error	0.2501841	0.03127301	8			
Total	0.3438126	0.1249015	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.688	23.15	0.6246	Equal Variances
Distribution	Shapiro-Wilk Normality	0.951		0.6800	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-007	5	0.71	0.6572	0.7628	0.5	0.85	0.02576	0.1387	19.54%	16.47%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-007	5	1.01	0.9521	1.068	0.7854	1.173	0.02833	0.1526	15.1%	16.08%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-007	0.65	0.5	0.85	0.8	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-6389-1796	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					26.79%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-006	0.696	1.86	0.2947	0.2531	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03041856	0.03041856	1	0.4844	0.5061	Non-Significant Effect
Error	0.5023288	0.06279109	8			
Total	0.5327473	0.09320965	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.198	23.15	0.4645	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9176		0.3377	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-006	5	0.75	0.6671	0.8329	0.5	1	0.04047	0.2179	29.06%	11.76%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-006	5	1.093	0.9816	1.205	0.7854	1.459	0.05455	0.2938	26.87%	9.16%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-006	1	0.7	0.95	0.5	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-1912-6436	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					24.08%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-005	1.241	1.86	0.2708	0.1248	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.08169179	0.08169179	1	1.541	0.2496	Non-Significant Effect
Error	0.4240574	0.05300718	8			
Total	0.5057492	0.134699	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.699	23.15	0.6201	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9175		0.3364	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-005	5	0.71	0.6214	0.7986	0.35	0.9	0.04325	0.2329	32.81%	16.47%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-005	5	1.023	0.9246	1.121	0.6331	1.249	0.04797	0.2583	25.26%	15.02%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-005	0.85	0.9	0.85	0.6	0.35

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-2069-0253	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					16.61%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-004	3.547	1.86	0.2029	0.0038	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3742159	0.3742159	1	12.58	0.0075	Significant Effect
Error	0.2379997	0.02974997	8			
Total	0.6122156	0.4039659	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.942	23.15	0.5362	Equal Variances
Distribution	Shapiro-Wilk Normality	0.922		0.3736	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-004	5	0.53	0.4769	0.5831	0.4	0.7	0.02593	0.1396	26.35%	37.65%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-004	5	0.8167	0.7627	0.8708	0.6847	0.9912	0.02641	0.1422	17.41%	32.14%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-004	0.4	0.65	0.7	0.5	0.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-3414-0781	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.67%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-003	0.4335	1.86	0.2402	0.3380	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.007838685	0.007838685	1	0.1879	0.6761	Non-Significant Effect
Error	0.33369	0.04171125	8			
Total	0.3415287	0.04954993	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.124	23.15	0.9124	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9562		0.7421	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-003	5	0.81	0.7539	0.8661	0.6	1	0.02739	0.1475	18.21%	4.71%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-003	5	1.148	1.068	1.228	0.8861	1.459	0.03902	0.2101	18.31%	4.65%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-003	0.85	0.85	0.75	1	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-3092-9944	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					16.51%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-002	1.146	1.86	0.2019	0.1424	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03871709	0.03871709	1	1.314	0.2848	Non-Significant Effect
Error	0.2356893	0.02946116	8			
Total	0.2744063	0.06817824	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.999	23.15	0.5189	Equal Variances
Distribution	Shapiro-Wilk Normality	0.95		0.6683	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-002	5	0.77	0.7223	0.8177	0.55	0.85	0.0233	0.1255	16.3%	9.41%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-002	5	1.079	1.026	1.133	0.8355	1.173	0.02603	0.1402	12.99%	10.34%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-002	0.8	0.55	0.85	0.8	0.85

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-2139-0656	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:37	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.93%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-001	2.094	1.86	0.2426	0.0348	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1865316	0.1865316	1	4.384	0.0696	Non-Significant Effect
Error	0.3403653	0.04254567	8			
Total	0.526897	0.2290773	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.167	23.15	0.8849	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8963		0.1992	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-001	5	0.63	0.5581	0.7019	0.45	0.9	0.03511	0.1891	30.01%	25.88%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-001	5	0.9305	0.8491	1.012	0.7353	1.249	0.03975	0.2141	23.0%	22.69%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-001	0.9	0.75	0.55	0.45	0.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-1950-3813	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:37	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					29.84%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-017	0.2658	1.86	0.3213	0.3986	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.005272456	0.005272456	1	0.07065	0.7971	Non-Significant Effect
Error	0.597048	0.074631	8			
Total	0.6023204	0.07990345	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.801	23.15	0.3425	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8605		0.0773	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-017	5	0.8	0.6924	0.9076	0.3	0.95	0.05252	0.2828	35.36%	5.88%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-017	5	1.158	1.032	1.284	0.5796	1.345	0.06158	0.3316	28.65%	3.82%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-017	0.95	0.95	0.85	0.95	0.3

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-9774-4203	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:37	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					29.73%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-016	-0.1664	1.86	0.3203	0.5640	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.002053357	0.002053357	1	0.02768	0.8720	Non-Significant Effect
Error	0.5934386	0.07417982	8			
Total	0.5954919	0.07623318	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.778	23.15	0.3463	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8747		0.1134	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-016	5	0.84	0.7474	0.9326	0.45	1	0.0452	0.2434	28.98%	1.18%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-016	5	1.232	1.107	1.358	0.7353	1.461	0.06133	0.3303	26.8%	-2.38%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-016	1	1	0.75	1	0.45

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-4678-5864	**Endpoint:**	Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 21:37	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					23.31%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-015	0.1162	1.86	0.264	0.4552	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0006795842	0.0006795842	1	0.01349	0.9104	Non-Significant Effect
Error	0.4029607	0.05037009	8			
Total	0.4036403	0.05104968	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.565	23.15	0.6749	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9478		0.6430	Normal Distribution

Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	0.85	0.8015	0.8985	0.7	1	0.02367	0.1275	15.0%	0.0%
19685-015	5	0.83	0.7606	0.8994	0.55	1	0.03386	0.1823	21.97%	2.35%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.204	1.128	1.279	0.9912	1.461	0.0368	0.1982	16.46%	0.0%
19685-015	5	1.187	1.093	1.281	0.8355	1.459	0.04604	0.2479	20.88%	1.37%

Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	0.7	1	0.95	0.85	0.75
19685-015	1	0.9	0.75	0.95	0.55

Leptocheirus plumulosus 28-Day Sediment Evaluation

STUDY NUMBER: 19685 **CLIENT:** Tetra Tech NUS

PROJECT: CTO 458 - Gould Island **START DATE:**

	REP	TARE WEIGHT (mg)	*L. plumulosus* and FOIL (mg)	NET WEIGHT (mg)	Number of *L. plumulosus*	MEAN DRY WEIGHT PER Individual
START ORGANISMS	A	207.75	208.11	0.36	10	0.036
	B	207.12	209.84	0.72	10	0.072
	C	207.44	207.89	0.45	10	0.045
	D	207.57	208.11	0.54	10	0.054
RECORDED BY: AM		WM				Average:
DATE: 6/2/10		6/3/10				0.05175

NOTES:

STUDY: 19685
CLIENT: TetraTech
PROJECT: Site 17 Gould Island - CTO NO. 0458
ASSAY: Leptocheirus plumulosus 28-day
TASK: Dry Weight Data

Date/Initial:	07/02/10 WM	06/27/10 JQ	Duplicate Measurements	
ESI Lab No.:	Total Wt (mg)	Tare Wt (mg)	Total Wt (mg)	Tare Wt (mg)
Lab A	230.49	208.43		
Lab B	234.75	207.28		
Lab C	233.78	207.68		
Lab D	236.14	208.25		
Lab E	229.16	207.71		
001A	230.48	208.89		
001B	223.58	207.91		
001C	216.35	208.05		
001D	219.12	207.86		
001E	215.02	208.79		
002A	229.25	207.90		
002B	234.93	208.50		
002C	236.16	206.37		
002D	226.14	208.41	226.14	208.41
002E	229.75	208.63		
003A	224.54	206.15		
003B	219.14	207.79		
003C	222.66	208.81		
003D	244.37	207.22		
003E	230.59	208.57		
004A	218.18	210.37		
004B	221.77	206.08		
004C	227.03	207.16		
004D	224.82	205.16		
004E	213.38	205.84	213.40	
005A	243.47	207.43		
005B	235.41	207.63		
005C	237.70	207.31		
005D	222.63	207.23		
005E	212.41	205.25		
006A	236.51	208.27		
006B	230.85	205.70		
006C	249.58	207.35		
006D	221.34	209.72		
006E	222.27	204.56		
007A	216.01	205.23		
007B	216.02	207.56		
007C	229.47	205.97		
007D	225.95	208.43	225.99	208.47
007E	219.16	208.06		
008A	225.33	206.79		
008B	222.03	207.02		
008C	222.68	206.51		
008D	225.53	206.41		
008E	234.10	208.19		

Date/Initial:	07/02/10 WM	06/27/10 JQ	Duplicate Measurements	
ESI Lab No.:	Total Wt (mg)	Tare Wt (mg)	Total Wt (mg)	Tare Wt (mg)
009A	235.40	204.91		
009B	221.28	204.06		
009C	221.68	206.25		
009D	226.34	207.39		
009E	222.31	207.87		
010A	213.02	207.88	213.03	
010B	224.89	207.63		
010C	249.18	209.10		
010D	213.00	206.01		
010E	217.93	207.00		
011A	243.93	208.28		
011B	233.01	207.61		
011C	249.17	207.70		
011D	228.88	206.62		
011E	243.33	207.89		
012A	210.08	207.84		
012B	230.06	209.14		
012C	217.42	207.24		
012D	219.32	207.66	219.33	207.70
012E	212.13	208.01		
013A	236.82	207.03		
013B	234.30	206.01		
013C	236.23	205.80		
013D	238.19	206.53		
013E	224.08	205.68		
014A	218.52	205.54		
014B	209.39	206.13		
014C	218.16	208.23		
014D	216.62	209.13		
014E	213.97	208.47		
015A	234.27	206.92	234.26	
015B	222.57	207.58		
015C	238.57	207.97		
015D	234.25	207.63		
015E	218.19	205.74		
016A	249.93	208.58		
016B	244.72	207.13		
016C	224.79	207.85		
016D	241.95	205.78		
016E	214.19	208.93		
017A	240.46	207.26		
017B	238.08	205.85		
017C	230.93	207.05		
017D	236.66	207.31	236.66	207.31
017E	214.45	207.32		
018A	243.76	208.76		
018B	241.75	208.70		
018C	241.66	207.67		
018D	247.07	208.50		
018E	232.69	207.28		
019A	222.70	208.33		
019B	229.76	205.92		
019C	230.85	205.48		

Date/Initial:	07/02/10 WM	06/27/10 JQ	Duplicate Measurements	
ESI Lab No.:	Total Wt (mg)	Tare Wt (mg)	Total Wt (mg)	Tare Wt (mg)
019D	219.03	207.92		
019E	232.10	206.64		
020A	243.60	207.63	243.64	
020B	239.53	205.87		
020C	237.67	206.51		
020D	231.81	205.87		
020E	250.31	207.99		
021A	236.69	206.96		
021B	213.54	204.70		
021C	213.00	208.71		
021D	242.04	206.85		
021E	211.18	205.93		
022A	232.79	205.07		
022B	222.14	207.46		
022C	239.32	205.79		
022D	223.17	205.84	223.15	205.86
022E	224.62	206.83		
023A	223.23	207.76		
023B	220.85	206.43		
023C	241.59	208.52		
023D	219.73	206.87		
023E	218.95	205.74		
024A	233.30	208.71		
024B	226.41	204.94		
024C	224.26	208.43		
024D	215.27	207.09		
024E	236.91	208.36		
025A	235.12	207.00	235.12	
025B	216.88	205.80		
025C	225.87	206.19		
025D	217.71	206.20		
025E	227.02	206.76		
026A	247.14	207.99		
026B	247.52	206.13		
026C	247.26	207.54		
026D	237.99	206.99		
026E	234.60	206.42		
027A	221.77	206.10		
027B	223.20	205.75		
027C	226.92	207.44		
027D	225.98	207.99	225.98	208.02
027E	225.93	207.18		
028A	223.19	206.10		
028B	223.49	206.95		
028C	224.67	207.56		
028D	219.95	208.50		
028E	222.72	208.95		
029A	237.52	208.45		
029B	231.35	205.58		
029C	228.20	204.39		
029D	227.42	205.91		
029E	234.35	207.41		
030A	237.76	207.07	237.79	

Date/Initial:	07/02/10 WM	06/27/10 JQ	Duplicate Measurements	
ESI Lab No.:	Total Wt (mg)	Tare Wt (mg)	Total Wt (mg)	Tare Wt (mg)
030B	221.33	208.50		
030C	244.02	206.89		
030D	231.66	208.45		
030E	237.08	206.33		
031A	229.67	210.28		
031B	219.10	209.94		
031C	236.75	207.48		
031D	216.07	208.16		
031E	212.70	206.75		
032A	224.04	211.52		
032B	225.02	208.13		
032C	233.13	207.87		
032D	234.99	211.32	234.98	211.33
032E	231.99	208.36		
033A	244.28	210.10		
033B	235.81	207.93		
033C	231.74	208.04		
033D	249.14	207.38		
033E	236.20	206.35	236.21	

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-7750-5377	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:45	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					19.88%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-033	-1.763	1.86	0.3015	0.9421	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2043606	0.2043606	1	3.11	0.1158	Non-Significant Effect
Error	0.525762	0.06572025	8			
Total	0.7301227	0.2700809	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.545	23.15	0.6839	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9202		0.3586	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-033	5	1.802	1.695	1.91	1.394	2.088	0.05245	0.2825	15.67%	-18.86%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-033	1.899	1.64	1.394	2.088	1.99

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-8564-5754	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					24.01%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-032	1.533	1.86	0.3641	0.0819	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.225173	0.225173	1	2.349	0.1639	Non-Significant Effect
Error	0.7667156	0.09583945	8			
Total	0.9918885	0.3210124	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.711	23.15	0.3575	Equal Variances
Distribution	Shapiro-Wilk Normality	0.896		0.1980	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-032	5	1.216	1.074	1.359	0.7825	1.578	0.06949	0.3742	30.77%	19.79%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-032	0.7825	0.8445	1.486	1.578	1.39

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-5941-2060	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					27.24%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-031	0.7774	1.86	0.413	0.2296	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.07453836	0.07453836	1	0.6044	0.4593	Non-Significant Effect
Error	0.9866704	0.1233338	8			
Total	1.061209	0.1978722	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.775	23.15	0.2264	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9737		0.9231	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-031	5	1.344	1.176	1.512	0.791	1.829	0.082	0.4416	32.87%	11.39%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-031	1.763	1.145	1.829	0.791	1.19

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-4922-6262	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					22.85%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-030	-0.5758	1.86	0.3464	0.7097	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02877261	0.02877261	1	0.3316	0.5806	Non-Significant Effect
Error	0.6941785	0.08677231	8			
Total	0.7229511	0.1155449	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.36	23.15	0.4261	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9724		0.9123	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-030	5	1.624	1.491	1.756	1.166	2.063	0.06483	0.3491	21.5%	-7.08%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-030	1.395	1.166	2.063	1.785	1.708

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-0750-1117	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					14.51%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-029	1.458	1.86	0.22	0.0915	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.07437256	0.07437256	1	2.125	0.1830	Non-Significant Effect
Error	0.2799768	0.03499711	8			
Total	0.3543494	0.1093697	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.817	23.15	0.3399	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9624		0.8127	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-029	5	1.344	1.292	1.395	1.171	1.497	0.02515	0.1354	10.08%	11.38%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-029	1.454	1.171	1.253	1.344	1.497

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-0247-8140	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					15.85%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-028	3.773	1.86	0.2404	0.0027	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5948372	0.5948372	1	14.24	0.0054	Significant Effect
Error	0.3342046	0.04177558	8			
Total	0.9290419	0.6366128	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.62	23.15	0.6518	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9288		0.4359	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-028	5	1.029	0.9606	1.096	0.8179	1.221	0.03316	0.1786	17.36%	32.17%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-028	1.221	1.103	1.141	0.8179	0.8606

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-1905-0175	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					14.2%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-027	2.417	1.86	0.2152	0.0210	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1956262	0.1956262	1	5.841	0.0421	Significant Effect
Error	0.2679514	0.03349393	8			
Total	0.4635777	0.2291202	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.369	23.15	0.2663	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9417		0.5724	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-027	5	1.237	1.189	1.284	1.124	1.425	0.02299	0.1238	10.01%	18.45%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-027	1.425	1.163	1.299	1.124	1.172

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-2885-6878	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:44	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					18.16%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-026	-4.212	1.86	0.2753	0.9985	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.9718859	0.9718859	1	17.74	0.0029	Significant Effect
Error	0.4383455	0.05479319	8			
Total	1.410231	1.026679	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.121	23.15	0.9142	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8653		0.0880	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-026	5	2.14	2.048	2.231	1.722	2.303	0.04469	0.2407	11.25%	-41.12%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-026	2.303	2.299	2.207	1.722	2.168

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-0144-6227	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					23.97%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-025	1.836	1.86	0.3635	0.0518	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.321945	0.321945	1	3.371	0.1037	Non-Significant Effect
Error	0.7641098	0.09551372	8			
Total	1.086055	0.4174588	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.698	23.15	0.3596	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9701		0.8920	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-025	5	1.157	1.015	1.299	0.6156	1.562	0.06932	0.3733	32.25%	23.67%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-025	1.562	0.6156	1.158	1.439	1.013

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-9795-7031	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					15.84%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-024	2.29	1.86	0.2402	0.0256	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2187836	0.2187836	1	5.245	0.0512	Non-Significant Effect
Error	0.3337049	0.04171311	8			
Total	0.5524884	0.2604967	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.626	23.15	0.6492	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9694		0.8851	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-024	5	1.22	1.153	1.288	1.023	1.503	0.0331	0.1782	14.6%	19.51%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-024	1.23	1.13	1.218	1.023	1.503

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-5515-5553	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					25.43%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-023	2.342	1.86	0.3856	0.0236	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5896404	0.5896404	1	5.486	0.0473	Significant Effect
Error	0.8598678	0.1074835	8			
Total	1.449508	0.6971239	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.162	23.15	0.2910	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8807		0.1329	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-023	5	1.031	0.8769	1.184	0.7565	1.741	0.07504	0.4041	39.21%	32.03%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-023	0.8142	0.9613	1.741	0.7565	0.8807

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-2405-4269	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					20.5%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-022	-1.568	1.86	0.3109	0.9223	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1718911	0.1718911	1	2.46	0.1554	Non-Significant Effect
Error	0.5590901	0.06988626	8			
Total	0.7309811	0.2417773	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.706	23.15	0.6176	Equal Variances
Distribution	Shapiro-Wilk Normality	0.966		0.8519	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-022	5	1.779	1.666	1.891	1.335	2.166	0.05512	0.2968	16.69%	-17.29%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-022	1.848	1.335	1.765	2.166	1.779

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-9607-5105	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					34.07%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-021	1.926	1.86	0.5166	0.0452	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7154267	0.7154267	1	3.708	0.0903	Non-Significant Effect
Error	1.543339	0.1929174	8			
Total	2.258766	0.9083441	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.469	23.15	0.0979	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9696		0.8867	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-021	5	0.9813	0.7615	1.201	0.429	1.759	0.1073	0.5781	58.91%	35.28%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-021	1.416	0.5525	0.429	1.759	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-1030-4663	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					14.81%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-020	-3.162	1.86	0.2246	0.9933	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3644077	0.3644077	1	9.995	0.0134	Significant Effect
Error	0.2916617	0.03645771	8			
Total	0.6560694	0.4008654	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.43	23.15	0.4109	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9511		0.6814	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-020	5	1.898	1.843	1.954	1.729	2.077	0.02708	0.1458	7.68%	-25.18%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-020	1.799	1.87	2.077	1.729	2.015

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-9188-7912	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.83%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-019	0.6505	1.86	0.4068	0.2668	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.05061485	0.05061485	1	0.4231	0.5336	Non-Significant Effect
Error	0.9570118	0.1196265	8			
Total	1.007627	0.1702413	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.632	23.15	0.2394	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9614		0.8012	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-019	5	1.374	1.209	1.539	0.7407	1.958	0.08043	0.4331	31.52%	9.38%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-019	1.437	1.324	1.409	0.7407	1.958

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-3380-9564	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					15.96%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-018	-2.169	1.86	0.242	0.9691	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.199163	0.199163	1	4.705	0.0619	Non-Significant Effect
Error	0.3386202	0.04232753	8			
Total	0.5377833	0.2414905	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.565	23.15	0.6748	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9018		0.2292	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-018	5	1.799	1.729	1.868	1.495	1.944	0.03373	0.1817	10.1%	-18.61%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-018	1.944	1.836	1.789	1.929	1.495

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-1992-4157	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					17.67%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-014	7.191	1.86	0.2679	<0.0001	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.683123	2.683123	1	51.71	<0.0001	Significant Effect
Error	0.4151422	0.05189278	8			
Total	3.098266	2.735016	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.009	23.15	0.9932	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9597		0.7819	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-014	5	0.4803	0.3935	0.5672	0.2717	0.8113	0.0424	0.2283	47.54%	68.32%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-014	0.8113	0.2717	0.6206	0.3745	0.3235

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-8391-5408	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					17.16%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-013	-0.06379	1.86	0.2602	0.5247	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.000199265	0.000199265	1	0.00407	0.9507	Non-Significant Effect
Error	0.391698	0.04896225	8			
Total	0.3918973	0.04916152	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.116	23.15	0.9176	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9362		0.5114	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-013	5	1.525	1.443	1.607	1.241	1.79	0.03994	0.2151	14.1%	-0.59%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-013	1.241	1.415	1.79	1.508	1.673

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-1367-6111	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					28.25%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-012	2.861	1.86	0.4284	0.0106	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.085843	1.085843	1	8.183	0.0211	Significant Effect
Error	1.061509	0.1326886	8			
Total	2.147352	1.218532	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.137	23.15	0.1978	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9699		0.8902	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-012	5	0.8572	0.6814	1.033	0.3733	1.458	0.08585	0.4623	53.93%	43.46%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-012	0.3733	1.231	0.6362	1.458	0.5886

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-9914-2477	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					19.37%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-011	-1.004	1.86	0.2937	0.8276	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.06287255	0.06287255	1	1.008	0.3447	Non-Significant Effect
Error	0.4988734	0.06235917	8			
Total	0.5617459	0.1252317	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.414	23.15	0.7451	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9262		0.4118	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-011	5	1.675	1.572	1.778	1.237	1.975	0.05019	0.2703	16.14%	-10.46%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-011	1.698	1.693	1.975	1.237	1.772

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-1708-6498	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.08%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-010	1.764	1.86	0.5016	0.0578	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5663179	0.5663179	1	3.113	0.1157	Non-Significant Effect
Error	1.455249	0.1819061	8			
Total	2.021567	0.748224	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.043	23.15	0.1095	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9318		0.4660	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-010	5	1.04	0.8278	1.253	0.514	1.909	0.1037	0.5587	53.7%	31.39%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-010	0.514	1.233	1.909	0.6355	0.9108

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-9452-3635	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.46%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-009	1.643	1.86	0.4013	0.0695	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3143838	0.3143838	1	2.701	0.1389	Non-Significant Effect
Error	0.9312278	0.1164035	8			
Total	1.245612	0.4307873	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.507	23.15	0.2517	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8726		0.1073	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-009	5	1.162	0.9998	1.324	0.861	1.906	0.07904	0.4256	36.64%	23.39%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-009	1.906	0.861	0.9644	1.115	0.9627

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-1455-7194	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:42	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					21.88%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-008	1.427	1.86	0.3317	0.0958	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1619117	0.1619117	1	2.035	0.1915	Non-Significant Effect
Error	0.6363626	0.07954532	8			
Total	0.7982743	0.2414571	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.08	23.15	0.4956	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9305		0.4530	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-008	5	1.262	1.137	1.386	0.9381	1.685	0.06087	0.3278	25.98%	16.78%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-008	1.685	0.9381	1.155	1.006	1.524

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-8749-1687	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					19.0%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-007	3.471	1.86	0.2881	0.0042	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7230042	0.7230042	1	12.05	0.0084	Significant Effect
Error	0.4800128	0.0600016	8			
Total	1.203017	0.7830058	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.323	23.15	0.7927	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9664		0.8559	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-007	5	0.9785	0.8791	1.078	0.74	1.382	0.04855	0.2614	26.72%	35.47%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-007	0.8292	0.846	1.382	1.095	0.74

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-0830-2092	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					25.64%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-006	-0.4662	1.86	0.3888	0.6732	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02375927	0.02375927	1	0.2173	0.6535	Non-Significant Effect
Error	0.8745348	0.1093169	8			
Total	0.8982941	0.1330761	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.232	23.15	0.2822	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9667		0.8587	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-006	5	1.614	1.458	1.769	1.162	2.223	0.07588	0.4086	25.32%	-6.43%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-006	1.412	1.796	2.223	1.162	1.476

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-8992-7225	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.55%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-005	-0.1624	1.86	0.4025	0.5625	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.003087542	0.003087542	1	0.02636	0.8750	Non-Significant Effect
Error	0.9370245	0.1171281	8			
Total	0.940112	0.1202156	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.535	23.15	0.2489	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9821		0.9756	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-005	5	1.551	1.389	1.714	1.023	2.12	0.07935	0.4273	27.54%	-2.32%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-005	2.12	1.543	1.788	1.283	1.023

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-1755-8714	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.1%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-004	1.006	1.86	0.3957	0.1719	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1145968	0.1145968	1	1.012	0.3438	Non-Significant Effect
Error	0.9056683	0.1132085	8			
Total	1.020265	0.2278053	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.383	23.15	0.2648	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9196		0.3534	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-004	5	1.302	1.143	1.461	0.9425	1.966	0.07763	0.418	32.1%	14.12%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-004	0.9762	1.207	1.419	1.966	0.9425

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-6621-4547	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					32.32%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-003	0.9229	1.86	0.4901	0.1915	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1479176	0.1479176	1	0.8517	0.3831	Non-Significant Effect
Error	1.389396	0.1736745	8			
Total	1.537313	0.3215921	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.724	23.15	0.1195	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9578		0.7604	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-003	5	1.273	1.066	1.48	0.6676	1.858	0.101	0.5438	42.71%	16.04%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-003	1.082	0.6676	0.9233	1.858	1.835

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-7226-7360	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					31.38%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-002	-0.202	1.86	0.4758	0.5775	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.006680887	0.006680887	1	0.04082	0.8449	Non-Significant Effect
Error	1.309491	0.1636863	8			
Total	1.316171	0.1703672	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.338	23.15	0.1337	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9112		0.2896	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-002	5	1.568	1.368	1.768	1.108	2.403	0.09751	0.5251	33.49%	-3.41%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-002	1.334	2.403	1.752	1.108	1.242

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	21-3943-6430	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					19.88%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-001	3.25	1.86	0.3014	0.0059	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.6938332	0.6938332	1	10.56	0.0117	Significant Effect
Error	0.5255098	0.06568872	8			
Total	1.219343	0.759522	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.543	23.15	0.6844	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8786		0.1258	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	0.0%
19685-001	5	0.9895	0.8821	1.097	0.623	1.251	0.05243	0.2823	28.54%	34.74%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.747	1.696	1.405	1.545	1.188
19685-001	1.199	1.119	0.7545	1.251	0.623

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-0489-1922	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					37.86%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-033	-1.083	1.86	0.559	0.8448	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2649889	0.2649889	1	1.173	0.3104	Non-Significant Effect
Error	1.807571	0.2259464	8			
Total	2.07256	0.4909354	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.664	23.15	0.1650	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9452		0.6118	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-033	5	1.802	1.695	1.91	1.394	2.088	0.05245	0.2825	15.67%	-22.05%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-033	1.899	1.64	1.394	2.088	1.99

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-7273-9098	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.3%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-032	0.8138	1.86	0.5951	0.2196	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1695923	0.1695923	1	0.6623	0.4393	Non-Significant Effect
Error	2.048525	0.2560656	8			
Total	2.218117	0.4256579	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.657	23.15	0.3668	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9054		0.2511	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-032	5	1.216	1.074	1.359	0.7825	1.578	0.06949	0.3742	30.77%	17.64%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-032	0.7825	0.8445	1.486	1.578	1.39

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-3201-9425	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.41%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-031	0.3949	1.86	0.6263	0.3516	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04422989	0.04422989	1	0.156	0.7032	Non-Significant Effect
Error	2.26848	0.28356	8			
Total	2.31271	0.3277899	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.908	23.15	0.5468	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9225		0.3781	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-031	5	1.344	1.176	1.512	0.791	1.829	0.082	0.4416	32.87%	9.01%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-031	1.763	1.145	1.829	0.791	1.19

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-1542-8439	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.58%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-030	-0.4675	1.86	0.5845	0.6737	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.05397862	0.05397862	1	0.2185	0.6526	Non-Significant Effect
Error	1.975988	0.2469985	8			
Total	2.029966	0.3009771	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.053	23.15	0.3052	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9469		0.6321	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-030	5	1.624	1.491	1.756	1.166	2.063	0.06483	0.3491	21.5%	-9.95%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-030	1.395	1.166	2.063	1.785	1.708

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-0902-1744	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.19%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-029	0.4753	1.86	0.5196	0.3236	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0441022	0.0441022	1	0.2259	0.6473	Non-Significant Effect
Error	1.561786	0.1952233	8			
Total	1.605888	0.2393255	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	20.29	23.15	0.0128	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9554		0.7328	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-029	5	1.344	1.292	1.395	1.171	1.497	0.02515	0.1354	10.08%	9.0%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-029	1.454	1.171	1.253	1.344	1.497

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-8735-2970	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.8%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-028	1.576	1.86	0.5286	0.0768	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5020415	0.5020415	1	2.485	0.1536	Non-Significant Effect
Error	1.616014	0.2020018	8			
Total	2.118055	0.7040432	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	11.67	23.15	0.0354	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9533		0.7078	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-028	5	1.029	0.9606	1.096	0.8179	1.221	0.03316	0.1786	17.36%	30.35%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-028	1.221	1.103	1.141	0.8179	0.8606

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-4925-0991	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:40	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.19%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-027	0.8624	2.132	0.5934	0.2185	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1440874	0.1440874	1	0.7438	0.4136	Non-Significant Effect
Error	1.549761	0.1937201	8			
Total	1.693848	0.3378075	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	24.27	23.15	0.0091	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.9471		0.6342	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-027	5	1.237	1.189	1.284	1.124	1.425	0.02299	0.1238	10.01%	16.26%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-027	1.425	1.163	1.299	1.124	1.172

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-7210-9782	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.93%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-026	-2.261	1.86	0.5454	0.9732	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.099459	1.099459	1	5.113	0.0536	Non-Significant Effect
Error	1.720155	0.2150194	8			
Total	2.819614	1.314478	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.423	23.15	0.0991	Equal Variances
Distribution	Shapiro-Wilk Normality	0.935		0.4987	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-026	5	2.14	2.048	2.231	1.722	2.303	0.04469	0.2407	11.25%	-44.91%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-026	2.303	2.299	2.207	1.722	2.168

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-9604-3558	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.28%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-025	0.998	1.86	0.5948	0.1738	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2547159	0.2547159	1	0.996	0.3475	Non-Significant Effect
Error	2.045919	0.2557399	8			
Total	2.300635	0.5104558	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.67	23.15	0.3646	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9378		0.5293	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-025	5	1.157	1.015	1.299	0.6156	1.562	0.06932	0.3733	32.25%	21.62%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-025	1.562	0.6156	1.158	1.439	1.013

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-2447-4895	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.79%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-024	0.9013	1.86	0.5285	0.1969	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1640533	0.1640533	1	0.8124	0.3937	Non-Significant Effect
Error	1.615514	0.2019393	8			
Total	1.779568	0.3659926	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	11.71	23.15	0.0352	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9553		0.7314	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-024	5	1.22	1.153	1.288	1.023	1.503	0.0331	0.1782	14.6%	17.35%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-024	1.23	1.13	1.218	1.023	1.503

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-7075-2917	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.21%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-023	1.363	1.86	0.6085	0.1050	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4972681	0.4972681	1	1.857	0.2100	Non-Significant Effect
Error	2.141677	0.2677096	8			
Total	2.638945	0.7649778	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.279	23.15	0.4447	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9586		0.7703	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-023	5	1.031	0.8769	1.184	0.7565	1.741	0.07504	0.4041	39.21%	30.2%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-023	0.8142	0.9613	1.741	0.7565	0.8807

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-0927-9769	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.21%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-022	-0.995	1.86	0.5642	0.8256	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2278206	0.2278206	1	0.99	0.3489	Non-Significant Effect
Error	1.840899	0.2301124	8			
Total	2.06872	0.4579331	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.223	23.15	0.1919	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9488		0.6545	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-022	5	1.779	1.666	1.891	1.335	2.166	0.05512	0.2968	16.69%	-20.44%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-022	1.848	1.335	1.765	2.166	1.779

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-5873-7056	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					47.33%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-021	1.318	1.86	0.6989	0.1120	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.6132784	0.6132784	1	1.737	0.2241	Non-Significant Effect
Error	2.825148	0.3531435	8			
Total	3.438427	0.966422	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.114	23.15	0.9195	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9412		0.5664	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-021	5	0.9813	0.7615	1.201	0.429	1.759	0.1073	0.5781	58.91%	33.54%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-021	1.416	0.5525	0.429	1.759	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	21-3685-3695	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:39	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.32%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-020	-1.503	1.86	0.5216	0.9143	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.444049	0.444049	1	2.258	0.1714	Non-Significant Effect
Error	1.573471	0.1966839	8			
Total	2.01752	0.6407329	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	17.5	23.15	0.0169	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9561		0.7407	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-020	5	1.898	1.843	1.954	1.729	2.077	0.02708	0.1458	7.68%	-28.54%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-020	1.799	1.87	2.077	1.729	2.015

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-7186-8211	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.13%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-019	0.3067	1.86	0.6222	0.3834	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02633134	0.02633134	1	0.09409	0.7669	Non-Significant Effect
Error	2.238821	0.2798527	8			
Total	2.265153	0.306184	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.984	23.15	0.5234	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9386		0.5379	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-019	5	1.374	1.209	1.539	0.7407	1.958	0.08043	0.4331	31.52%	6.95%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-019	1.437	1.324	1.409	0.7407	1.958

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-8421-8369	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.85%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-018	-1.131	1.86	0.5293	0.8546	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2590657	0.2590657	1	1.279	0.2908	Non-Significant Effect
Error	1.62043	0.2025537	8			
Total	1.879495	0.4616194	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	11.28	23.15	0.0377	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9462		0.6236	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-018	5	1.799	1.729	1.868	1.495	1.944	0.03373	0.1817	10.1%	-21.8%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-018	1.944	1.836	1.789	1.929	1.495

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-3868-0022	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.68%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-014	3.42	1.86	0.5417	0.0045	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.481621	2.481621	1	11.7	0.0091	Significant Effect
Error	1.696952	0.212119	8			
Total	4.178573	2.69374	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.138	23.15	0.0832	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9543		0.7200	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-014	5	0.4803	0.3935	0.5672	0.2717	0.8113	0.0424	0.2283	47.54%	67.47%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-014	0.8113	0.2717	0.6206	0.3745	0.3235

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-4758-6094	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.43%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-013	-0.168	1.86	0.5379	0.5646	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.005901962	0.005901962	1	0.02821	0.8708	Non-Significant Effect
Error	1.673507	0.2091884	8			
Total	1.679409	0.2150904	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.042	23.15	0.0680	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9572		0.7534	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-013	5	1.525	1.443	1.607	1.241	1.79	0.03994	0.2151	14.1%	-3.29%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-013	1.241	1.415	1.79	1.508	1.673

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-6053-3045	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					43.11%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-012	1.809	1.86	0.6365	0.0540	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.959087	0.959087	1	3.274	0.1080	Non-Significant Effect
Error	2.343318	0.2929148	8			
Total	3.302405	1.252002	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.741	23.15	0.6043	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9198		0.3555	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-012	5	0.8572	0.6814	1.033	0.3733	1.458	0.08585	0.4623	53.93%	41.95%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-012	0.3733	1.231	0.6362	1.458	0.5886

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-1245-7483	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					37.58%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-011	-0.6644	1.86	0.5549	0.7374	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.09825221	0.09825221	1	0.4414	0.5251	Non-Significant Effect
Error	1.780683	0.2225854	8			
Total	1.878935	0.3208376	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.093	23.15	0.1439	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9449		0.6090	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-011	5	1.675	1.572	1.778	1.237	1.975	0.05019	0.2703	16.14%	-13.43%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-011	1.698	1.693	1.975	1.237	1.772

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-2601-6176	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					46.59%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-010	1.179	1.86	0.6879	0.1361	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4758694	0.4758694	1	1.391	0.2721	Non-Significant Effect
Error	2.737058	0.3421323	8			
Total	3.212928	0.8180016	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.192	23.15	0.8689	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9783		0.9556	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-010	5	1.04	0.8278	1.253	0.514	1.909	0.1037	0.5587	53.7%	29.55%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-010	0.514	1.233	1.909	0.6355	0.9108

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-1619-8660	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:37	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.89%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-009	0.9468	1.86	0.6186	0.1857	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2479953	0.2479953	1	0.8965	0.3714	Non-Significant Effect
Error	2.213037	0.2766297	8			
Total	2.461033	0.524625	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.054	23.15	0.5028	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9615		0.8034	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-009	5	1.162	0.9998	1.324	0.861	1.906	0.07904	0.4256	36.64%	21.33%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-009	1.906	0.861	0.9644	1.115	0.9627

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-5234-2386	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:37	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.0%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-008	0.6937	1.86	0.5759	0.2538	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1153788	0.1153788	1	0.4812	0.5075	Non-Significant Effect
Error	1.918172	0.2397715	8			
Total	2.033551	0.3551503	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.464	23.15	0.2562	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9332		0.4800	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-008	5	1.262	1.137	1.386	0.9381	1.685	0.06087	0.3278	25.98%	14.55%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-008	1.685	0.9381	1.155	1.006	1.524

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-6218-7391	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:37	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					37.38%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-007	1.678	1.86	0.5519	0.0659	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.6202955	0.6202955	1	2.817	0.1318	Non-Significant Effect
Error	1.761822	0.2202278	8			
Total	2.382118	0.8405233	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.444	23.15	0.1295	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9503		0.6718	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-007	5	0.9785	0.8791	1.078	0.74	1.382	0.04855	0.2614	26.72%	33.73%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-007	0.8292	0.846	1.382	1.095	0.74

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-4012-9701	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:37	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.35%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-006	-0.4177	1.86	0.6106	0.6564	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04702329	0.04702329	1	0.1745	0.6872	Non-Significant Effect
Error	2.156344	0.269543	8			
Total	2.203367	0.3165663	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.228	23.15	0.4568	Equal Variances
Distribution	Shapiro-Wilk Normality	0.952		0.6921	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-006	5	1.614	1.458	1.769	1.162	2.223	0.07588	0.4086	25.32%	-9.29%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-006	1.412	1.796	2.223	1.162	1.476

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-9817-8854	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:37	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.95%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-005	-0.2246	1.86	0.6194	0.5860	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01398868	0.01398868	1	0.05044	0.8279	Non-Significant Effect
Error	2.218834	0.2773542	8			
Total	2.232823	0.2913429	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.038	23.15	0.5075	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9417		0.5715	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-005	5	1.551	1.389	1.714	1.023	2.12	0.07935	0.4273	27.54%	-5.07%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-005	2.12	1.543	1.788	1.283	1.023

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-2548-6221	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:37	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.65%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-004	0.5275	1.86	0.615	0.3061	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.07607303	0.07607303	1	0.2782	0.6122	Non-Significant Effect
Error	2.187478	0.2734347	8			
Total	2.263551	0.3495077	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.129	23.15	0.4822	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9544		0.7208	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-004	5	1.302	1.143	1.461	0.9425	1.966	0.07763	0.418	32.1%	11.81%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-004	0.9762	1.207	1.419	1.966	0.9425

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-8079-1854	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:37	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					46.02%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-003	0.5571	1.86	0.6796	0.2964	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1036148	0.1036148	1	0.3103	0.5927	Non-Significant Effect
Error	2.671205	0.3339007	8			
Total	2.77482	0.4375155	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.258	23.15	0.8291	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8963		0.1995	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-003	5	1.273	1.066	1.48	0.6676	1.858	0.101	0.5438	42.71%	13.79%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-003	1.082	0.6676	0.9233	1.858	1.835

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-2996-2458	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:36	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					45.33%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-002	-0.2538	1.86	0.6693	0.5970	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0208643	0.0208643	1	0.06441	0.8061	Non-Significant Effect
Error	2.5913	0.3239125	8			
Total	2.612164	0.3447768	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.35	23.15	0.7785	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9684		0.8759	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-002	5	1.568	1.368	1.768	1.108	2.403	0.09751	0.5251	33.49%	-6.19%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-002	1.334	2.403	1.752	1.108	1.242

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-4696-8755	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:36	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					37.86%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-001	1.621	1.86	0.559	0.0719	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.593298	0.593298	1	2.626	0.1438	Non-Significant Effect
Error	1.807319	0.2259149	8			
Total	2.400617	0.8192129	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.668	23.15	0.1648	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9303		0.4513	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-001	5	0.9895	0.8821	1.097	0.623	1.251	0.05243	0.2823	28.54%	32.99%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-001	1.199	1.119	0.7545	1.251	0.623

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-5672-7644	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:36	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.66%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-017	-0.1362	1.86	0.5414	0.5525	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.003932306	0.003932306	1	0.01856	0.8950	Non-Significant Effect
Error	1.695057	0.2118821	8			
Total	1.698989	0.2158144	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.204	23.15	0.0819	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9497		0.6646	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	0.0%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	-2.69%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	1.129	1.722	0.5844
19685-017	1.747	1.696	1.405	1.545	1.188

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-8557-7463	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:36	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					28.29%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-033	-1.875	1.86	0.3967	0.9512	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3999682	0.3999682	1	3.516	0.0976	Non-Significant Effect
Error	0.910122	0.1137652	8			
Total	1.31009	0.5137335	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.852	23.15	0.5653	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9594		0.7793	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-033	5	1.802	1.695	1.91	1.394	2.088	0.05245	0.2825	15.67%	-28.53%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-033	1.899	1.64	1.394	2.088	1.99

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-2571-1152	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:36	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					31.81%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-032	0.7755	1.86	0.4461	0.2302	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.08652785	0.08652785	1	0.6014	0.4604	Non-Significant Effect
Error	1.151075	0.1438844	8			
Total	1.237603	0.2304123	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.055	23.15	0.9598	Equal Variances
Distribution	Shapiro-Wilk Normality	0.941		0.5646	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-032	5	1.216	1.074	1.359	0.7825	1.578	0.06949	0.3742	30.77%	13.27%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-032	0.7825	0.8445	1.486	1.578	1.39

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-4647-1027	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:36	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					34.72%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-031	0.2238	1.86	0.4869	0.4143	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.008583907	0.008583907	1	0.05009	0.8285	Non-Significant Effect
Error	1.37103	0.1713788	8			
Total	1.379614	0.1799627	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.32	23.15	0.7945	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9291		0.4387	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-031	5	1.344	1.176	1.512	0.791	1.829	0.082	0.4416	32.87%	4.18%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-031	1.763	1.145	1.829	0.791	1.19

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-2692-0356	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:36	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					30.8%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-030	-0.9532	1.86	0.4318	0.8158	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1224949	0.1224949	1	0.9086	0.3684	Non-Significant Effect
Error	1.078538	0.1348173	8			
Total	1.201033	0.2573122	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.212	23.15	0.8566	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9537		0.7127	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-030	5	1.624	1.491	1.756	1.166	2.063	0.06483	0.3491	21.5%	-15.79%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-030	1.395	1.166	2.063	1.785	1.708

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-5367-2957	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:36	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					24.17%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-029	0.3205	1.86	0.3389	0.3784	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.008527705	0.008527705	1	0.1027	0.7568	Non-Significant Effect
Error	0.6643367	0.08304209	8			
Total	0.6728644	0.0915698	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.057	23.15	0.0678	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8887		0.1638	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-029	5	1.344	1.292	1.395	1.171	1.497	0.02515	0.1354	10.08%	4.17%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-029	1.454	1.171	1.253	1.344	1.497

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-7826-3594	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:35	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					25.14%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-028	1.972	1.86	0.3525	0.0421	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.34915	0.34915	1	3.887	0.0841	Non-Significant Effect
Error	0.7185645	0.08982056	8			
Total	1.067715	0.4389706	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.632	23.15	0.1668	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9098		0.2794	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-028	5	1.029	0.9606	1.096	0.8179	1.221	0.03316	0.1786	17.36%	26.65%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-028	1.221	1.103	1.141	0.8179	0.8606

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-3259-3620	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:35	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					23.95%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-027	0.9173	1.86	0.3358	0.1929	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.06860669	0.06860669	1	0.8414	0.3858	Non-Significant Effect
Error	0.6523113	0.08153892	8			
Total	0.720918	0.1501456	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	9.637	23.15	0.0497	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8722		0.1061	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-027	5	1.237	1.189	1.284	1.124	1.425	0.02299	0.1238	10.01%	11.81%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-027	1.425	1.163	1.299	1.124	1.172

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-5917-6982	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:35	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.9%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-026	-3.637	1.86	0.3772	0.9967	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.360047	1.360047	1	13.23	0.0066	Significant Effect
Error	0.8227054	0.1028382	8			
Total	2.182752	1.462885	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.55	23.15	0.3866	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9285		0.4336	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-026	5	2.14	2.048	2.231	1.722	2.303	0.04469	0.2407	11.25%	-52.6%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-026	2.303	2.299	2.207	1.722	2.168

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-9056-2540	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:35	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					31.78%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-025	1.021	1.86	0.4456	0.1685	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1497955	0.1497955	1	1.043	0.3369	Non-Significant Effect
Error	1.14847	0.1435587	8			
Total	1.298265	0.2933542	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.06	23.15	0.9563	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9717		0.9058	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-025	5	1.157	1.015	1.299	0.6156	1.562	0.06932	0.3733	32.25%	17.46%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-025	1.562	0.6156	1.158	1.439	1.013

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-6766-2427	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:35	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					25.13%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-024	0.9592	1.86	0.3524	0.1828	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.08258457	0.08258457	1	0.9201	0.3655	Non-Significant Effect
Error	0.7180648	0.0897581	8			
Total	0.8006493	0.1723427	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.65	23.15	0.1658	Equal Variances
Distribution	Shapiro-Wilk Normality	0.879		0.1272	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-024	5	1.22	1.153	1.288	1.023	1.503	0.0331	0.1782	14.6%	12.96%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-024	1.23	1.13	1.218	1.023	1.503

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-8681-8871	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:35	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.08%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-015		19685-023	19		0	0.0476	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3451712	0.3451712	1	2.219	0.1746	Non-Significant Effect
Error	1.244228	0.1555285	8			
Total	1.589399	0.5006996	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.105	23.15	0.9250	Equal Variances
Distribution	Shapiro-Wilk Normality	0.773		0.0068	Non-normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-023	5	1.031	0.8769	1.184	0.7565	1.741	0.07504	0.4041	39.21%	26.5%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-023	0.8142	0.9613	1.741	0.7565	0.8807

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-3641-6213	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:35	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					28.8%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-022	-1.733	1.86	0.4039	0.9393	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3539836	0.3539836	1	3.002	0.1214	Non-Significant Effect
Error	0.94345	0.1179312	8			
Total	1.297434	0.4719149	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.677	23.15	0.6289	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9264		0.4138	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-022	5	1.779	1.666	1.891	1.335	2.166	0.05512	0.2968	16.69%	-26.84%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-022	1.848	1.335	1.765	2.166	1.779

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-4039-0925	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:35	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.17%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-021	1.356	1.86	0.5773	0.1061	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4428387	0.4428387	1	1.838	0.2122	Non-Significant Effect
Error	1.927699	0.2409624	8			
Total	2.370538	0.6838011	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.262	23.15	0.4487	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9029		0.2360	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-021	5	0.9813	0.7615	1.201	0.429	1.759	0.1073	0.5781	58.91%	30.01%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-021	1.416	0.5525	0.429	1.759	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-1549-8604	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:34	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					24.38%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-020	-2.697	1.86	0.3419	0.9864	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.6147026	0.6147026	1	7.274	0.0272	Significant Effect
Error	0.6760216	0.0845027	8			
Total	1.290724	0.6992053	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.95	23.15	0.0870	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8946		0.1907	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-020	5	1.898	1.843	1.954	1.729	2.077	0.02708	0.1458	7.68%	-35.36%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-020	1.799	1.87	2.077	1.729	2.015

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-5840-2059	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:34	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					34.34%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-019	0.1089	1.86	0.4816	0.4580	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.001990023	0.001990023	1	0.01187	0.9159	Non-Significant Effect
Error	1.341372	0.1676715	8			
Total	1.343362	0.1696615	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.27	23.15	0.8226	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9249		0.3995	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-019	5	1.374	1.209	1.539	0.7407	1.958	0.08043	0.4331	31.52%	2.01%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-019	1.437	1.324	1.409	0.7407	1.958

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-9639-6594	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:34	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					25.21%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-018	-2.085	1.86	0.3536	0.9647	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3926835	0.3926835	1	4.345	0.0706	Non-Significant Effect
Error	0.7229801	0.09037252	8			
Total	1.115664	0.483056	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.477	23.15	0.1757	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8832		0.1419	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-018	5	1.799	1.729	1.868	1.495	1.944	0.03373	0.1817	10.1%	-28.26%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-018	1.944	1.836	1.789	1.929	1.495

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-5590-1084	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:34	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.51%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-014	4.611	1.86	0.3718	0.0009	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.124762	2.124762	1	21.26	0.0017	Significant Effect
Error	0.7995021	0.09993777	8			
Total	2.924264	2.2247	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.834	23.15	0.3372	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9051		0.2491	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-014	5	0.4803	0.3935	0.5672	0.2717	0.8113	0.0424	0.2283	47.54%	65.75%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-014	0.8113	0.2717	0.6206	0.3745	0.3235

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-2254-6084	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:34	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.12%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-013	-0.6244	1.86	0.3663	0.7251	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03782398	0.03782398	1	0.3899	0.5497	Non-Significant Effect
Error	0.776058	0.09700724	8			
Total	0.8138819	0.1348312	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.193	23.15	0.2870	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9099		0.2805	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-013	5	1.525	1.443	1.607	1.241	1.79	0.03994	0.2151	14.1%	-8.77%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-013	1.241	1.415	1.79	1.508	1.673

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-8591-4498	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:34	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.66%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-012	2.027	1.86	0.5	0.0386	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7424756	0.7424756	1	4.108	0.0772	Non-Significant Effect
Error	1.445869	0.1807336	8			
Total	2.188344	0.9232092	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.447	23.15	0.7293	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8806		0.1325	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-012	5	0.8572	0.6814	1.033	0.3733	1.458	0.08585	0.4623	53.93%	38.86%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-012	0.3733	1.231	0.6362	1.458	0.5886

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-9799-3793	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:34	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					27.87%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-011	-1.297	1.86	0.3908	0.8847	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1858573	0.1858573	1	1.683	0.2306	Non-Significant Effect
Error	0.8832333	0.1104042	8			
Total	1.069091	0.2962615	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.022	23.15	0.5120	Equal Variances
Distribution	Shapiro-Wilk Normality	0.941		0.5638	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-011	5	1.675	1.572	1.778	1.237	1.975	0.05019	0.2703	16.14%	-19.44%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-011	1.698	1.693	1.975	1.237	1.772

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-0507-0128	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:33	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.22%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-010	1.193	1.86	0.564	0.1335	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3273822	0.3273822	1	1.424	0.2670	Non-Significant Effect
Error	1.839609	0.2299511	8			
Total	2.166991	0.5573333	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.113	23.15	0.4866	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9078		0.2661	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-010	5	1.04	0.8278	1.253	0.514	1.909	0.1037	0.5587	53.7%	25.81%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-010	0.514	1.233	1.909	0.6355	0.9108

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-5330-3190	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:33	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					34.01%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-015		19685-009	20		0	0.0754	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1446522	0.1446522	1	0.8796	0.3758	Non-Significant Effect
Error	1.315588	0.1644485	8			
Total	1.46024	0.3091006	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.226	23.15	0.8482	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7748		0.0072	Non-normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-009	5	1.162	0.9998	1.324	0.861	1.906	0.07904	0.4256	36.64%	17.15%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-009	1.906	0.861	0.9644	1.115	0.9627

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-5547-9129	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:33	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					29.96%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-008	0.6215	1.86	0.4201	0.2758	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04929058	0.04929058	1	0.3863	0.5515	Non-Significant Effect
Error	1.020723	0.1275903	8			
Total	1.070013	0.1768809	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.375	23.15	0.7650	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8846		0.1475	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-008	5	1.262	1.137	1.386	0.9381	1.685	0.06087	0.3278	25.98%	10.01%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-008	1.685	0.9381	1.155	1.006	1.524

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-0228-2767	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:33	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					27.57%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-007	2.038	1.86	0.3866	0.0379	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4488046	0.4488046	1	4.154	0.0759	Non-Significant Effect
Error	0.8643727	0.1080466	8			
Total	1.313177	0.5568511	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.162	23.15	0.4737	Equal Variances
Distribution	Shapiro-Wilk Normality	0.888		0.1609	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-007	5	0.9785	0.8791	1.078	0.74	1.382	0.04855	0.2614	26.72%	30.22%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-007	0.8292	0.846	1.382	1.095	0.74

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-5699-9347	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:33	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.27%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-006	-0.8433	1.86	0.4665	0.7882	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1118957	0.1118957	1	0.7111	0.4236	Non-Significant Effect
Error	1.258895	0.1573619	8			
Total	1.37079	0.2692576	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.13	23.15	0.9085	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8931		0.1836	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-006	5	1.614	1.458	1.769	1.162	2.223	0.07588	0.4086	25.32%	-15.09%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-006	1.412	1.796	2.223	1.162	1.476

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-9760-2939	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:33	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					34.09%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-005	-0.5805	1.86	0.478	0.7112	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.05566457	0.05566457	1	0.337	0.5775	Non-Significant Effect
Error	1.321384	0.1651731	8			
Total	1.377049	0.2208376	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.236	23.15	0.8423	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9286		0.4338	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-005	5	1.551	1.389	1.714	1.023	2.12	0.07935	0.4273	27.54%	-10.64%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-005	2.12	1.543	1.788	1.283	1.023

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-1109-6200	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:33	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.68%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-004	0.3938	1.86	0.4723	0.3520	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0250126	0.0250126	1	0.1551	0.7040	Non-Significant Effect
Error	1.290028	0.1612535	8			
Total	1.315041	0.1862661	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.183	23.15	0.8746	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8328		0.0362	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-004	5	1.302	1.143	1.461	0.9425	1.966	0.07763	0.418	32.1%	7.13%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-004	0.9762	1.207	1.419	1.966	0.9425

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-9586-8066	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:32	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.49%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-003	0.4337	1.86	0.5538	0.3380	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04171107	0.04171107	1	0.1881	0.6759	Non-Significant Effect
Error	1.773756	0.2217195	8			
Total	1.815467	0.2634305	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.001	23.15	0.5181	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8829		0.1407	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-003	5	1.273	1.066	1.48	0.6676	1.858	0.101	0.5438	42.71%	9.21%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-003	1.082	0.6676	0.9233	1.858	1.835

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-7628-9154	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:32	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.59%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-002	-0.5696	1.86	0.5412	0.7077	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.06869874	0.06869874	1	0.3245	0.5846	Non-Significant Effect
Error	1.69385	0.2117313	8			
Total	1.762549	0.28043	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.866	23.15	0.5605	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8671		0.0926	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-002	5	1.568	1.368	1.768	1.108	2.403	0.09751	0.5251	33.49%	-11.82%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-002	1.334	2.403	1.752	1.108	1.242

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-7161-8273	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:32	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					28.29%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-001	1.935	1.86	0.3966	0.0445	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4258851	0.4258851	1	3.745	0.0890	Non-Significant Effect
Error	0.9098697	0.1137337	8			
Total	1.335755	0.5396188	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.853	23.15	0.5648	Equal Variances
Distribution	Shapiro-Wilk Normality	0.931		0.4579	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-001	5	0.9895	0.8821	1.097	0.623	1.251	0.05243	0.2823	28.54%	29.43%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-001	1.199	1.119	0.7545	1.251	0.623

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-6247-8438	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:32	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.48%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-017	-0.5712	1.86	0.3714	0.7082	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03253253	0.03253253	1	0.3263	0.5835	Non-Significant Effect
Error	0.7976075	0.09970094	8			
Total	0.8301401	0.1322335	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.86	23.15	0.3331	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9167		0.3303	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	-8.14%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-017	1.747	1.696	1.405	1.545	1.188

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-2914-0732	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:32	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.76%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-016	-0.2308	1.86	0.5996	0.5884	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0138438	0.0138438	1	0.05326	0.8233	Non-Significant Effect
Error	2.079417	0.2599271	8			
Total	2.093261	0.2737709	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.519	23.15	0.3928	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9541		0.7170	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	0.0%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	-5.31%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	1.071	2.04	1.401	1.132
19685-016	2.068	1.88	1.129	1.722	0.5844

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-9303-0402	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:32	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					17.86%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-033	-2.391	1.86	0.2618	0.9781	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2832231	0.2832231	1	5.716	0.0438	Significant Effect
Error	0.396408	0.049551	8			
Total	0.6796311	0.3327741	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.13	23.15	0.1983	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9529		0.7031	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-033	5	1.802	1.695	1.91	1.394	2.088	0.05245	0.2825	15.67%	-22.97%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-033	1.899	1.64	1.394	2.088	1.99

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-8180-2199	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:32	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					22.65%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-032	1.397	1.86	0.332	0.0999	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.155551	0.155551	1	1.952	0.1999	Non-Significant Effect
Error	0.6373615	0.07967019	8			
Total	0.7929125	0.2352212	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.249	23.15	0.0811	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9475		0.6396	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-032	5	1.216	1.074	1.359	0.7825	1.578	0.06949	0.3742	30.77%	17.02%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-032	0.7825	0.8445	1.486	1.578	1.39

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-8566-3252	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:31	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.27%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-031	0.5892	1.86	0.385	0.2860	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0372076	0.0372076	1	0.3472	0.5720	Non-Significant Effect
Error	0.8573163	0.1071645	8			
Total	0.8945239	0.1443721	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.1	23.15	0.0458	Equal Variances
Distribution	Shapiro-Wilk Normality	0.955		0.7280	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-031	5	1.344	1.176	1.512	0.791	1.829	0.082	0.4416	32.87%	8.32%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-031	1.763	1.145	1.829	0.791	1.19

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-9416-4188	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:31	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					21.32%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-030	-0.9399	1.86	0.3125	0.8126	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.06237472	0.06237472	1	0.8835	0.3748	Non-Significant Effect
Error	0.5648244	0.07060305	8			
Total	0.6271991	0.1329778	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.31	23.15	0.1020	Equal Variances
Distribution	Shapiro-Wilk Normality	0.983		0.9791	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-030	5	1.624	1.491	1.756	1.166	2.063	0.06483	0.3491	21.5%	-10.78%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-030	1.395	1.166	2.063	1.785	1.708

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-9994-4734	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:31	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					11.01%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-029	1.404	1.86	0.1614	0.0990	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03709049	0.03709049	1	1.97	0.1981	Non-Significant Effect
Error	0.1506228	0.01882785	8			
Total	0.1877133	0.05591834	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.053	23.15	0.9610	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9127		0.3003	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-029	5	1.344	1.292	1.395	1.171	1.497	0.02515	0.1354	10.08%	8.31%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-029	1.454	1.171	1.253	1.344	1.497

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-4985-4293	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:31	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					12.84%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-028	4.319	1.86	0.1882	0.0013	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4776642	0.4776642	1	18.65	0.0025	Significant Effect
Error	0.2048506	0.02560632	8			
Total	0.6825147	0.5032705	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.651	23.15	0.6390	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9065		0.2579	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-028	5	1.029	0.9606	1.096	0.8179	1.221	0.03316	0.1786	17.36%	29.82%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-028	1.221	1.103	1.141	0.8179	0.8606

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-8361-1056	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:31	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					10.56%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-027	2.752	1.86	0.1548	0.0125	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1311686	0.1311686	1	7.571	0.0250	Significant Effect
Error	0.1385974	0.01732467	8			
Total	0.269766	0.1484933	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.26	23.15	0.8282	Equal Variances
Distribution	Shapiro-Wilk Normality	0.903		0.2365	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-027	5	1.237	1.189	1.284	1.124	1.425	0.02299	0.1238	10.01%	15.63%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-027	1.425	1.163	1.299	1.124	1.172

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-8168-1975	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:31	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					15.77%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-026	-5.424	1.86	0.2311	0.9997	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.136286	1.136286	1	29.42	0.0006	Significant Effect
Error	0.3089914	0.03862393	8			
Total	1.445277	1.17491	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.999	23.15	0.3127	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8711		0.1031	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-026	5	2.14	2.048	2.231	1.722	2.303	0.04469	0.2407	11.25%	-46.0%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-026	2.303	2.299	2.207	1.722	2.168

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-7669-6333	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:31	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					22.6%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-025	1.73	1.86	0.3313	0.0610	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2374394	0.2374394	1	2.993	0.1219	Non-Significant Effect
Error	0.6347557	0.07934446	8			
Total	0.8721951	0.3167839	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.215	23.15	0.0817	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9639		0.8289	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-025	5	1.157	1.015	1.299	0.6156	1.562	0.06932	0.3733	32.25%	21.03%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-025	1.562	0.6156	1.158	1.439	1.013

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-9084-2269	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:30	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					12.83%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-024	2.425	1.86	0.188	0.0208	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1502482	0.1502482	1	5.882	0.0415	Significant Effect
Error	0.2043508	0.02554385	8			
Total	0.3545991	0.1757921	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.645	23.15	0.6416	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9546		0.7233	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-024	5	1.22	1.153	1.288	1.023	1.503	0.0331	0.1782	14.6%	16.73%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-024	1.23	1.13	1.218	1.023	1.503

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-1762-2062	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:30	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					24.25%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-023	2.276	1.86	0.3554	0.0262	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4730084	0.4730084	1	5.18	0.0524	Non-Significant Effect
Error	0.7305137	0.09131421	8			
Total	1.203522	0.5643227	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.454	23.15	0.0624	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8025		0.0155	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-023	5	1.031	0.8769	1.184	0.7565	1.741	0.07504	0.4041	39.21%	29.68%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-023	0.8142	0.9613	1.741	0.7565	0.8807

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-9821-9170	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:30	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					18.6%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-022	-2.135	1.86	0.2726	0.9673	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2447498	0.2447498	1	4.556	0.0653	Non-Significant Effect
Error	0.429736	0.053717	8			
Total	0.6744858	0.2984667	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.562	23.15	0.1707	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9631		0.8203	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-022	5	1.779	1.666	1.891	1.335	2.166	0.05512	0.2968	16.69%	-21.35%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-022	1.848	1.335	1.765	2.166	1.779

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-9824-8198	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:30	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.74%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-021	1.821	1.86	0.4944	0.0530	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5863035	0.5863035	1	3.317	0.1060	Non-Significant Effect
Error	1.413985	0.1767481	8			
Total	2.000288	0.7630516	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	17.3	23.15	0.0173	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9673		0.8648	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-021	5	0.9813	0.7615	1.201	0.429	1.759	0.1073	0.5781	58.91%	33.04%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-021	1.416	0.5525	0.429	1.759	0.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-0493-4201	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:30	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					11.43%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-020	-4.801	1.86	0.1675	0.9993	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4675638	0.4675638	1	23.05	0.0014	Significant Effect
Error	0.1623076	0.02028845	8			
Total	0.6298714	0.4878522	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.101	23.15	0.9283	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8925		0.1808	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-020	5	1.898	1.843	1.954	1.729	2.077	0.02708	0.1458	7.68%	-29.51%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-020	1.799	1.87	2.077	1.729	2.015

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	21-2739-2550	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:30	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					25.81%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-019	0.4503	1.86	0.3783	0.3322	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0209824	0.0209824	1	0.2028	0.6644	Non-Significant Effect
Error	0.8276578	0.1034572	8			
Total	0.8486401	0.1244396	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	9.711	23.15	0.0490	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9104		0.2834	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-019	5	1.374	1.209	1.539	0.7407	1.958	0.08043	0.4331	31.52%	6.25%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-019	1.437	1.324	1.409	0.7407	1.958

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-8393-4167	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:30	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					12.98%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-018	-3.255	1.86	0.1902	0.9942	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2770983	0.2770983	1	10.59	0.0116	Significant Effect
Error	0.2092662	0.02615827	8			
Total	0.4863645	0.3032566	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.708	23.15	0.6167	Equal Variances
Distribution	Shapiro-Wilk Normality	0.933		0.4779	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-018	5	1.799	1.729	1.868	1.495	1.944	0.03373	0.1817	10.1%	-22.72%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-018	1.944	1.836	1.789	1.929	1.495

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-6146-4423	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:29	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					15.17%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-014	8.243	1.86	0.2223	<0.0001	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.427052	2.427052	1	67.94	<0.0001	Significant Effect
Error	0.2857882	0.03572352	8			
Total	2.71284	2.462775	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.699	23.15	0.3596	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9151		0.3180	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-014	5	0.4803	0.3935	0.5672	0.2717	0.8113	0.0424	0.2283	47.54%	67.23%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-014	0.8113	0.2717	0.6206	0.3745	0.3235

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-0305-1020	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:29	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					14.53%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-013	-0.5204	1.86	0.213	0.6916	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.008881279	0.008881279	1	0.2708	0.6169	Non-Significant Effect
Error	0.262344	0.032793	8			
Total	0.2712252	0.04167427	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.395	23.15	0.4183	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9724		0.9124	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-013	5	1.525	1.443	1.607	1.241	1.79	0.03994	0.2151	14.1%	-4.07%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-013	1.241	1.415	1.79	1.508	1.673

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-1515-8917	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:29	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					27.39%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-012	2.818	1.86	0.4015	0.0113	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.9252777	0.9252777	1	7.941	0.0226	Significant Effect
Error	0.9321547	0.1165193	8			
Total	1.857432	1.041797	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	11.06	23.15	0.0389	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9747		0.9308	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-012	5	0.8572	0.6814	1.033	0.3733	1.458	0.08585	0.4623	53.93%	41.51%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-012	0.3733	1.231	0.6362	1.458	0.5886

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-4815-2033	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:29	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					17.25%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-011	-1.54	1.86	0.2528	0.9189	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1094739	0.1094739	1	2.37	0.1622	Non-Significant Effect
Error	0.3695193	0.04618992	8			
Total	0.4789932	0.1556638	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.782	23.15	0.2258	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9504		0.6732	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-011	5	1.675	1.572	1.778	1.237	1.975	0.05019	0.2703	16.14%	-14.28%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-011	1.698	1.693	1.975	1.237	1.772

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-6946-2487	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:29	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					32.67%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-010	1.652	1.86	0.4788	0.0686	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.452144	0.452144	1	2.728	0.1372	Non-Significant Effect
Error	1.325895	0.1657369	8			
Total	1.778039	0.6178809	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	16.16	23.15	0.0196	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9119		0.2940	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-010	5	1.04	0.8278	1.253	0.514	1.909	0.1037	0.5587	53.7%	29.02%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-010	0.514	1.233	1.909	0.6355	0.9108

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-0948-0679	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:29	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					25.41%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-009	1.518	1.86	0.3723	0.0838	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2309523	0.2309523	1	2.304	0.1675	Non-Significant Effect
Error	0.8018737	0.1002342	8			
Total	1.032826	0.3311865	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	9.378	23.15	0.0521	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8082		0.0182	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-009	5	1.162	0.9998	1.324	0.861	1.906	0.07904	0.4256	36.64%	20.74%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-009	1.906	0.861	0.9644	1.115	0.9627

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-2233-0509	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:29	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					20.2%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-008	1.28	1.86	0.2961	0.1182	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1038503	0.1038503	1	1.639	0.2364	Non-Significant Effect
Error	0.5070085	0.06337606	8			
Total	0.6108588	0.1672264	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.562	23.15	0.1252	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9644		0.8347	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-008	5	1.262	1.137	1.386	0.9381	1.685	0.06087	0.3278	25.98%	13.91%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-008	1.685	0.9381	1.155	1.006	1.524

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-0211-9386	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:29	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					16.8%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-007	3.679	1.86	0.2462	0.0031	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5931651	0.5931651	1	13.53	0.0062	Significant Effect
Error	0.3506587	0.04383234	8			
Total	0.9438238	0.6369975	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.538	23.15	0.2485	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9166		0.3292	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-007	5	0.9785	0.8791	1.078	0.74	1.382	0.04855	0.2614	26.72%	33.24%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-007	0.8292	0.846	1.382	1.095	0.74

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-4310-7478	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:28	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					24.49%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-006	-0.7676	1.86	0.3589	0.7676	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.05488002	0.05488002	1	0.5892	0.4648	Non-Significant Effect
Error	0.7451808	0.0931476	8			
Total	0.8000608	0.1480276	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.644	23.15	0.0601	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9445		0.6043	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-006	5	1.614	1.458	1.769	1.162	2.223	0.07588	0.4086	25.32%	-10.11%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-006	1.412	1.796	2.223	1.162	1.476

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-0065-2892	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:28	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					25.5%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-005	-0.427	1.86	0.3737	0.6597	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01841179	0.01841179	1	0.1824	0.6806	Non-Significant Effect
Error	0.8076704	0.1009588	8			
Total	0.8260822	0.1193706	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	9.453	23.15	0.0514	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9863		0.9900	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-005	5	1.551	1.389	1.714	1.023	2.12	0.07935	0.4273	27.54%	-5.86%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-005	2.12	1.543	1.788	1.283	1.023

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-5395-3905	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:28	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					25.0%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-004	0.8295	1.86	0.3664	0.2154	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.06676905	0.06676905	1	0.6881	0.4309	Non-Significant Effect
Error	0.7763142	0.09703927	8			
Total	0.8430833	0.1638083	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	9.047	23.15	0.0555	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9053		0.2501	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-004	5	1.302	1.143	1.461	0.9425	1.966	0.07763	0.418	32.1%	11.15%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-004	0.9762	1.207	1.419	1.966	0.9425

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-4303-3630	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:28	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					31.85%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-003	0.7672	1.86	0.4668	0.2325	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.09270577	0.09270577	1	0.5886	0.4650	Non-Significant Effect
Error	1.260042	0.1575052	8			
Total	1.352748	0.250211	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	15.31	23.15	0.0216	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9536		0.7113	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-003	5	1.273	1.066	1.48	0.6676	1.858	0.101	0.5438	42.71%	13.14%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-003	1.082	0.6676	0.9233	1.858	1.835

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-4139-2553	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:28	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					30.82%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-002	-0.4214	1.86	0.4517	0.6577	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02619902	0.02619902	1	0.1776	0.6845	Non-Significant Effect
Error	1.180136	0.1475171	8			
Total	1.206335	0.1737161	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	14.27	23.15	0.0246	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9046		0.2457	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-002	5	1.568	1.368	1.768	1.108	2.403	0.09751	0.5251	33.49%	-6.99%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-002	1.334	2.403	1.752	1.108	1.242

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-1904-4586	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:28	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					17.86%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-001	3.383	1.86	0.2617	0.0048	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5667712	0.5667712	1	11.45	0.0096	Significant Effect
Error	0.3961557	0.04951946	8			
Total	0.9629269	0.6162907	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.127	23.15	0.1986	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9425		0.5814	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-001	5	0.9895	0.8821	1.097	0.623	1.251	0.05243	0.2823	28.54%	32.49%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-001	1.199	1.119	0.7545	1.251	0.623

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-4075-9101	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:28	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					15.12%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-017	-0.4253	1.86	0.2215	0.6591	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.006419922	0.006419922	1	0.1809	0.6818	Non-Significant Effect
Error	0.2838936	0.0354867	8			
Total	0.2903135	0.04190662	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.674	23.15	0.3638	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9546		0.7225	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-017	5	1.516	1.43	1.603	1.188	1.747	0.0422	0.2273	14.99%	-3.46%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-017	1.747	1.696	1.405	1.545	1.188

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-7619-6196	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:28	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.5%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-016	-0.03937	1.86	0.5203	0.5152	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0003033281	0.0003033281	1	0.00155	0.9696	Non-Significant Effect
Error	1.565703	0.1957129	8			
Total	1.566006	0.1960162	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	19.26	23.15	0.0141	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9548		0.7256	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-016	5	1.477	1.245	1.709	0.5844	2.068	0.1133	0.61	41.31%	-0.75%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-016	2.068	1.88	1.129	1.722	0.5844

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-4313-4697	**Endpoint:**	Mean Dry Weight-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:27	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					23.19%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-015	0.3468	1.86	0.3399	0.3688	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01004873	0.01004873	1	0.1203	0.7377	Non-Significant Effect
Error	0.6682535	0.08353169	8			
Total	0.6783022	0.09358041	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.648	23.15	0.0740	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8899		0.1691	Normal Distribution

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.466	1.413	1.518	1.308	1.641	0.02581	0.139	9.48%	0.0%
19685-015	5	1.402	1.256	1.548	1.071	2.04	0.07138	0.3844	27.41%	4.33%

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.576	1.308	1.374	1.641	1.43
19685-015	1.368	1.071	2.04	1.401	1.132

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-9299-0061	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:26	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.07%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-033	-1.11	1.86	0.5292	0.8503	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2493242	0.2493242	1	1.231	0.2994	Non-Significant Effect
Error	1.620039	0.2025049	8			
Total	1.869363	0.4518291	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.427	23.15	0.4116	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9344		0.4927	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-033	5	1.574	1.443	1.704	1.185	2.088	0.06384	0.3438	21.85%	-25.11%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-033	1.709	1.394	1.185	2.088	1.493

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-2814-2791	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:25	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.74%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-032	0.8861	1.86	0.4999	0.2007	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.141848	0.141848	1	0.7852	0.4014	Non-Significant Effect
Error	1.445156	0.1806445	8			
Total	1.587004	0.3224925	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.851	23.15	0.2199	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8634		0.0837	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-032	5	1.02	0.9159	1.124	0.626	1.263	0.05068	0.2729	26.76%	18.94%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-032	0.626	0.8445	1.263	1.184	1.182

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-2535-8481	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:25	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					48.07%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-031	1.664	1.86	0.6047	0.0673	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7319726	0.7319726	1	2.769	0.1347	Non-Significant Effect
Error	2.114698	0.2643373	8			
Total	2.846671	0.9963099	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.186	23.15	0.8728	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9727		0.9144	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-031	5	0.7168	0.5297	0.9039	0.2975	1.464	0.09132	0.4918	68.61%	43.02%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-031	0.9695	0.458	1.464	0.3955	0.2975

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-9578-6395	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:25	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					46.44%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-030	-0.1919	1.86	0.5842	0.5737	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.009090248	0.009090248	1	0.03684	0.8526	Non-Significant Effect
Error	1.973806	0.2467257	8			
Total	1.982896	0.255816	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.388	23.15	0.7584	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8969		0.2028	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-030	5	1.318	1.145	1.491	0.6415	1.857	0.08441	0.4546	34.48%	-4.79%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-030	1.395	0.6415	1.857	1.161	1.538

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-9409-1896	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:25	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.78%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-029	0.0415	1.86	0.4627	0.4840	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0002666244	0.0002666244	1	0.001723	0.9679	Non-Significant Effect
Error	1.238222	0.1547778	8			
Total	1.238489	0.1550444	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	12.61	23.15	0.0308	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8426		0.0474	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-029	5	1.248	1.19	1.305	1.076	1.454	0.028	0.1508	12.09%	0.82%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-029	1.454	1.171	1.191	1.076	1.347

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-5615-6521	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:25	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.36%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-028	2.026	1.86	0.4574	0.0387	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.6207569	0.6207569	1	4.104	0.0774	Non-Significant Effect
Error	1.210063	0.1512579	8			
Total	1.83082	0.7720148	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	18.27	23.15	0.0156	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8374		0.0410	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-028	5	0.7596	0.7119	0.8073	0.5725	0.8555	0.02327	0.1253	16.5%	39.61%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-028	0.8545	0.827	0.8555	0.5725	0.6885

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-2597-3907	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:25	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.96%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-027	1.508	2.132	0.5152	0.1030	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3321508	0.3321508	1	2.275	0.1699	Non-Significant Effect
Error	1.168249	0.1460312	8			
Total	1.5004	0.478182	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	54.65	23.15	0.0019	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.8103		0.0193	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-027	5	0.8934	0.8658	0.921	0.7835	0.974	0.01345	0.07245	8.11%	28.98%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-027	0.7835	0.8725	0.974	0.8995	0.9375

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-6929-2538	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:25	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.41%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-026	-1.963	1.86	0.5083	0.9573	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7195808	0.7195808	1	3.852	0.0853	Non-Significant Effect
Error	1.494512	0.1868141	8			
Total	2.214093	0.9063949	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.304	23.15	0.2738	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8651		0.0875	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-026	5	1.794	1.682	1.906	1.409	2.07	0.05471	0.2946	16.42%	-42.65%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-026	1.958	2.07	1.986	1.55	1.409

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-9195-6810	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:24	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.43%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-025	1.224	1.86	0.5338	0.1279	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3087046	0.3087046	1	1.499	0.2557	Non-Significant Effect
Error	1.647922	0.2059902	8			
Total	1.956626	0.5146948	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.291	23.15	0.4417	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9232		0.3846	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-025	5	0.9065	0.7719	1.041	0.554	1.406	0.0657	0.3538	39.03%	27.94%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-025	1.406	0.554	0.984	0.5755	1.013

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-1667-2250	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:24	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					44.1%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-024	0.9108	1.86	0.5547	0.1945	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.184552	0.184552	1	0.8295	0.3890	Non-Significant Effect
Error	1.779885	0.2224857	8			
Total	1.964437	0.4070377	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.813	23.15	0.5784	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8816		0.1360	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-024	5	0.9862	0.8349	1.137	0.409	1.428	0.07385	0.3977	40.33%	21.6%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-024	1.23	1.074	0.7915	0.409	1.428

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-8559-7843	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:24	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					45.4%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-023	1.197	1.86	0.571	0.1328	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3378243	0.3378243	1	1.433	0.2655	Non-Significant Effect
Error	1.886	0.23575	8			
Total	2.223824	0.5735743	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.553	23.15	0.6802	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9554		0.7323	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-023	5	0.8903	0.7268	1.054	0.643	1.654	0.0798	0.4298	48.27%	29.22%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-023	0.7735	0.721	1.654	0.643	0.6605

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-7509-3446	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:24	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					44.27%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-022	0.4922	1.86	0.5569	0.3179	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.05431695	0.05431695	1	0.2423	0.6358	Non-Significant Effect
Error	1.793642	0.2242053	8			
Total	1.847959	0.2785223	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.775	23.15	0.5920	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9394		0.5460	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-022	5	1.11	0.9576	1.263	0.734	1.677	0.07465	0.402	36.2%	11.72%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-022	1.386	0.734	1.677	0.8665	0.8895

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	21-2398-9086	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:24	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					59.18%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-021	1.097	1.86	0.7444	0.1523	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4819284	0.4819284	1	1.203	0.3047	Non-Significant Effect
Error	3.205105	0.4006381	8			
Total	3.687033	0.8825665	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.794	23.15	0.5853	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9643		0.8341	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-021	5	0.8188	0.546	1.092	0.2145	1.759	0.1332	0.7173	87.59%	34.9%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-021	1.416	0.442	0.2145	1.759	0.2625

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-3359-9213	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:24	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.6%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-020	-1.54	1.86	0.4981	0.9189	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4252829	0.4252829	1	2.371	0.1622	Non-Significant Effect
Error	1.434799	0.1793498	8			
Total	1.860082	0.6046327	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.99	23.15	0.2088	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8793		0.1280	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-020	5	1.67	1.568	1.772	1.297	2.015	0.04979	0.2681	16.05%	-32.79%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-020	1.799	1.683	1.558	1.297	2.015

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-7693-6495	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:24	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.91%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-019	0.9044	1.86	0.5272	0.1961	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1643522	0.1643522	1	0.8179	0.3922	Non-Significant Effect
Error	1.607553	0.2009441	8			
Total	1.771905	0.3652963	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.492	23.15	0.3980	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8532		0.0634	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-019	5	1.002	0.8725	1.131	0.5555	1.273	0.06299	0.3392	33.87%	20.38%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-019	0.7185	1.192	1.269	0.5555	1.273

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-9815-7399	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:24	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.84%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-018	-1.531	1.86	0.4886	0.9179	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4046138	0.4046138	1	2.344	0.1643	Non-Significant Effect
Error	1.380775	0.1725969	8			
Total	1.785389	0.5772107	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.913	23.15	0.1523	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8641		0.0852	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-018	5	1.66	1.568	1.752	1.271	1.929	0.04487	0.2416	14.55%	-31.98%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-018	1.75	1.653	1.7	1.929	1.271

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-6049-2760	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:23	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					37.55%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-014	3.41	1.86	0.4724	0.0046	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.876189	1.876189	1	11.63	0.0092	Significant Effect
Error	1.290661	0.1613327	8			
Total	3.16685	2.037522	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8	23.15	0.0686	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8673		0.0929	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-014	5	0.3916	0.3196	0.4636	0.163	0.649	0.03516	0.1893	48.35%	68.87%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-014	0.649	0.163	0.4965	0.3745	0.275

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-9674-3809	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:23	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.09%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-013	-0.2386	1.86	0.4917	0.5913	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.009945855	0.009945855	1	0.05691	0.8174	Non-Significant Effect
Error	1.398186	0.1747732	8			
Total	1.408132	0.1847191	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.572	23.15	0.1701	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8564		0.0693	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-013	5	1.321	1.226	1.416	0.92	1.522	0.04651	0.2505	18.96%	-5.01%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-013	1.241	1.415	1.522	1.508	0.92

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-5502-3716	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:23	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.96%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-012	2.638	1.86	0.5404	0.0149	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.469572	1.469572	1	6.961	0.0298	Significant Effect
Error	1.688934	0.2111168	8			
Total	3.158506	1.680688	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.118	23.15	0.4852	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9489		0.6554	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-012	5	0.4912	0.3512	0.6312	0.112	1.046	0.06833	0.368	74.92%	60.95%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-012	0.112	1.046	0.509	0.583	0.206

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-3599-7746	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:23	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.68%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-011	-1.065	1.86	0.5368	0.8411	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2365079	0.2365079	1	1.135	0.3178	Non-Significant Effect
Error	1.666925	0.2083657	8			
Total	1.903433	0.4448736	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.208	23.15	0.4619	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8766		0.1191	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-011	5	1.565	1.428	1.703	1.113	1.975	0.06693	0.3604	23.02%	-24.45%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-011	1.698	1.27	1.975	1.113	1.772

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-0550-2885	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:23	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					56.69%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-010	1.233	1.86	0.7131	0.1262	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5592891	0.5592891	1	1.521	0.2524	Non-Significant Effect
Error	2.941078	0.3676347	8			
Total	3.500367	0.9269238	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.564	23.15	0.6756	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9798		0.9643	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-010	5	0.7849	0.5302	1.04	0.257	1.909	0.1244	0.6697	85.32%	37.6%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-010	0.257	0.863	1.909	0.3495	0.5465

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-3517-9473	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:23	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.39%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-009	1.045	1.86	0.5207	0.1633	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.214037	0.214037	1	1.092	0.3266	Non-Significant Effect
Error	1.567909	0.1959886	8			
Total	1.781946	0.4100257	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.727	23.15	0.3546	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9307		0.4551	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-009	5	0.9653	0.8419	1.089	0.722	1.525	0.06022	0.3243	33.59%	23.26%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-009	1.525	0.861	0.7715	0.9475	0.722

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-5961-6942	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:23	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.08%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-008	1.205	1.86	0.479	0.1313	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2408703	0.2408703	1	1.452	0.2626	Non-Significant Effect
Error	1.326983	0.1658729	8			
Total	1.567853	0.4067432	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.383	23.15	0.1001	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8597		0.0757	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-008	5	0.9475	0.8669	1.028	0.7505	1.296	0.03936	0.212	22.37%	24.68%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-008	0.927	0.7505	0.8085	0.956	1.296

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-0284-0756	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:23	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.84%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-007	1.97	1.86	0.5138	0.0422	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7406557	0.7406557	1	3.881	0.0843	Non-Significant Effect
Error	1.526607	0.1908259	8			
Total	2.267263	0.9314815	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.024	23.15	0.3091	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9078		0.2664	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-007	5	0.7136	0.5965	0.8307	0.423	1.175	0.05719	0.308	43.16%	43.27%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-007	0.539	0.423	1.175	0.876	0.555

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-5110-5017	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:22	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					52.23%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-006	0.02378	1.86	0.6569	0.4908	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0001764	0.0001764	1	0.0005653	0.9816	Non-Significant Effect
Error	2.496158	0.3120198	8			
Total	2.496335	0.3121962	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.176	23.15	0.8791	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9718		0.9069	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-006	5	1.249	1.029	1.47	0.581	2.112	0.1078	0.5807	46.48%	0.67%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-006	1.412	1.258	2.112	0.581	0.8855

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-9425-7110	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:22	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					52.64%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-005	0.2533	1.86	0.6622	0.4032	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02033998	0.02033998	1	0.06416	0.8064	Non-Significant Effect
Error	2.536109	0.3170136	8			
Total	2.556449	0.3373536	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.211	23.15	0.8575	Equal Variances
Distribution	Shapiro-Wilk Normality	0.878		0.1239	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-005	5	1.168	0.9436	1.392	0.358	1.802	0.1094	0.5892	50.46%	7.17%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-005	1.802	1.389	1.52	0.77	0.358

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-1380-2724	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:22	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.76%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-004	2.003	1.86	0.5127	0.0401	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7623118	0.7623118	1	4.011	0.0802	Non-Significant Effect
Error	1.520584	0.190073	8			
Total	2.282896	0.9523848	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.073	23.15	0.3025	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8677		0.0941	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-004	5	0.7057	0.5895	0.8219	0.377	0.9935	0.05673	0.3055	43.29%	43.9%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-004	0.3905	0.7845	0.9935	0.983	0.377

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-9226-6890	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:22	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					48.77%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-003	0.698	1.86	0.6135	0.2525	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1325952	0.1325952	1	0.4872	0.5049	Non-Significant Effect
Error	2.177046	0.2721308	8			
Total	2.309642	0.404726	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.114	23.15	0.9191	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9913		0.9981	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-003	5	1.028	0.8346	1.221	0.5675	1.858	0.09422	0.5074	49.38%	18.31%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-003	0.9195	0.5675	0.6925	1.858	1.101

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-6724-2886	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:22	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.78%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-002	0.3572	1.86	0.4878	0.3651	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02194921	0.02194921	1	0.1276	0.7302	Non-Significant Effect
Error	1.375995	0.1719994	8			
Total	1.397944	0.1939486	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.016	23.15	0.1474	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8713		0.1034	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-002	5	1.164	1.073	1.255	0.8865	1.49	0.04441	0.2391	20.54%	7.45%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-002	1.068	1.322	1.49	0.8865	1.056

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-8819-0336	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:21	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.82%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-001	2.272	1.86	0.5135	0.0264	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.9840766	0.9840766	1	5.162	0.0527	Non-Significant Effect
Error	1.525023	0.1906279	8			
Total	2.5091	1.174705	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.037	23.15	0.3074	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9079		0.2668	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	0.0%
19685-001	5	0.6305	0.5136	0.7474	0.3115	1.08	0.05707	0.3073	48.74%	49.88%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	1.66	1.612	1.194	1.468	0.3565
19685-001	1.08	0.7835	0.415	0.563	0.3115

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-9256-9345	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:21	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					51.69%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-033	-0.5779	1.86	0.7009	0.7104	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1186182	0.1186182	1	0.334	0.5792	Non-Significant Effect
Error	2.841031	0.3551289	8			
Total	2.95965	0.4737471	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.009	23.15	0.1477	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9516		0.6874	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-033	5	1.574	1.443	1.704	1.185	2.088	0.06384	0.3438	21.85%	-16.07%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-033	1.709	1.394	1.185	2.088	1.493

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-1791-7436	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:21	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					50.07%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-032	0.9207	1.86	0.6789	0.1921	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2825358	0.2825358	1	0.8478	0.3841	Non-Significant Effect
Error	2.666148	0.3332685	8			
Total	2.948684	0.6158043	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.95	23.15	0.0693	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9474		0.6384	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-032	5	1.02	0.9159	1.124	0.626	1.263	0.05068	0.2729	26.76%	24.79%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-032	0.626	0.8445	1.263	1.184	1.182

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-9576-2595	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:21	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					56.01%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-031	1.565	1.86	0.7594	0.0781	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.021045	1.021045	1	2.449	0.1562	Non-Significant Effect
Error	3.33569	0.4169613	8			
Total	4.356735	1.438007	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.448	23.15	0.4071	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9328		0.4762	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-031	5	0.7168	0.5297	0.9039	0.2975	1.464	0.09132	0.4918	68.61%	47.13%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-031	0.9695	0.458	1.464	0.3955	0.2975

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-7273-7731	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:21	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					54.81%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-030	0.09427	1.86	0.7432	0.4636	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.003548705	0.003548705	1	0.008886	0.9272	Non-Significant Effect
Error	3.194798	0.3993497	8			
Total	3.198347	0.4028985	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.865	23.15	0.3323	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9329		0.4767	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-030	5	1.318	1.145	1.491	0.6415	1.857	0.08441	0.4546	34.48%	2.78%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-030	1.395	0.6415	1.857	1.161	1.538

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-0769-4045	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:21	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					55.13%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-029	0.3089	2.132	0.7475	0.3864	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02932397	0.02932397	1	0.09539	0.7653	Non-Significant Effect
Error	2.459214	0.3074018	8			
Total	2.488539	0.3367258	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	26.03	23.15	0.0080	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.9535		0.7099	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-029	5	1.248	1.19	1.305	1.076	1.454	0.028	0.1508	12.09%	7.99%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-029	1.454	1.171	1.191	1.076	1.347

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-2445-3003	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					54.82%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-028	1.71	2.132	0.7433	0.0812	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.8888625	0.8888625	1	2.925	0.1256	Non-Significant Effect
Error	2.431056	0.3038819	8			
Total	3.319918	1.192744	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	37.71	23.15	0.0039	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.9444		0.6027	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-028	5	0.7596	0.7119	0.8073	0.5725	0.8555	0.02327	0.1253	16.5%	43.98%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-028	0.8545	0.827	0.8555	0.5725	0.6885

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-9615-5872	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					54.34%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-027	1.338	2.132	0.7368	0.1259	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5347106	0.5347106	1	1.79	0.2177	Non-Significant Effect
Error	2.389241	0.2986552	8			
Total	2.923952	0.8333658	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	112.8	23.15	0.0005	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.9305		0.4528	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-027	5	0.8934	0.8658	0.921	0.7835	0.974	0.01345	0.07245	8.11%	34.11%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-027	0.7835	0.8725	0.974	0.8995	0.9375

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-8327-9689	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					50.54%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-026	-1.19	1.86	0.6852	0.8659	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4807582	0.4807582	1	1.416	0.2681	Non-Significant Effect
Error	2.715505	0.3394381	8			
Total	3.196263	0.8201963	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.82	23.15	0.0898	Equal Variances
Distribution	Shapiro-Wilk Normality	0.944		0.5977	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-026	5	1.794	1.682	1.906	1.409	2.07	0.05471	0.2946	16.42%	-32.34%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-026	1.958	2.07	1.986	1.55	1.409

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-7058-0361	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					51.94%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-025	1.186	1.86	0.7043	0.1347	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5048468	0.5048468	1	1.408	0.2695	Non-Significant Effect
Error	2.868914	0.3586142	8			
Total	3.37376	0.863461	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.73	23.15	0.1615	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9425		0.5811	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-025	5	0.9065	0.7719	1.041	0.554	1.406	0.0657	0.3538	39.03%	33.14%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-025	1.406	0.554	0.984	0.5755	1.013

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-2561-7777	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					53.12%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-024	0.9544	1.86	0.7203	0.1839	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3416508	0.3416508	1	0.9108	0.3678	Non-Significant Effect
Error	3.000878	0.3751097	8			
Total	3.342528	0.7167605	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.744	23.15	0.2292	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9363		0.5128	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-024	5	0.9862	0.8349	1.137	0.409	1.428	0.07385	0.3977	40.33%	27.26%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-024	1.23	1.074	0.7915	0.409	1.428

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-0757-0544	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					54.06%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-023	1.181	1.86	0.7329	0.1357	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5419026	0.5419026	1	1.395	0.2714	Non-Significant Effect
Error	3.106992	0.388374	8			
Total	3.648894	0.9302766	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.206	23.15	0.2854	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9378		0.5285	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-023	5	0.8903	0.7268	1.054	0.643	1.654	0.0798	0.4298	48.27%	34.34%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-023	0.7735	0.721	1.654	0.643	0.6605

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-8720-1083	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					53.25%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-022	0.632	1.86	0.722	0.2725	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1505236	0.1505236	1	0.3994	0.5450	Non-Significant Effect
Error	3.014635	0.3768293	8			
Total	3.165158	0.527353	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.664	23.15	0.2364	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9325		0.4733	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-022	5	1.11	0.9576	1.263	0.734	1.677	0.07465	0.402	36.2%	18.1%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-022	1.386	0.734	1.677	0.8665	0.8895

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-1046-6979	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					64.52%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-021	1.142	1.86	0.8748	0.1433	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7210124	0.7210124	1	1.303	0.2866	Non-Significant Effect
Error	4.426097	0.5532621	8			
Total	5.147109	1.274274	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.151	23.15	0.8950	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9068		0.2595	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-021	5	0.8188	0.546	1.092	0.2145	1.759	0.1332	0.7173	87.59%	39.61%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-021	1.416	0.442	0.2145	1.759	0.2625

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-6464-3143	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					49.98%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-020	-0.863	1.86	0.6776	0.7934	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2472311	0.2472311	1	0.7447	0.4133	Non-Significant Effect
Error	2.655791	0.3319739	8			
Total	2.903022	0.5792049	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.236	23.15	0.0653	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9571		0.7520	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-020	5	1.67	1.568	1.772	1.297	2.015	0.04979	0.2681	16.05%	-23.19%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-020	1.799	1.683	1.558	1.297	2.015

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-5873-7121	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					51.58%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-019	0.9423	1.86	0.6993	0.1868	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3139557	0.3139557	1	0.888	0.3736	Non-Significant Effect
Error	2.828545	0.3535682	8			
Total	3.142501	0.6675239	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.145	23.15	0.1417	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9281		0.4295	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-019	5	1.002	0.8725	1.131	0.5555	1.273	0.06299	0.3392	33.87%	26.14%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-019	0.7185	1.192	1.269	0.5555	1.273

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-4684-0916	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					49.47%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-018	-0.8438	1.86	0.6707	0.7883	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.231533	0.231533	1	0.7119	0.4233	Non-Significant Effect
Error	2.601767	0.3252209	8			
Total	2.8333	0.5567539	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.14	23.15	0.0454	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9509		0.6796	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-018	5	1.66	1.568	1.752	1.271	1.929	0.04487	0.2416	14.55%	-22.44%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-018	1.75	1.653	1.7	1.929	1.271

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-4925-0756	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					48.6%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-014	2.721	1.86	0.659	0.0131	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.32457	2.32457	1	7.404	0.0262	Significant Effect
Error	2.511653	0.3139567	8			
Total	4.836224	2.638527	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	16.51	23.15	0.0188	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9606		0.7930	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-014	5	0.3916	0.3196	0.4636	0.163	0.649	0.03516	0.1893	48.35%	71.12%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-014	0.649	0.163	0.4965	0.3745	0.275

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-2593-0953	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					49.63%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-013	0.09645	1.86	0.6729	0.4628	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.003045372	0.003045372	1	0.009302	0.9255	Non-Significant Effect
Error	2.619178	0.3273973	8			
Total	2.622223	0.3304426	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	9.438	23.15	0.0516	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9502		0.6710	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-013	5	1.321	1.226	1.416	0.92	1.522	0.04651	0.2505	18.96%	2.57%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-013	1.241	1.415	1.522	1.508	0.92

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-2484-2455	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					52.31%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-012	2.267	1.86	0.7093	0.0266	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.869161	1.869161	1	5.139	0.0531	Non-Significant Effect
Error	2.909926	0.3637408	8			
Total	4.779088	2.232902	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.372	23.15	0.1821	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9489		0.6555	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-012	5	0.4912	0.3512	0.6312	0.112	1.046	0.06833	0.368	74.92%	63.77%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-012	0.112	1.046	0.509	0.583	0.206

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-3497-2792	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					52.12%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-011	-0.5516	1.86	0.7066	0.7019	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1098306	0.1098306	1	0.3042	0.5963	Non-Significant Effect
Error	2.887918	0.3609897	8			
Total	2.997748	0.4708203	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.557	23.15	0.1710	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9358		0.5071	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-011	5	1.565	1.428	1.703	1.113	1.975	0.06693	0.3604	23.02%	-15.46%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-011	1.698	1.27	1.975	1.113	1.772

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-7419-1168	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					62.56%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-010	1.252	1.86	0.8483	0.1230	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.8149939	0.8149939	1	1.567	0.2461	Non-Significant Effect
Error	4.16207	0.5202587	8			
Total	4.977064	1.335253	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.32	23.15	0.7943	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9725		0.9133	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-010	5	0.7849	0.5302	1.04	0.257	1.909	0.1244	0.6697	85.32%	42.11%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-010	0.257	0.863	1.909	0.3495	0.5465

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-7152-0851	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					51.21%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-009	1.046	1.86	0.6944	0.1631	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3813744	0.3813744	1	1.094	0.3262	Non-Significant Effect
Error	2.788901	0.3486126	8			
Total	3.170275	0.729987	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.63	23.15	0.1228	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9448		0.6080	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-009	5	0.9653	0.8419	1.089	0.722	1.525	0.06022	0.3243	33.59%	28.81%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-009	1.525	0.861	0.7715	0.9475	0.722

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-5218-3672	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					48.95%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-008	1.144	1.86	0.6637	0.1428	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4169275	0.4169275	1	1.309	0.2856	Non-Significant Effect
Error	2.547975	0.3184969	8			
Total	2.964902	0.7354243	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	13.18	23.15	0.0284	Equal Variances
Distribution	Shapiro-Wilk Normality	0.951		0.6809	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-008	5	0.9475	0.8669	1.028	0.7505	1.296	0.03936	0.212	22.37%	30.12%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-008	0.927	0.7505	0.8085	0.956	1.296

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-5692-2054	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					50.83%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-007	1.733	1.86	0.6892	0.0607	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.031296	1.031296	1	3.003	0.1214	Non-Significant Effect
Error	2.747599	0.3434499	8			
Total	3.778895	1.374746	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.243	23.15	0.1038	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9498		0.6659	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-007	5	0.7136	0.5965	0.8307	0.423	1.175	0.05719	0.308	43.16%	47.37%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-007	0.539	0.423	1.175	0.876	0.555

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-3754-0330	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					59.13%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-006	0.2467	1.86	0.8017	0.4057	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02828968	0.02828968	1	0.06088	0.8113	Non-Significant Effect
Error	3.71715	0.4646438	8			
Total	3.74544	0.4929335	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.756	23.15	0.5990	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9638		0.8281	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-006	5	1.249	1.029	1.47	0.581	2.112	0.1078	0.5807	46.48%	7.85%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-006	1.412	1.258	2.112	0.581	0.8855

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-9227-3168	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					59.44%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-005	0.4342	1.86	0.806	0.3378	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.08852535	0.08852535	1	0.1885	0.6756	Non-Significant Effect
Error	3.757101	0.4696376	8			
Total	3.845626	0.5581629	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.705	23.15	0.6178	Equal Variances
Distribution	Shapiro-Wilk Normality	0.892		0.1787	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-005	5	1.168	0.9436	1.392	0.358	1.802	0.1094	0.5892	50.46%	13.88%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-005	1.802	1.389	1.52	0.77	0.358

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-1524-6778	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					50.78%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-004	1.756	1.86	0.6885	0.0586	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.056822	1.056822	1	3.084	0.1171	Non-Significant Effect
Error	2.741576	0.342697	8			
Total	3.798398	1.399519	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.344	23.15	0.1012	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9407		0.5611	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-004	5	0.7057	0.5895	0.8219	0.377	0.9935	0.05673	0.3055	43.29%	47.95%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-004	0.3905	0.7845	0.9935	0.983	0.377

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-9510-4321	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					56.53%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-003	0.7964	1.86	0.7665	0.2244	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.269413	0.269413	1	0.6343	0.4488	Non-Significant Effect
Error	3.398038	0.4247548	8			
Total	3.667451	0.6941677	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.3	23.15	0.4397	Equal Variances
Distribution	Shapiro-Wilk Normality	0.963		0.8191	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-003	5	1.028	0.8346	1.221	0.5675	1.858	0.09422	0.5074	49.38%	24.21%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-003	0.9195	0.5675	0.6925	1.858	1.101

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-1033-3188	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					49.42%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-002	0.5319	1.86	0.6701	0.3046	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.09184927	0.09184927	1	0.2829	0.6092	Non-Significant Effect
Error	2.596987	0.3246234	8			
Total	2.688837	0.4164727	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.35	23.15	0.0438	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9569		0.7503	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-002	5	1.164	1.073	1.255	0.8865	1.49	0.04441	0.2391	20.54%	14.14%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-002	1.068	1.322	1.49	0.8865	1.056

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-8796-1417	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					50.82%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-001	1.958	1.86	0.689	0.0430	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.315426	1.315426	1	3.832	0.0860	Non-Significant Effect
Error	2.746015	0.3432519	8			
Total	4.061441	1.658678	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.269	23.15	0.1031	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9555		0.7341	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-001	5	0.6305	0.5136	0.7474	0.3115	1.08	0.05707	0.3073	48.74%	53.5%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-001	1.08	0.7835	0.415	0.563	0.3115

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-4166-4528	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					57.5%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-017	0.2337	1.86	0.7796	0.4105	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02399828	0.02399828	1	0.05461	0.8211	Non-Significant Effect
Error	3.515504	0.439438	8			
Total	3.539503	0.4634363	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.064	23.15	0.5000	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8791		0.1273	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	0.0%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	7.23%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.068	1.88	0.847	1.722	0.263
19685-017	1.66	1.612	1.194	1.468	0.3565

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-7594-5474	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.49%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-033	-1.907	1.86	0.4423	0.9535	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5143822	0.5143822	1	3.637	0.0929	Non-Significant Effect
Error	1.131437	0.1414296	8			
Total	1.645819	0.6558118	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.393	23.15	0.7558	Equal Variances
Distribution	Shapiro-Wilk Normality	0.942		0.5751	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-033	5	1.574	1.443	1.704	1.185	2.088	0.06384	0.3438	21.85%	-40.5%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-033	1.709	1.394	1.185	2.088	1.493

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-3044-9684	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.31%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-032	0.4591	1.86	0.4067	0.3292	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02520045	0.02520045	1	0.2108	0.6584	Non-Significant Effect
Error	0.956554	0.1195692	8			
Total	0.9817544	0.1447697	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.211	23.15	0.4611	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8669		0.0920	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-032	5	1.02	0.9159	1.124	0.626	1.263	0.05068	0.2729	26.76%	8.96%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-032	0.626	0.8445	1.263	1.184	1.182

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-5569-2493	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					47.34%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-031	1.414	1.86	0.5302	0.0975	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4066272	0.4066272	1	2.001	0.1950	Non-Significant Effect
Error	1.626096	0.203262	8			
Total	2.032723	0.6098893	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.469	23.15	0.7186	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8988		0.2124	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-031	5	0.7168	0.5297	0.9039	0.2975	1.464	0.09132	0.4918	68.61%	36.01%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-031	0.9695	0.458	1.464	0.3955	0.2975

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-8736-5528	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					45.24%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-030	-0.727	1.86	0.5067	0.7560	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.09810895	0.09810895	1	0.5285	0.4880	Non-Significant Effect
Error	1.485204	0.1856505	8			
Total	1.583313	0.2837594	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.255	23.15	0.8312	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9371		0.5212	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-030	5	1.318	1.145	1.491	0.6415	1.857	0.08441	0.4546	34.48%	-17.69%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-030	1.395	0.6415	1.857	1.161	1.538

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-0316-6819	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					32.14%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-029	-0.6584	1.86	0.36	0.7356	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04062323	0.04062323	1	0.4335	0.5287	Non-Significant Effect
Error	0.7496202	0.09370252	8			
Total	0.7902434	0.1343258	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.241	23.15	0.0812	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9569		0.7504	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-029	5	1.248	1.19	1.305	1.076	1.454	0.028	0.1508	12.09%	-11.38%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-029	1.454	1.171	1.191	1.076	1.347

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-7376-9917	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					31.53%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-028	1.898	1.86	0.3532	0.0471	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3249007	0.3249007	1	3.603	0.0942	Non-Significant Effect
Error	0.7214612	0.09018265	8			
Total	1.046362	0.4150833	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.49	23.15	0.0428	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9569		0.7497	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-028	5	0.7596	0.7119	0.8073	0.5725	0.8555	0.02327	0.1253	16.5%	32.18%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-028	0.8545	0.827	0.8555	0.5725	0.6885

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-6076-9499	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.09%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-027	1.23	2.132	0.393	0.1431	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1284826	0.1284826	1	1.512	0.2537	Non-Significant Effect
Error	0.6796471	0.08495589	8			
Total	0.8081297	0.2134385	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	31.37	23.15	0.0056	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.9575		0.7571	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-027	5	0.8934	0.8658	0.921	0.7835	0.974	0.01345	0.07245	8.11%	20.24%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-027	0.7835	0.8725	0.974	0.8995	0.9375

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-7662-7128	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					37.23%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-026	-3.007	1.86	0.417	0.9916	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.136701	1.136701	1	9.04	0.0169	Significant Effect
Error	1.00591	0.1257388	8			
Total	2.142611	1.26244	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.897	23.15	0.5505	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8551		0.0668	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-026	5	1.794	1.682	1.906	1.409	2.07	0.05471	0.2946	16.42%	-60.2%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-026	1.958	2.07	1.986	1.55	1.409

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-8120-5723	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.97%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-025	0.8872	1.86	0.4477	0.2004	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1140624	0.1140624	1	0.7871	0.4009	Non-Significant Effect
Error	1.159319	0.1449149	8			
Total	1.273382	0.2589773	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.316	23.15	0.7969	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9064		0.2573	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-025	5	0.9065	0.7719	1.041	0.554	1.406	0.0657	0.3538	39.03%	19.07%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-025	1.406	0.554	0.984	0.5755	1.013

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-4932-3380	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.18%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-024	0.527	1.86	0.4725	0.3063	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04482302	0.04482302	1	0.2777	0.6125	Non-Significant Effect
Error	1.291283	0.1614104	8			
Total	1.336106	0.2062334	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.041	23.15	0.9698	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8934		0.1852	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-024	5	0.9862	0.8349	1.137	0.409	1.428	0.07385	0.3977	40.33%	11.95%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-024	1.23	1.074	0.7915	0.409	1.428

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-2635-4622	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					43.88%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-023	0.8694	1.86	0.4915	0.2050	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1320202	0.1320202	1	0.7558	0.4100	Non-Significant Effect
Error	1.397398	0.1746747	8			
Total	1.529418	0.3066949	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.122	23.15	0.9141	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9339		0.4870	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-023	5	0.8903	0.7268	1.054	0.643	1.654	0.0798	0.4298	48.27%	20.52%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-023	0.7735	0.721	1.654	0.643	0.6605

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-6041-3151	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.41%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-022	0.03758	1.86	0.475	0.4855	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0002304107	0.0002304107	1	0.001412	0.9709	Non-Significant Effect
Error	1.30504	0.16313	8			
Total	1.305271	0.1633604	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.019	23.15	0.9859	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9021		0.2313	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-022	5	1.11	0.9576	1.263	0.734	1.677	0.07465	0.402	36.2%	0.86%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-022	1.386	0.734	1.677	0.8665	0.8895

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-0500-3369	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					61.18%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-021	0.8174	1.86	0.6853	0.2187	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2268903	0.2268903	1	0.6682	0.4374	Non-Significant Effect
Error	2.716502	0.3395628	8			
Total	2.943393	0.566453	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.124	23.15	0.2957	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8961		0.1986	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-021	5	0.8188	0.546	1.092	0.2145	1.759	0.1332	0.7173	87.59%	26.9%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-021	1.416	0.442	0.2145	1.759	0.2625

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-9235-2411	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.11%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-020	-2.53	1.86	0.4045	0.9824	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7569311	0.7569311	1	6.4	0.0353	Significant Effect
Error	0.9461966	0.1182746	8			
Total	1.703128	0.8752056	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.291	23.15	0.4418	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9214		0.3688	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-020	5	1.67	1.568	1.772	1.297	2.015	0.04979	0.2681	16.05%	-49.12%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-020	1.799	1.683	1.558	1.297	2.015

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-0335-1285	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.27%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-019	0.5014	1.86	0.4398	0.3148	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03516489	0.03516489	1	0.2514	0.6296	Non-Significant Effect
Error	1.118951	0.1398689	8			
Total	1.154116	0.1750338	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.431	23.15	0.7369	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8224		0.0271	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-019	5	1.002	0.8725	1.131	0.5555	1.273	0.06299	0.3392	33.87%	10.59%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-019	0.7185	1.192	1.269	0.5555	1.273

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-6759-7730	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.06%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-018	-2.557	1.86	0.3928	0.9831	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7292703	0.7292703	1	6.539	0.0338	Significant Effect
Error	0.8921729	0.1115216	8			
Total	1.621443	0.8407919	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.821	23.15	0.3393	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9048		0.2469	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-018	5	1.66	1.568	1.752	1.271	1.929	0.04487	0.2416	14.55%	-48.22%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-018	1.75	1.653	1.7	1.929	1.271

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-5819-2174	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.25%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-014	3.638	1.86	0.3724	0.0033	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.326781	1.326781	1	13.23	0.0066	Significant Effect
Error	0.8020592	0.1002574	8			
Total	2.12884	1.427038	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.593	23.15	0.1689	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9532		0.7065	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-014	5	0.3916	0.3196	0.4636	0.163	0.649	0.03516	0.1893	48.35%	65.04%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-014	0.649	0.163	0.4965	0.3745	0.275

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-9248-9748	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.4%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-013	-0.9419	1.86	0.3966	0.8131	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1008759	0.1008759	1	0.8872	0.3738	Non-Significant Effect
Error	0.9095838	0.113698	8			
Total	1.01046	0.2145738	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.625	23.15	0.3727	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8841		0.1452	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-013	5	1.321	1.226	1.416	0.92	1.522	0.04651	0.2505	18.96%	-17.93%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-013	1.241	1.415	1.522	1.508	0.92

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-2204-4933	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.67%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-012	2.567	1.86	0.4556	0.0166	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.988788	0.988788	1	6.59	0.0333	Significant Effect
Error	1.200332	0.1500415	8			
Total	2.18912	1.138829	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.216	23.15	0.8543	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9356		0.5049	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-012	5	0.4912	0.3512	0.6312	0.112	1.046	0.06833	0.368	74.92%	56.15%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-012	0.112	1.046	0.509	0.583	0.206

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-0192-6308	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.3%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-011	-1.835	1.86	0.4514	0.9481	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4958997	0.4958997	1	3.367	0.1039	Non-Significant Effect
Error	1.178323	0.1472904	8			
Total	1.674223	0.6431901	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.267	23.15	0.8239	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8517		0.0608	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-011	5	1.565	1.428	1.703	1.113	1.975	0.06693	0.3604	23.02%	-39.76%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-011	1.698	1.27	1.975	1.113	1.772

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-0119-7595	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					58.14%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-010	0.9572	1.86	0.6512	0.1832	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2808742	0.2808742	1	0.9162	0.3665	Non-Significant Effect
Error	2.452476	0.3065594	8			
Total	2.73335	0.5874336	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.723	23.15	0.3553	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8889		0.1650	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-010	5	0.7849	0.5302	1.04	0.257	1.909	0.1244	0.6697	85.32%	29.92%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-010	0.257	0.863	1.909	0.3495	0.5465

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-3336-7507	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.57%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-009	0.6664	1.86	0.432	0.2620	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.05990779	0.05990779	1	0.444	0.5239	Non-Significant Effect
Error	1.079307	0.1349134	8			
Total	1.139215	0.1948211	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.566	23.15	0.6746	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9666		0.8578	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-009	5	0.9653	0.8419	1.089	0.722	1.525	0.06022	0.3243	33.59%	13.82%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-009	1.525	0.861	0.7715	0.9475	0.722

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-9175-7535	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.99%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-008	0.843	1.86	0.3807	0.2119	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.07447699	0.07447699	1	0.7107	0.4237	Non-Significant Effect
Error	0.8383807	0.1047976	8			
Total	0.9128577	0.1792746	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.665	23.15	0.2363	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9585		0.7686	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-008	5	0.9475	0.8669	1.028	0.7505	1.296	0.03936	0.212	22.37%	15.41%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-008	0.927	0.7505	0.8085	0.956	1.296

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-5985-6992	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					37.82%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-007	1.784	1.86	0.4236	0.0561	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4131055	0.4131055	1	3.184	0.1122	Non-Significant Effect
Error	1.038005	0.1297506	8			
Total	1.45111	0.5428562	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.736	23.15	0.6061	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9299		0.4471	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-007	5	0.7136	0.5965	0.8307	0.423	1.175	0.05719	0.308	43.16%	36.29%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-007	0.539	0.423	1.175	0.876	0.555

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-3002-0660	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					52.6%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-006	-0.4084	1.86	0.5892	0.6532	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0418608	0.0418608	1	0.1668	0.6937	Non-Significant Effect
Error	2.007556	0.2509445	8			
Total	2.049417	0.2928053	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.048	23.15	0.5046	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9567		0.7476	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-006	5	1.249	1.029	1.47	0.581	2.112	0.1078	0.5807	46.48%	-11.55%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-006	1.412	1.258	2.112	0.581	0.8855

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-3211-4929	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:13	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					53.12%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-005	-0.1488	1.86	0.595	0.5573	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.005664426	0.005664426	1	0.02213	0.8854	Non-Significant Effect
Error	2.047507	0.2559383	8			
Total	2.053171	0.2616028	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.109	23.15	0.4877	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9086		0.2714	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-005	5	1.168	0.9436	1.392	0.358	1.802	0.1094	0.5892	50.46%	-4.25%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-005	1.802	1.389	1.52	0.77	0.358

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-6828-1793	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:13	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					37.71%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-004	1.824	1.86	0.4224	0.0528	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4293185	0.4293185	1	3.328	0.1056	Non-Significant Effect
Error	1.031982	0.1289978	8			
Total	1.4613	0.5583162	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.764	23.15	0.5958	Equal Variances
Distribution	Shapiro-Wilk Normality	0.859		0.0742	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-004	5	0.7057	0.5895	0.8219	0.377	0.9935	0.05673	0.3055	43.29%	37.0%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-004	0.3905	0.7845	0.9935	0.983	0.377

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-8059-6958	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:13	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					48.24%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-003	0.3184	1.86	0.5403	0.3792	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02139069	0.02139069	1	0.1014	0.7584	Non-Significant Effect
Error	1.688444	0.2110555	8			
Total	1.709835	0.2324462	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.563	23.15	0.6756	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9322		0.4702	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-003	5	1.028	0.8346	1.221	0.5675	1.858	0.09422	0.5074	49.38%	8.26%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-003	0.9195	0.5675	0.6925	1.858	1.101

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-1631-4623	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:13	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					34.97%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-002	-0.2094	1.86	0.3917	0.5803	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.004861998	0.004861998	1	0.04383	0.8394	Non-Significant Effect
Error	0.8873931	0.1109241	8			
Total	0.8922551	0.1157861	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.879	23.15	0.3302	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9363		0.5121	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-002	5	1.164	1.073	1.255	0.8865	1.49	0.04441	0.2391	20.54%	-3.94%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-002	1.068	1.322	1.49	0.8865	1.056

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-2558-6665	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:13	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					37.79%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-001	2.151	1.86	0.4233	0.0319	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5992706	0.5992706	1	4.626	0.0637	Non-Significant Effect
Error	1.036421	0.1295526	8			
Total	1.635692	0.7288232	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.744	23.15	0.6034	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9313		0.4606	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-001	5	0.6305	0.5136	0.7474	0.3115	1.08	0.05707	0.3073	48.74%	43.71%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-001	1.08	0.7835	0.415	0.563	0.3115

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-0225-9213	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:13	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					49.89%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-017	-0.4586	1.86	0.5588	0.6706	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.047472	0.047472	1	0.2103	0.6587	Non-Significant Effect
Error	1.80591	0.2257388	8			
Total	1.853382	0.2732108	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.742	23.15	0.6041	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8539		0.0646	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	-12.3%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-017	1.66	1.612	1.194	1.468	0.3565

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-1145-4730	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:13	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					64.59%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-016	-0.6061	1.86	0.7234	0.7194	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1389757	0.1389757	1	0.3673	0.5613	Non-Significant Effect
Error	3.026902	0.3783628	8			
Total	3.165878	0.5173385	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.596	23.15	0.2429	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9119		0.2945	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	0.0%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	-21.05%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	1.368	0.7495	1.53	1.331	0.6225
19685-016	2.068	1.88	0.847	1.722	0.263

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-3759-2385	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					24.99%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-033	-2.028	1.86	0.309	0.9615	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2840586	0.2840586	1	4.115	0.0770	Non-Significant Effect
Error	0.5522832	0.0690354	8			
Total	0.8363419	0.353094	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.947	23.15	0.1124	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9504		0.6728	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-033	5	1.574	1.443	1.704	1.185	2.088	0.06384	0.3438	21.85%	-27.26%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-033	1.709	1.394	1.185	2.088	1.493

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-3843-8752	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					20.66%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-032	1.579	1.86	0.2554	0.0765	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1176349	0.1176349	1	2.494	0.1530	Non-Significant Effect
Error	0.3774003	0.04717503	8			
Total	0.4950352	0.1648099	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.747	23.15	0.2289	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8999		0.2183	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-032	5	1.02	0.9159	1.124	0.626	1.263	0.05068	0.2729	26.76%	17.54%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-032	0.626	0.8445	1.263	1.184	1.182

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-0480-6573	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					34.4%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-031	2.272	1.86	0.4255	0.0264	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.6755299	0.6755299	1	5.162	0.0527	Non-Significant Effect
Error	1.046942	0.1308678	8			
Total	1.722472	0.8063977	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	12.17	23.15	0.0328	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9251		0.4012	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-031	5	0.7168	0.5297	0.9039	0.2975	1.464	0.09132	0.4918	68.61%	42.04%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-031	0.9695	0.458	1.464	0.3955	0.2975

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-0025-6628	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					32.01%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-030	-0.3833	1.86	0.3958	0.6443	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01663856	0.01663856	1	0.1469	0.7115	Non-Significant Effect
Error	0.90605	0.1132563	8			
Total	0.9226886	0.1298948	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.4	23.15	0.0435	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9277		0.4255	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-030	5	1.318	1.145	1.491	0.6415	1.857	0.08441	0.4546	34.48%	-6.6%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-030	1.395	0.6415	1.857	1.161	1.538

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-8594-4772	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					13.88%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-029	-0.1186	1.86	0.1717	0.5458	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0002999517	0.0002999517	1	0.01408	0.9085	Non-Significant Effect
Error	0.1704665	0.02130831	8			
Total	0.1707664	0.02160826	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.144	23.15	0.8993	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9195		0.3528	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-029	5	1.248	1.19	1.305	1.076	1.454	0.028	0.1508	12.09%	-0.89%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-029	1.454	1.171	1.191	1.076	1.347

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-5427-0378	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					12.68%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-028	5.655	1.86	0.1569	0.0002	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5688682	0.5688682	1	31.98	0.0005	Significant Effect
Error	0.1423075	0.01778844	8			
Total	0.7111757	0.5866566	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.266	23.15	0.8249	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8608		0.0779	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-028	5	0.7596	0.7119	0.8073	0.5725	0.8555	0.02327	0.1253	16.5%	38.57%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-028	0.8545	0.827	0.8555	0.5725	0.6885

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-9739-1559	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					10.66%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-027	4.842	1.86	0.1318	0.0006	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2944989	0.2944989	1	23.44	0.0013	Significant Effect
Error	0.1004934	0.01256168	8			
Total	0.3949924	0.3070606	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.787	23.15	0.2254	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9352		0.5014	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-027	5	0.8934	0.8658	0.921	0.7835	0.974	0.01345	0.07245	8.11%	27.75%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-027	0.7835	0.8725	0.974	0.8995	0.9375

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-6043-3060	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					21.97%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-026	-3.818	1.86	0.2716	0.9974	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7777985	0.7777985	1	14.58	0.0051	Significant Effect
Error	0.4267566	0.05334457	8			
Total	1.204555	0.8311431	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.368	23.15	0.1824	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9254		0.4042	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-026	5	1.794	1.682	1.906	1.409	2.07	0.05471	0.2946	16.42%	-45.11%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-026	1.958	2.07	1.986	1.55	1.409

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-9350-7449	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					25.61%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-025	1.938	1.86	0.3167	0.0443	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2724466	0.2724466	1	3.757	0.0886	Non-Significant Effect
Error	0.5801657	0.07252071	8			
Total	0.8526123	0.3449673	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.298	23.15	0.1024	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9278		0.4269	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-025	5	0.9065	0.7719	1.041	0.554	1.406	0.0657	0.3538	39.03%	26.7%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-025	1.406	0.554	0.984	0.5755	1.013

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-2615-4866	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					28.38%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-024	1.327	1.86	0.3509	0.1106	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1567744	0.1567744	1	1.761	0.2211	Non-Significant Effect
Error	0.7121296	0.0890162	8			
Total	0.8689039	0.2457906	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.958	23.15	0.0692	Equal Variances
Distribution	Shapiro-Wilk Normality	0.955		0.7282	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-024	5	0.9862	0.8349	1.137	0.409	1.428	0.07385	0.3977	40.33%	20.25%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-024	1.23	1.074	0.7915	0.409	1.428

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-0365-4286	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:11	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					30.42%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-000		19685-023	20		0	0.0754	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2998425	0.2998425	1	2.932	0.1252	Non-Significant Effect
Error	0.8182439	0.1022805	8			
Total	1.118086	0.402123	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	9.292	23.15	0.0530	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7591		0.0046	Non-normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-023	5	0.8903	0.7268	1.054	0.643	1.654	0.0798	0.4298	48.27%	28.01%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-023	0.7735	0.721	1.654	0.643	0.6605

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-9996-1934	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					28.65%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-022	0.662	1.86	0.3543	0.2633	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03976524	0.03976524	1	0.4383	0.5266	Non-Significant Effect
Error	0.7258865	0.09073582	8			
Total	0.7656518	0.130501	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.131	23.15	0.0667	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9487		0.6536	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-022	5	1.11	0.9576	1.263	0.734	1.677	0.07465	0.402	36.2%	10.2%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-022	1.386	0.734	1.677	0.8665	0.8895

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-0506-5151	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					56.36%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-021	1.278	2.132	0.6969	0.1352	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4363434	0.4363434	1	1.633	0.2371	Non-Significant Effect
Error	2.137349	0.2671686	8			
Total	2.573692	0.703512	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	25.88	23.15	0.0081	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.94		0.5527	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-021	5	0.8188	0.546	1.092	0.2145	1.759	0.1332	0.7173	87.59%	33.78%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-021	1.416	0.442	0.2145	1.759	0.2625

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-7733-4505	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					20.37%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-020	-3.202	1.86	0.2519	0.9937	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4703009	0.4703009	1	10.25	0.0126	Significant Effect
Error	0.3670429	0.04588036	8			
Total	0.8373438	0.5161813	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.617	23.15	0.2408	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9772		0.9487	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-020	5	1.67	1.568	1.772	1.297	2.015	0.04979	0.2681	16.05%	-35.07%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-020	1.799	1.683	1.558	1.297	2.015

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-2617-2413	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					24.7%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-019	1.431	1.86	0.3055	0.0951	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1382025	0.1382025	1	2.048	0.1903	Non-Significant Effect
Error	0.5397972	0.06747466	8			
Total	0.6779997	0.2056772	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.79	23.15	0.1174	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9195		0.3525	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-019	5	1.002	0.8725	1.131	0.5555	1.273	0.06299	0.3392	33.87%	19.01%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-019	0.7185	1.192	1.269	0.5555	1.273

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-1903-0404	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					18.81%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-018	-3.386	1.86	0.2326	0.9952	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4485521	0.4485521	1	11.46	0.0096	Significant Effect
Error	0.3130192	0.03912739	8			
Total	0.7615713	0.4876795	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.937	23.15	0.3215	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9392		0.5443	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-018	5	1.66	1.568	1.752	1.271	1.929	0.04487	0.2416	14.55%	-34.25%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-018	1.75	1.653	1.7	1.929	1.271

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-1563-5414	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					15.88%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-014	8.004	1.86	0.1963	<0.0001	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.785144	1.785144	1	64.07	<0.0001	Significant Effect
Error	0.2229054	0.02786318	8			
Total	2.008049	1.813007	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.804	23.15	0.5817	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9592		0.7769	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-014	5	0.3916	0.3196	0.4636	0.163	0.649	0.03516	0.1893	48.35%	68.33%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-014	0.649	0.163	0.4965	0.3745	0.275

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-0415-1104	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					19.33%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-013	-0.6563	1.86	0.239	0.7350	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01778933	0.01778933	1	0.4307	0.5301	Non-Significant Effect
Error	0.3304301	0.04130376	8			
Total	0.3482194	0.0590931	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.156	23.15	0.2916	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8968		0.2020	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-013	5	1.321	1.226	1.416	0.92	1.522	0.04651	0.2505	18.96%	-6.82%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-013	1.241	1.415	1.522	1.508	0.92

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-4277-1496	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.5%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-012	4.23	1.86	0.3277	0.0014	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.389124	1.389124	1	17.89	0.0029	Significant Effect
Error	0.6211784	0.07764731	8			
Total	2.010303	1.466771	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.814	23.15	0.0899	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9389		0.5405	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-012	5	0.4912	0.3512	0.6312	0.112	1.046	0.06833	0.368	74.92%	60.28%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-012	0.112	1.046	0.509	0.583	0.206

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-9509-8070	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.03%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-011	-1.9	1.86	0.3219	0.9530	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2703673	0.2703673	1	3.61	0.0940	Non-Significant Effect
Error	0.5991694	0.07489618	8			
Total	0.8695367	0.3452635	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.537	23.15	0.0963	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9674		0.8654	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-011	5	1.565	1.428	1.703	1.113	1.975	0.06693	0.3604	23.02%	-26.59%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-011	1.698	1.27	1.975	1.113	1.772

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-2934-1453	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					46.02%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-010	1.476	1.86	0.5691	0.0891	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5100939	0.5100939	1	2.178	0.1782	Non-Significant Effect
Error	1.873322	0.2341652	8			
Total	2.383416	0.7442591	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	22.56	23.15	0.0105	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8308		0.0343	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-010	5	0.7849	0.5302	1.04	0.257	1.909	0.1244	0.6697	85.32%	36.53%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-010	0.257	0.863	1.909	0.3495	0.5465

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-9491-1705	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:09	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					23.78%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-009	1.716	1.86	0.2941	0.0623	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1840355	0.1840355	1	2.944	0.1246	Non-Significant Effect
Error	0.5001531	0.06251913	8			
Total	0.6841886	0.2465547	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.291	23.15	0.1355	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8574		0.0712	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-009	5	0.9653	0.8419	1.089	0.722	1.525	0.06022	0.3243	33.59%	21.94%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-009	1.525	0.861	0.7715	0.9475	0.722

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-8472-2927	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					17.12%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-008	2.54	1.86	0.2117	0.0174	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2089748	0.2089748	1	6.449	0.0347	Significant Effect
Error	0.2592269	0.03240337	8			
Total	0.4682018	0.2413782	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.261	23.15	0.4489	Equal Variances
Distribution	Shapiro-Wilk Normality	0.925		0.4008	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-008	5	0.9475	0.8669	1.028	0.7505	1.296	0.03936	0.212	22.37%	23.38%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-008	0.927	0.7505	0.8085	0.956	1.296

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-3989-8469	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					22.78%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-007	3.453	1.86	0.2817	0.0043	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.6838724	0.6838724	1	11.92	0.0087	Significant Effect
Error	0.4588512	0.0573564	8			
Total	1.142724	0.7412288	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.772	23.15	0.1593	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9142		0.3109	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-007	5	0.7136	0.5965	0.8307	0.423	1.175	0.05719	0.308	43.16%	42.29%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-007	0.539	0.423	1.175	0.876	0.555

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-4789-9246	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.19%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-006	-0.0482	1.86	0.497	0.5186	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0004147815	0.0004147815	1	0.002323	0.9627	Non-Significant Effect
Error	1.428402	0.1785503	8			
Total	1.428817	0.1789651	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	16.97	23.15	0.0179	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9225		0.3781	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-006	5	1.249	1.029	1.47	0.581	2.112	0.1078	0.5807	46.48%	-1.04%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-006	1.412	1.258	2.112	0.581	0.8855

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-9652-8746	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.74%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-005	0.2544	1.86	0.5039	0.4028	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01187458	0.01187458	1	0.0647	0.8056	Non-Significant Effect
Error	1.468353	0.1835441	8			
Total	1.480227	0.1954187	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	17.47	23.15	0.0170	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9702		0.8923	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-005	5	1.168	0.9436	1.392	0.358	1.802	0.1094	0.5892	50.46%	5.57%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-005	1.802	1.389	1.52	0.77	0.358

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-3268-4541	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					22.63%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-004	3.528	1.86	0.2798	0.0039	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7046879	0.7046879	1	12.45	0.0078	Significant Effect
Error	0.4528283	0.05660354	8			
Total	1.157516	0.7612914	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.696	23.15	0.1633	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9154		0.3203	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-004	5	0.7057	0.5895	0.8219	0.377	0.9935	0.05673	0.3055	43.29%	42.93%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-004	0.3905	0.7845	0.9935	0.983	0.377

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-5390-3010	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.41%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-003	0.8875	1.86	0.4379	0.2003	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1092227	0.1092227	1	0.7877	0.4007	Non-Significant Effect
Error	1.10929	0.1386613	8			
Total	1.218513	0.247884	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	12.95	23.15	0.0293	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8754		0.1155	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-003	5	1.028	0.8346	1.221	0.5675	1.858	0.09422	0.5074	49.38%	16.9%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-003	0.9195	0.5675	0.6925	1.858	1.101

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-9832-2829	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					18.67%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-002	0.5833	1.86	0.2309	0.2879	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01311137	0.01311137	1	0.3403	0.5757	Non-Significant Effect
Error	0.3082393	0.03852991	8			
Total	0.3213507	0.05164129	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.877	23.15	0.3305	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9563		0.7426	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-002	5	1.164	1.073	1.255	0.8865	1.49	0.04441	0.2391	20.54%	5.86%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-002	1.068	1.322	1.49	0.8865	1.056

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-4371-1404	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					22.74%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-001	4.009	1.86	0.2812	0.0020	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.9184512	0.9184512	1	16.07	0.0039	Significant Effect
Error	0.4572672	0.0571584	8			
Total	1.375718	0.9756097	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.752	23.15	0.1603	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9585		0.7691	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-001	5	0.6305	0.5136	0.7474	0.3115	1.08	0.05707	0.3073	48.74%	49.01%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-001	1.08	0.7835	0.415	0.563	0.3115

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-0461-9708	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					37.24%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-017	-0.08593	1.86	0.4605	0.5332	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.001132171	0.001132171	1	0.007383	0.9336	Non-Significant Effect
Error	1.226756	0.1533445	8			
Total	1.227888	0.1544767	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	14.43	23.15	0.0241	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8466		0.0529	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-017	5	1.258	1.054	1.462	0.3565	1.66	0.09945	0.5356	42.57%	-1.72%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-017	1.66	1.612	1.194	1.468	0.3565

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-3402-0998	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					60.31%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-016	-0.3409	2.132	0.7458	0.6248	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03555546	0.03555546	1	0.1162	0.7420	Non-Significant Effect
Error	2.447748	0.3059686	8			
Total	2.483304	0.341524	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	29.79	23.15	0.0062	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.9496		0.6637	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-016	5	1.356	1.063	1.649	0.263	2.068	0.1429	0.7695	56.75%	-9.64%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-016	2.068	1.88	0.847	1.722	0.263

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-3876-6279	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					28.89%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-015	0.6065	1.86	0.3572	0.2805	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03394178	0.03394178	1	0.3679	0.5610	Non-Significant Effect
Error	0.7381542	0.09226928	8			
Total	0.772096	0.126211	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.285	23.15	0.0646	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9565		0.7450	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	1.237	1.183	1.29	1.073	1.395	0.02618	0.141	11.4%	0.0%
19685-015	5	1.12	0.9657	1.274	0.6225	1.53	0.07535	0.4058	36.23%	9.42%

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	1.103	1.308	1.305	1.395	1.073
19685-015	1.368	0.7495	1.53	1.331	0.6225

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-7211-5257	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:03	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					29.3%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-033	1.041	1.86	1.661	0.1641	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.163978	2.163978	1	1.085	0.3281	Non-Significant Effect
Error	15.96231	1.995289	8			
Total	18.12629	4.159267	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.884	23.15	0.5546	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9422		0.5780	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-033	5	4.74	4.126	5.354	2.765	6.667	0.2998	1.615	34.06%	16.41%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-033	6.667	2.765	6.118	3.95	4.2

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-7091-1178	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:03	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.97%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-032	2.287	1.86	2.039	0.0257	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	15.73031	15.73031	1	5.231	0.0515	Non-Significant Effect
Error	24.05591	3.006989	8			
Total	39.78622	18.7373	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.346	23.15	0.2689	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9185		0.3443	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-032	5	3.162	2.343	3.98	1.25	6.529	0.3996	2.152	68.06%	44.24%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-032	1.25	3.9	1.529	2.6	6.529

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-6313-1954	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:02	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					34.2%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-031	2.39	1.86	1.939	0.0219	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	15.52791	15.52791	1	5.71	0.0439	Significant Effect
Error	21.75454	2.719317	8			
Total	37.28245	18.24723	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.93	23.15	0.3225	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8746		0.1130	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-031	5	3.178	2.412	3.944	0.625	4.938	0.3739	2.014	63.36%	43.95%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-031	4.727	0.625	4.938	4.2	1.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-3788-6627	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:02	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					114.9%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-030	-0.1001	2.132	6.514	0.5375	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2340451	0.2340451	1	0.01003	0.9227	Non-Significant Effect
Error	186.7151	23.33939	8			
Total	186.9492	23.57344	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	32.73	23.15	0.0052	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.8797		0.1295	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-030	5	5.976	3.416	8.536	0.9091	16.45	1.25	6.73	112.6%	-5.4%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-030	16.45	0.9091	9	2.462	1.056

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-1003-5478	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:02	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					24.72%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-029	-1.763	1.86	1.402	0.9420	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.412207	4.412207	1	3.107	0.1160	Non-Significant Effect
Error	11.36206	1.420258	8			
Total	15.77427	5.832464	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.053	23.15	0.9614	Equal Variances
Distribution	Shapiro-Wilk Normality	0.967		0.8614	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-029	5	6.999	6.54	7.458	6	8.938	0.2241	1.207	17.25%	-23.43%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-029	6	6.091	6.632	8.938	7.333

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-1514-4202	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:02	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					18.92%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-028	0.1867	1.86	1.073	0.4283	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.028985	0.028985	1	0.03485	0.8566	Non-Significant Effect
Error	6.653406	0.8316757	8			
Total	6.682391	0.8606607	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.948	23.15	0.1506	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8686		0.0963	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-028	5	5.563	5.361	5.764	4.786	6.214	0.0982	0.5288	9.51%	1.9%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-028	4.786	5.4	5.6	6.214	5.813

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-4469-5486	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:02	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					23.44%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-027	0.0329	1.86	1.329	0.4873	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.001381656	0.001381656	1	0.001082	0.9746	Non-Significant Effect
Error	10.21291	1.276613	8			
Total	10.21429	1.277995	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.183	23.15	0.8744	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9253		0.4030	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-027	5	5.647	5.235	6.058	4.313	7.188	0.2008	1.081	19.15%	0.41%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-027	5	5.8	5.933	4.313	7.188

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-7847-7861	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:02	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					53.49%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-026	-1.434	1.86	3.033	0.9053	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	13.68289	13.68289	1	2.057	0.1894	Non-Significant Effect
Error	53.20516	6.650645	8			
Total	66.88805	20.33353	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.613	23.15	0.0604	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8702		0.1004	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-026	5	8.01	6.697	9.323	4.889	13.72	0.6411	3.452	43.1%	-41.26%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-026	6.176	4.889	6.722	13.72	8.538

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-7076-6065	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:02	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					29.25%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-025	-1.618	1.86	1.658	0.9278	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	5.203697	5.203697	1	2.617	0.1444	Non-Significant Effect
Error	15.90531	1.988163	8			
Total	21.109	7.19186	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.874	23.15	0.5580	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9484		0.6499	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-025	5	7.113	6.5	7.725	6	9.944	0.299	1.61	22.64%	-25.44%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-025	9.944	6.833	6.412	6.375	6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-5354-9086	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:01	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.63%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-024	-0.8792	1.86	2.19	0.7975	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.680822	2.680822	1	0.773	0.4049	Non-Significant Effect
Error	27.74601	3.468251	8			
Total	30.42683	6.149074	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.013	23.15	0.2070	Equal Variances
Distribution	Shapiro-Wilk Normality	0.957		0.7517	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-024	5	6.706	5.809	7.602	3.316	9.615	0.4376	2.356	35.14%	-18.26%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-024	6.65	5.947	9.615	8	3.316

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-7341-2064	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:01	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					24.6%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-023	-0.5958	1.86	1.395	0.7161	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4993772	0.4993772	1	0.355	0.5678	Non-Significant Effect
Error	11.25494	1.406868	8			
Total	11.75432	1.906245	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.033	23.15	0.9753	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9759		0.9392	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-023	5	6.117	5.662	6.572	4.895	7.895	0.2221	1.196	19.55%	-7.88%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-023	4.895	6.733	7.895	5.529	5.533

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-9085-8924	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:01	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					28.91%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-022	1.808	1.86	1.639	0.0541	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	6.345507	6.345507	1	3.267	0.1083	Non-Significant Effect
Error	15.53713	1.942141	8			
Total	21.88263	8.287648	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.807	23.15	0.5806	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8519		0.0613	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-022	5	4.077	3.476	4.679	1.5	5.579	0.2936	1.581	38.79%	28.1%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-022	3.933	4.273	5.579	1.5	5.1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-7120-0674	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:01	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					50.52%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-021	0.2846	1.86	2.865	0.3916	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4804639	0.4804639	1	0.08098	0.7832	Non-Significant Effect
Error	47.46231	5.932789	8			
Total	47.94278	6.413253	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.575	23.15	0.0753	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8871		0.1574	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-021	5	5.232	4	6.463	0.8	9.85	0.6012	3.238	61.88%	7.73%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-021	5.571	5.563	0.8	9.85	4.375

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-8475-4055	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:01	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					29.48%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-020	-2.834	1.86	1.671	0.9890	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	16.21963	16.21963	1	8.031	0.0220	Significant Effect
Error	16.15716	2.019644	8			
Total	32.37679	18.23927	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.919	23.15	0.5433	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9518		0.6902	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-020	5	8.217	7.597	8.837	6.867	11.05	0.3026	1.63	19.83%	-44.92%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-020	7.55	7.889	6.867	7.733	11.05

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-0013-6201	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:01	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					31.31%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-019	2.527	1.86	1.775	0.0177	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	14.55328	14.55328	1	6.386	0.0354	Significant Effect
Error	18.23289	2.279111	8			
Total	32.78617	16.83239	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.294	23.15	0.4410	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9223		0.3766	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-019	5	3.257	2.58	3.935	1.444	5.722	0.3309	1.782	54.7%	42.55%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-019	3.3	5.722	1.444	1.667	4.154

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-8831-6446	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:01	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					51.92%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-018	-1.008	1.86	2.944	0.8285	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	6.365262	6.365262	1	1.016	0.3430	Non-Significant Effect
Error	50.12561	6.265701	8			
Total	56.49087	12.63096	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.056	23.15	0.0678	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8711		0.1030	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-018	5	7.266	5.996	8.536	4.111	12.88	0.62	3.339	45.95%	-28.14%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-018	4.111	7.278	6.158	5.9	12.88

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-1041-6017	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:01	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					29.57%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-014	4.738	1.86	1.677	0.0007	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	45.61949	45.61949	1	22.45	0.0015	Significant Effect
Error	16.25685	2.032106	8			
Total	61.87634	47.6516	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.937	23.15	0.5376	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9542		0.7183	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-014	5	1.398	0.7757	2.021	0.1	4.188	0.304	1.637	117.1%	75.34%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-014	1.313	0.3333	4.188	0.1	1.059

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-1784-0236	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:00	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					57.4%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-013	-0.7711	1.86	3.254	0.7686	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.553579	4.553579	1	0.5946	0.4628	Non-Significant Effect
Error	61.26072	7.65759	8			
Total	65.8143	12.21117	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.07	23.15	0.0460	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8823		0.1387	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-013	5	7.02	5.6	8.44	2.19	12.64	0.6931	3.732	53.17%	-23.8%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-013	7.375	6.25	6.647	2.19	12.64

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-7433-0965	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:00	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					53.6%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-012	0.9925	1.86	3.039	0.1750	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	6.578599	6.578599	1	0.9851	0.3500	Non-Significant Effect
Error	53.42589	6.678236	8			
Total	60.00449	13.25684	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.653	23.15	0.0599	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9396		0.5488	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-012	5	4.048	2.732	5.364	0	8.714	0.6425	3.46	85.48%	28.61%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-012	0	4.588	5.563	1.375	8.714

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-1739-3647	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:00	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.17%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-011	-0.295	1.86	2.164	0.6122	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2946658	0.2946658	1	0.08701	0.7755	Non-Significant Effect
Error	27.09105	3.386382	8			
Total	27.38572	3.681047	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.895	23.15	0.2163	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9077		0.2654	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-011	5	6.013	5.13	6.897	2.389	8.095	0.4311	2.321	38.6%	-6.06%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-011	8	5.933	8.095	2.389	5.65

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-6031-3706	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:00	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.0%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-010	-0.8136	1.86	2.382	0.7803	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.714579	2.714579	1	0.6619	0.4394	Non-Significant Effect
Error	32.80777	4.100971	8			
Total	35.52235	6.81555	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.927	23.15	0.1516	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9092		0.2754	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-010	5	6.712	5.719	7.705	2.6	9.333	0.4849	2.611	38.9%	-18.38%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-010	2.6	5.857	7.952	7.818	9.333

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-2229-1618	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:00	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					32.49%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-009	2.779	1.86	1.842	0.0120	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	18.94913	18.94913	1	7.723	0.0240	Significant Effect
Error	19.62834	2.453542	8			
Total	38.57747	21.40267	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.546	23.15	0.3874	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9178		0.3388	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-009	5	2.917	2.203	3.631	0.6	5.25	0.3486	1.877	64.35%	48.55%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-009	1.5	4	5.25	3.235	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-8958-1439	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:00	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.06%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-008	-0.1279	1.895	2.158	0.5491	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04715334	0.04715334	1	0.01635	0.9018	Non-Significant Effect
Error	20.18675	2.883822	7			
Total	20.23391	2.930975	8			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.53	24.26	0.2547	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8621		0.1010	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-008	4	5.816	4.975	6.656	2.688	7.842	0.4104	2.21	38.0%	-2.57%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-008	6.091	2.688	6.643	7.842	

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-5671-4321	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:00	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.45%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-007	1.263	1.86	1.897	0.1210	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.15088	4.15088	1	1.596	0.2421	Non-Significant Effect
Error	20.80769	2.600961	8			
Total	24.95856	6.751841	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.759	23.15	0.3493	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9713		0.9029	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-007	5	4.382	3.638	5.125	2	6.824	0.3629	1.954	44.6%	22.72%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-007	3.385	5.9	6.824	2	3.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-7092-9751	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:59	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					32.98%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-006	-0.2931	1.86	1.87	0.6115	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2172115	0.2172115	1	0.08589	0.7769	Non-Significant Effect
Error	20.23074	2.528842	8			
Total	20.44795	2.746054	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.655	23.15	0.3672	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8282		0.0318	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-006	5	5.965	5.236	6.694	3.857	7.684	0.3559	1.917	32.13%	-5.2%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-006	7.3	3.857	7.684	3.9	7.083

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-4347-4141	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:59	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					30.13%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-005	-3.105	1.86	1.709	0.9927	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	20.35474	20.35474	1	9.644	0.0145	Significant Effect
Error	16.88552	2.110691	8			
Total	37.24026	22.46543	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.051	23.15	0.5038	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9115		0.2912	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-005	5	8.524	7.883	9.164	6.059	10.71	0.3128	1.685	19.76%	-50.32%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-005	10.71	9.056	6.059	8.083	8.714

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-6533-8756	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:59	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.37%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-004	-1.578	1.86	2.006	0.9234	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	7.2422	7.2422	1	2.49	0.1532	Non-Significant Effect
Error	23.26683	2.908354	8			
Total	30.50903	10.15055	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.204	23.15	0.2857	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9556		0.7346	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-004	5	7.372	6.571	8.173	4.357	9.6	0.391	2.105	28.56%	-30.02%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-004	6.625	7.154	4.357	9.6	9.125

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-8371-6499	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:59	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.46%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-003	0.9814	1.86	2.068	0.1776	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.976553	2.976553	1	0.9631	0.3551	Non-Significant Effect
Error	24.72353	3.090441	8			
Total	27.70008	6.066994	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.467	23.15	0.2558	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9068		0.2595	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-003	5	4.579	3.746	5.412	1.353	7.5	0.4067	2.19	47.83%	19.24%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-003	1.353	5.059	4.533	4.45	7.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-4615-0292	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:59	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.67%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-002	1.335	1.86	1.512	0.1093	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.946046	2.946046	1	1.783	0.2186	Non-Significant Effect
Error	13.22195	1.652743	8			
Total	16.16799	4.598789	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.389	23.15	0.7580	Equal Variances
Distribution	Shapiro-Wilk Normality	0.813		0.0209	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-002	5	4.585	4.057	5.112	2.313	5.765	0.2574	1.386	30.24%	19.14%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-002	4.563	4.636	5.765	2.313	5.647

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-6840-1074	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:59	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					58.34%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-001	0.02207	1.86	3.308	0.4915	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.003854615	0.003854615	1	0.0004872	0.9829	Non-Significant Effect
Error	63.29867	7.912334	8			
Total	63.30252	7.916189	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.44	23.15	0.0432	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8306		0.0340	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	0.0%
19685-001	5	5.631	4.185	7.076	2.455	12.22	0.7057	3.8	67.49%	0.69%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	6	6.789	6	5.895	3.667
19685-001	4.944	4.133	2.455	12.22	4.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-5943-3015	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:59	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.43%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-033	1.118	1.86	2.134	0.1480	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.118619	4.118619	1	1.251	0.2959	Non-Significant Effect
Error	26.34833	3.293541	8			
Total	30.46695	7.412161	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.527	23.15	0.6918	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9476		0.6401	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-033	5	4.74	4.126	5.354	2.765	6.667	0.2998	1.615	34.06%	21.31%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-033	6.667	2.765	6.118	3.95	4.2

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-2063-0239	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:58	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.51%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-032	2.181	1.86	2.44	0.0304	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	20.47144	20.47144	1	4.755	0.0608	Non-Significant Effect
Error	34.44193	4.305241	8			
Total	54.91336	24.77668	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.163	23.15	0.8870	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9909		0.9978	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-032	5	3.162	2.343	3.98	1.25	6.529	0.3996	2.152	68.06%	47.51%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-032	1.25	3.9	1.529	2.6	6.529

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-9630-8131	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:58	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.14%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-031	2.245	1.86	2.357	0.0275	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	20.24045	20.24045	1	5.038	0.0550	Non-Significant Effect
Error	32.14055	4.017569	8			
Total	52.381	24.25802	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.019	23.15	0.9861	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8867		0.1558	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-031	5	3.178	2.412	3.944	0.625	4.938	0.3739	2.014	63.36%	47.24%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-031	4.727	0.625	4.938	4.2	1.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-7332-4138	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:58	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					96.92%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-030	0.01503	1.86	5.838	0.4942	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.005566593	0.005566593	1	0.0002259	0.9884	Non-Significant Effect
Error	197.1012	24.63765	8			
Total	197.1067	24.64321	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	11.38	23.15	0.0370	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8917		0.1773	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-030	5	5.976	3.416	8.536	0.9091	16.45	1.25	6.73	112.6%	0.78%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-030	16.45	0.9091	9	2.462	1.056

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-3889-3765	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:58	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					32.19%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-029	-0.9353	1.86	1.939	0.8115	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.378176	2.378176	1	0.8748	0.3770	Non-Significant Effect
Error	21.74808	2.71851	8			
Total	24.12625	5.096686	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.732	23.15	0.3538	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9389		0.5406	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-029	5	6.999	6.54	7.458	6	8.938	0.2241	1.207	17.25%	-16.19%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-029	6	6.091	6.632	8.938	7.333

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-3309-5630	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:58	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					28.5%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-028	0.4993	1.86	1.716	0.3155	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5309184	0.5309184	1	0.2493	0.6310	Non-Significant Effect
Error	17.03942	2.129928	8			
Total	17.57034	2.660846	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	14.23	23.15	0.0247	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8685		0.0961	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-028	5	5.563	5.361	5.764	4.786	6.214	0.0982	0.5288	9.51%	7.65%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-028	4.786	5.4	5.6	6.214	5.813

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-3036-7846	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:58	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					31.33%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-027	0.3712	1.86	1.887	0.3601	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3546945	0.3546945	1	0.1378	0.7202	Non-Significant Effect
Error	20.59892	2.574865	8			
Total	20.95362	2.92956	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.403	23.15	0.2626	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9343		0.4916	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-027	5	5.647	5.235	6.058	4.313	7.188	0.2008	1.081	19.15%	6.25%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-027	5	5.8	5.933	4.313	7.188

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-6443-7070	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:58	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					55.05%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-026	-1.114	1.86	3.316	0.8512	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	9.863666	9.863666	1	1.241	0.2976	Non-Significant Effect
Error	63.59118	7.948897	8			
Total	73.45484	17.81256	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.994	23.15	0.3133	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9303		0.4509	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-026	5	8.01	6.697	9.323	4.889	13.72	0.6411	3.452	43.1%	-32.98%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-026	6.176	4.889	6.722	13.72	8.538

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-1659-6690	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:57	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.4%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-025	-0.9503	1.86	2.132	0.8151	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.967935	2.967935	1	0.9031	0.3698	Non-Significant Effect
Error	26.29132	3.286416	8			
Total	29.25926	6.254351	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.535	23.15	0.6880	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9656		0.8476	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-025	5	7.113	6.5	7.725	6	9.944	0.299	1.61	22.64%	-18.09%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-025	9.944	6.833	6.412	6.375	6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-7342-0533	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:57	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.63%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-024	-0.4942	1.86	2.568	0.6828	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.16409	1.16409	1	0.2442	0.6345	Non-Significant Effect
Error	38.13203	4.766504	8			
Total	39.29612	5.930593	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.395	23.15	0.7548	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9259		0.4089	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-024	5	6.706	5.809	7.602	3.316	9.615	0.4376	2.356	35.14%	-11.33%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-024	6.65	5.947	9.615	8	3.316

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-9316-8972	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:57	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					32.11%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-023	-0.09015	1.86	1.934	0.5348	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02198536	0.02198536	1	0.008127	0.9304	Non-Significant Effect
Error	21.64096	2.70512	8			
Total	21.66294	2.727105	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.783	23.15	0.3453	Equal Variances
Distribution	Shapiro-Wilk Normality	0.949		0.6569	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-023	5	6.117	5.662	6.572	4.895	7.895	0.2221	1.196	19.55%	-1.56%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-023	4.895	6.733	7.895	5.529	5.533

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-6604-0614	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:57	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.15%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-022	1.71	1.86	2.117	0.0629	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	9.470518	9.470518	1	2.923	0.1257	Non-Significant Effect
Error	25.92314	3.240393	8			
Total	35.39366	12.71091	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.592	23.15	0.6635	Equal Variances
Distribution	Shapiro-Wilk Normality	0.877		0.1207	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-022	5	4.077	3.476	4.679	1.5	5.579	0.2936	1.581	38.79%	32.31%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-022	3.933	4.273	5.579	1.5	5.1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-2604-4426	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:57	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					52.51%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-021	0.4654	1.86	3.163	0.3270	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.566369	1.566369	1	0.2166	0.6540	Non-Significant Effect
Error	57.84833	7.231041	8			
Total	59.4147	8.79741	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.633	23.15	0.3711	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9417		0.5724	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-021	5	5.232	4	6.463	0.8	9.85	0.6012	3.238	61.88%	13.14%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-021	5.571	5.563	0.8	9.85	4.375

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-8759-6481	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:57	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.57%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-020	-1.904	1.86	2.142	0.9533	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	12.03374	12.03374	1	3.627	0.0933	Non-Significant Effect
Error	26.54317	3.317897	8			
Total	38.57692	15.35164	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.499	23.15	0.7045	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9708		0.8983	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-020	5	8.217	7.597	8.837	6.867	11.05	0.3026	1.63	19.83%	-36.42%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-020	7.55	7.889	6.867	7.733	11.05

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-9874-0111	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:57	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.93%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-019	2.312	1.86	2.224	0.0248	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	19.12547	19.12547	1	5.346	0.0495	Significant Effect
Error	28.61891	3.577363	8			
Total	47.74438	22.70284	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.254	23.15	0.8318	Equal Variances
Distribution	Shapiro-Wilk Normality	0.957		0.7509	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-019	5	3.257	2.58	3.935	1.444	5.722	0.3309	1.782	54.7%	45.92%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-019	3.3	5.722	1.444	1.667	4.154

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-7808-7277	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:57	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					53.7%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-018	-0.7143	1.86	3.235	0.7523	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	3.859478	3.859478	1	0.5102	0.4953	Non-Significant Effect
Error	60.51162	7.563953	8			
Total	64.3711	11.42343	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.801	23.15	0.3425	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9256		0.4057	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-018	5	7.266	5.996	8.536	4.111	12.88	0.62	3.339	45.95%	-20.63%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-018	4.111	7.278	6.158	5.9	12.88

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-9197-5484	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:57	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.63%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-014	4.007	1.86	2.146	0.0020	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	53.4743	53.4743	1	16.06	0.0039	Significant Effect
Error	26.64287	3.330359	8			
Total	80.11716	56.80466	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.485	23.15	0.7110	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9737		0.9226	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-014	5	1.398	0.7757	2.021	0.1	4.188	0.304	1.637	117.1%	76.78%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-014	1.313	0.3333	4.188	0.1	1.059

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-1038-5722	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:56	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					58.43%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-013	-0.5265	1.86	3.52	0.6936	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.482264	2.482264	1	0.2772	0.6128	Non-Significant Effect
Error	71.64674	8.955842	8			
Total	74.129	11.43811	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.5	23.15	0.2524	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9426		0.5818	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-013	5	7.02	5.6	8.44	2.19	12.64	0.6931	3.732	53.17%	-16.54%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-013	7.375	6.25	6.647	2.19	12.64

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-5583-1177	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:56	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					55.15%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-012	1.106	1.86	3.322	0.1505	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	9.754813	9.754813	1	1.223	0.3009	Non-Significant Effect
Error	63.81191	7.976489	8			
Total	73.56672	17.7313	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.008	23.15	0.3114	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9484		0.6498	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-012	5	4.048	2.732	5.364	0	8.714	0.6425	3.46	85.48%	32.79%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-012	0	4.588	5.563	1.375	8.714

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-0792-9751	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:56	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.26%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-011	0.007189	1.86	2.546	0.4972	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0002421265	0.0002421265	1	5.169E-05	0.9944	Non-Significant Effect
Error	37.47707	4.684634	8			
Total	37.47731	4.684876	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.354	23.15	0.7762	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8573		0.0710	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-011	5	6.013	5.13	6.897	2.389	8.095	0.4311	2.321	38.6%	0.16%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-011	8	5.933	8.095	2.389	5.65

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-7994-6718	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:56	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					45.37%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-010	-0.4688	1.86	2.733	0.6741	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.18637	1.18637	1	0.2197	0.6518	Non-Significant Effect
Error	43.19379	5.399223	8			
Total	44.38016	6.585593	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.713	23.15	0.6149	Equal Variances
Distribution	Shapiro-Wilk Normality	0.898		0.2081	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-010	5	6.712	5.719	7.705	2.6	9.333	0.4849	2.611	38.9%	-11.44%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-010	2.6	5.857	7.952	7.818	9.333

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-4401-7890	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:56	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					37.82%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-009	2.536	1.86	2.278	0.0175	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	24.12235	24.12235	1	6.43	0.0349	Significant Effect
Error	30.01436	3.751795	8			
Total	54.13671	27.87415	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.13	23.15	0.9088	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9398		0.5512	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-009	5	2.917	2.203	3.631	0.6	5.25	0.3486	1.877	64.35%	51.57%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-009	1.5	4	5.25	3.235	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-9982-0228	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:56	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					44.1%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-008	0.148	1.895	2.656	0.4433	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.09567176	0.09567176	1	0.02191	0.8865	Non-Significant Effect
Error	30.57277	4.367539	7			
Total	30.66844	4.463211	8			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.227	24.26	0.8181	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8348		0.0505	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-008	4	5.816	4.975	6.656	2.688	7.842	0.4104	2.21	38.0%	3.45%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-008	6.091	2.688	6.643	7.842	

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-5762-3484	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:56	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.56%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-007	1.315	1.86	2.322	0.1125	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	6.737983	6.737983	1	1.728	0.2251	Non-Significant Effect
Error	31.1937	3.899213	8			
Total	37.93169	10.6372	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.042	23.15	0.9688	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9617		0.8051	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-007	5	4.382	3.638	5.125	2	6.824	0.3629	1.954	44.6%	27.26%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-007	3.385	5.9	6.824	2	3.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-7604-3968	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:55	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.2%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-006	0.0472	1.86	2.301	0.4818	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.008525229	0.008525229	1	0.002228	0.9635	Non-Significant Effect
Error	30.61675	3.827094	8			
Total	30.62528	3.835619	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.083	23.15	0.9400	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8853		0.1501	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-006	5	5.965	5.236	6.694	3.857	7.684	0.3559	1.917	32.13%	0.97%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-006	7.3	3.857	7.684	3.9	7.083

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-9066-5730	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:55	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.05%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-005	-2.141	1.86	2.171	0.9677	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	15.62803	15.62803	1	4.584	0.0647	Non-Significant Effect
Error	27.27154	3.408943	8			
Total	42.89957	19.03698	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.403	23.15	0.7510	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9124		0.2982	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-005	5	8.524	7.883	9.164	6.059	10.71	0.3128	1.685	19.76%	-41.51%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-005	10.71	9.056	6.059	8.083	8.714

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-4662-4481	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:55	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.05%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-004	-1.04	1.86	2.412	0.8356	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.548588	4.548588	1	1.081	0.3288	Non-Significant Effect
Error	33.65285	4.206606	8			
Total	38.20144	8.755194	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.114	23.15	0.9194	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9037		0.2406	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-004	5	7.372	6.571	8.173	4.357	9.6	0.391	2.105	28.56%	-22.39%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-004	6.625	7.154	4.357	9.6	9.125

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-3148-2484	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:55	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.9%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-003	1.09	1.86	2.464	0.1537	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	5.215106	5.215106	1	1.188	0.3074	Non-Significant Effect
Error	35.10954	4.388693	8			
Total	40.32465	9.603798	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.205	23.15	0.8608	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8935		0.1854	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-003	5	4.579	3.746	5.412	1.353	7.5	0.4067	2.19	47.83%	23.98%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-003	1.353	5.059	4.533	4.45	7.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-5597-7247	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:55	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.54%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-002	1.324	1.86	2.02	0.1110	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	5.174699	5.174699	1	1.754	0.2220	Non-Significant Effect
Error	23.60796	2.950995	8			
Total	28.78266	8.125694	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.071	23.15	0.4981	Equal Variances
Distribution	Shapiro-Wilk Normality	0.877		0.1207	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-002	5	4.585	4.057	5.112	2.313	5.765	0.2574	1.386	30.24%	23.89%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-002	4.563	4.636	5.765	2.313	5.647

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-6517-6214	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:55	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					59.26%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-001	0.2044	1.86	3.569	0.4216	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.384992	0.384992	1	0.0418	0.8431	Non-Significant Effect
Error	73.68468	9.210586	8			
Total	74.06968	9.595577	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.628	23.15	0.2398	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8945		0.1906	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-001	5	5.631	4.185	7.076	2.455	12.22	0.7057	3.8	67.49%	6.52%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-001	4.944	4.133	2.455	12.22	4.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-4929-8255	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:55	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					31.98%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-017	0.341	1.86	1.926	0.3710	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3118013	0.3118013	1	0.1163	0.7419	Non-Significant Effect
Error	21.45576	2.68197	8			
Total	21.76756	2.993771	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.876	23.15	0.3306	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8646		0.0864	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	0.0%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	5.86%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	2.75	6.3	8.067	6	7
19685-017	6	6.789	6	5.895	3.667

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-0047-3356	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:54	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					53.74%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-033	1.089	1.86	3.717	0.1539	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	11.85152	11.85152	1	1.186	0.3078	Non-Significant Effect
Error	79.93128	9.99141	8			
Total	91.7828	21.84293	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.665	23.15	0.0932	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9769		0.9466	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-033	5	4.74	4.126	5.354	2.765	6.667	0.2998	1.615	34.06%	31.48%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-033	6.667	2.765	6.118	3.95	4.2

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-0156-3783	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:54	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					56.4%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-032	1.79	1.86	3.901	0.0556	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	35.25631	35.25631	1	3.204	0.1112	Non-Significant Effect
Error	88.02487	11.00311	8			
Total	123.2812	46.25941	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.753	23.15	0.2284	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9682		0.8732	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-032	5	3.162	2.343	3.98	1.25	6.529	0.3996	2.152	68.06%	54.29%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-032	1.25	3.9	1.529	2.6	6.529

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-5185-2537	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:54	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					55.66%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-031	1.806	1.86	3.85	0.0543	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	34.95297	34.95297	1	3.262	0.1085	Non-Significant Effect
Error	85.7235	10.71544	8			
Total	120.6765	45.66841	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.285	23.15	0.1877	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9701		0.8916	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-031	5	3.178	2.412	3.944	0.625	4.938	0.3739	2.014	63.36%	54.06%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-031	4.727	0.625	4.938	4.2	1.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-2063-7632	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:54	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					95.18%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-030	0.2658	1.86	6.583	0.3986	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.213473	2.213473	1	0.07064	0.7971	Non-Significant Effect
Error	250.6841	31.33551	8			
Total	252.8976	33.54899	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.607	23.15	0.3760	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8835		0.1431	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-030	5	5.976	3.416	8.536	0.9091	16.45	1.25	6.73	112.6%	13.6%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-030	16.45	0.9091	9	2.462	1.056

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-1033-9081	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:54	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					52.17%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-029	-0.04203	1.86	3.609	0.5162	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01663293	0.01663293	1	0.001766	0.9675	Non-Significant Effect
Error	75.33102	9.416378	8			
Total	75.34766	9.433011	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	11.93	23.15	0.0341	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9621		0.8101	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-029	5	6.999	6.54	7.458	6	8.938	0.2241	1.207	17.25%	-1.18%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-029	6	6.091	6.632	8.938	7.333

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-5754-8435	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:54	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					57.91%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-028	0.7209	2.132	4.006	0.2554	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.587335	4.587335	1	0.5196	0.4915	Non-Significant Effect
Error	70.62237	8.827796	8			
Total	75.2097	13.41513	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	62.14	23.15	0.0015	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.9472		0.6355	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-028	5	5.563	5.361	5.764	4.786	6.214	0.0982	0.5288	9.51%	19.58%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-028	4.786	5.4	5.6	6.214	5.813

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-1924-9559	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:54	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					51.77%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-027	0.6597	1.86	3.581	0.2640	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.034985	4.034985	1	0.4351	0.5280	Non-Significant Effect
Error	74.18187	9.272734	8			
Total	78.21686	13.30772	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	14.86	23.15	0.0229	Equal Variances
Distribution	Shapiro-Wilk Normality	0.975		0.9330	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-027	5	5.647	5.235	6.058	4.313	7.188	0.2008	1.081	19.15%	18.37%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-027	5	5.8	5.933	4.313	7.188

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-3243-8170	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:54	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					65.07%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-026	-0.4514	1.86	4.501	0.6681	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.984195	2.984195	1	0.2037	0.6637	Non-Significant Effect
Error	117.1741	14.64677	8			
Total	120.1583	17.63096	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.458	23.15	0.7237	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9048		0.2471	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-026	5	8.01	6.697	9.323	4.889	13.72	0.6411	3.452	43.1%	-15.8%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-026	6.176	4.889	6.722	13.72	8.538

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-8240-7183	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					53.72%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-025	-0.09798	1.86	3.716	0.5378	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.09585507	0.09585507	1	0.009601	0.9244	Non-Significant Effect
Error	79.87428	9.984284	8			
Total	79.97013	10.08014	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.702	23.15	0.0924	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9386		0.5372	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-025	5	7.113	6.5	7.725	6	9.944	0.299	1.61	22.64%	-2.83%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-025	9.944	6.833	6.412	6.375	6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-1288-7640	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					57.57%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-024	0.09871	1.86	3.982	0.4619	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.111713	0.111713	1	0.009744	0.9238	Non-Significant Effect
Error	91.71497	11.46437	8			
Total	91.82668	11.57609	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.129	23.15	0.2951	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9753		0.9352	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-024	5	6.706	5.809	7.602	3.316	9.615	0.4376	2.356	35.14%	3.06%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-024	6.65	5.947	9.615	8	3.316

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-0093-7365	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					52.14%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-023	0.4125	1.86	3.606	0.3454	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.599947	1.599947	1	0.1702	0.6908	Non-Significant Effect
Error	75.22391	9.402988	8			
Total	76.82385	11.00294	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	12.15	23.15	0.0329	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9695		0.8863	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-023	5	6.117	5.662	6.572	4.895	7.895	0.2221	1.196	19.55%	11.57%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-023	4.895	6.733	7.895	5.529	5.533

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-1125-1228	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					53.6%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-022	1.424	1.86	3.708	0.0961	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	20.16536	20.16536	1	2.029	0.1921	Non-Significant Effect
Error	79.50609	9.938261	8			
Total	99.67145	30.10362	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.949	23.15	0.0870	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9817		0.9736	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-022	5	4.077	3.476	4.679	1.5	5.579	0.2936	1.581	38.79%	41.06%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-022	3.933	4.273	5.579	1.5	5.1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-6774-3691	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					63.46%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-021	0.714	1.86	4.389	0.2478	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	7.100688	7.100688	1	0.5098	0.4955	Non-Significant Effect
Error	111.4313	13.92891	8			
Total	118.532	21.0296	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.658	23.15	0.6364	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9456		0.6165	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-021	5	5.232	4	6.463	0.8	9.85	0.6012	3.238	61.88%	24.36%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-021	5.571	5.563	0.8	9.85	4.375

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-3158-7555	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					53.81%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-020	-0.6496	1.86	3.722	0.7329	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.226328	4.226328	1	0.422	0.5342	Non-Significant Effect
Error	80.12612	10.01577	8			
Total	84.35245	14.24209	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.543	23.15	0.0961	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9466		0.6279	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-020	5	8.217	7.597	8.837	6.867	11.05	0.3026	1.63	19.83%	-18.8%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-020	7.55	7.889	6.867	7.733	11.05

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-4386-6895	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					54.5%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-019	1.805	1.86	3.77	0.0543	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	33.4828	33.4828	1	3.259	0.1087	Non-Significant Effect
Error	82.20186	10.27523	8			
Total	115.6847	43.75803	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.474	23.15	0.1284	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9787		0.9576	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-019	5	3.257	2.58	3.935	1.444	5.722	0.3309	1.782	54.7%	52.91%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-019	3.3	5.722	1.444	1.667	4.154

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-8998-3794	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:53	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					64.21%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-018	-0.146	1.86	4.441	0.5562	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3040316	0.3040316	1	0.02132	0.8875	Non-Significant Effect
Error	114.0946	14.26182	8			
Total	114.3986	14.56585	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.559	23.15	0.6777	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9026		0.2339	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-018	5	7.266	5.996	8.536	4.111	12.88	0.62	3.339	45.95%	-5.04%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-018	4.111	7.278	6.158	5.9	12.88

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-0492-7448	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:52	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					53.84%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-014	2.755	1.86	3.724	0.0124	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	76.13918	76.13918	1	7.592	0.0248	Significant Effect
Error	80.22581	10.02823	8			
Total	156.365	86.16741	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.482	23.15	0.0976	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9539		0.7142	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-014	5	1.398	0.7757	2.021	0.1	4.188	0.304	1.637	117.1%	79.78%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-014	1.313	0.3333	4.188	0.1	1.059

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-0445-8762	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:52	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					67.27%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-013	-0.04104	1.86	4.653	0.5159	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02635921	0.02635921	1	0.001684	0.9683	Non-Significant Effect
Error	125.2297	15.65371	8			
Total	125.2561	15.68007	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.247	23.15	0.8356	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9228		0.3810	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-013	5	7.02	5.6	8.44	2.19	12.64	0.6931	3.732	53.17%	-1.48%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-013	7.375	6.25	6.647	2.19	12.64

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-3977-0302	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:52	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					65.13%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-012	1.184	1.86	4.505	0.1352	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	20.57924	20.57924	1	1.402	0.2703	Non-Significant Effect
Error	117.3949	14.67436	8			
Total	137.9741	35.25359	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.451	23.15	0.7270	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9436		0.5940	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-012	5	4.048	2.732	5.364	0	8.714	0.6425	3.46	85.48%	41.48%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-012	0	4.588	5.563	1.375	8.714

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-6889-6422	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:52	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					57.36%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-011	0.4235	1.86	3.968	0.3416	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.041256	2.041256	1	0.1793	0.6831	Non-Significant Effect
Error	91.06002	11.3825	8			
Total	93.10127	13.42376	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.224	23.15	0.2832	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9687		0.8787	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-011	5	6.013	5.13	6.897	2.389	8.095	0.4311	2.321	38.6%	13.06%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-011	8	5.933	8.095	2.389	5.65

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-6745-1608	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:52	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					59.14%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-010	0.09314	1.86	4.091	0.4640	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1049493	0.1049493	1	0.008676	0.9281	Non-Significant Effect
Error	96.77673	12.09709	8			
Total	96.88168	12.20204	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.548	23.15	0.3870	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9611		0.7983	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-010	5	6.712	5.719	7.705	2.6	9.333	0.4849	2.611	38.9%	2.96%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-010	2.6	5.857	7.952	7.818	9.333

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-1909-9289	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:52	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					54.96%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-009	1.957	1.86	3.802	0.0431	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	40.00077	40.00077	1	3.828	0.0861	Non-Significant Effect
Error	83.59731	10.44966	8			
Total	123.5981	50.45043	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.932	23.15	0.1514	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9823		0.9761	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-009	5	2.917	2.203	3.631	0.6	5.25	0.3486	1.877	64.35%	57.83%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-009	1.5	4	5.25	3.235	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-9042-4085	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:51	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					63.71%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-008	0.4735	1.895	4.407	0.3251	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.695025	2.695025	1	0.2242	0.6503	Non-Significant Effect
Error	84.15572	12.02225	7			
Total	86.85074	14.71727	8			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.558	46.19	0.3253	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9762		0.9420	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-008	4	5.816	4.975	6.656	2.688	7.842	0.4104	2.21	38.0%	15.92%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-008	6.091	2.688	6.643	7.842	

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-7456-0796	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:51	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					55.35%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-007	1.232	1.86	3.829	0.1266	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	16.0715	16.0715	1	1.517	0.2531	Non-Significant Effect
Error	84.77665	10.59708	8			
Total	100.8481	26.66858	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.551	23.15	0.1713	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9692		0.8837	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-007	5	4.382	3.638	5.125	2	6.824	0.3629	1.954	44.6%	36.66%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-007	3.385	5.9	6.824	2	3.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-3153-9530	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:51	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					55.16%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-006	0.4641	1.86	3.815	0.3275	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.266521	2.266521	1	0.2153	0.6550	Non-Significant Effect
Error	84.1997	10.52496	8			
Total	86.46622	12.79148	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.729	23.15	0.1615	Equal Variances
Distribution	Shapiro-Wilk Normality	0.968		0.8714	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-006	5	5.965	5.236	6.694	3.857	7.684	0.3559	1.917	32.13%	13.77%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-006	7.3	3.857	7.684	3.9	7.083

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-6517-8470	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:51	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					54.05%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-005	-0.799	1.86	3.739	0.7763	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	6.451935	6.451935	1	0.6384	0.4474	Non-Significant Effect
Error	80.85449	10.10681	8			
Total	87.30643	16.55875	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.123	23.15	0.1072	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9814		0.9721	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-005	5	8.524	7.883	9.164	6.059	10.71	0.3128	1.685	19.76%	-23.22%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-005	10.71	9.056	6.059	8.083	8.714

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-0144-3867	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:51	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					56.15%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-004	-0.2179	1.86	3.884	0.5835	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.5177912	0.5177912	1	0.04748	0.8330	Non-Significant Effect
Error	87.23579	10.90447	8			
Total	87.75359	11.42227	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.92	23.15	0.2143	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9711		0.9007	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-004	5	7.372	6.571	8.173	4.357	9.6	0.391	2.105	28.56%	-6.58%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-004	6.625	7.154	4.357	9.6	9.125

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-3322-1627	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:51	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					56.61%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-003	1.11	1.86	3.916	0.1496	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	13.66652	13.66652	1	1.233	0.2991	Non-Significant Effect
Error	88.69249	11.08656	8			
Total	102.359	24.75308	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.622	23.15	0.2403	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9716		0.9049	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-003	5	4.579	3.746	5.412	1.353	7.5	0.4067	2.19	47.83%	33.8%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-003	1.353	5.059	4.533	4.45	7.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-6467-3234	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:51	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					52.81%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-002	1.187	1.86	3.653	0.1346	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	13.60106	13.60106	1	1.41	0.2692	Non-Significant Effect
Error	77.19091	9.648864	8			
Total	90.79197	23.24992	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	9.042	23.15	0.0556	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9793		0.9614	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-002	5	4.585	4.057	5.112	2.313	5.765	0.2574	1.386	30.24%	33.72%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-002	4.563	4.636	5.765	2.313	5.647

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-9886-2358	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:51	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					67.82%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-001	0.5099	1.86	4.691	0.3120	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.1357	4.1357	1	0.26	0.6239	Non-Significant Effect
Error	127.2676	15.90845	8			
Total	131.4033	20.04416	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.203	23.15	0.8620	Equal Variances
Distribution	Shapiro-Wilk Normality	0.887		0.1567	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-001	5	5.631	4.185	7.076	2.455	12.22	0.7057	3.8	67.49%	18.59%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-001	4.944	4.133	2.455	12.22	4.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-7251-1747	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:50	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					52.07%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-017	0.6437	1.86	3.602	0.2689	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	3.887035	3.887035	1	0.4144	0.5378	Non-Significant Effect
Error	75.03871	9.379839	8			
Total	78.92574	13.26687	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	12.56	23.15	0.0310	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9708		0.8983	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	18.03%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-017	6	6.789	6	5.895	3.667

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-2458-9619	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:50	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					55.56%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-016	0.4325	1.86	3.843	0.3384	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.997035	1.997035	1	0.187	0.6768	Non-Significant Effect
Error	85.42473	10.67809	8			
Total	87.42176	12.67513	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.366	23.15	0.1825	Equal Variances
Distribution	Shapiro-Wilk Normality	0.979		0.9595	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	0.0%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	12.92%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	4.1	6	9.533	2.316	12.64
19685-016	2.75	6.3	8.067	6	7

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-8576-4235	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:50	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.58%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-033	1.037	1.86	2.178	0.1650	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	3.688472	3.688472	1	1.075	0.3301	Non-Significant Effect
Error	27.44247	3.430309	8			
Total	31.13094	7.11878	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.632	23.15	0.6468	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9696		0.8871	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-033	5	4.74	4.126	5.354	2.765	6.667	0.2998	1.615	34.06%	20.4%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-033	6.667	2.765	6.118	3.95	4.2

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-8346-3723	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:50	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.63%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-032	2.095	1.86	2.479	0.0347	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	19.49786	19.49786	1	4.389	0.0695	Non-Significant Effect
Error	35.53606	4.442008	8			
Total	55.03393	23.93987	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.089	23.15	0.9365	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9853		0.9871	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-032	5	3.162	2.343	3.98	1.25	6.529	0.3996	2.152	68.06%	46.9%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-032	1.25	3.9	1.529	2.6	6.529

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-2191-9293	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:50	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.26%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-031	2.154	1.86	2.397	0.0317	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	19.27245	19.27245	1	4.639	0.0634	Non-Significant Effect
Error	33.23469	4.154336	8			
Total	52.50714	23.42679	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.049	23.15	0.9641	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9221		0.3751	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-031	5	3.178	2.412	3.944	0.625	4.938	0.3739	2.014	63.36%	46.63%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-031	4.727	0.625	4.938	4.2	1.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-6564-1889	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:50	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					98.31%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-030	-0.006889	1.86	5.854	0.5027	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.00117575	0.00117575	1	4.746E-05	0.9947	Non-Significant Effect
Error	198.1953	24.77441	8			
Total	198.1965	24.77559	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.65	23.15	0.0417	Equal Variances
Distribution	Shapiro-Wilk Normality	0.896		0.1981	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-030	5	5.976	3.416	8.536	0.9091	16.45	1.25	6.73	112.6%	-0.36%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-030	16.45	0.9091	9	2.462	1.056

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	21-0776-2831	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:50	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.37%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-029	-0.9771	1.86	1.987	0.8214	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.725908	2.725908	1	0.9547	0.3571	Non-Significant Effect
Error	22.84221	2.855277	8			
Total	25.56812	5.581185	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.92	23.15	0.3241	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9596		0.7812	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-029	5	6.999	6.54	7.458	6	8.938	0.2241	1.207	17.25%	-17.54%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-029	6	6.091	6.632	8.938	7.333

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-3542-8688	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					29.74%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-028	0.4116	1.86	1.771	0.3457	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.384081	0.384081	1	0.1694	0.6914	Non-Significant Effect
Error	18.13356	2.266695	8			
Total	18.51764	2.650776	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	15.21	23.15	0.0219	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8984		0.2103	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-028	5	5.563	5.361	5.764	4.786	6.214	0.0982	0.5288	9.51%	6.58%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-028	4.786	5.4	5.6	6.214	5.813

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-8646-7174	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					32.52%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-027	0.2955	1.86	1.937	0.3876	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2368414	0.2368414	1	0.08734	0.7751	Non-Significant Effect
Error	21.69306	2.711632	8			
Total	21.9299	2.948474	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.637	23.15	0.2389	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9658		0.8499	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-027	5	5.647	5.235	6.058	4.313	7.188	0.2008	1.081	19.15%	5.17%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-027	5	5.8	5.933	4.313	7.188

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-0407-6858	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					56.16%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-026	-1.143	1.86	3.344	0.8569	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	10.55955	10.55955	1	1.306	0.2862	Non-Significant Effect
Error	64.68532	8.085665	8			
Total	75.24487	18.64521	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.802	23.15	0.3423	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9325		0.4732	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-026	5	8.01	6.697	9.323	4.889	13.72	0.6411	3.452	43.1%	-34.52%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-026	6.176	4.889	6.722	13.72	8.538

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-3497-9883	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.54%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-025	-0.99	1.86	2.176	0.8244	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	3.355009	3.355009	1	0.9801	0.3512	Non-Significant Effect
Error	27.38546	3.423182	8			
Total	30.74047	6.778192	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.641	23.15	0.6432	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9411		0.5649	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-025	5	7.113	6.5	7.725	6	9.944	0.299	1.61	22.64%	-19.46%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-025	9.944	6.833	6.412	6.375	6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-8578-0343	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					43.74%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-024	-0.5364	1.86	2.604	0.6969	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.410937	1.410937	1	0.2878	0.6063	Non-Significant Effect
Error	39.22617	4.903271	8			
Total	40.6371	6.314208	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.305	23.15	0.8025	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9335		0.4834	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-024	5	6.706	5.809	7.602	3.316	9.615	0.4376	2.356	35.14%	-12.62%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-024	6.65	5.947	9.615	8	3.316

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-0799-4036	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.3%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-023	-0.1526	1.86	1.983	0.5587	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.06613816	0.06613816	1	0.02327	0.8825	Non-Significant Effect
Error	22.73509	2.841887	8			
Total	22.80123	2.908025	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.975	23.15	0.3161	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9695		0.8864	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-023	5	6.117	5.662	6.572	4.895	7.895	0.2221	1.196	19.55%	-2.73%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-023	4.895	6.733	7.895	5.529	5.533

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-5163-9968	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.3%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-022	1.615	1.86	2.161	0.0724	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	8.812122	8.812122	1	2.609	0.1449	Non-Significant Effect
Error	27.01728	3.37716	8			
Total	35.8294	12.18928	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.701	23.15	0.6194	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9143		0.3118	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-022	5	4.077	3.476	4.679	1.5	5.579	0.2936	1.581	38.79%	31.53%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-022	3.933	4.273	5.579	1.5	5.1

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-8221-1486	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:48	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					53.61%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-021	0.421	1.86	3.192	0.3424	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.305644	1.305644	1	0.1772	0.6849	Non-Significant Effect
Error	58.94246	7.367808	8			
Total	60.24811	8.673452	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.464	23.15	0.4038	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9576		0.7583	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-021	5	5.232	4	6.463	0.8	9.85	0.6012	3.238	61.88%	12.14%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-021	5.571	5.563	0.8	9.85	4.375

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-3116-0247	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:48	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.71%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-020	-1.925	1.86	2.186	0.9548	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	12.80113	12.80113	1	3.705	0.0904	Non-Significant Effect
Error	27.63731	3.454664	8			
Total	40.43844	16.2558	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.602	23.15	0.6592	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9464		0.6259	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-020	5	8.217	7.597	8.837	6.867	11.05	0.3026	1.63	19.83%	-38.0%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-020	7.55	7.889	6.867	7.733	11.05

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-0528-6450	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:48	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.06%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-019	2.213	1.86	2.267	0.0289	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	18.18484	18.18484	1	4.896	0.0578	Non-Significant Effect
Error	29.71305	3.714131	8			
Total	47.89789	21.89897	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.34	23.15	0.7836	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9551		0.7283	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-019	5	3.257	2.58	3.935	1.444	5.722	0.3309	1.782	54.7%	45.29%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-019	3.3	5.722	1.444	1.667	4.154

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-6633-4570	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:48	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					54.81%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-018	-0.7472	1.86	3.264	0.7618	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.299212	4.299212	1	0.5583	0.4763	Non-Significant Effect
Error	61.60576	7.70072	8			
Total	65.90498	11.99993	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.621	23.15	0.3734	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9228		0.3807	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-018	5	7.266	5.996	8.536	4.111	12.88	0.62	3.339	45.95%	-22.02%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-018	4.111	7.278	6.158	5.9	12.88

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-4641-4679	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:48	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.78%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-014	3.869	1.86	2.19	0.0024	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	51.89349	51.89349	1	14.97	0.0047	Significant Effect
Error	27.73701	3.467126	8			
Total	79.63049	55.36061	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.587	23.15	0.6655	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9541		0.7168	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-014	5	1.398	0.7757	2.021	0.1	4.188	0.304	1.637	117.1%	76.51%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-014	1.313	0.3333	4.188	0.1	1.059

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-1480-6877	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:48	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					59.56%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-013	-0.5586	1.86	3.546	0.7041	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.837267	2.837267	1	0.312	0.5917	Non-Significant Effect
Error	72.74088	9.092609	8			
Total	75.57814	11.92988	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.275	23.15	0.2771	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9499		0.6678	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-013	5	7.02	5.6	8.44	2.19	12.64	0.6931	3.732	53.17%	-17.89%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-013	7.375	6.25	6.647	2.19	12.64

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-6521-6095	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:48	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					56.26%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-012	1.058	1.86	3.35	0.1604	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	9.086432	9.086432	1	1.12	0.3208	Non-Significant Effect
Error	64.90604	8.113256	8			
Total	73.99248	17.19969	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.815	23.15	0.3403	Equal Variances
Distribution	Shapiro-Wilk Normality	0.964		0.8302	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-012	5	4.048	2.732	5.364	0	8.714	0.6425	3.46	85.48%	32.02%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-012	0	4.588	5.563	1.375	8.714

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-1353-8030	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					43.37%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-011	-0.04251	1.86	2.582	0.5164	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.008712056	0.008712056	1	0.001807	0.9671	Non-Significant Effect
Error	38.57121	4.821401	8			
Total	38.57992	4.830113	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.267	23.15	0.8242	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8885		0.1633	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-011	5	6.013	5.13	6.897	2.389	8.095	0.4311	2.321	38.6%	-0.99%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-011	8	5.933	8.095	2.389	5.65

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-3921-7212	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					46.47%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-010	-0.5092	1.86	2.767	0.6878	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.435456	1.435456	1	0.2593	0.6243	Non-Significant Effect
Error	44.28792	5.53599	8			
Total	45.72338	6.971446	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.603	23.15	0.6588	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9125		0.2986	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-010	5	6.712	5.719	7.705	2.6	9.333	0.4849	2.611	38.9%	-12.73%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-010	2.6	5.857	7.952	7.818	9.333

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-0377-4111	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.95%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-009	2.435	1.86	2.319	0.0204	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	23.06451	23.06451	1	5.931	0.0409	Significant Effect
Error	31.10849	3.888562	8			
Total	54.173	26.95307	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.207	23.15	0.8595	Equal Variances
Distribution	Shapiro-Wilk Normality	0.951		0.6799	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-009	5	2.917	2.203	3.631	0.6	5.25	0.3486	1.877	64.35%	51.01%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-009	1.5	4	5.25	3.235	0.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-1592-3518	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					45.4%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-008	0.09715	1.895	2.703	0.4627	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04269915	0.04269915	1	0.009439	0.9253	Non-Significant Effect
Error	31.66691	4.523844	7			
Total	31.70961	4.566544	8			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.148	24.26	0.8632	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8822		0.1658	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-008	4	5.816	4.975	6.656	2.688	7.842	0.4104	2.21	38.0%	2.33%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-008	6.091	2.688	6.643	7.842	

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-3601-2676	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.68%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-007	1.238	1.86	2.363	0.1254	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	6.184491	6.184491	1	1.532	0.2509	Non-Significant Effect
Error	32.28784	4.03598	8			
Total	38.47233	10.22047	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.114	23.15	0.9191	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9543		0.7190	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-007	5	4.382	3.638	5.125	2	6.824	0.3629	1.954	44.6%	26.41%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-007	3.385	5.9	6.824	2	3.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-9833-5705	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.32%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-006	-0.008321	1.86	2.342	0.5032	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0002744536	0.0002744536	1	6.924E-05	0.9936	Non-Significant Effect
Error	31.71089	3.963861	8			
Total	31.71117	3.964136	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.158	23.15	0.8905	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9208		0.3638	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-006	5	5.965	5.236	6.694	3.857	7.684	0.3559	1.917	32.13%	-0.18%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-006	7.3	3.857	7.684	3.9	7.083

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-5444-8138	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:47	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					37.19%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-005	-2.157	1.86	2.215	0.9685	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	16.5009	16.5009	1	4.654	0.0631	Non-Significant Effect
Error	28.36568	3.54571	8			
Total	44.86658	20.04661	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.499	23.15	0.7044	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9342		0.4902	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-005	5	8.524	7.883	9.164	6.059	10.71	0.3128	1.685	19.76%	-43.15%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-005	10.71	9.056	6.059	8.083	8.714

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-2722-7406	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.16%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-004	-1.076	1.86	2.451	0.8433	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	5.024953	5.024953	1	1.157	0.3135	Non-Significant Effect
Error	34.74698	4.343373	8			
Total	39.77193	9.368326	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.042	23.15	0.9691	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9134		0.3053	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-004	5	7.372	6.571	8.173	4.357	9.6	0.391	2.105	28.56%	-23.81%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-004	6.625	7.154	4.357	9.6	9.125

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-0078-0106	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.02%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-003	1.022	1.86	2.502	0.1683	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.729589	4.729589	1	1.045	0.3366	Non-Significant Effect
Error	36.20368	4.52546	8			
Total	40.93327	9.255049	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.128	23.15	0.9100	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9012		0.2256	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-003	5	4.579	3.746	5.412	1.353	7.5	0.4067	2.19	47.83%	23.1%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-003	1.353	5.059	4.533	4.445	7.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-8396-3264	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					34.71%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-002	1.233	1.86	2.067	0.1264	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.691113	4.691113	1	1.519	0.2527	Non-Significant Effect
Error	24.7021	3.087763	8			
Total	29.39321	7.778875	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.213	23.15	0.4605	Equal Variances
Distribution	Shapiro-Wilk Normality	0.914		0.3097	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-002	5	4.585	4.057	5.112	2.313	5.765	0.2574	1.386	30.24%	23.01%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-002	4.563	4.636	5.765	2.313	5.647

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-7308-2498	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					60.39%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-001	0.1673	1.86	3.596	0.4356	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2617125	0.2617125	1	0.028	0.8713	Non-Significant Effect
Error	74.77882	9.347353	8			
Total	75.04053	9.609065	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.395	23.15	0.2635	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8897		0.1682	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-001	5	5.631	4.185	7.076	2.455	12.22	0.7057	3.8	67.49%	5.43%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-001	4.944	4.133	2.455	12.22	4.4

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-6144-8269	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.16%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-017	0.2677	1.86	1.975	0.3978	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2020438	0.2020438	1	0.07168	0.7957	Non-Significant Effect
Error	22.5499	2.818737	8			
Total	22.75194	3.020781	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.074	23.15	0.3023	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9151		0.3179	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-017	5	5.67	5.223	6.118	3.667	6.789	0.2184	1.176	20.75%	4.77%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-017	6	6.789	6	5.895	3.667

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-5844-9535	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.08%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-016	-0.05367	1.86	2.386	0.5207	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01185895	0.01185895	1	0.00288	0.9585	Non-Significant Effect
Error	32.93591	4.116989	8			
Total	32.94777	4.128848	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.069	23.15	0.9502	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8778		0.1232	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-016	5	6.023	5.264	6.782	2.75	8.067	0.3705	1.995	33.12%	-1.16%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-016	2.75	6.3	8.067	6	7

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-4047-1735	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 22:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					64.95%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-015	-0.4628	1.86	3.868	0.6721	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.316678	2.316678	1	0.2142	0.6558	Non-Significant Effect
Error	86.51886	10.81486	8			
Total	88.83554	13.13154	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.085	23.15	0.2016	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9777		0.9516	Normal Distribution

Reproduction Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	5.954	5.17	6.739	2.762	8.357	0.383	2.062	34.64%	0.0%
19685-015	5	6.917	5.332	8.503	2.316	12.64	0.7741	4.168	60.26%	-16.17%

Reproduction Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	8.357	2.762	6.947	5.706	6
19685-015	4.1	6	9.533	2.316	12.64

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-4017-9786	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:21	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					47.3%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-033	-0.9481	1.86	5.437	0.8146	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	19.21084	19.21084	1	0.8989	0.3708	Non-Significant Effect
Error	170.9723	21.37154	8			
Total	190.1832	40.58238	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.51	23.15	0.0427	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8883		0.1622	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-033	5	14.27	11.89	16.64	6.714	24	1.16	6.247	43.79%	-24.11%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-033	24	6.714	14.86	13.17	12.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-9968-5323	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:21	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					103.4%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-032	-0.3521	2.132	11.89	0.6287	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	9.642928	9.642928	1	0.124	0.7339	Non-Significant Effect
Error	622.2853	77.78566	8			
Total	631.9282	87.42859	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	40.88	23.15	0.0034	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.9128		0.3008	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-032	5	13.46	8.772	18.15	3.333	27.75	2.288	12.32	91.56%	-17.08%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-032	3.333	26	3.714	6.5	27.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-0868-3385	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:21	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					46.38%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-031	0.4319	1.86	5.331	0.3386	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	3.834165	3.834165	1	0.1866	0.6772	Non-Significant Effect
Error	164.4043	20.55054	8			
Total	168.2385	24.38471	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.06	23.15	0.0461	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9765		0.9435	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-031	5	10.26	7.931	12.58	1.667	17.33	1.135	6.114	59.61%	10.77%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-031	17.33	1.667	11.29	14	7

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-6941-6910	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:21	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					96.86%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-030	-0.2927	2.132	11.13	0.6079	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	5.84394	5.84394	1	0.08569	0.7772	Non-Significant Effect
Error	545.5603	68.19504	8			
Total	551.4042	74.03898	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	35.71	23.15	0.0044	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.9209		0.3646	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-030	5	13.02	8.643	17.41	3.8	27.85	2.139	11.52	88.44%	-13.3%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-030	27.85	5	23.14	5.333	3.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-6849-2314	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:21	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					19.15%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-029	-3.925	1.86	2.202	0.9978	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	54.01013	54.01013	1	15.41	0.0044	Significant Effect
Error	28.04334	3.505417	8			
Total	82.05347	57.51554	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.127	23.15	0.9105	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9837		0.9819	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-029	5	16.14	15.45	16.83	13.2	17.88	0.3371	1.815	11.25%	-40.43%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-029	17.14	16.75	15.75	17.88	13.2

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-3243-4028	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:21	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					67.18%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-028	-3.878	1.86	7.723	0.9977	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	648.3828	648.3828	1	15.04	0.0047	Significant Effect
Error	344.9347	43.11683	8			
Total	993.3175	691.4996	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	22.21	23.15	0.0108	Equal Variances
Distribution	Shapiro-Wilk Normality	0.941		0.5642	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-028	5	27.6	24.14	31.06	16.75	40.5	1.687	9.084	32.91%	-140.1%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-028	16.75	40.5	28	21.75	31

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-4718-8929	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					59.25%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-027	-4.91	1.86	6.811	0.9994	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	808.6006	808.6006	1	24.11	0.0012	Significant Effect
Error	268.3232	33.5404	8			
Total	1076.924	842.141	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	17.06	23.15	0.0177	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9132		0.3035	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-027	5	29.48	26.45	32.51	17.4	38.33	1.478	7.96	27.0%	-156.4%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-027	27.5	17.4	29.67	34.5	38.33

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-3613-3018	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					27.16%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-026	-5.509	1.86	3.122	0.9997	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	213.8696	213.8696	1	30.35	0.0006	Significant Effect
Error	56.36735	7.045918	8			
Total	270.2369	220.9155	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.793	23.15	0.3437	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9788		0.9582	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-026	5	20.74	19.52	21.97	15.86	24.7	0.5982	3.221	15.53%	-80.46%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-026	21	22	20.17	24.7	15.86

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-0632-7049	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.37%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-025	-3.28	1.86	4.755	0.9944	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	175.8371	175.8371	1	10.76	0.0112	Significant Effect
Error	130.7829	16.34786	8			
Total	306.62	192.185	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.801	23.15	0.0716	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9421		0.5771	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-025	5	19.88	17.83	21.93	13.63	25.57	0.9997	5.383	27.08%	-72.96%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-025	25.57	17.57	13.63	25.5	17.14

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-2581-4872	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:20	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					50.8%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-017		19685-024	40		0	0.9960	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	187.2485	187.2485	1	7.593	0.0248	Significant Effect
Error	197.279	24.65988	8			
Total	384.5276	211.9084	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	12.28	23.15	0.0323	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7869		0.0100	Non-normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-024	5	20.15	17.58	22.72	15.75	32	1.254	6.753	33.51%	-75.29%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-024	19	16.14	17.86	32	15.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-5159-8971	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					27.1%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-023	-0.4044	1.86	3.115	0.6517	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.147381	1.147381	1	0.1635	0.6965	Non-Significant Effect
Error	56.12728	7.01591	8			
Total	57.27466	8.163291	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.777	23.15	0.3463	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9795		0.9623	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-023	5	12.17	10.95	13.39	7.833	16.67	0.5965	3.212	26.39%	-5.89%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-023	13.29	11.22	16.67	7.833	11.86

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-5510-3590	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					65.62%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-022	-1.575	1.86	7.544	0.9230	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	102.0093	102.0093	1	2.479	0.1540	Non-Significant Effect
Error	329.1319	41.14148	8			
Total	431.1411	143.1507	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	21.15	23.15	0.0119	Equal Variances
Distribution	Shapiro-Wilk Normality	0.958		0.7623	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-022	5	17.88	14.51	21.25	6	26.5	1.646	8.864	49.56%	-55.57%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-022	19.67	11.75	26.5	6	25.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-8505-1958	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:20	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					99.46%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-021	-1.453	2.132	11.43	0.8900	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	151.7319	151.7319	1	2.11	0.1844	Non-Significant Effect
Error	575.2769	71.90961	8			
Total	727.0088	223.6415	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	37.71	23.15	0.0039	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.8903		0.1709	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-021	5	19.29	14.78	23.79	2.667	35	2.198	11.84	61.37%	-67.77%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-021	14.63	22.25	2.667	21.89	35

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-5757-1037	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					16.22%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-020	-7.482	1.86	1.865	1.0000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	140.7471	140.7471	1	55.99	<0.0001	Significant Effect
Error	20.11167	2.513958	8			
Total	160.8587	143.261	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.829	23.15	0.3379	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9628		0.8174	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-020	5	19	18.56	19.43	17.17	20.29	0.2128	1.146	6.03%	-65.27%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-020	18.88	20.29	17.17	19.33	19.33

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-1058-5096	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.71%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-019	1.724	1.86	4.22	0.0615	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	38.26173	38.26173	1	2.972	0.1230	Non-Significant Effect
Error	102.9979	12.87473	8			
Total	141.2596	51.13646	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.931	23.15	0.1129	Equal Variances
Distribution	Shapiro-Wilk Normality	0.96		0.7864	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-019	5	7.583	5.798	9.369	2.273	13.5	0.8717	4.694	61.9%	34.03%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-019	5.5	11.44	5.2	2.273	13.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-7174-5503	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					43.93%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-018	-0.3476	1.86	5.049	0.6314	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.227077	2.227077	1	0.1208	0.7371	Non-Significant Effect
Error	147.4699	18.43374	8			
Total	149.697	20.66082	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.924	23.15	0.0568	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8908		0.1731	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-018	5	12.44	10.25	14.63	6.727	21.9	1.069	5.758	46.29%	-8.21%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-018	6.727	13.1	10.64	9.833	21.9

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-2774-1670	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					23.78%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-014	6.198	1.86	2.733	0.0001	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	207.5177	207.5177	1	38.42	0.0003	Significant Effect
Error	43.21052	5.401315	8			
Total	250.7282	212.919	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.908	23.15	0.5469	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8942		0.1890	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-014	5	2.385	1.372	3.397	0.1429	6.7	0.4944	2.662	111.6%	79.26%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-014	3	0.4444	6.7	0.1429	1.636

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-1641-1070	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					46.92%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-013	-0.9128	1.86	5.394	0.8060	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	17.52367	17.52367	1	0.8331	0.3880	Non-Significant Effect
Error	168.2651	21.03314	8			
Total	185.7888	38.55681	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.32	23.15	0.0440	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9289		0.4370	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-013	5	14.14	11.79	16.5	4.6	19.86	1.15	6.193	43.79%	-23.03%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-013	11.8	15.63	18.83	4.6	19.86

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-8108-0802	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.3%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-012	2.434	1.86	3.828	0.0205	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	62.73814	62.73814	1	5.922	0.0410	Significant Effect
Error	84.75154	10.59394	8			
Total	147.4897	73.33208	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.703	23.15	0.1629	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9578		0.7603	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-012	5	6.486	4.896	8.076	0	11.13	0.7762	4.18	64.45%	43.58%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-012	0	7.091	11.13	5.5	8.714

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-0234-3821	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					25.19%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-011	-0.3953	1.86	2.896	0.6485	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.9472716	0.9472716	1	0.1562	0.7030	Non-Significant Effect
Error	48.50729	6.063411	8			
Total	49.45456	7.010683	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.264	23.15	0.4481	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9237		0.3885	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-011	5	12.11	11.01	13.21	7.167	14.83	0.5386	2.9	23.95%	-5.36%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-011	12.92	14.83	13.08	7.167	12.56

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-6631-7608	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:19	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					37.36%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-010	0.4996	1.86	4.295	0.3154	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	3.328191	3.328191	1	0.2496	0.6308	Non-Significant Effect
Error	106.6737	13.33421	8			
Total	110.0019	16.66241	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.179	23.15	0.1056	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9669		0.8608	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-010	5	10.34	8.519	12.16	3.714	16.7	0.8897	4.791	46.33%	10.04%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-010	3.714	10.25	16.7	8.6	12.44

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-1403-3791	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					25.31%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-009	3.557	1.86	2.909	0.0037	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	77.45024	77.45024	1	12.66	0.0074	Significant Effect
Error	48.95975	6.119969	8			
Total	126.41	83.57021	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.295	23.15	0.4409	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9643		0.8341	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-009	5	5.93	4.819	7.04	1.286	9.333	0.5422	2.92	49.24%	48.42%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-009	6	6.154	9.333	6.875	1.286

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-4479-8649	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					43.94%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-008	-0.002228	1.895	5.051	0.5009	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	7.841251E-05	7.841251E-05	1	4.964E-06	0.9983	Non-Significant Effect
Error	110.5705	15.79579	7			
Total	110.5706	15.79587	8			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.588	24.26	0.0646	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9395		0.5765	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-008	4	11.5	9.353	13.65	4.778	18.6	1.049	5.648	49.11%	-0.05%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-008	11.17	4.778	18.6	11.46	

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-3925-7291	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					44.89%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-007	0.5466	1.86	5.161	0.2998	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	5.751898	5.751898	1	0.2987	0.5996	Non-Significant Effect
Error	154.038	19.25475	8			
Total	159.7899	25.00665	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	9.366	23.15	0.0522	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9272		0.4207	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-007	5	9.979	7.735	12.22	4.571	19	1.095	5.899	59.11%	13.19%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-007	4.889	9.833	11.6	4.571	19

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-9203-1995	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					40.27%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-006	-0.09904	1.86	4.63	0.5382	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1520132	0.1520132	1	0.009809	0.9235	Non-Significant Effect
Error	123.9762	15.49702	8			
Total	124.1282	15.64904	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.343	23.15	0.0793	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8172		0.0234	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-006	5	11.74	9.755	13.73	7.8	20.86	0.9699	5.223	44.48%	-2.15%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-006	10.43	9	20.86	7.8	10.63

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-1338-7142	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					24.56%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-005	-3.312	1.86	2.824	0.9947	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	63.23828	63.23828	1	10.97	0.0107	Significant Effect
Error	46.12138	5.765173	8			
Total	109.3597	69.00345	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.104	23.15	0.4890	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9737		0.9231	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-005	5	16.52	15.46	17.59	12.88	20.22	0.5191	2.796	16.92%	-43.75%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-005	20.22	18.11	12.88	16.17	15.25

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-9025-2156	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					48.13%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-004	-0.5688	1.86	5.532	0.7075	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	7.159712	7.159712	1	0.3236	0.5851	Non-Significant Effect
Error	177.0277	22.12846	8			
Total	184.1874	29.28818	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.91	23.15	0.0399	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8523		0.0618	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-004	5	13.19	10.77	15.61	7.625	24	1.182	6.367	48.28%	-14.72%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-004	10.6	13.29	7.625	24	10.43

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	21-4474-1590	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:18	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.58%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-017		19685-003	0.9531	1.86	4.091	0.1842	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	10.9892	10.9892	1	0.9084	0.3684	Non-Significant Effect
Error	96.78047	12.09756	8			
Total	107.7697	23.08675	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.513	23.15	0.1270	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9571		0.7524	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-003	5	9.399	7.678	11.12	2.556	15	0.8404	4.526	48.15%	18.24%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-003	2.556	8.6	9.714	11.13	15

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-9598-5629	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:17	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					139.3%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-017		19685-002	25		0	0.3452	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	80.15639	80.15639	1	0.4322	0.5294	Non-Significant Effect
Error	1483.605	185.4506	8			
Total	1563.761	265.607	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	98.84	23.15	0.0006	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.7368		0.0025	Non-normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-002	5	17.16	9.869	24.45	4.111	51	3.558	19.16	111.7%	-49.26%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-002	10.43	51	12.25	4.111	8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-1628-6800	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:17	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					67.17%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-017		19685-001	21		0	0.1111	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02060872	0.02060872	1	0.0004782	0.9831	Non-Significant Effect
Error	344.8015	43.10019	8			
Total	344.8221	43.1208	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	22.2	23.15	0.0108	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7748		0.0072	Non-normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	0.0%
19685-001	5	11.59	8.132	15.04	5.4	27.5	1.687	9.082	78.39%	-0.79%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-017	9.5	14.33	10.2	12.44	11
19685-001	9.889	8.857	5.4	27.5	6.286

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-4975-8937	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					43.59%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-033	-0.1664	1.86	5.985	0.5640	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7168369	0.7168369	1	0.02768	0.8720	Non-Significant Effect
Error	207.1905	25.89881	8			
Total	207.9073	26.61565	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.056	23.15	0.3047	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9488		0.6539	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-033	5	14.27	11.89	16.64	6.714	24	1.16	6.247	43.79%	-3.9%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-033	24	6.714	14.86	13.17	12.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-9001-7723	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					77.7%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-032	0.04751	1.86	10.67	0.4816	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1858029	0.1858029	1	0.002257	0.9633	Non-Significant Effect
Error	658.5034	82.31293	8			
Total	658.6892	82.49873	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	11.89	23.15	0.0342	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9168		0.3307	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-032	5	13.46	8.772	18.15	3.333	27.75	2.288	12.32	91.56%	1.99%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-032	3.333	26	3.714	6.5	27.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-2005-2616	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.89%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-031	1.097	1.86	5.89	0.1522	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	30.18906	30.18906	1	1.204	0.3045	Non-Significant Effect
Error	200.6225	25.07781	8			
Total	230.8115	55.26687	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.928	23.15	0.3229	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9606		0.7926	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-031	5	10.26	7.931	12.58	1.667	17.33	1.135	6.114	59.61%	25.31%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-031	17.33	1.667	11.29	14	7

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-6858-1268	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					73.04%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-030	0.1312	1.86	10.03	0.4494	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.252006	1.252006	1	0.01722	0.8988	Non-Significant Effect
Error	581.7784	72.72231	8			
Total	583.0305	73.97431	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.39	23.15	0.0435	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9213		0.3678	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-030	5	13.02	8.643	17.41	3.8	27.85	2.139	11.52	88.44%	5.15%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-030	27.85	5	23.14	5.333	3.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-5982-2492	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					24.27%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-029	-1.345	1.86	3.333	0.8923	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	14.53747	14.53747	1	1.81	0.2154	Non-Significant Effect
Error	64.26149	8.032686	8			
Total	78.79896	22.57016	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.874	23.15	0.2180	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9038		0.2408	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-029	5	16.14	15.45	16.83	13.2	17.88	0.3371	1.815	11.25%	-17.56%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-029	17.14	16.75	15.75	17.88	13.2

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-2809-6533	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					59.12%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-028	-3.177	1.86	8.118	0.9935	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	480.7936	480.7936	1	10.09	0.0131	Significant Effect
Error	381.1528	47.6441	8			
Total	861.9464	528.4377	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.462	23.15	0.0981	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9427		0.5830	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-028	5	27.6	24.14	31.06	16.75	40.5	1.687	9.084	32.91%	-101.0%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-028	16.75	40.5	28	21.75	31

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-4648-4093	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					52.84%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-027	-4.036	1.86	7.256	0.9981	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	619.9875	619.9875	1	16.29	0.0038	Significant Effect
Error	304.5414	38.06767	8			
Total	924.5288	658.0552	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.962	23.15	0.1499	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9515		0.6867	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-027	5	29.48	26.45	32.51	17.4	38.33	1.478	7.96	27.0%	-114.7%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-027	27.5	17.4	29.67	34.5	38.33

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-0489-3930	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					29.14%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-026	-3.259	1.86	4.001	0.9942	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	122.9421	122.9421	1	10.62	0.0115	Significant Effect
Error	92.58549	11.57319	8			
Total	215.5276	134.5152	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.231	23.15	0.8455	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8974		0.2052	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-026	5	20.74	19.52	21.97	15.86	24.7	0.5982	3.221	15.53%	-51.07%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-026	21	22	20.17	24.7	15.86

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	07-0047-3825	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.13%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-025	-2.128	1.86	5.373	0.9670	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	94.55625	94.55625	1	4.53	0.0660	Non-Significant Effect
Error	167.001	20.87513	8			
Total	261.5573	115.4314	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.27	23.15	0.4468	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9385		0.5364	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-025	5	19.88	17.83	21.93	13.63	25.57	0.9997	5.383	27.08%	-44.79%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-025	25.57	17.57	13.63	25.5	17.14

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-6722-2795	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					46.27%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-024	-1.878	1.86	6.354	0.9514	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	102.9722	102.9722	1	3.528	0.0972	Non-Significant Effect
Error	233.4972	29.18715	8			
Total	336.4694	132.1594	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.571	23.15	0.2452	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8915		0.1764	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-024	5	20.15	17.58	22.72	15.75	32	1.254	6.753	33.51%	-46.74%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-024	19	16.14	17.86	32	15.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-9123-9512	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					29.1%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-023	0.7256	1.86	3.996	0.2444	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	6.077192	6.077192	1	0.5265	0.4888	Non-Significant Effect
Error	92.34543	11.54318	8			
Total	98.42262	17.62037	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.238	23.15	0.8412	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9481		0.6457	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-023	5	12.17	10.95	13.39	7.833	16.67	0.5965	3.212	26.39%	11.35%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-023	13.29	11.22	16.67	7.833	11.86

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-8298-4362	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					57.88%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-022	-0.9713	1.86	7.948	0.8201	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	43.08096	43.08096	1	0.9433	0.3599	Non-Significant Effect
Error	365.35	45.66875	8			
Total	408.431	88.74971	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.153	23.15	0.1063	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9477		0.6419	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-022	5	17.88	14.51	21.25	6	26.5	1.646	8.864	49.56%	-30.23%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-022	19.67	11.75	26.5	6	25.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-1339-7373	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					74.88%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-021	-1.004	1.86	10.28	0.8277	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	77.11641	77.11641	1	1.009	0.3446	Non-Significant Effect
Error	611.4951	76.43689	8			
Total	688.6115	153.5533	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.97	23.15	0.0395	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9161		0.3253	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-021	5	19.29	14.78	23.79	2.667	35	2.198	11.84	61.37%	-40.45%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-021	14.63	22.25	2.667	21.89	35

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-6254-5291	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					22.73%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-020	-3.138	1.86	3.121	0.9931	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	69.34444	69.34444	1	9.848	0.0138	Significant Effect
Error	56.32982	7.041227	8			
Total	125.6743	76.38567	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	9.725	23.15	0.0489	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8722		0.1062	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-020	5	19	18.56	19.43	17.17	20.29	0.2128	1.146	6.03%	-38.35%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-020	18.88	20.29	17.17	19.33	19.33

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-1809-3360	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.73%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-019	2.331	1.86	4.906	0.0241	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	94.51654	94.51654	1	5.431	0.0481	Significant Effect
Error	139.216	17.402	8			
Total	233.7326	111.9185	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.726	23.15	0.6101	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9596		0.7813	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-019	5	7.583	5.798	9.369	2.273	13.5	0.8717	4.694	61.9%	44.78%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-019	5.5	11.44	5.2	2.273	13.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-5623-0577	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.04%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-018	0.4266	1.86	5.636	0.3405	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.177999	4.177999	1	0.182	0.6809	Non-Significant Effect
Error	183.6881	22.96101	8			
Total	187.8661	27.13901	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.596	23.15	0.3779	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9399		0.5523	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-018	5	12.44	10.25	14.63	6.727	21.9	1.069	5.758	46.29%	9.41%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-018	6.727	13.1	10.64	9.833	21.9

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	21-3487-4511	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.99%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-014	5.694	1.86	3.706	0.0002	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	321.9093	321.9093	1	32.42	0.0005	Significant Effect
Error	79.42867	9.928584	8			
Total	401.338	331.8379	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.802	23.15	0.5825	Equal Variances
Distribution	Shapiro-Wilk Normality	0.968		0.8716	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-014	5	2.385	1.372	3.397	0.1429	6.7	0.4944	2.662	111.6%	82.63%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-014	3	0.4444	6.7	0.1429	1.636

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-1464-0757	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					43.3%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-013	-0.1285	1.86	5.946	0.5495	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4222046	0.4222046	1	0.01652	0.9009	Non-Significant Effect
Error	204.4833	25.56041	8			
Total	204.9055	25.98261	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.003	23.15	0.3120	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9288		0.4361	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-013	5	14.14	11.79	16.5	4.6	19.86	1.15	6.193	43.79%	-2.99%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-013	11.8	15.63	18.83	4.6	19.86

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-3777-8414	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:15	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.3%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-012	2.946	1.86	4.573	0.0093	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	131.2651	131.2651	1	8.681	0.0185	Significant Effect
Error	120.9697	15.12121	8			
Total	252.2347	146.3863	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.368	23.15	0.7686	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8987		0.2118	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-012	5	6.486	4.896	8.076	0	11.13	0.7762	4.18	64.45%	52.77%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-012	0	7.091	11.13	5.5	8.714

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-8820-0172	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					27.87%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-011	0.7876	1.86	3.827	0.2268	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	6.56936	6.56936	1	0.6203	0.4536	Non-Significant Effect
Error	84.72544	10.59068	8			
Total	91.2948	17.16004	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.518	23.15	0.6958	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8428		0.0477	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-011	5	12.11	11.01	13.21	7.167	14.83	0.5386	2.9	23.95%	11.8%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-011	12.92	14.83	13.08	7.167	12.56

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-7704-7012	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.2%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-010	1.268	1.86	4.97	0.1202	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	28.73698	28.73698	1	1.609	0.2403	Non-Significant Effect
Error	142.8919	17.86148	8			
Total	171.6288	46.59846	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.798	23.15	0.5840	Equal Variances
Distribution	Shapiro-Wilk Normality	0.948		0.6454	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-010	5	10.34	8.519	12.16	3.714	16.7	0.8897	4.791	46.33%	24.69%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-010	3.714	10.25	16.7	8.6	12.44

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-1416-6588	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					27.95%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-009	3.781	1.86	3.838	0.0027	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	152.2	152.2	1	14.29	0.0054	Significant Effect
Error	85.1779	10.64724	8			
Total	237.3779	162.8472	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.498	23.15	0.7050	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8651		0.0877	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-009	5	5.93	4.819	7.04	1.286	9.333	0.5422	2.92	49.24%	56.82%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-009	6	6.154	9.333	6.875	1.286

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-8046-2403	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.38%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-008	0.7262	1.895	5.82	0.2457	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	11.0573	11.0573	1	0.5273	0.4913	Non-Significant Effect
Error	146.7887	20.96981	7			
Total	157.846	32.02711	8			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.498	24.26	0.3974	Equal Variances
Distribution	Shapiro-Wilk Normality	0.93		0.4814	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-008	4	11.5	9.353	13.65	4.778	18.6	1.049	5.648	49.11%	16.24%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-008	11.17	4.778	18.6	11.46	

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-3546-1244	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.77%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-007	1.217	1.86	5.735	0.1292	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	35.22027	35.22027	1	1.481	0.2583	Non-Significant Effect
Error	190.2562	23.78202	8			
Total	225.4764	59.00229	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.725	23.15	0.3551	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9206		0.3619	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-007	5	9.979	7.735	12.22	4.571	19	1.095	5.899	59.11%	27.33%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-007	4.889	9.833	11.6	4.571	19

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-6318-2715	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					38.32%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-006	0.7031	1.86	5.263	0.2510	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	9.90025	9.90025	1	0.4944	0.5019	Non-Significant Effect
Error	160.1944	20.02429	8			
Total	170.0946	29.92455	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.136	23.15	0.4803	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9468		0.6310	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-006	5	11.74	9.755	13.73	7.8	20.86	0.9699	5.223	44.48%	14.49%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-006	10.43	9	20.86	7.8	10.63

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-4301-7917	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:14	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					27.48%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-005	-1.376	1.86	3.773	0.8970	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	19.50013	19.50013	1	1.895	0.2060	Non-Significant Effect
Error	82.33953	10.29244	8			
Total	101.8397	29.79257	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.634	23.15	0.6460	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9417		0.5726	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-005	5	16.52	15.46	17.59	12.88	20.22	0.5191	2.796	16.92%	-20.34%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-005	20.22	18.11	12.88	16.17	15.25

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-9466-1552	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:13	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					44.22%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-004	0.1667	1.86	6.072	0.4359	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.7406173	0.7406173	1	0.02778	0.8718	Non-Significant Effect
Error	213.2458	26.65573	8			
Total	213.9865	27.39635	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.175	23.15	0.2893	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9113		0.2901	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-004	5	13.19	10.77	15.61	7.625	24	1.182	6.367	48.28%	3.96%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-004	10.6	13.29	7.625	24	10.43

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-5120-0165	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:13	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					34.92%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-003	1.68	1.86	4.795	0.0657	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	46.94101	46.94101	1	2.824	0.1314	Non-Significant Effect
Error	132.9986	16.62483	8			
Total	179.9396	63.56583	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.604	23.15	0.6584	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9182		0.3423	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-003	5	9.399	7.678	11.12	2.556	15	0.8404	4.526	48.15%	31.55%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-003	2.556	8.6	9.714	11.13	15

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-2049-4377	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:13	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					118.0%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-016		19685-002	23		0	0.2103	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	29.34015	29.34015	1	0.1544	0.7046	Non-Significant Effect
Error	1519.823	189.9778	8			
Total	1549.163	219.318	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	28.76	23.15	0.0066	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.7565		0.0043	Non-normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-002	5	17.16	9.869	24.45	4.111	51	3.558	19.16	111.7%	-24.95%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-002	10.43	51	12.25	4.111	8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-8253-9046	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:13	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					59.11%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-001	0.4916	1.86	8.116	0.3181	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	11.51108	11.51108	1	0.2417	0.6362	Non-Significant Effect
Error	381.0197	47.62746	8			
Total	392.5308	59.13853	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.46	23.15	0.0982	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8297		0.0332	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-001	5	11.59	8.132	15.04	5.4	27.5	1.687	9.082	78.39%	15.63%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-001	9.889	8.857	5.4	27.5	6.286

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-9996-1842	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:13	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					24.59%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-016		19685-017	1.232	1.86	3.376	0.1265	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	12.50581	12.50581	1	1.517	0.2530	Non-Significant Effect
Error	65.93746	8.242183	8			
Total	78.44327	20.74799	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.437	23.15	0.2589	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9433		0.5905	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	0.0%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	16.29%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-016	13.75	15.75	17.29	14	7.875
19685-017	9.5	14.33	10.2	12.44	11

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	20-1782-8390	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:13	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					72.77%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-033	-0.2218	1.86	9.553	0.5850	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	3.24493	3.24493	1	0.04918	0.8301	Non-Significant Effect
Error	527.837	65.97963	8			
Total	531.082	69.22456	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.381	23.15	0.4214	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8973		0.2044	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-033	5	14.27	11.89	16.64	6.714	24	1.16	6.247	43.79%	-8.68%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-033	24	6.714	14.86	13.17	12.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-1416-0714	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:13	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					99.11%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-032	-0.04733	1.86	13.01	0.5183	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.2742178	0.2742178	1	0.00224	0.9634	Non-Significant Effect
Error	979.15	122.3938	8			
Total	979.4243	122.668	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.634	23.15	0.6459	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8063		0.0173	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-032	5	13.46	8.772	18.15	3.333	27.75	2.288	12.32	91.56%	-2.52%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-032	3.333	26	3.714	6.5	27.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-6809-4076	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					72.31%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-031	0.5624	1.86	9.493	0.2946	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	20.60934	20.60934	1	0.3163	0.5893	Non-Significant Effect
Error	521.269	65.15863	8			
Total	541.8784	85.76797	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.486	23.15	0.3994	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9272		0.4213	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-031	5	10.26	7.931	12.58	1.667	17.33	1.135	6.114	59.61%	21.87%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-031	17.33	1.667	11.29	14	7

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-8651-5066	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					95.15%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-030	0.01546	1.86	12.49	0.4940	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02696957	0.02696957	1	0.0002391	0.9880	Non-Significant Effect
Error	902.425	112.8031	8			
Total	902.452	112.8301	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.428	23.15	0.7385	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7925		0.0118	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-030	5	13.02	8.643	17.41	3.8	27.85	2.139	11.52	88.44%	0.79%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-030	27.85	5	23.14	5.333	3.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-7024-9055	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					71.24%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-029	-0.6873	2.132	9.352	0.7352	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	22.72915	22.72915	1	0.4724	0.5113	Non-Significant Effect
Error	384.9081	48.11351	8			
Total	407.6372	70.84267	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	28.2	23.15	0.0069	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.905		0.2486	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-029	5	16.14	15.45	16.83	13.2	17.88	0.3371	1.815	11.25%	-22.97%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-029	17.14	16.75	15.75	17.88	13.2

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-7579-8182	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					83.91%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-028	-2.443	1.86	11.02	0.9798	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	523.5728	523.5728	1	5.968	0.0404	Significant Effect
Error	701.7994	87.72492	8			
Total	1225.372	611.2977	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.126	23.15	0.9111	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9176		0.3372	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-028	5	27.6	24.14	31.06	16.75	40.5	1.687	9.084	32.91%	-110.2%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-028	16.75	40.5	28	21.75	31

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-7078-0557	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					79.19%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-027	-2.925	1.86	10.4	0.9904	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	668.4425	668.4425	1	8.553	0.0192	Significant Effect
Error	625.1879	78.14849	8			
Total	1293.63	746.591	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.467	23.15	0.7196	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9734		0.9202	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-027	5	29.48	26.45	32.51	17.4	38.33	1.478	7.96	27.0%	-124.6%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-027	27.5	17.4	29.67	34.5	38.33

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-6278-0110	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					64.38%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-026	-1.676	1.86	8.453	0.9338	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	145.025	145.025	1	2.808	0.1323	Non-Significant Effect
Error	413.2321	51.65401	8			
Total	558.2571	196.679	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.956	23.15	0.0565	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9177		0.3383	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-026	5	20.74	19.52	21.97	15.86	24.7	0.5982	3.221	15.53%	-58.02%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-026	21	22	20.17	24.7	15.86

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-2959-8881	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					69.94%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-025	-1.368	1.86	9.182	0.8957	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	114.0349	114.0349	1	1.871	0.2086	Non-Significant Effect
Error	487.6476	60.95595	8			
Total	601.6825	174.9908	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.207	23.15	0.2853	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8912		0.1748	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-025	5	19.88	17.83	21.93	13.63	25.57	0.9997	5.383	27.08%	-51.44%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-025	25.57	17.57	13.63	25.5	17.14

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-5667-0076	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					74.56%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-024	-1.334	1.86	9.788	0.8905	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	123.2595	123.2595	1	1.779	0.2189	Non-Significant Effect
Error	554.1438	69.26797	8			
Total	677.4033	192.5275	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.038	23.15	0.5075	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8432		0.0482	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-024	5	20.15	17.58	22.72	15.75	32	1.254	6.753	33.51%	-53.48%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-024	19	16.14	17.86	32	15.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-0899-1205	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					64.37%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-023	0.2102	1.86	8.45	0.4194	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.281579	2.281579	1	0.0442	0.8387	Non-Significant Effect
Error	412.992	51.624	8			
Total	415.2736	53.90558	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	9.008	23.15	0.0559	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9157		0.3222	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-023	5	12.17	10.95	13.39	7.833	16.67	0.5965	3.212	26.39%	7.28%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-023	13.29	11.22	16.67	7.833	11.86

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-2885-1286	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					82.96%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-022	-0.8119	1.86	10.89	0.7798	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	56.52506	56.52506	1	0.6592	0.4403	Non-Significant Effect
Error	685.9966	85.74957	8			
Total	742.5217	142.2746	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.183	23.15	0.8747	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9428		0.5840	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-022	5	17.88	14.51	21.25	6	26.5	1.646	8.864	49.56%	-36.22%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-022	19.67	11.75	26.5	6	25.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-2530-4411	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					96.7%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-021	-0.902	1.86	12.7	0.8033	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	94.79557	94.79557	1	0.8136	0.3934	Non-Significant Effect
Error	932.1417	116.5177	8			
Total	1026.937	211.3133	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.508	23.15	0.7005	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9499		0.6669	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-021	5	19.29	14.78	23.79	2.667	35	2.198	11.84	61.37%	-46.9%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-021	14.63	22.25	2.667	21.89	35

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-1709-1562	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					70.5%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-020	-1.352	2.132	9.255	0.8761	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	86.15623	86.15623	1	1.828	0.2133	Non-Significant Effect
Error	376.9764	47.12205	8			
Total	463.1326	133.2783	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	70.78	23.15	0.0012	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.8912		0.1749	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-020	5	19	18.56	19.43	17.17	20.29	0.2128	1.146	6.03%	-44.72%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-020	18.88	20.29	17.17	19.33	19.33

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	08-7442-6287	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					67.92%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-019	1.156	1.86	8.917	0.1404	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	76.86476	76.86476	1	1.337	0.2809	Non-Significant Effect
Error	459.8626	57.48283	8			
Total	536.7274	134.3476	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.218	23.15	0.1922	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9065		0.2580	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-019	5	7.583	5.798	9.369	2.273	13.5	0.8717	4.694	61.9%	42.24%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-019	5.5	11.44	5.2	2.273	13.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-5996-9535	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					71.13%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-018	0.1372	1.86	9.338	0.4471	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.186594	1.186594	1	0.01882	0.8943	Non-Significant Effect
Error	504.3347	63.04183	8			
Total	505.5212	64.22842	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.803	23.15	0.3421	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8993		0.2153	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-018	5	12.44	10.25	14.63	6.727	21.9	1.069	5.758	46.29%	5.25%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-018	6.727	13.1	10.64	9.833	21.9

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-2350-4151	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					63.35%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-014	2.402	1.86	8.317	0.0215	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	288.5624	288.5624	1	5.77	0.0430	Significant Effect
Error	400.0753	50.00941	8			
Total	688.6376	338.5718	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	13.11	23.15	0.0287	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9111		0.2889	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-014	5	2.385	1.372	3.397	0.1429	6.7	0.4944	2.662	111.6%	81.84%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-014	3	0.4444	6.7	0.1429	1.636

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-1213-7734	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					72.58%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-013	-0.198	1.86	9.529	0.5760	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.574354	2.574354	1	0.03922	0.8480	Non-Significant Effect
Error	525.1299	65.64124	8			
Total	527.7042	68.21559	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.423	23.15	0.4123	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9369		0.5194	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-013	5	14.14	11.79	16.5	4.6	19.86	1.15	6.193	43.79%	-7.73%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-013	11.8	15.63	18.83	4.6	19.86

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-9334-5117	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					66.56%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-012	1.414	1.86	8.738	0.0976	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	110.3002	110.3002	1	1.998	0.1952	Non-Significant Effect
Error	441.6163	55.20203	8			
Total	551.9164	165.5022	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.319	23.15	0.1344	Equal Variances
Distribution	Shapiro-Wilk Normality	0.916		0.3249	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-012	5	6.486	4.896	8.076	0	11.13	0.7762	4.18	64.45%	50.6%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-012	0	7.091	11.13	5.5	8.714

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-4376-8700	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					63.77%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-011	0.2259	1.86	8.372	0.4135	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.586853	2.586853	1	0.05105	0.8269	Non-Significant Effect
Error	405.372	50.6715	8			
Total	407.9589	53.25836	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	11.05	23.15	0.0391	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9063		0.2566	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-011	5	12.11	11.01	13.21	7.167	14.83	0.5386	2.9	23.95%	7.75%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-011	12.92	14.83	13.08	7.167	12.56

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-3212-8890	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					68.19%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-010	0.5788	1.86	8.952	0.2893	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	19.41267	19.41267	1	0.335	0.5786	Non-Significant Effect
Error	463.5385	57.94231	8			
Total	482.9511	77.35498	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.049	23.15	0.2043	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9229		0.3819	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-010	5	10.34	8.519	12.16	3.714	16.7	0.8897	4.791	46.33%	21.23%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-010	3.714	10.25	16.7	8.6	12.44

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-4799-7227	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					63.8%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-009	1.598	1.86	8.376	0.0743	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	129.5552	129.5552	1	2.554	0.1487	Non-Significant Effect
Error	405.8245	50.72806	8			
Total	535.3796	180.2832	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	10.9	23.15	0.0400	Equal Variances
Distribution	Shapiro-Wilk Normality	0.912		0.2949	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-009	5	5.93	4.819	7.04	1.286	9.333	0.5422	2.92	49.24%	54.83%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-009	6	6.154	9.333	6.875	1.286

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	12-6675-5560	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					79.11%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-008	0.2968	1.895	10.39	0.3876	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	5.881335	5.881335	1	0.08807	0.7753	Non-Significant Effect
Error	467.4352	66.77647	7			
Total	473.3166	72.6578	8			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.913	46.19	0.4064	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9065		0.2919	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-008	4	11.5	9.353	13.65	4.778	18.6	1.049	5.648	49.11%	12.39%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-008	11.17	4.778	18.6	11.46	

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	04-7011-0402	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					71.59%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-007	0.6232	1.86	9.399	0.2753	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	24.8	24.8	1	0.3883	0.5505	Non-Significant Effect
Error	510.9027	63.86284	8			
Total	535.7028	88.66284	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.671	23.15	0.3644	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9006		0.2225	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-007	5	9.979	7.735	12.22	4.571	19	1.095	5.899	59.11%	23.99%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-007	4.889	9.833	11.6	4.571	19

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-1666-6258	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:09	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					69.45%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-006	0.2827	1.86	9.118	0.3923	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	4.80381	4.80381	1	0.07992	0.7846	Non-Significant Effect
Error	480.8409	60.10512	8			
Total	485.6447	64.90893	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.407	23.15	0.2622	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8849		0.1484	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-006	5	11.74	9.755	13.73	7.8	20.86	0.9699	5.223	44.48%	10.56%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-006	10.43	9	20.86	7.8	10.63

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-1374-7954	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:09	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					63.58%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-005	-0.7567	1.86	8.347	0.7645	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	28.84336	28.84336	1	0.5726	0.4709	Non-Significant Effect
Error	402.9861	50.37326	8			
Total	431.8295	79.21663	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	11.89	23.15	0.0342	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9187		0.3461	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-005	5	16.52	15.46	17.59	12.88	20.22	0.5191	2.796	16.92%	-25.87%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-005	20.22	18.11	12.88	16.17	15.25

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-4438-4539	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:09	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					73.18%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-004	-0.01152	1.86	9.608	0.5045	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.008857709	0.008857709	1	0.0001327	0.9911	Non-Significant Effect
Error	533.8925	66.73656	8			
Total	533.9013	66.74541	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.292	23.15	0.4415	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8751		0.1146	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-004	5	13.19	10.77	15.61	7.625	24	1.182	6.367	48.28%	-0.45%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-004	10.6	13.29	7.625	24	10.43

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-5687-5421	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:09	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					67.46%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-003	0.7831	1.86	8.856	0.2281	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	34.77041	34.77041	1	0.6132	0.4561	Non-Significant Effect
Error	453.6452	56.70565	8			
Total	488.4156	91.47606	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.538	23.15	0.1721	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9185		0.3448	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-003	5	9.399	7.678	11.12	2.556	15	0.8404	4.526	48.15%	28.41%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-003	2.556	8.6	9.714	11.13	15

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-9403-9651	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:09	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					135.9%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-015		19685-002	28		0	0.5000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	40.59425	40.59425	1	0.1765	0.6855	Non-Significant Effect
Error	1840.469	230.0587	8			
Total	1881.064	270.6529	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.951	23.15	0.2118	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7806		0.0084	Non-normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-002	5	17.16	9.869	24.45	4.111	51	3.558	19.16	111.7%	-30.69%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-002	10.43	51	12.25	4.111	8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-7628-4442	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:09	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					83.9%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-001	0.2603	1.86	11.01	0.4006	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	5.944288	5.944288	1	0.06777	0.8012	Non-Significant Effect
Error	701.6663	87.70828	8			
Total	707.6105	93.65257	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.127	23.15	0.9108	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8007		0.0148	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-001	5	11.59	8.132	15.04	5.4	27.5	1.687	9.082	78.39%	11.75%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-001	9.889	8.857	5.4	27.5	6.286

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-5449-2925	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:09	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					71.39%

Unequal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-017	0.3714	2.132	9.373	0.3646	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	6.664908	6.664908	1	0.1379	0.7200	Non-Significant Effect
Error	386.584	48.32301	8			
Total	393.249	54.98792	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	25.02	23.15	0.0086	Unequal Variances
Distribution	Shapiro-Wilk Normality	0.9114		0.2909	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	12.44%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-017	9.5	14.33	10.2	12.44	11

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-1450-1670	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					65.13%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-015		19685-016	-0.1313	1.86	8.55	0.5506	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.9114649	0.9114649	1	0.01725	0.8988	Non-Significant Effect
Error	422.8022	52.85027	8			
Total	423.7137	53.76174	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.278	23.15	0.0805	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9147		0.3150	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	0.0%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	-4.6%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-015	5.467	9	17.88	5.5	27.8
19685-016	13.75	15.75	17.29	14	7.875

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-0815-4568	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					50.2%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-033	-0.5144	1.86	6.289	0.6896	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	7.566741	7.566741	1	0.2646	0.6209	Non-Significant Effect
Error	228.7767	28.59709	8			
Total	236.3434	36.16383	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.148	23.15	0.4771	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9331		0.4790	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-033	5	14.27	11.89	16.64	6.714	24	1.16	6.247	43.79%	-13.89%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-033	24	6.714	14.86	13.17	12.6

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-0479-4978	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					86.56%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-032	-0.1598	1.86	10.84	0.5615	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.169906	2.169906	1	0.02552	0.8770	Non-Significant Effect
Error	680.0897	85.01121	8			
Total	682.2596	87.18111	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	8.359	23.15	0.0636	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9073		0.2631	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-032	5	13.46	8.772	18.15	3.333	27.75	2.288	12.32	91.56%	-7.44%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-032	3.333	26	3.714	6.5	27.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-0869-4396	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					49.48%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-031	0.6812	1.86	6.198	0.2575	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	12.8906	12.8906	1	0.4641	0.5150	Non-Significant Effect
Error	222.2087	27.77609	8			
Total	235.0993	40.66669	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.058	23.15	0.5017	Equal Variances
Distribution	Shapiro-Wilk Normality	0.926		0.4094	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-031	5	10.26	7.931	12.58	1.667	17.33	1.135	6.114	59.61%	18.13%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-031	17.33	1.667	11.29	14	7

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-1266-8820	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					81.53%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-030	-0.09041	1.86	10.21	0.5349	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.6165043	0.6165043	1	0.008174	0.9302	Non-Significant Effect
Error	603.3646	75.42058	8			
Total	603.9811	76.03708	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.303	23.15	0.0800	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9071		0.2618	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-030	5	13.02	8.643	17.41	3.8	27.85	2.139	11.52	88.44%	-3.96%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-030	27.85	5	23.14	5.333	3.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-3129-8691	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					30.75%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-029	-1.745	1.86	3.853	0.9404	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	32.68308	32.68308	1	3.046	0.1191	Non-Significant Effect
Error	85.84771	10.73096	8			
Total	118.5308	43.41405	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.512	23.15	0.1270	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8524		0.0621	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-029	5	16.14	15.45	16.83	13.2	17.88	0.3371	1.815	11.25%	-28.86%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-029	17.14	16.75	15.75	17.88	13.2

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-6673-1768	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					66.61%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-028	-3.359	1.86	8.345	0.9950	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	567.9221	567.9221	1	11.28	0.0100	Significant Effect
Error	402.739	50.34238	8			
Total	970.6611	618.2645	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.542	23.15	0.1718	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9398		0.5505	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-028	5	27.6	24.14	31.06	16.75	40.5	1.687	9.084	32.91%	-120.3%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-028	16.75	40.5	28	21.75	31

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-1346-6337	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					59.94%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-027	-4.198	1.86	7.509	0.9985	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	718.436	718.436	1	17.62	0.0030	Significant Effect
Error	326.1276	40.76595	8			
Total	1044.564	759.202	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.488	23.15	0.2536	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9434		0.5920	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-027	5	29.48	26.45	32.51	17.4	38.33	1.478	7.96	27.0%	-135.3%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-027	27.5	17.4	29.67	34.5	38.33

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-3786-3285	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.46%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-026	-3.439	1.86	4.443	0.9956	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	168.7929	168.7929	1	11.83	0.0088	Significant Effect
Error	114.1717	14.27147	8			
Total	282.9647	183.0644	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.751	23.15	0.6008	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8796		0.1290	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-026	5	20.74	19.52	21.97	15.86	24.7	0.5982	3.221	15.53%	-65.59%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-026	21	22	20.17	24.7	15.86

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-4839-8455	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					45.58%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-025	-2.395	1.86	5.71	0.9782	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	135.213	135.213	1	5.736	0.0435	Significant Effect
Error	188.5872	23.57341	8			
Total	323.8002	158.7864	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.595	23.15	0.6620	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9373		0.5236	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-025	5	19.88	17.83	21.93	13.63	25.57	0.9997	5.383	27.08%	-58.7%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-025	25.57	17.57	13.63	25.5	17.14

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-8828-5565	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					53.01%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-024	-2.134	1.86	6.641	0.9673	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	145.2418	145.2418	1	4.555	0.0654	Non-Significant Effect
Error	255.0834	31.88543	8			
Total	400.3253	177.1273	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.51	23.15	0.3944	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9326		0.4735	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-024	5	20.15	17.58	22.72	15.75	32	1.254	6.753	33.51%	-60.84%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-024	19	16.14	17.86	32	15.75

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	11-6137-9297	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					35.43%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-023	0.1487	1.86	4.438	0.4427	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.3148192	0.3148192	1	0.02211	0.8855	Non-Significant Effect
Error	113.9317	14.24146	8			
Total	114.2465	14.55628	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.761	23.15	0.5971	Equal Variances
Distribution	Shapiro-Wilk Normality	0.928		0.4282	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-023	5	12.17	10.95	13.39	7.833	16.67	0.5965	3.212	26.39%	2.83%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-023	13.29	11.22	16.67	7.833	11.86

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-1285-1927	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:07	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					65.29%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-022	-1.218	1.86	8.179	0.8710	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	71.70223	71.70223	1	1.482	0.2581	Non-Significant Effect
Error	386.9362	48.36703	8			
Total	458.6385	120.0693	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.325	23.15	0.1851	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9367		0.5173	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-022	5	17.88	14.51	21.25	6	26.5	1.646	8.864	49.56%	-42.75%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-022	19.67	11.75	26.5	6	25.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-4447-8527	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:06	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					83.51%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-021	-1.201	1.86	10.46	0.8680	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	114.1843	114.1843	1	1.443	0.2640	Non-Significant Effect
Error	633.0813	79.13516	8			
Total	747.2656	193.3194	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.712	23.15	0.0730	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9176		0.3373	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-021	5	19.29	14.78	23.79	2.667	35	2.198	11.84	61.37%	-53.95%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-021	14.63	22.25	2.667	21.89	35

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	06-3230-9962	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:06	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					29.3%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-020	-3.278	1.86	3.67	0.9944	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	104.6824	104.6824	1	10.75	0.0112	Significant Effect
Error	77.91604	9.739505	8			
Total	182.5984	114.4219	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	13.84	23.15	0.0260	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8246		0.0288	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-020	5	19	18.56	19.43	17.17	20.29	0.2128	1.146	6.03%	-51.65%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-020	18.88	20.29	17.17	19.33	19.33

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	03-8534-7068	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:06	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.09%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-019	1.744	1.86	5.273	0.0597	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	61.11883	61.11883	1	3.041	0.1194	Non-Significant Effect
Error	160.8022	20.10028	8			
Total	221.9211	81.21911	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.213	23.15	0.8561	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9612		0.7994	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-019	5	7.583	5.798	9.369	2.273	13.5	0.8717	4.694	61.9%	39.47%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-019	5.5	11.44	5.2	2.273	13.5

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-0897-2911	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:06	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					47.55%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-018	0.02762	1.86	5.957	0.4893	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.01957392	0.01957392	1	0.0007628	0.9786	Non-Significant Effect
Error	205.2743	25.65929	8			
Total	205.2939	25.67886	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.825	23.15	0.5744	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9639		0.8290	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-018	5	12.44	10.25	14.63	6.727	21.9	1.069	5.758	46.29%	0.71%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-018	6.727	13.1	10.64	9.833	21.9

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	18-8864-1925	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:06	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.36%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-014	4.513	1.86	4.179	0.0010	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	257.2085	257.2085	1	20.37	0.0020	Significant Effect
Error	101.0149	12.62686	8			
Total	358.2234	269.8354	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.563	23.15	0.3842	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9312		0.4597	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-014	5	2.385	1.372	3.397	0.1429	6.7	0.4944	2.662	111.6%	80.96%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-014	3	0.4444	6.7	0.1429	1.636

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-1615-3887	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:06	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					49.9%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-013	-0.4804	1.86	6.252	0.6781	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	6.52231	6.52231	1	0.2308	0.6438	Non-Significant Effect
Error	226.0695	28.25869	8			
Total	232.5918	34.781	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.111	23.15	0.4870	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8974		0.2050	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-013	5	14.14	11.79	16.5	4.6	19.86	1.15	6.193	43.79%	-12.89%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-013	11.8	15.63	18.83	4.6	19.86

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-7839-0109	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:06	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					39.63%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-012	2.263	1.86	4.965	0.0267	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	91.25957	91.25957	1	5.121	0.0535	Non-Significant Effect
Error	142.5559	17.81949	8			
Total	233.8155	109.0791	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.04	23.15	0.9708	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8665		0.0910	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-012	5	6.486	4.896	8.076	0	11.13	0.7762	4.18	64.45%	48.23%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-012	0	7.091	11.13	5.5	8.714

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	13-2777-9737	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:05	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					34.22%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-011	0.1808	1.86	4.287	0.4305	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.4342383	0.4342383	1	0.03268	0.8610	Non-Significant Effect
Error	106.3117	13.28896	8			
Total	106.7459	13.7232	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.16	23.15	0.4742	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8088		0.0186	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-011	5	12.11	11.01	13.21	7.167	14.83	0.5386	2.9	23.95%	3.33%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-011	12.92	14.83	13.08	7.167	12.56

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	05-3017-8330	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:05	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					42.57%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-010	0.7623	1.86	5.333	0.2339	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	11.94794	11.94794	1	0.5811	0.4677	Non-Significant Effect
Error	164.4781	20.55976	8			
Total	176.426	32.5077	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.264	23.15	0.8261	Equal Variances
Distribution	Shapiro-Wilk Normality	0.93		0.4484	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-010	5	10.34	8.519	12.16	3.714	16.7	0.8897	4.791	46.33%	17.45%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-010	3.714	10.25	16.7	8.6	12.44

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	09-2047-8461	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:05	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					34.29%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-009	2.856	1.86	4.296	0.0106	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	108.8439	108.8439	1	8.156	0.0213	Significant Effect
Error	106.7641	13.34552	8			
Total	215.608	122.1894	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.131	23.15	0.4818	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8469		0.0533	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-009	5	5.93	4.819	7.04	1.286	9.333	0.5422	2.92	49.24%	52.67%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-009	6	6.154	9.333	6.875	1.286

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	10-4250-7084	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:05	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					49.75%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-008	0.312	1.895	6.233	0.3821	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.341027	2.341027	1	0.09733	0.7642	Non-Significant Effect
Error	168.3749	24.05355	7			
Total	170.7159	26.39458	8			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.756	24.26	0.5880	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9182		0.3775	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-008	4	11.5	9.353	13.65	4.778	18.6	1.049	5.648	49.11%	8.19%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-008	11.17	4.778	18.6	11.46	

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-8246-3965	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:05	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					48.31%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-007	0.7833	1.86	6.052	0.2280	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	16.2454	16.2454	1	0.6135	0.4560	Non-Significant Effect
Error	211.8424	26.4803	8			
Total	228.0878	42.7257	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.915	23.15	0.5445	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9465		0.6268	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-007	5	9.979	7.735	12.22	4.571	19	1.095	5.899	59.11%	20.35%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-007	4.889	9.833	11.6	4.571	19

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	15-1377-2033	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:05	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					44.75%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-006	0.2606	1.86	5.606	0.4005	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.543452	1.543452	1	0.06793	0.8010	Non-Significant Effect
Error	181.7806	22.72257	8			
Total	183.324	24.26602	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.502	23.15	0.7032	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9747		0.9306	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-006	5	11.74	9.755	13.73	7.8	20.86	0.9699	5.223	44.48%	6.27%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-006	10.43	9	20.86	7.8	10.63

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	17-9795-2908	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:05	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.84%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-005	-1.753	1.86	4.239	0.9412	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	39.94244	39.94244	1	3.075	0.1176	Non-Significant Effect
Error	103.9258	12.99072	8			
Total	143.8682	52.93316	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.324	23.15	0.4340	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9112		0.2894	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-005	5	16.52	15.46	17.59	12.88	20.22	0.5191	2.796	16.92%	-31.91%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-005	20.22	18.11	12.88	16.17	15.25

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	19-1427-9841	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:05	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					50.86%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-004	-0.1926	1.86	6.372	0.5740	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	1.088929	1.088929	1	0.0371	0.8521	Non-Significant Effect
Error	234.8321	29.35401	8			
Total	235.921	30.44294	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.232	23.15	0.4560	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9491		0.6579	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-004	5	13.19	10.77	15.61	7.625	24	1.182	6.367	48.28%	-5.27%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-004	10.6	13.29	7.625	24	10.43

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	14-0367-1460	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:04	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					41.27%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-003	1.125	1.86	5.17	0.1465	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	24.4752	24.4752	1	1.267	0.2930	Non-Significant Effect
Error	154.5848	19.3231	8			
Total	179.06	43.79831	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.127	23.15	0.9103	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8865		0.1549	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-003	5	9.399	7.678	11.12	2.556	15	0.8404	4.526	48.15%	24.98%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-003	2.556	8.6	9.714	11.13	15

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-3635-7739	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:04	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					130.3%

Wilcoxon Rank Sum Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	Ties	P-Value	Decision(5%)
19685-000		19685-002	23		0	0.2103	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	53.59359	53.59359	1	0.2782	0.6122	Non-Significant Effect
Error	1541.409	192.6761	8			
Total	1595.003	246.2697	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	20.21	23.15	0.0129	Equal Variances
Distribution	Shapiro-Wilk Normality	0.7642		0.0053	Non-normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-002	5	17.16	9.869	24.45	4.111	51	3.558	19.16	111.7%	-36.96%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-002	10.43	51	12.25	4.111	8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	01-8538-5919	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:04	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					66.6%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-001	0.2099	1.86	8.343	0.4195	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.216195	2.216195	1	0.04404	0.8390	Non-Significant Effect
Error	402.6059	50.32574	8			
Total	404.8221	52.54193	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.541	23.15	0.1719	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8681		0.0950	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-001	5	11.59	8.132	15.04	5.4	27.5	1.687	9.082	78.39%	7.52%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-001	9.889	8.857	5.4	27.5	6.286

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	00-4196-6108	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:04	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					31.05%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-017	0.4935	1.86	3.89	0.3175	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.664228	2.664228	1	0.2435	0.6349	Non-Significant Effect
Error	87.52368	10.94046	8			
Total	90.18791	13.60469	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.89	23.15	0.1534	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8914		0.1760	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-017	5	11.5	10.76	12.23	9.5	14.33	0.3579	1.927	16.77%	8.24%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-017	9.5	14.33	10.2	12.44	11

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	02-2618-3800	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:04	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					36.92%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-016	-0.4841	1.86	4.625	0.6794	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	3.62563	3.62563	1	0.2344	0.6413	Non-Significant Effect
Error	123.7418	15.46773	8			
Total	127.3675	19.09336	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.423	23.15	0.7410	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8235		0.0280	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-016	5	13.73	12.37	15.09	7.875	17.29	0.6636	3.573	26.02%	-9.61%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-016	13.75	15.75	17.29	14	7.875

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test — **EnviroSystems, Inc.**

Analysis ID:	16-8780-2774	**Endpoint:**	Offspring/Surviving Female	**CETIS Version:**	CETISv1.7.0
Analyzed:	05 Jul-10 23:04	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	19-3837-6848	**Test Type:**	Leptocheirus (28-d)	**Analyst:**	
Start Date:	02 Jun-10 12:00	**Protocol:**	EPA/600/R-01/020 (2001)	**Diluent:**	Not Applicable
Ending Date:	30 Jun-10 12:00	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Duration:	28d 0h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					69.97%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19685-000		19685-015	-0.1274	1.86	8.765	0.5491	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.9013641	0.9013641	1	0.01623	0.9018	Non-Significant Effect
Error	444.3884	55.54855	8			
Total	445.2898	56.44992	9			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.116	23.15	0.1429	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9035		0.2392	Normal Distribution

Offspring/Surviving Female Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19685-000	5	12.53	10.91	14.15	5.273	16.17	0.7915	4.262	34.02%	0.0%
19685-015	5	13.13	9.461	16.8	5.467	27.8	1.79	9.64	73.43%	-4.79%

Offspring/Surviving Female Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
19685-000	13	5.273	13.2	16.17	15
19685-015	5.467	9	17.88	5.5	27.8

Leptocheirus 28-d Survival, Growth and Reproduction Sediment Test **EnviroSystems, Inc.**

Start Date: 02 Jun-10 12:00
End Date: 30 Jun-10 12:00
Sample Date: 14 May-10 16:00

Species: Leptocheirus plumulosus
Protocol: EPA/600/R-01/020 (2001)
Material: Marine Sediment

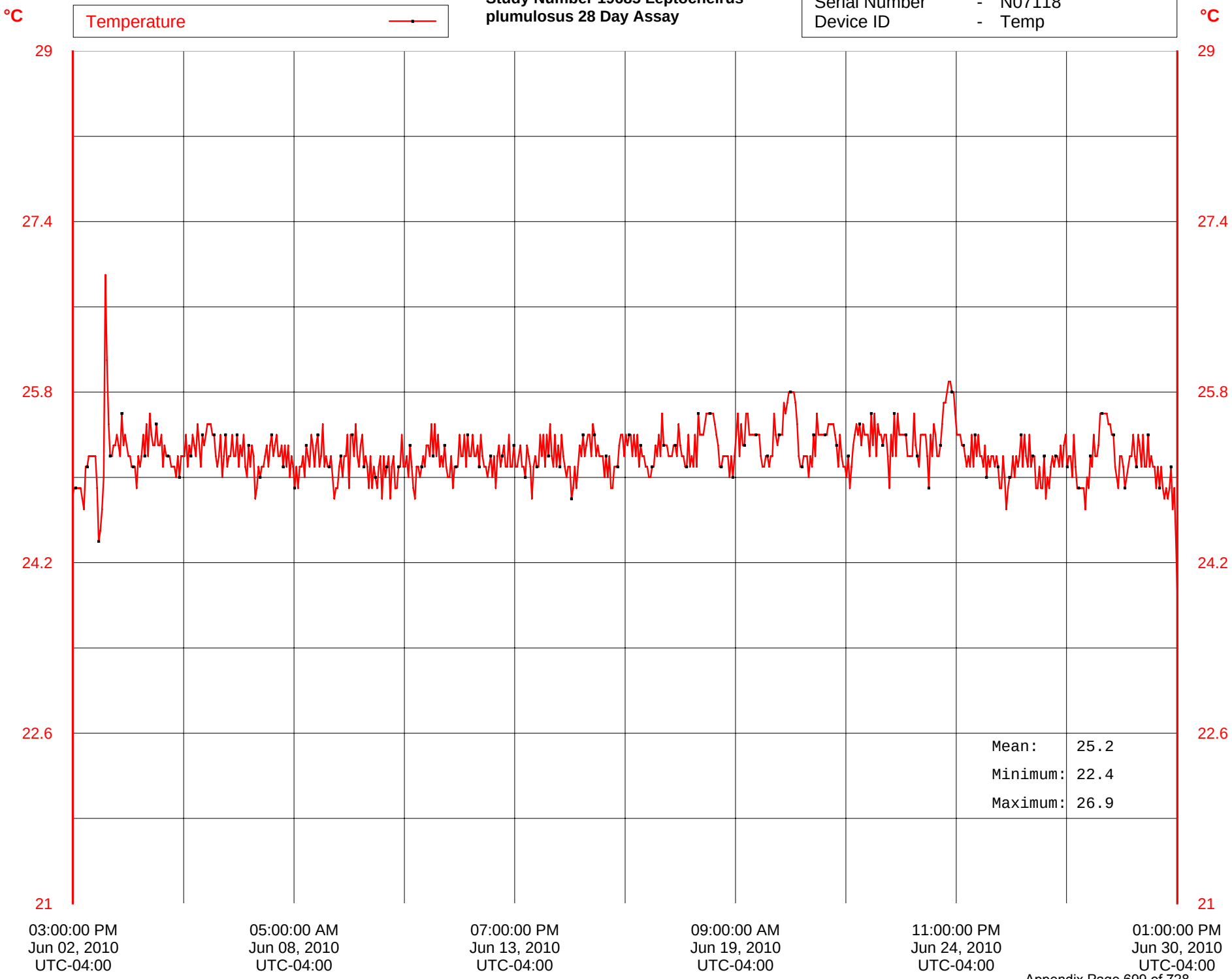
Sample Code: 19685-000
Sample Source: Gould Island, Rhode Island
Sample Station: Laboratory Control; 19685-000

Sample Code	Rep	Pos	# Exposed	# Survived	otal Weight-m	are Weight-m	an Coun	Neonate Weight-mg	# Offspring	#Females	- F	F	Pan Count - Fe
19685-000	1	3	20	14	230.49	208.43	14		117	9			
19685-000	2	50	21	21	234.75	207.28	21		58	11			
19685-000	3	90	20	19	233.78	207.68	19		132	10			
19685-000	4	125	20	17	236.14	208.25	17		97	6			
19685-000	5	137	20	15	229.16	207.71	15		90	6			
19685-015	1	8	20	20	234.27	206.92	20		82	15			
19685-015	2	56	20	18	222.57	207.58	14		108	12			
19685-015	3	80	20	15	238.57	207.97	15		143	8			
19685-015	4	106	20	19	234.25	207.63	19		44	8			
19685-015	5	159	20	11	218.19	205.74	11		139	5			
19685-016	1	13	20	20	249.93	208.58	20		55	4			
19685-016	2	67	20	20	244.72	207.13	20		126	8			
19685-016	3	84	20	15	224.79	207.85	15		121	7			
19685-016	4	121	21	21	241.95	205.78	21		126	9			
19685-016	5	166	20	9	214.19	208.93	9		63	8			
19685-017	1	23	20	19	240.46	207.26	19		114	12			
19685-017	2	63	20	19	238.08	205.85	19		129	9			
19685-017	3	70	20	17	230.93	207.05	17		102	10			
19685-017	4	108	20	19	236.66	207.31	19		112	9			
19685-017	5	163	20	6	214.45	207.32	6		22	2			
19685-001	1	5	20	18	230.48	208.89	18		89	9			
19685-001	2	53	20	15	223.58	207.91	14		62	7			
19685-001	3	76	20	11	216.35	208.05	11		27	5			
19685-001	4	115	20	9	219.12	207.86	9		110	4			
19685-001	5	149	20	10	215.02	208.79	10		44	7			
19685-002	1	15	20	16	229.25	207.9	16		73	7			
19685-002	2	41	20	11	234.93	208.5	11		51	1			
19685-002	3	77	20	17	236.16	206.37	17		98	8			
19685-002	4	134	20	16	226.14	208.41	16		37	9			
19685-002	5	168	20	17	229.75	208.63	17		96	12			
19685-003	1	7	20	17	224.54	206.15	17		23	9			
19685-003	2	47	20	17	219.14	207.79	17		86	10			
19685-003	3	72	20	15	222.66	208.81	15		68	7			
19685-003	4	114	20	20	244.37	207.22	20		89	8			
19685-003	5	165	20	12	230.59	208.57	12		90	6			
19685-004	1	19	20	8	218.18	210.37	8		53	5			
19685-004	2	62	20	13	221.77	206.08	13		93	7			
19685-004	3	95	20	14	227.03	207.16	14		61	8			
19685-004	4	122	20	10	224.82	205.16	10		96	4			
19685-004	5	148	20	8	213.38	205.84	8		73	7			
19685-005	1	18	20	17	243.47	207.43	17		182	9			
19685-005	2	37	20	18	235.41	207.63	18		163	9			
19685-005	3	100	20	17	237.7	207.31	17		103	8			
19685-005	4	109	20	12	222.63	207.23	12		97	6			
19685-005	5	160	20	7	212.41	205.25	7		61	4			
19685-006	1	16	20	20	236.51	208.27	20		146	14			
19685-006	2	42	20	14	230.85	205.7	14		54	6			

Sample Code	Rep	Pos	# Exposed	# Survived	otal Weight-m	are Weight-m	an Cour	Neonate Weight-mg	# Offspring	#Females	- F	F	Pan Count - Fe
19685-006	3	92	20	19	249.58	207.35	19		146	7			
19685-006	4	124	20	10	221.34	209.72	10		39	5			
19685-006	5	164	20	12	222.27	204.56	12		85	8			
19685-007	1	26	20	13	216.01	205.23	13		44	9			
19685-007	2	48	20	10	216.02	207.56	10		59	6			
19685-007	3	79	20	17	229.47	205.97	17		116	10			
19685-007	4	105	20	16	225.95	208.43	16		32	7			
19685-007	5	151	20	15	219.16	208.06	15		57	3			
19685-008	1	34	20	11	225.33	206.79	11		67	6			
19685-008	2	60	20	16	222.03	207.02	16		43	9			
19685-008	3	99	20	14	222.68	206.51	14		93	5			
19685-008	4	116	20	19	225.53	206.41	19		149	13			
19685-008	5	141	20	17	234.1	208.19	17			7			
19685-009	1	1	20	16	235.4	204.91	16		24	4			
19685-009	2	45	20	20	221.28	204.06	20		80	13			
19685-009	3	98	20	16	221.68	206.25	16		84	9			
19685-009	4	129	20	17	226.34	207.39	17		55	8			
19685-009	5	139	20	15	222.31	207.87	15		9	7			
19685-010	1	29	20	10	213.02	207.88	10		26	7			
19685-010	2	36	20	14	224.89	207.63	14		82	8			
19685-010	3	102	21	21	249.18	209.1	21		167	10			
19685-010	4	111	20	11	213	206.01	11		86	10			
19685-010	5	143	20	12	217.93	207	12		112	9			
19685-011	1	6	21	21	243.93	208.28	21		168	13			
19685-011	2	65	20	15	233.01	207.61	15		89	6			
19685-011	3	83	21	21	249.17	207.7	21		170	13			
19685-011	4	130	20	18	228.88	206.62	18		43	6			
19685-011	5	155	20	20	243.33	207.89	20		113	9			
19685-012	1	20	20	6	210.08	207.84	6		0	5			
19685-012	2	52	20	17	230.06	209.14	17		78	11			
19685-012	3	81	20	16	217.42	207.24	16		89	8			
19685-012	4	127	20	8	219.32	207.66	8		11	2			
19685-012	5	152	20	7	212.13	208.01	7		61	7			
19685-013	1	9	24	24	236.82	207.03	24		177	15			
19685-013	2	59	20	20	234.3	206.01	20		125	8			
19685-013	3	89	20	17	236.23	205.8	17		113	6			
19685-013	4	135	21	21	238.19	206.53	21		46	10			
19685-013	5	138	20	11	224.08	205.68	11		139	7			
19685-014	1	24	20	16	218.52	205.54	16		21	7			
19685-014	2	39	20	12	209.39	206.13	12		4	9			
19685-014	3	94	20	16	218.16	208.23	16		67	10			
19685-014	4	136	20	20	216.62	209.13	20		2	14			
19685-014	5	147	20	17	213.97	208.47	17		18	11			
19685-018	1	28	20	18	243.76	208.76	18		74	11			
19685-018	2	61	20	18	241.75	208.7	18		131	10			
19685-018	3	74	20	19	241.66	207.67	19		117	11			
19685-018	4	107	20	20	247.07	208.5	20		118	12			
19685-018	5	150	20	17	232.69	207.28	17		219	10			
19685-019	1	31	20	10	222.7	208.33	10		33	6			
19685-019	2	35	20	18	229.76	205.92	18		103	9			
19685-019	3	85	20	18	230.85	205.48	18		26	5			
19685-019	4	104	20	15	219.03	207.92	15		25	11			

Sample Code	Rep	Pos	# Exposed	# Survived	otal Weight-m	are Weight-m	an Cour	Neonate Weight-mg	# Offspring	#Females	- F	F	Pan Count - Fe
19685-019	5	144	20	13	232.1	206.64	13		54	4			
19685-020	1	21	20	20	243.6	207.63	20		151	8			
19685-020	2	64	20	18	239.53	205.87	18		142	7			
19685-020	3	78	20	15	237.67	206.51	15		103	6			
19685-020	4	110	20	15	231.81	205.87	15		116	6			
19685-020	5	156	21	21	250.31	207.99	21		232	12			
19685-021	1	17	21	21	236.69	206.96	21		117	8			
19685-021	2	46	20	16	213.54	204.7	16		89	4			
19685-021	3	75	20	10	213	208.71	10		8	3			
19685-021	4	120	20	20	242.04	206.85	20		197	9			
19685-021	5	169	20	8	211.18	205.93	7		35	1			
19685-022	1	25	20	15	232.79	205.07	15		59	3			
19685-022	2	68	20	11	222.14	207.46	11		47	4			
19685-022	3	82	20	19	239.32	205.79	19		106	4			
19685-022	4	133	20	8	223.17	205.84	8		12	2			
19685-022	5	154	20	10	224.62	206.83	10		51	2			
19685-023	1	33	20	19	223.23	207.76	19		93	7			
19685-023	2	58	20	15	220.85	206.43	15		101	9			
19685-023	3	86	20	19	241.59	208.52	19		150	9			
19685-023	4	112	20	17	219.73	206.87	17		94	12			
19685-023	5	157	20	15	218.95	205.74	15		83	7			
19685-024	1	12	20	20	233.3	208.71	20		133	7			
19685-024	2	51	20	19	226.41	204.94	19		113	7			
19685-024	3	88	20	13	224.26	208.43	13		125	7			
19685-024	4	128	20	8	215.27	207.09	8		64	2			
19685-024	5	142	20	19	236.91	208.36	19		63	4			
19685-025	1	11	20	18	235.12	207	18		179	7			
19685-025	2	49	20	18	216.88	205.8	18		123	7			
19685-025	3	97	20	17	225.87	206.19	17		109	8			
19685-025	4	117	20	8	217.71	206.2	8		51	2			
19685-025	5	140	20	20	227.02	206.76	20		120	7			
19685-026	1	10	20	17	247.14	207.99	17		105	5			
19685-026	2	55	20	18	247.52	206.13	18		88	4			
19685-026	3	87	20	18	247.26	207.54	18		121	6			
19685-026	4	132	20	18	237.99	206.99	18		247	10			
19685-026	5	170	20	13	234.6	206.42	13		111	7			
19685-027	1	32	20	11	221.77	206.1	11		55	2			
19685-027	2	43	20	15	223.2	205.75	15		87	5			
19685-027	3	93	20	15	226.92	207.44	15		89	3			
19685-027	4	103	20	16	225.98	207.99	16		69	2			
19685-027	5	145	20	16	225.93	207.18	16		115	3			
19685-028	1	22	20	14	223.19	206.1	14		67	4			
19685-028	2	57	20	15	223.49	206.95	15		81	2			
19685-028	3	91	20	15	224.67	207.56	15		84	3			
19685-028	4	126	20	14	219.95	208.5	14		87	4			
19685-028	5	162	20	16	222.72	208.95	16		93	3			
19685-029	1	27	20	20	237.52	208.45	20		120	7			
19685-029	2	54	22	22	231.35	205.58	22		134	8			
19685-029	3	96	20	19	228.2	204.39	19		126	8			
19685-029	4	119	20	16	227.42	205.91	16		143	8			
19685-029	5	158	20	18	234.35	207.41	18		132	10			
19685-030	1	4	22	22	237.76	207.07	22		362	13			

Sample Code	Rep	Pos	# Exposed	# Survived	otal Weight-m	are Weight-m	an Cour	Neonate Weight-mg	# Offspring	#Females	- F	F	Pan Count - Fe
19685-030	2	40	20	11	221.33	208.5	11		10	2			
19685-030	3	71	20	18	244.02	206.89	18		162	7			
19685-030	4	118	20	13	231.66	208.45	13		32	6			
19685-030	5	146	20	18	237.08	206.33	18		19	5			
19685-031	1	14	20	11	229.67	210.28	11		52	3			
19685-031	2	38	20	8	219.1	209.94	8		5	3			
19685-031	3	101	20	16	236.75	207.48	16		79	7			
19685-031	4	123	20	10	216.07	208.16	10		42	3			
19685-031	5	161	20	5	212.7	206.75	5		7	1			
19685-032	1	30	20	16	224.04	211.52	16		20	6			
19685-032	2	44	20	20	225.02	208.13	20		78	3			
19685-032	3	73	20	17	233.13	207.87	17		26	7			
19685-032	4	113	20	15	234.99	211.32	15		39	6			
19685-032	5	167	20	17	231.99	208.36	17		111	4			
19685-033	1	2	20	18	244.28	210.1	18		120	5			
19685-033	2	66	20	17	235.81	207.93	17		47	7			
19685-033	3	69	20	17	231.74	208.04	17		104	7			
19685-033	4	131	20	20	249.14	207.38	20		79	6			
19685-033	5	153	20	15	236.2	206.35	15		63	5			


°C
Temperature
Study Number 19685 Leptocheirus plumulosus 28 Day Assay
Device - MicroPoint1
Serial Number - N07118
Device ID - Temp
°C
29
27.4
25.8
24.2
22.6
21
Mean: 25.2
Minimum: 22.4
Maximum: 26.9
03:00:00 PM Jun 02, 2010 UTC-04:00
05:00:00 AM Jun 08, 2010 UTC-04:00
07:00:00 PM Jun 13, 2010 UTC-04:00
09:00:00 AM Jun 19, 2010 UTC-04:00
11:00:00 PM Jun 24, 2010 UTC-04:00
01:00:00 PM Jun 30, 2010 UTC-04:00

STUDY: 19685
CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO 458 - Gould Island
ASSAY: Leptocheirus plumulosus 28 Day Assay
TASK: Pore Water Ammonia Summary
METHOD: SM 4500-NH3 G

	Sample			AMMONIA					
Field ID	Number	Day	LAB ID	TOTAL	UNIONIZED	QLIMIT	UNITS	SAMPLED	ANALYZED
Laboratory Control	000	0	19685-134	9.9	0.042	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD509-0006	001	0	19685-135	1.8	0.007	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD511-0006	002	0	19685-136	5.9	0.101	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD527-0006	003	0	19685-137	0.97	0.014	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD566-0006	004	0	19685-138	0.18	0.011	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD514-0006	005	0	19685-139	3.6	0.243	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD515-0006	006	0	19685-140	15	0.086	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD503-0006	007	0	19685-141	18	0.195	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD510-0006	008	0	19685-142	2.9	0.035	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD501-0006	009	0	19685-143	6	0.274	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD507-0006	010	0	19685-144	2.7	0.038	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD504-0006	011	0	19685-145	4.7	0.058	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD-DUP01-043010	012	0	19685-146	1.4	0.033	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD532-0006	013	0	19685-147	4.4	0.064	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD518-0006	014	0	19685-148	0.21	0.002	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD526-0006	015	0	19685-149	4.7	0.023	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD525-0006	016	0	19685-150	13	0.073	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD524-0006	017	0	19685-151	4.2	0.026	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD502-0006	018	0	19685-152	11	0.091	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD508-0006	019	0	19685-153	11	0.100	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD529-0006	020	0	19685-154	9	0.184	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD506-0006	021	0	19685-155	4.3	0.043	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD519-0006	022	0	19685-156	7.3	0.049	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD505-0006	023	0	19685-157	2.3	0.039	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD531-0006	024	0	19685-158	6.6	0.029	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD528-0006	025	0	19685-159	2.4	0.037	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD530-0006	026	0	19685-160	4	0.506	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD521-0006	027	0	19685-161	0.65	0.018	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD512-0006	028	0	19685-162	1.1	0.023	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD513-0006	029	0	19685-163	5.9	0.060	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD517-0006	030	0	19685-164	3.9	0.120	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD520-0006	031	0	19685-165	3.7	0.043	0.1	mg/L as N	06/02/10 1000	06/14/10

	Sample			AMMONIA					
Field ID	Number	Day	LAB ID	TOTAL	UNIONIZED	QLIMIT	UNITS	SAMPLED	ANALYZED
GI-SD523-0006	032	0	19685-166	0.47	0.014	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD522-0006	033	0	19685-167	6.6	0.169	0.1	mg/L as N	06/02/10 1000	06/14/10
Laboratory Control	000	7	19685-234	7.3	0.018	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD509-0006	001	7	19685-235	0.52	0.002	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD511-0006	002	7	19685-236	1.4	0.007	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD527-0006	003	7	19685-237	ND	0.001	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD566-0006	004	7	19685-238	0.3	0.004	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD514-0006	005	7	19685-239	0.94	0.042	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD515-0006	006	7	19685-240	6.9	0.024	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD503-0006	007	7	19685-241	12	0.111	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD510-0006	008	7	19685-242	1.5	0.020	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD501-0006	009	7	19685-243	7.2	0.062	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD507-0006	010	7	19685-244	1.1	0.009	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD504-0006	011	7	19685-245	0.59	0.015	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD-DUP01-043010	012	7	19685-246	0.31	0.007	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD532-0006	013	7	19685-247	0.61	0.013	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD518-0006	014	7	19685-248	0.14	0.001	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD526-0006	015	7	19685-249	1.9	0.010	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD525-0006	016	7	19685-250	11	0.089	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD524-0006	017	7	19685-251	2	0.009	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD502-0006	018	7	19685-252	4.4	0.043	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD508-0006	019	7	19685-253	7.2	0.044	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD529-0006	020	7	19685-254	2.2	0.018	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD506-0006	021	7	19685-255	2	0.013	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD519-0006	022	7	19685-256	1.2	0.033	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD505-0006	023	7	19685-257	3.3	0.046	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD531-0006	024	7	19685-258	1	0.016	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD528-0006	025	7	19685-259	0.9	0.024	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD530-0006	026	7	19685-260	2.5	0.113	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD521-0006	027	7	19685-261	1.2	0.015	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD512-0006	028	7	19685-262	0.72	0.007	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD513-0006	029	7	19685-263	0.81	0.013	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD517-0006	030	7	19685-264	1.7	0.014	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD520-0006	031	7	19685-265	1.5	0.019	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD523-0006	032	7	19685-266	0.14	0.004	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD522-0006	033	7	19685-267	0.61	0.010	0.1	mg/L as N	06/09/10 1130	06/17/10
Laboratory Control	000	14	19685-334	4	0.015	0.1	mg/L as N	06/16/10 1130	06/17/10

	Sample			AMMONIA					
Field ID	Number	Day	LAB ID	TOTAL	UNIONIZED	QLIMIT	UNITS	SAMPLED	ANALYZED
GI-SD509-0006	001	14	19685-335	0.21	0.001	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD511-0006	002	14	19685-336	0.42	0.004	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD527-0006	003	14	19685-337	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD566-0006	004	14	19685-338	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD514-0006	005	14	19685-339	0.69	0.023	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD515-0006	006	14	19685-340	3.3	0.010	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD503-0006	007	14	19685-341	7.2	0.082	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD510-0006	008	14	19685-342	0.19	0.004	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD501-0006	009	14	19685-343	3.8	0.057	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD507-0006	010	14	19685-344	0.32	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD504-0006	011	14	19685-345	0.15	0.006	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD-DUP01-043010	012	14	19685-346	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD532-0006	013	14	19685-347	0.38	0.006	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD518-0006	014	14	19685-348	ND	0.001	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD526-0006	015	14	19685-349	0.74	0.004	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD525-0006	016	14	19685-350	3.9	0.028	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD524-0006	017	14	19685-351	0.65	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD502-0006	018	14	19685-352	2.4	0.033	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD508-0006	019	14	19685-353	3	0.016	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD529-0006	020	14	19685-354	0.46	0.010	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD506-0006	021	14	19685-355	0.68	0.005	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD519-0006	022	14	19685-356	0.24	0.008	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD505-0006	023	14	19685-357	0.81	0.011	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD531-0006	024	14	19685-358	0.42	0.010	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD528-0006	025	14	19685-359	0.3	0.006	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD530-0006	026	14	19685-360	0.1	0.006	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD521-0006	027	14	19685-361	0.38	0.009	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD512-0006	028	14	19685-362	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD513-0006	029	14	19685-363	0.46	0.009	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD517-0006	030	14	19685-364	0.28	0.006	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD520-0006	031	14	19685-365	0.33	0.010	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD523-0006	032	14	19685-366	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD522-0006	033	14	19685-367	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
Laboratory Control	000	21	19685-434	3.2	0.004	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD509-0006	001	21	19685-435	0.5	0.001	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD511-0006	002	21	19685-436	0.55	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD527-0006	003	21	19685-437	ND	0.000	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD566-0006	004	21	19685-438	ND	0.000	0.1	mg/L as N	06/23/10 1130	06/28/10

	Sample			AMMONIA					
Field ID	Number	Day	LAB ID	TOTAL	UNIONIZED	QLIMIT	UNITS	SAMPLED	ANALYZED
GI-SD514-0006	005	21	19685-439	0.16	0.001	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD515-0006	006	21	19685-440	2	0.003	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD503-0006	007	21	19685-441	5.7	0.031	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD510-0006	008	21	19685-442	ND	0.000	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD501-0006	009	21	19685-443	3.9	0.016	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD507-0006	010	21	19685-444	0.48	0.001	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD504-0006	011	21	19685-445	0.91	0.003	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD-DUP01-043010	012	21	19685-446	ND	0.000	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD532-0006	013	21	19685-447	0.48	0.003	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD518-0006	014	21	19685-448	0.25	0.001	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD526-0006	015	21	19685-449	0.71	0.001	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD525-0006	016	21	19685-450	2	0.004	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD524-0006	017	21	19685-451	0.63	0.001	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD502-0006	018	21	19685-452	2.1	0.008	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD508-0006	019	21	19685-453	1	0.004	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD529-0006	020	21	19685-454	0.42	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD506-0006	021	21	19685-455	0.38	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD519-0006	022	21	19685-456	0.3	0.003	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD505-0006	023	21	19685-457	1	0.008	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD531-0006	024	21	19685-458	0.42	0.005	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD528-0006	025	21	19685-459	0.27	0.003	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD530-0006	026	21	19685-460	ND	0.001	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD521-0006	027	21	19685-461	0.31	0.003	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD512-0006	028	21	19685-462	ND	0.000	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD513-0006	029	21	19685-463	ND	0.000	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD517-0006	030	21	19685-464	0.41	0.003	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD520-0006	031	21	19685-465	0.22	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD523-0006	032	21	19685-466	0.11	0.001	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD522-0006	033	21	19685-467	ND	0.001	0.1	mg/L as N	06/23/10 1130	06/28/10
Laboratory Control	000	28	19685-534	2.7	0.009	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD509-0006	001	28	19685-535	1.2	0.010	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD511-0006	002	28	19685-536	0.86	0.009	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD527-0006	003	28	19685-537	ND	0.001	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD566-0006	004	28	19685-538	ND	0.001	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD514-0006	005	28	19685-539	ND	0.001	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD515-0006	006	28	19685-540	1.9	0.008	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD503-0006	007	28	19685-541	4.3	0.049	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD510-0006	008	28	19685-542	ND	0.001	0.1	mg/L as N	06/30/10 0800	07/02/10

	Sample			AMMONIA					
Field ID	Number	Day	LAB ID	TOTAL	UNIONIZED	QLIMIT	UNITS	SAMPLED	ANALYZED
GI-SD501-0006	009	28	19685-543	1.3	0.019	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD507-0006	010	28	19685-544	0.49	0.004	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD504-0006	011	28	19685-545	1.1	0.007	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD-DUP01-043010	012	28	19685-546	0.25	0.002	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD532-0006	013	28	19685-547	0.41	0.009	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD518-0006	014	28	19685-548	0.15	0.003	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD526-0006	015	28	19685-549	0.99	0.006	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD525-0006	016	28	19685-550	1.6	0.024	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD524-0006	017	28	19685-551	0.57	0.003	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD502-0006	018	28	19685-552	1.1	0.023	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD508-0006	019	28	19685-553	1.1	0.010	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD529-0006	020	28	19685-554	0.21	0.002	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD506-0006	021	28	19685-555	0.4	0.003	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD519-0006	022	28	19685-556	ND	0.001	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD505-0006	023	28	19685-557	0.6	0.006	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD531-0006	024	28	19685-558	0.41	0.009	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD528-0006	025	28	19685-559	ND	0.001	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD530-0006	026	28	19685-560	ND	0.001	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD521-0006	027	28	19685-561	0.11	0.003	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD512-0006	028	28	19685-562	ND	0.001	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD513-0006	029	28	19685-563	ND	0.001	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD517-0006	030	28	19685-564	ND	0.002	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD520-0006	031	28	19685-565	ND	0.001	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD523-0006	032	28	19685-566	ND	0.002	0.1	mg/L as N	06/30/10 0800	07/02/10
GI-SD522-0006	033	28	19685-567	ND	0.001	0.1	mg/L as N	06/30/10 0800	07/02/10

STUDY: 19685
CLIENT: Tetra Tech NUS, Inc.
PROJECT: CTO 458 - Gould Island
ASSAY: Leptocheirus plumulosus 28 Day Assay
TASK: Overlying Water Ammonia Summary
METHOD: SM 4500-NH3 G

	Sample			AMMONIA					
Field ID	Number	Day	LAB ID	TOTAL	UNIONIZED	QLIMIT	UNITS	SAMPLED	ANALYZED
Laboratory Control	000	0	19685-100	ND	0.001	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD509-0006	001	0	19685-101	ND	0.003	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD511-0006	002	0	19685-102	1.1	0.133	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD527-0006	003	0	19685-103	ND	0.003	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD566-0006	004	0	19685-104	ND	0.006	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD514-0006	005	0	19685-105	1.7	0.207	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD515-0006	006	0	19685-106	0.9	0.093	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD503-0006	007	0	19685-107	ND	0.004	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD510-0006	008	0	19685-108	ND	0.003	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD501-0006	009	0	19685-109	2	0.175	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD507-0006	010	0	19685-110	0.37	0.029	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD504-0006	011	0	19685-111	0.5	0.046	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD-DUP01-043010	012	0	19685-112	ND	0.005	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD532-0006	013	0	19685-113	ND	0.003	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD518-0006	014	0	19685-114	ND	0.003	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD526-0006	015	0	19685-115	0.11	0.006	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD525-0006	016	0	19685-116	0.83	0.090	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD524-0006	017	0	19685-117	ND	0.004	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD502-0006	018	0	19685-118	ND	0.004	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD508-0006	019	0	19685-119	ND	0.003	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD529-0006	020	0	19685-120	3.3	0.353	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD506-0006	021	0	19685-121	0.12	0.009	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD519-0006	022	0	19685-122	1.9	0.106	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD505-0006	023	0	19685-123	0.23	0.011	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD531-0006	024	0	19685-124	1	0.060	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD528-0006	025	0	19685-125	0.16	0.009	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD530-0006	026	0	19685-126	3.8	0.338	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD521-0006	027	0	19685-127	ND	0.004	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD512-0006	028	0	19685-128	0.53	0.024	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD513-0006	029	0	19685-129	ND	0.002	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD517-0006	030	0	19685-130	2.2	0.160	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD520-0006	031	0	19685-131	ND	0.004	0.1	mg/L as N	06/02/10 1000	06/14/10

Field ID	Sample Number	Day	LAB ID	AMMONIA TOTAL	UNIONIZED	QLIMIT	UNITS	SAMPLED	ANALYZED
GI-SD523-0006	032	0	19685-132	0.4	0.034	0.1	mg/L as N	06/02/10 1000	06/14/10
GI-SD522-0006	033	0	19685-133	3.7	0.255	0.1	mg/L as N	06/02/10 1000	06/14/10
Laboratory Control	000	7	19685-200	0.12	0.004	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD509-0006	001	7	19685-201	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD511-0006	002	7	19685-202	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD527-0006	003	7	19685-203	ND	0.005	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD566-0006	004	7	19685-204	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD514-0006	005	7	19685-205	ND	0.004	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD515-0006	006	7	19685-206	ND	0.004	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD503-0006	007	7	19685-207	ND	0.004	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD510-0006	008	7	19685-208	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD501-0006	009	7	19685-209	ND	0.004	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD507-0006	010	7	19685-210	ND	0.004	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD504-0006	011	7	19685-211	ND	0.004	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD-DUP01-043010	012	7	19685-212	ND	0.004	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD532-0006	013	7	19685-213	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD518-0006	014	7	19685-214	ND	0.002	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD526-0006	015	7	19685-215	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD525-0006	016	7	19685-216	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD524-0006	017	7	19685-217	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD502-0006	018	7	19685-218	0.16	0.012	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD508-0006	019	7	19685-219	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD529-0006	020	7	19685-220	ND	0.004	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD506-0006	021	7	19685-221	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD519-0006	022	7	19685-222	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD505-0006	023	7	19685-223	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD531-0006	024	7	19685-224	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD528-0006	025	7	19685-225	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD530-0006	026	7	19685-226	1.7	0.117	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD521-0006	027	7	19685-227	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD512-0006	028	7	19685-228	ND	0.002	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD513-0006	029	7	19685-229	ND	0.002	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD517-0006	030	7	19685-230	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD520-0006	031	7	19685-231	ND	0.003	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD523-0006	032	7	19685-232	ND	0.002	0.1	mg/L as N	06/09/10 1130	06/17/10
GI-SD522-0006	033	7	19685-233	ND	0.004	0.1	mg/L as N	06/09/10 1130	06/17/10
Laboratory Control	000	14	19685-300	ND	0.001	0.1	mg/L as N	06/16/10 1130	06/17/10

	Sample			AMMONIA					
Field ID	Number	Day	LAB ID	TOTAL	UNIONIZED	QLIMIT	UNITS	SAMPLED	ANALYZED
GI-SD509-0006	001	14	19685-301	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD511-0006	002	14	19685-302	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD527-0006	003	14	19685-303	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD566-0006	004	14	19685-304	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD514-0006	005	14	19685-305	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD515-0006	006	14	19685-306	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD503-0006	007	14	19685-307	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD510-0006	008	14	19685-308	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD501-0006	009	14	19685-309	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD507-0006	010	14	19685-310	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD504-0006	011	14	19685-311	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD-DUP01-043010	012	14	19685-312	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD532-0006	013	14	19685-313	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD518-0006	014	14	19685-314	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD526-0006	015	14	19685-315	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD525-0006	016	14	19685-316	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD524-0006	017	14	19685-317	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD502-0006	018	14	19685-318	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD508-0006	019	14	19685-319	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD529-0006	020	14	19685-320	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD506-0006	021	14	19685-321	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD519-0006	022	14	19685-322	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD505-0006	023	14	19685-323	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD531-0006	024	14	19685-324	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD528-0006	025	14	19685-325	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD530-0006	026	14	19685-326	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD521-0006	027	14	19685-327	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD512-0006	028	14	19685-328	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD513-0006	029	14	19685-329	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD517-0006	030	14	19685-330	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD520-0006	031	14	19685-331	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD523-0006	032	14	19685-332	ND	0.002	0.1	mg/L as N	06/16/10 1130	06/17/10
GI-SD522-0006	033	14	19685-333	ND	0.003	0.1	mg/L as N	06/16/10 1130	06/17/10
Laboratory Control	000	21	19685-400	0.19	0.004	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD509-0006	001	21	19685-401	ND	0.001	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD511-0006	002	21	19685-402	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD527-0006	003	21	19685-403	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD566-0006	004	21	19685-404	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10

	Sample			AMMONIA					
Field ID	Number	Day	LAB ID	TOTAL	UNIONIZED	QLIMIT	UNITS	SAMPLED	ANALYZED
GI-SD514-0006	005	21	19685-405	0.1	0.005	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD515-0006	006	21	19685-406	ND	0.003	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD503-0006	007	21	19685-407	ND	0.003	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD510-0006	008	21	19685-408	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD501-0006	009	21	19685-409	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD507-0006	010	21	19685-410	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD504-0006	011	21	19685-411	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD-DUP01-043010	012	21	19685-412	ND	0.003	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD532-0006	013	21	19685-413	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD518-0006	014	21	19685-414	0.11	0.004	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD526-0006	015	21	19685-415	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD525-0006	016	21	19685-416	ND	0.003	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD524-0006	017	21	19685-417	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD502-0006	018	21	19685-418	0.1	0.004	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD508-0006	019	21	19685-419	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD529-0006	020	21	19685-420	0.15	0.006	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD506-0006	021	21	19685-421	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD519-0006	022	21	19685-422	0.22	0.011	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD505-0006	023	21	19685-423	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD531-0006	024	21	19685-424	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD528-0006	025	21	19685-425	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD530-0006	026	21	19685-426	ND	0.003	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD521-0006	027	21	19685-427	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD512-0006	028	21	19685-428	0.1	0.004	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD513-0006	029	21	19685-429	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD517-0006	030	21	19685-430	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD520-0006	031	21	19685-431	0.13	0.004	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD523-0006	032	21	19685-432	ND	0.002	0.1	mg/L as N	06/23/10 1130	06/28/10
GI-SD522-0006	033	21	19685-433	ND	0.003	0.1	mg/L as N	06/23/10 1130	06/28/10
Laboratory Control	000	28	19685-500	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD509-0006	001	28	19685-501	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD511-0006	002	28	19685-502	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD527-0006	003	28	19685-503	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD566-0006	004	28	19685-504	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD514-0006	005	28	19685-505	ND	0.003	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD515-0006	006	28	19685-506	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD503-0006	007	28	19685-507	ND	0.003	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD510-0006	008	28	19685-508	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10

	Sample			AMMONIA					
Field ID	Number	Day	LAB ID	TOTAL	UNIONIZED	QLIMIT	UNITS	SAMPLED	ANALYZED
GI-SD501-0006	009	28	19685-509	ND	0.003	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD507-0006	010	28	19685-510	ND	0.003	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD504-0006	011	28	19685-511	ND	0.003	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD-DUP01-043010	012	28	19685-512	ND	0.003	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD532-0006	013	28	19685-513	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD518-0006	014	28	19685-514	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD526-0006	015	28	19685-515	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD525-0006	016	28	19685-516	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD524-0006	017	28	19685-517	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD502-0006	018	28	19685-518	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD508-0006	019	28	19685-519	ND	0.003	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD529-0006	020	28	19685-520	ND	0.004	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD506-0006	021	28	19685-521	ND	0.003	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD519-0006	022	28	19685-522	ND	0.003	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD505-0006	023	28	19685-523	ND	0.003	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD531-0006	024	28	19685-524	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD528-0006	025	28	19685-525	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD530-0006	026	28	19685-526	ND	0.003	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD521-0006	027	28	19685-527	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD512-0006	028	28	19685-528	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD513-0006	029	28	19685-529	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD517-0006	030	28	19685-530	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD520-0006	031	28	19685-531	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD523-0006	032	28	19685-532	ND	0.002	0.1	mg/L as N	06/30/10 0730	07/02/10
GI-SD522-0006	033	28	19685-533	ND	0.003	0.1	mg/L as N	06/30/10 0730	07/02/10

Day 0 Pore Water Quality

Study Number: 19685

Client: Tetra Tech NUS

Project: CTO 458 - Gould Island

Sample ID	Temperature	pH value	Sample ID	Temperature	pH value
Lab	22.3	6.96	-017	22.0	7.13
-001	↓	6.90	-018	↓	7.26
-002	↓	7.57	-019	↓	7.30
-003	↓	7.50	-020	↓	7.66
-004	↓	8.13	-021	↓	7.34
-005	↓	8.19	-022	↓	7.17
-006	↓	7.09	-023	↓	7.58
-007	↓	7.37	-024	↓	6.77
-008	↓	7.42	-025	↓	7.54
-009	↓	8.01	-026	↓	8.50
-010	↓	7.49	-027	↓	7.80
-011	↓	7.43	-028	↓	7.67
-012	↓	7.71	-029	↓	7.35
-013	↓	7.50	-030	↓	7.84
-014	↓	7.34	-031	↓	7.41
-015	↓	7.03	-032	↓	7.82
-016	↓	7.08	-033	↓	7.76

Date: 6/2/10

Initial: AM

Day 7 Pore Water Quality

Study Number: 19685 **Client:** Tetra Tech NUS **Project:** CTO 458 - Gould Island

Sample ID	Temperature	pH value	Sample ID	Temperature	pH value
Lab	23.3	6.68	-017	23.1	6.95
-001	↓	6.83	-018	↓	7.30
-002		6.99	-019		7.09
-003		7.74	-020		7.21
-004		7.45	-021		7.13
-005		7.97	-022		7.76
-006		6.85	-023		7.46
-007		7.27	-024		7.51
-008		7.43	-025		7.74
-009		7.24	-026		7.98
-010		7.21	-027		7.42 ~~8.00~~ Bram c/f
-011		7.72	-028		7.30
-012		7.64	-029		7.52
-013		7.65	-030		7.21
-014		7.33	-031		7.41
-015		7.03	-032		7.81
-016	↓	7.21	-033	↓	7.52

Date: 6/9/10

Initial: AM

Day 14 Pore Water Quality

Study Number:	Client:	Project:
19685	Tetra Tech NUS	CTO 458 - Gould Island

Sample ID	Temperature	pH value	Sample ID	Temperature	pH value
Lab	22.7	6.88	-017	22.7	6.88
-001		6.98	-018		7.46
-002		7.30	-019		7.06
-003		7.86	-020		7.66
-004		7.98	-021		7.18
-005		7.85	-022		7.85
-006		6.80	-023		7.45
-007		7.38	-024		7.70
-008		7.66	-025		7.64
-009		7.50	-026		8.11
-010		7.33	-027		7.69
-011		7.95	-028		7.81
-012		8.02	-029		7.61
-013		7.54	-030		7.69
-014		7.38	-031		7.79
-015		7.03	-032		7.88
-016		7.18	-033		8.09

Date: 6/16/10

Initial: JTP

Day 21 Pore Water Quality

Study Number: 19685 **Client:** Tetra Tech NUS **Project:** CTO 458 - Gould Island

Sample ID	Temperature	pH value	Sample ID	Temperature	pH value
Lab	22°C	6.40	-017	23°C	6.61
-001	↓	6.69	-018	↓	6.88
-002		6.85	-019		6.92
-003		7.27	-020		7.07
-004		7.24	-021		6.92
-005		7.16	-022		7.30
-006		6.45	-023		7.23
-007		7.08	-024		7.38
-008		7.26	-025		7.29
-009		6.96	-026		7.52
-010		6.80	-027		7.33
-011		6.80	-028		7.29
-012		7.28	-029		7.27
-013		7.19	-030		7.17
-014		7.11	-031		7.18
-015		6.66	-032		7.35
-016	↓	6.63	-033	↓	7.48

Date: Oct 23 10 pH electrode: Fisher AB-15

Initial: EAY

Day 28 Pore Water Quality

Study Number: 19685 **Client:** Tetra Tech NUS **Project:** CTO 458 - Gould Island

Sample ID	Temperature	pH value	Sample ID	Temperature	pH value
Lab	23.2	6.84	-017		7.06
-001		7.21	-018		7.62
-002		7.34	-019		7.26
-003		7.67	-020	22.9	7.38
-004		7.67	-021		7.16
-005	23.0	7.79	-022		7.71
-006		6.91	-023		7.28
-007		7.37	-024		7.65
-008		7.66	-025	23.3	7.66
-009		7.48	-026		7.77
-010	23.5	7.25	-027		7.79
-011		7.10	-028		7.71
-012		7.14	-029		7.71
-013		7.63	-030	23.2	7.80
-014		7.55	-031		7.70
-015	23.4	7.05	-032		7.80
-016		7.47	-033	23.0	7.79

Date: 6/30/10

Initial: JQ

Aquatic Research Organisms

Rec. 6/2/10 AM

DATA SHEET

I. Organism History

Species Leptocheirus plumulosus

Source: Lab reared X Hatchery reared _____ Field collected _____

Hatch date 6/1/10 Receipt date _____

Lot number 06 01 10 LP Strain 420

Brood origination Chesapeake bay; MD

II. Water Quality

Temperature 24 °C Salinity ~20 ppt D.O. SAT ppm

pH ~8.0 su Hardness — ppm Alkalinity — ppm

III. Culture Conditions

Freshwater _____ Saltwater X Other _____

Recirculating _____ Flow through _____ Static X

DIET: Flake food X Phytoplankton _____ Trout chow X

Artemia _____ Rotifers _____ YCT _____ Other "GORP"

Prophylactic treatments: _____

Comments: _____

_____

IV. Shipping Information

Client: ESI # of Organisms 5000+

Carrier: Pick-up Date shipped 6/2/10

Biologist: _____

PO BOX 1271 HAMPTON NH 03843-1271 (603) 926-1650 AROFISH@AOL.COM

Test Sediment Preparation Notes

Study Number: 19685

Client: Tetra Tech NUS

Project: CTO 458 - Gould Island

Sample ID	Notes	Sample ID	Notes
19685-001	shells and coarse sand excluded ~ 1/6 gallons	19685-018	broken shells, gravel ~ 1 1/4 gallon
19685-002	rocks, grass, shell hash excluded ~ 1/8 gallon	19685-019	mussel shells, broken shells Pebbles ~ 1 1/4 gallon
19685-003	rocks excluded ~ 1/6 gallon	19685-020	dead worms, rocks, clam shells gravel ~ 1/3 gallon
19685-004	rocks and shells excluded ~ 1/8 gallon	19685-021	amphipods found in sample removed, some rocks/shells excluded
19685-005	rocks, clams, and shells ~ 1/4 gallon	19685-022	plants, shell hash removed
19685-006	rocks, gravel, clams, and shells ~ 1/2 gallon	19685-023	small amt. of rock & shell removed
19685-007	~~rocks, gravel, shells 1/4 gallon ~ 1/8 gallon~~ rocks, clam, shell hash	19685-024	broken shells, pebbles, gravel ~ 1/4 gallon
19685-008	1/4 bucket (gallon) rocks & shells excluded	19685-025	1/8 gallon rock & shell hash excluded
19685-009	rocks, gravel shells ~ 1/8 gallon	19685-026	rocks & shells excluded
19685-010	shells ~ 1/16 gallon	19685-027	3 clams, 2 live crabs, seaweed, rocks ~ 1 gallon
19685-011	rocks, dead worms, dead clams gravel, shells ~ 1/2 gallon	19685-028	mussels, snails, rocks, gravel, pebbles ~ 1 3/4 gallons
19685-012	clamshells ~ 1/16 gallon	19685-029	rocks, broken shells, & snails ~ 1 3/4 gallon
19685-013	rocks, mussel shells ~ 1 gallon	19685-030	1/8 gallon rocks, shells, snails excluded
19685-014	rocks, gravel ~ 1 gallon	19685-031	1/4 gallon rocks, crabs, shells excluded
19685-015	gravel ~ 1/4 gallon	19685-032	1/2 gallon rocks, snails, shells excluded
19685-016	gravel, shells ~ 1/2 gallon	19685-033	2 live crabs, 4 snails, rocks seaweed, 1 dead female crab w/eggs
19685-017	dead amphipods, 1 clam shells ~ 1/64 gallon		gravel, pebbles ~ 1 gallon

Date:

Initial: RAM | DM | AM

only 314 full when opened →

Pore Water Salinity

Study Number: 19685

Client: Tetra Tech NUS

Project: CTO 458 - Gould Island

Sample ID	Salinity	Sample ID	Salinity
19685-001	30	19685-018	30
19685-002	30	19685-019	30
19685-003	30	19685-020	30
19685-004	30	19685-021	30
19685-005	30	19685-022	30
19685-006	30	19685-023	30
19685-007	30	19685-024	30
19685-008	30	19685-025	30
19685-009	30	19685-026	30
19685-010	30	19685-027	30
19685-011	30	19685-028	30
19685-012	30	19685-029	30
19685-013	30	19685-030	30
19685-014	20	19685-031	30
19685-015	30	19685-032	30
19685-016	30	19685-033	30
19685-017	30		

Date: 05/20/10
Initial: RAM

Pre-Assay Pore Water Quality

Study Number: 19685 **Client:** Tetra Tech NUS **Project:** CTO 458 - Gould Island

Sample ID	Temperature	pH value	Sample ID	Temperature	pH value
Lab	1.5 x5		-017	1.5 x5	
-001	1.5x5		-018	> 5x5	
-002	>5 x5		-019	>5 x5	
-003	3 x 5		-020	> 5x5	
-004	1.5x5		-021	<3x5	
-005	>5 x5		-022	<5x5	
-006	>5x5		-023	>5x5	
-007	<3x5		-024		
-008	<3x 5		-025		
-009	1.5x5		-026		
-010	<3x5		-027		
-011	>5x5		-028		
-012	<3x5		-029		
-013	3x5		-030		
-014	0x5		-031		
-015	5x5		-032		
-016	>5 x5		-033		

Date: 05/25/10

Initial: RAM

Pre-Assay Monitoring
Leptocheirus plumulosus
28 Day Sediment Assay

Study: 19685	Client: Tetra Tech NUS	Project: CTO 458 - Gould Island	

Day	Date	Renewed	Initial	Pore Water NH3 Measured
0	5/25/10	✓	KC	+ ✓ RAM
1	5/26/10	✓	AM	—
2	5/27/10	✓	AM	—
3	5/28/10	✓	AM	✓ See Below
4	5/29/10	✓	AM	—
5	5-30-10	✓	DM	—
6	5/31/10	✓	KC	—
7	6/1/10	✓	AM	✓
8				
9				
10				
11				
12				
13				
14				

one volume addition daily	Overlying Salinity: 20ppt	Temperature: 25°C

Pore NH_3 samples were pulled from all samples. A test kit was used to evaluate questionable samples that showed high values on Day 0. Remainder of samples preserved + stored for a full analysis. AM 5/28/10

ESI
EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843
Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 19685

CHAIN OF CUSTODY DOCUMENTATION

Client: TetraTech NUS	Contact: Steve Parker	Project Name: Gould Island CTO458	Page 1 of 1
Report to: Steve Parker	Address: 55 Jonspin Rd	Project Number: 112G00949	
Invoice to:	Address: Wilmington MA	Project Manager: Steve Parker	
Voice: (978) 474-8434	Fax: (978) 474-8499	email:	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
-001	GI-SD509-0006	4/30/10	0955	MH	G	1 gal	P	4°C	S	N	Toxicity
-002	GI-SD511-0006		1415								Toxicity
-003	GI-SD527-0006		0810								Toxicity
-004	GI-SD566-0006		1400								Toxicity
-005	GI-SD514-0006		1320								Toxicity
-006	GI-SD515-0006		1345								Toxicity
-007	GI-SD503-0006		1045								Toxicity
-008	GI-SD510-0006		1135								Toxicity
-009	GI-SD501-0006		1025								Toxicity
-010	GI-SD507-0006		0840								Toxicity
011	GI-SD504-0006		0825								Toxicity
012	GI-SD-DUP01-043010	↓	0000	↓	↓	↓	↓	↓	↓	↓	Toxicity

Relinquished By: [signature] Date: 5/3/10 Time: 1415 Received By: [signature] Date: 5/3/10 Time: 1415

Relinquished By: Date: Time: Received at Lab By: Date: Time:

Comments:

Sample Delivery Group No: Page of

COC Doc No: 3753

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	19685		
SDG No:			
Project:	CTO 458 - Gould Island		
Delivered via:	**ESI**		
Date and Time Received:	05/03/10 1415	Date and TIme Logged into Lab:	05/03/10 1530
Recieved By:	AM	Logged into Lab by:	AM RAM RAM
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	2C,1C,1C,1C,3C	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):			
COC Complete:	Yes	Does the info on the COC match the samples?	Yes
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
GI-SD509-0006	19685-001	S	Lp28T	1 gallon P	4 C	Yes
GI-SD511-0006	19685-002	S	Lp28T	1 gallon P	4 C	Yes
GI-SD527-0006	19685-003	S	Lp28T	1 gallon P	4 C	Yes
GI-SD566-0006	19685-004	S	Lp28T	1 gallon P	4 C	Yes
GI-SD514-0006	19685-005	S	Lp28T	1 gallon P	4 C	Yes
GI-SD515-0006	19685-006	S	Lp28T	1 gallon P	4 C	Yes
GI-SD503-0006	19685-007	S	Lp28T	1 gallon P	4 C	Yes
GI-SD510-0006	19685-008	S	Lp28T	1 gallon P	4 C	Yes
GI-SD501-0006	19685-009	S	Lp28T	1 gallon P	4 C	Yes
GI-SD507-0006	19685-010	S	Lp28T	1 gallon P	4 C	Yes
GI-SD504-0006	19685-011	S	Lp28T	1 gallon P	4 C	Yes
GI-SD-DUP01-043010	19685-012	S	Lp28T	1 gallon P	4 C	Yes

Notes and qualifications:

ESI
EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843
Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 19685

CHAIN OF CUSTODY DOCUMENTATION

Client: Tetra Tech NUS	Contact: Steve Parker	Project Name: Goodel Island	Page 1 of
Report to: Steve Parker	Address: 55 Jonspin Rd	Project Number: 112G00949	
Invoice to:	Address: Wilmington MA	Project Manager: Steve Parker	
Voice: (978) 474-8434	Fax: (978) 474-8499	email:	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or com-posit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preser-vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
-013	GI-SD532-0006	5/3/10	0850	MH	G	1 gal	P	4°C	S	N	Toxicity
-014	GI-SD518-0006		0830								Toxicity
-015	GI-SD526-0006		1205								Toxicity
-016	GI-SD525-0006		1135								Toxicity
-017	GI-SD524-0006		1115								Toxicity
-018	GI-SD502-0006		0910								Toxicity
-019	GI-SD508-0006		0940								Toxicity
-020	GI-SD529-0006	5/4/10	0910								Toxicity
-021	GI-SD506-0006		0750								Toxicity
	~~GI-SD429-0006~~		~~0835~~								~~Toxicity~~ MJH
022	GI-SD519-0006		0855								Toxicity
023	GI-SD505-0006		1240								Toxicity

Relinquished By: [signature] Date: 5/7/10 Time: 1:00PM Received By: [signature] Date: 5/7/10 Time: 1300

Relinquished By: Date: Time: Received at Lab By: Date: Time:

Comments:

Sample Delivery Group No: Page of

COC Doc No: 3386

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	19685		
SDG No:			
Project:	CTO 458 - Gould Island		
Delivered via:	**ESI**		
Date and Time Received:	05/07/10 1300	Date and TIme Logged into Lab:	05/07/10 1430
Recieved By:	DG	Logged into Lab by:	RAM RAM
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	2C, 6C	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):			
COC Complete:	Yes	Does the info on the COC match the samples?	No
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
GI-SD532-0006	19685-013	S	Lp28T	1 gallon P	4 C	Yes
GI-SD518-0006	19685-014	S	Lp28T	1 gallon P	4 C	Yes
GI-SD526-0006	19685-015	S	Lp28T	1 gallon P	4 C	Yes
GI-SD525-0006	19685-016	S	Lp28T	1 gallon P	4 C	Yes
GI-SD524-0006	19685-017	S	Lp28T	1 gallon P	4 C	Yes
GI-SD502-0006	19685-018	S	Lp28T	1 gallon P	4 C	Yes
GI-SD508-0006	19685-019	S	Lp28T	1 gallon P	4 C	Yes
GI-SD529-0006	19685-020	S	Lp28T	1 gallon P	4 C	Yes
GI-SD506-0006	19685-021	S	Lp28T	1 gallon P	4 C	Yes
GI-SD519-0006	19685-022	S	Lp28T	1 gallon P	4 C	Yes
GI-SD505-0006	19685-023	S	Lp28T	1 gallon P	4 C	Yes

Notes and qualifications:

The time sampled for sample GI-SD505-0006 (19685-023) is different on the container label.

Has been corrected
- RAM

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	19685		
SDG No:			
Project:	CTO 458 - Gould Island		
Delivered via:	**ESI**		
Date and Time Received:	05/07/10 1300	Date and TIme Logged into Lab:	05/07/10 1430
Recieved By:	DG	Logged into Lab by:	RAM RAM
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	2C, 6C	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):			
COC Complete:	Yes	Does the info on the COC match the samples?	No
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
GI-SD532-0006	19685-013	S	Lp28T	1 gallon P	4 C	Yes
GI-SD518-0006	19685-014	S	Lp28T	1 gallon P	4 C	Yes
GI-SD526-0006	19685-015	S	Lp28T	1 gallon P	4 C	Yes
GI-SD525-0006	19685-016	S	Lp28T	1 gallon P	4 C	Yes
GI-SD524-0006	19685-017	S	Lp28T	1 gallon P	4 C	Yes
GI-SD502-0006	19685-018	S	Lp28T	1 gallon P	4 C	Yes
GI-SD508-0006	19685-019	S	Lp28T	1 gallon P	4 C	Yes
GI-SD529-0006	19685-020	S	Lp28T	1 gallon P	4 C	Yes
GI-SD506-0006	19685-021	S	Lp28T	1 gallon P	4 C	Yes
GI-SD519-0006	19685-022	S	Lp28T	1 gallon P	4 C	Yes
GI-SD505-0006	19685-023	S	Lp28T	1 gallon P	4 C	Yes

Notes and qualifications:

The time sampled for sample GI-SD505-0006 (19685-023) is different on the container label.
The time listed on container is correct, see e-mail from Mike Horton dated 05/10/10.

ESI
EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843
Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 19685

CHAIN OF CUSTODY DOCUMENTATION

Client: TetraTech NUS	Contact:	Project Name: Gould Island	Page 1 of 1
Report to: Steve Parker	Address: 55 Jonspin Rd	Project Number: 112G00949 CTO458	
Invoice to:	Address: Wilmington MA 01887	Project Manager: Steve Parker	
Voice: (978) 474-8434	Fax: (978) 474-8499	email:	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
024	GI-SD531-0006	5/13/10	1135	MH	G	1 gal	P	4°C	S	N	Toxicity
025	GI-SD528-0006	↓	1145	↓	↓	↓	↓	↓	↓	↓	Toxicity
026	GI-SD530-0006		1240								Toxicity
027	GI-SD521-0006		1305								Toxicity
028	GI-SD512-0006		1100								Toxicity
029	GI-SD513-0006		1110								Toxicity
030	GI-SD517-0006		1200								Toxicity
031	GI-SD520-0006		1315								Toxicity
032	GI-SD523-0006		1345								Toxicity
033	GI-SD522-0006	↓	1335	↓	↓	↓	↓	↓	↓	↓	Toxicity
								MJH			

Relinquished By: [signature] Date: 5/14/10 Time: 1130 Received By: [signature] Date: 5/14/10 Time: 1130

Relinquished By: Date: Time: Received at Lab By: Date: Time:

Comments:

Sample Delivery Group No: Page of

COC Doc No: 3385

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	19685		
SDG No:			
Project:	CTO 458 - Gould Island		
Delivered via:	**ESI**		
Date and Time Received:	05/14/10 1130	Date and TIme Logged into Lab:	05/14/10 1500
Recieved By:	WB	Logged into Lab by:	RAM RAM
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	4C, 4C, 3C	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):			
COC Complete:	Yes	Does the info on the COC match the samples?	Yes
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
GI-SD531-0006	19685-024	S	Lp28T	1 gallon P	4 C	Yes
GI-SD528-0006	19685-025	S	Lp28T	1 gallon P	4 C	Yes
GI-SD530-0006	19685-026	S	Lp28T	1 gallon P	4 C	Yes
GI-SD521-0006	19685-027	S	Lp28T	1 gallon P	4 C	Yes
GI-SD512-0006	19685-028	S	Lp28T	1 gallon P	4 C	Yes
GI-SD513-0006	19685-029	S	Lp28T	1 gallon P	4 C	Yes
GI-SD517-0006	19685-030	S	Lp28T	1 gallon P	4 C	Yes
GI-SD520-0006	19685-031	S	Lp28T	1 gallon P	4 C	Yes
GI-SD523-0006	19685-032	S	Lp28T	1 gallon P	4 C	Yes
GI-SD522-0006	19685-033	S	Lp28T	1 gallon P	4 C	Yes

Notes and qualifications:

Subject: FW: Gould Island Samples
From: "Horton, Mike" <Mike.Horton@tetratech.com>
Date: Mon, 10 May 2010 12:06:56 -0500
To: Renee McIsaac <r.mcisaac@envirosystems.com>

Renee, sorry for the discrepancy, the COC is incorrect, the correct sample time for that sample is 0805 as listed on the container.

Thanks for your attention to detail.

Mike Horton

From: Parker, Stephen
Sent: Friday, May 07, 2010 2:58 PM
To: Horton, Mike
Subject: FW: Gould Island Samples

Question from Renee on the COC attached. Please get back to her on Monday. Thanks.

Stephen S. Parker

PLEASE NOTE: This message, including any attachments, may include privileged, confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

From: Renee McIsaac [mailto:r.mcisaac@envirosystems.com]
Sent: Friday, May 07, 2010 2:53 PM
To: Parker, Stephen
Subject: Gould Island Samples

Hello Steve,

We received the second batch of Gould Island samples today. I noted one discrepancy between the sample container and the chain of custody. The sample time for GI-SD505-0006 is listed as 1240 on the chain and as 0805 on the container label. (I have attached a copy of the chain.)
Can you please confirm the sample time?
Otherwise the samples were all received in good condition and within the recommended holding temperature.
Please let me know if you have any questions.

Thanks,
Renee McIsaac
ERA Project Manager

EnviroSystems, Inc.
Specialists in Environmental Toxicology and Chemistry
PO Box 778 / 1 Lafayette Road
Hampton, NH 03843-0778

Voice: 603-926-3345 ext. 214 / Fax: 603-926-3521

http://www.envirosystems.com

Please consider the environment before printing this email

Subject: RE: Gould Island - CTO 458
From: "Horton, Mike" <Mike.Horton@tetratech.com>
Date: Fri, 21 May 2010 08:30:02 -0500
To: "Parker, Stephen" <Stephen.Parker@tetratech.com>, Renee McIsaac <r.mcisaac@envirosystems.com>

Hi Renee,

The reference station IDs are
GI-SD524-0006
GI-SD525-0006
GI-SD526-0006

Let me know if you need anything else

Mike Horton

From: Parker, Stephen
Sent: Friday, May 21, 2010 9:26 AM
To: Horton, Mike
Subject: FW: Gould Island - CTO 458

Can you give renee the sample IDs for the reference stations?

Stephen S. Parker

PLEASE NOTE: This message, including any attachments, may include privileged, confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

From: Renee McIsaac [mailto:r.mcisaac@envirosystems.com]
Sent: Friday, May 21, 2010 9:17 AM
To: Parker, Stephen
Subject: Gould Island - CTO 458

Hello,

We are in the process of setting up the test for this project. Can you tell which samples are reference sites? This will allow me to enter the samples into the statistical database and get project report tables started.

Thanks,
Renee McIsaac
ERA Project Manager

EnviroSystems, Inc.
Specialists in Environmental Toxicology and Chemistry
PO Box 778 / 1 Lafayette Road
Hampton, NH 03843-0778

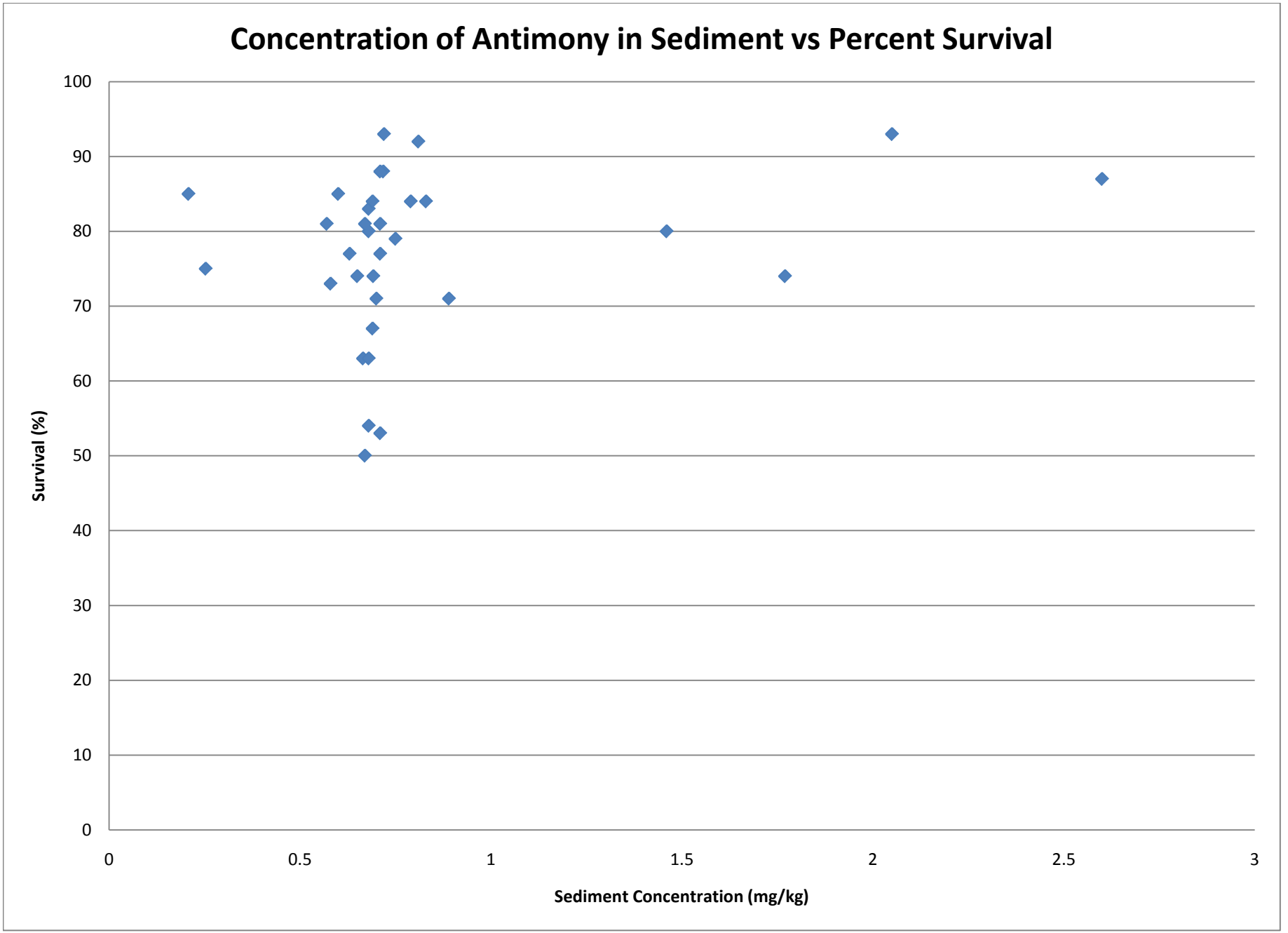
Voice: 603-926-3345 ext. 214 / Fax: 603-926-3521

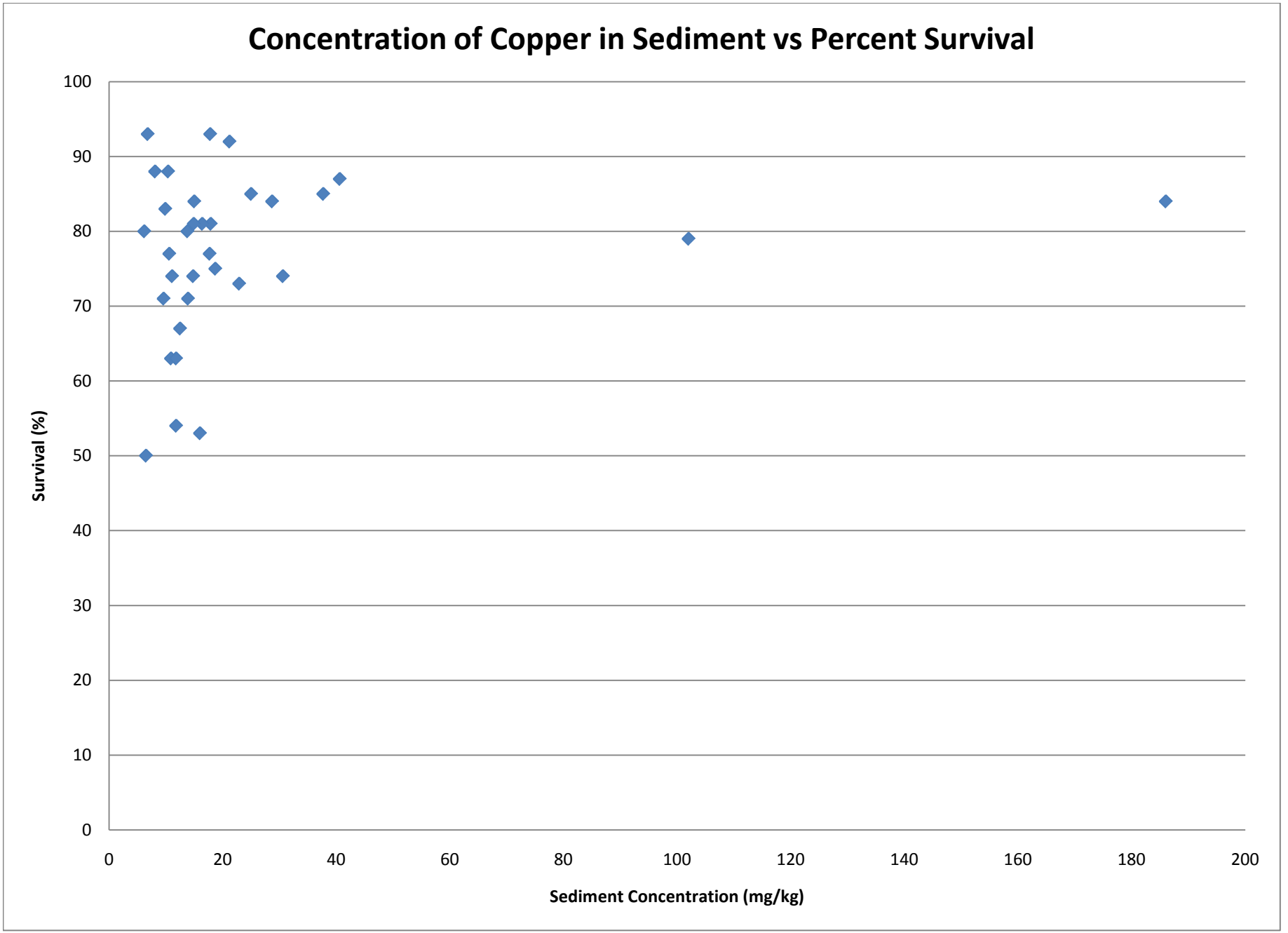
http://www.envirosystems.com

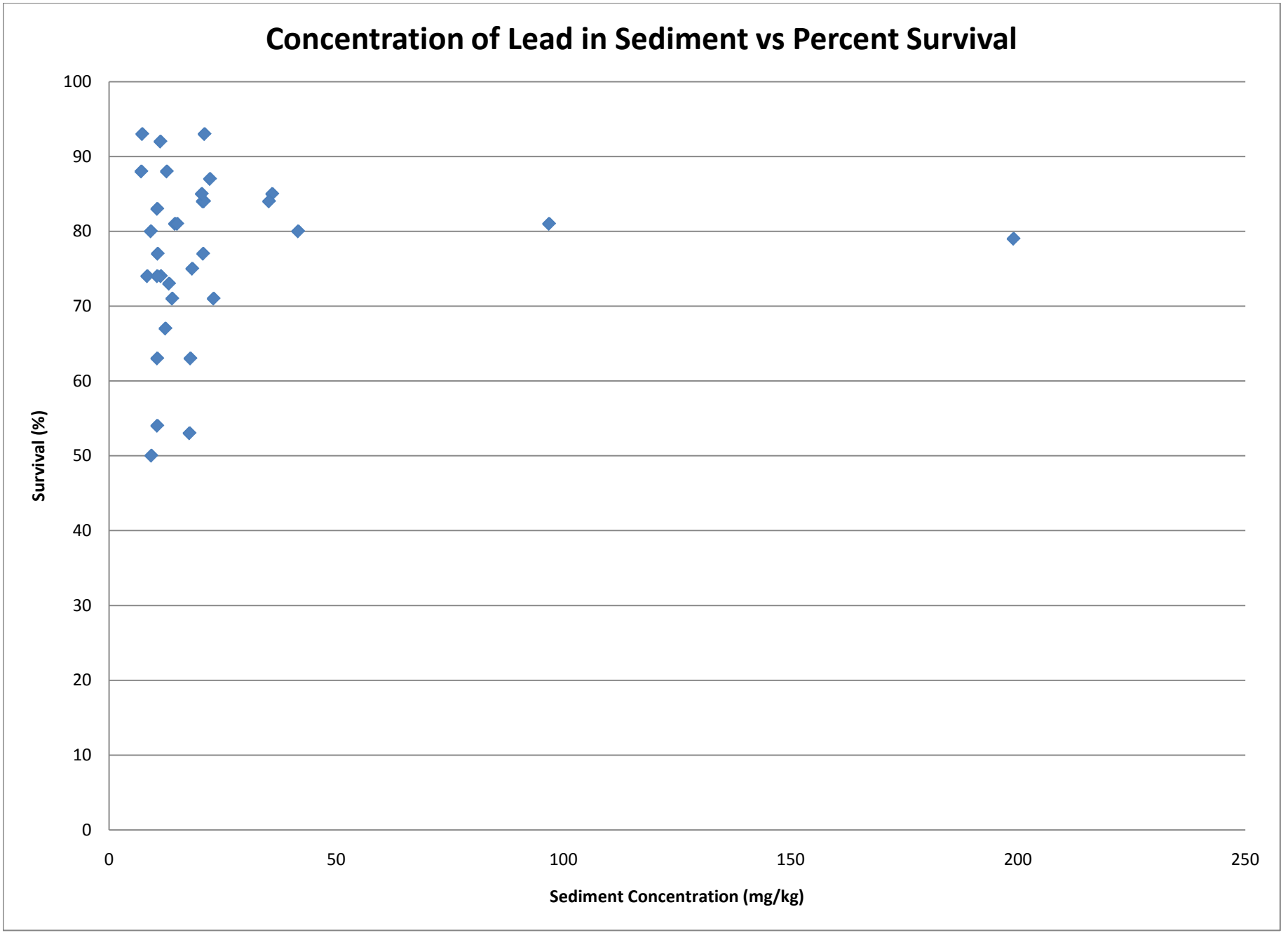
Please consider the environment before printing this email

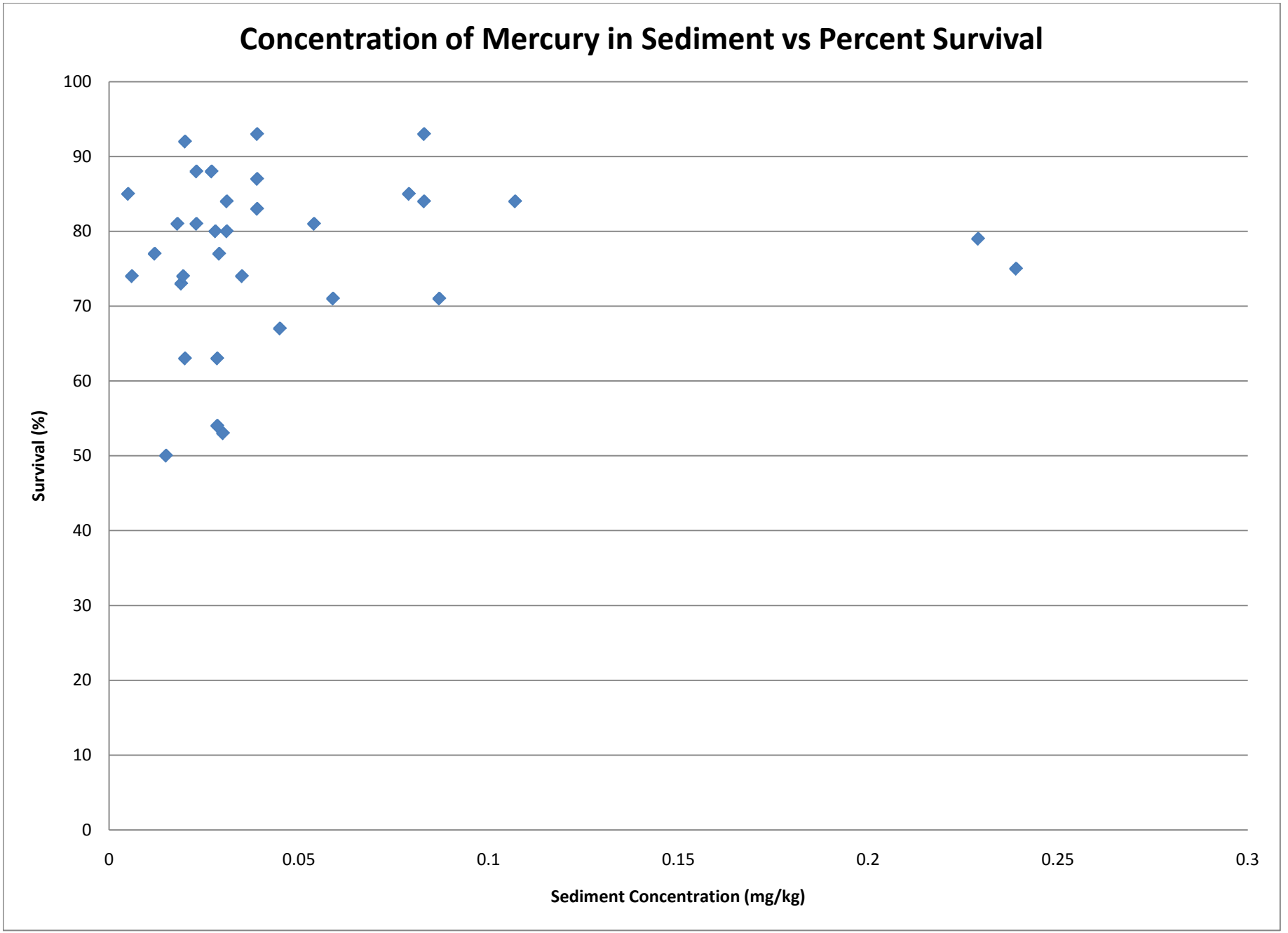
APPENDIX G.6

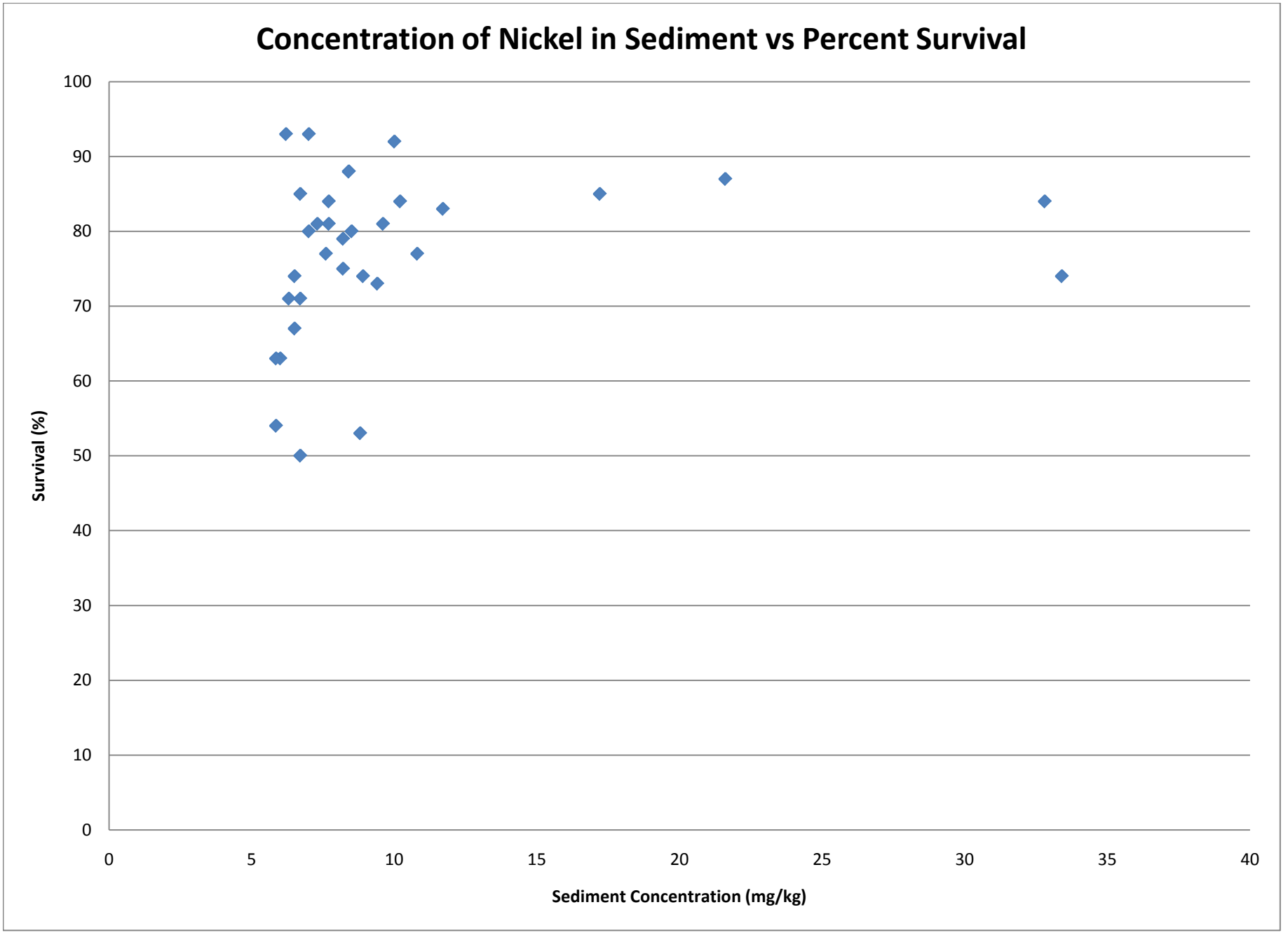
CONCENTRATION PLOTS

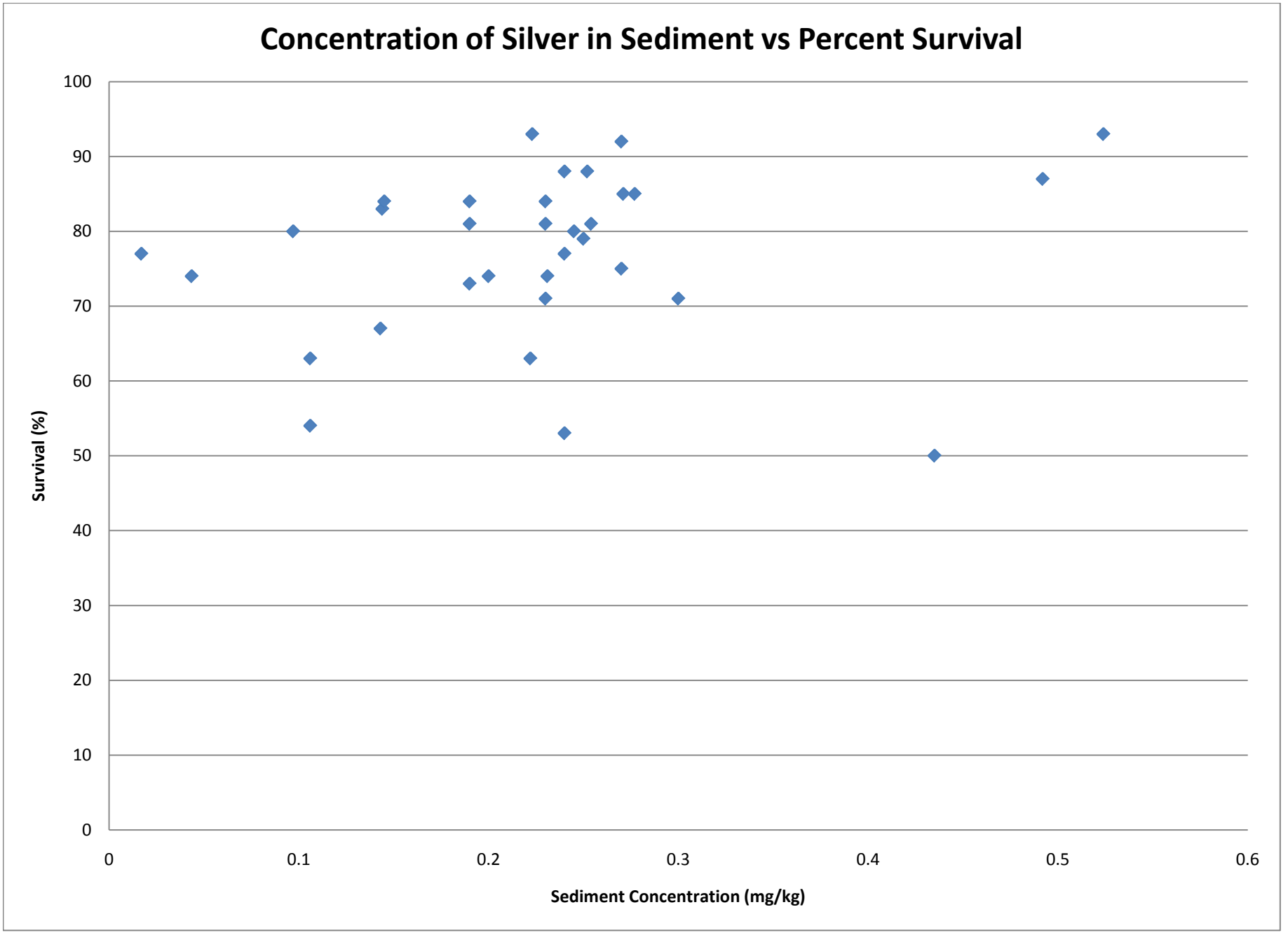

Concentration of Antimony in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
0.5
1
1.5
2
2.5
3
Sediment Concentration (mg/kg)

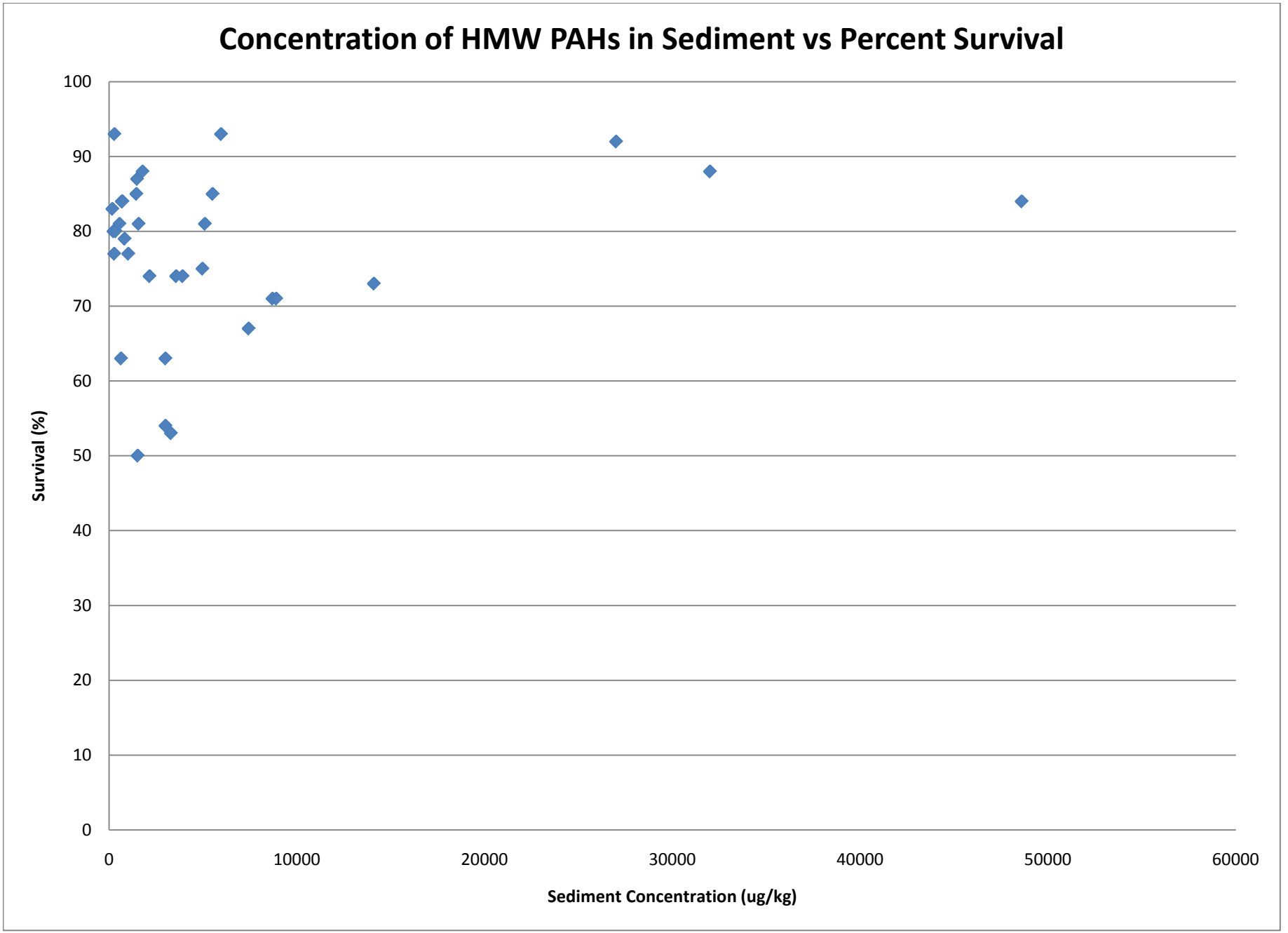

Concentration of Copper in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
20
40
60
80
100
120
140
160
180
200
Sediment Concentration (mg/kg)

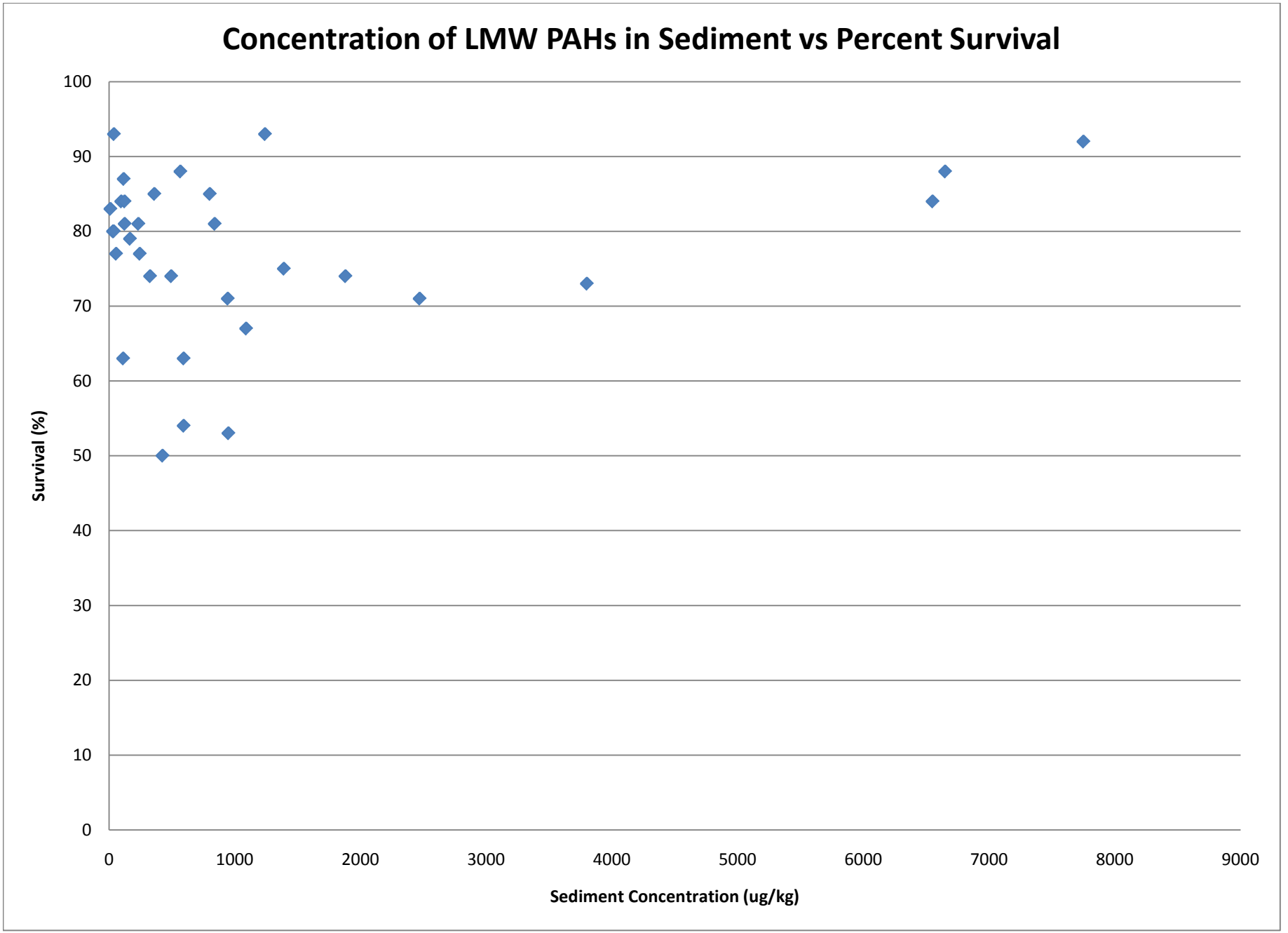

Concentration of Lead in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
50
100
150
200
250
Sediment Concentration (mg/kg)

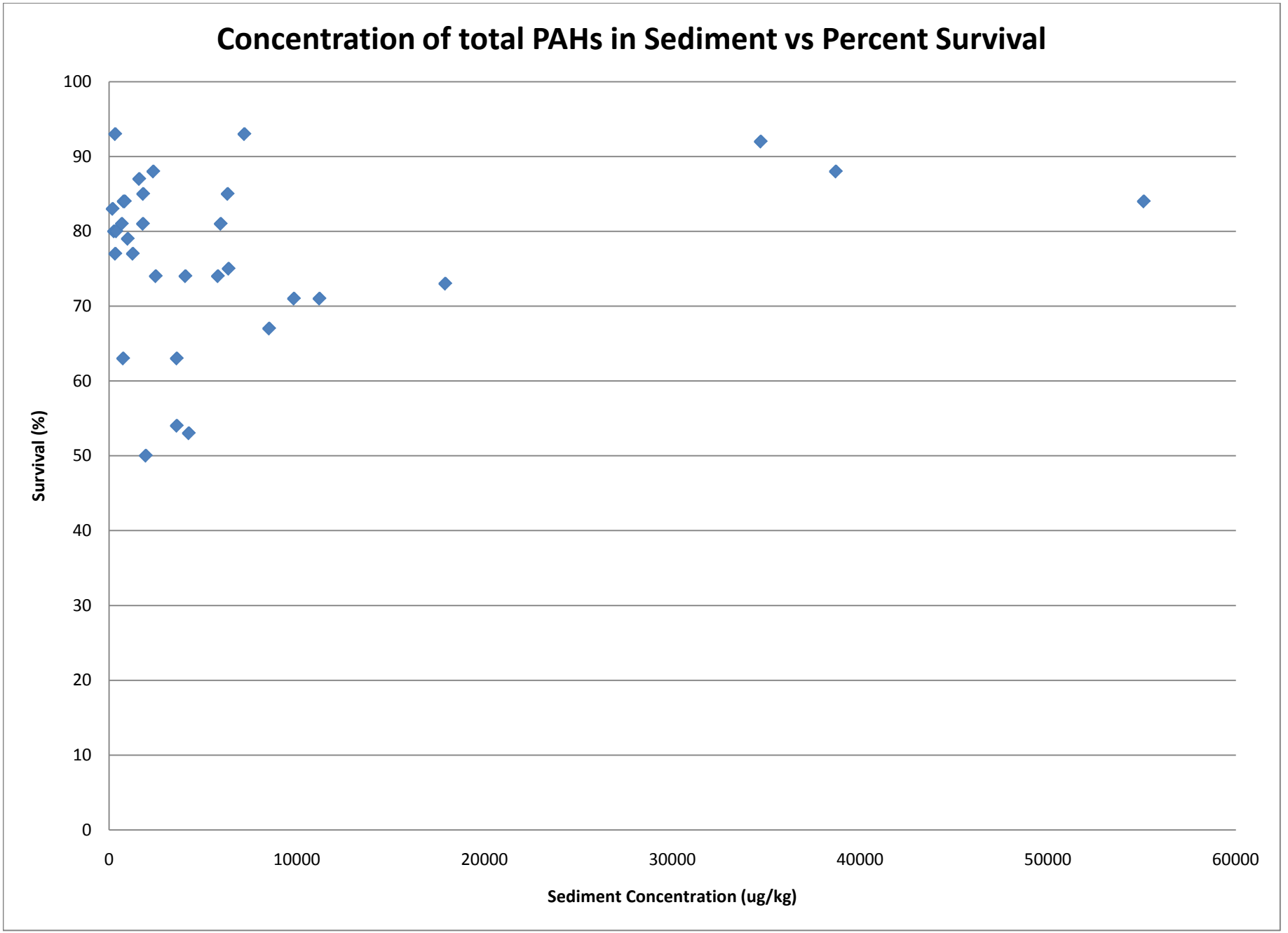

Concentration of Mercury in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
0.05
0.1
0.15
0.2
0.25
0.3
Sediment Concentration (mg/kg)

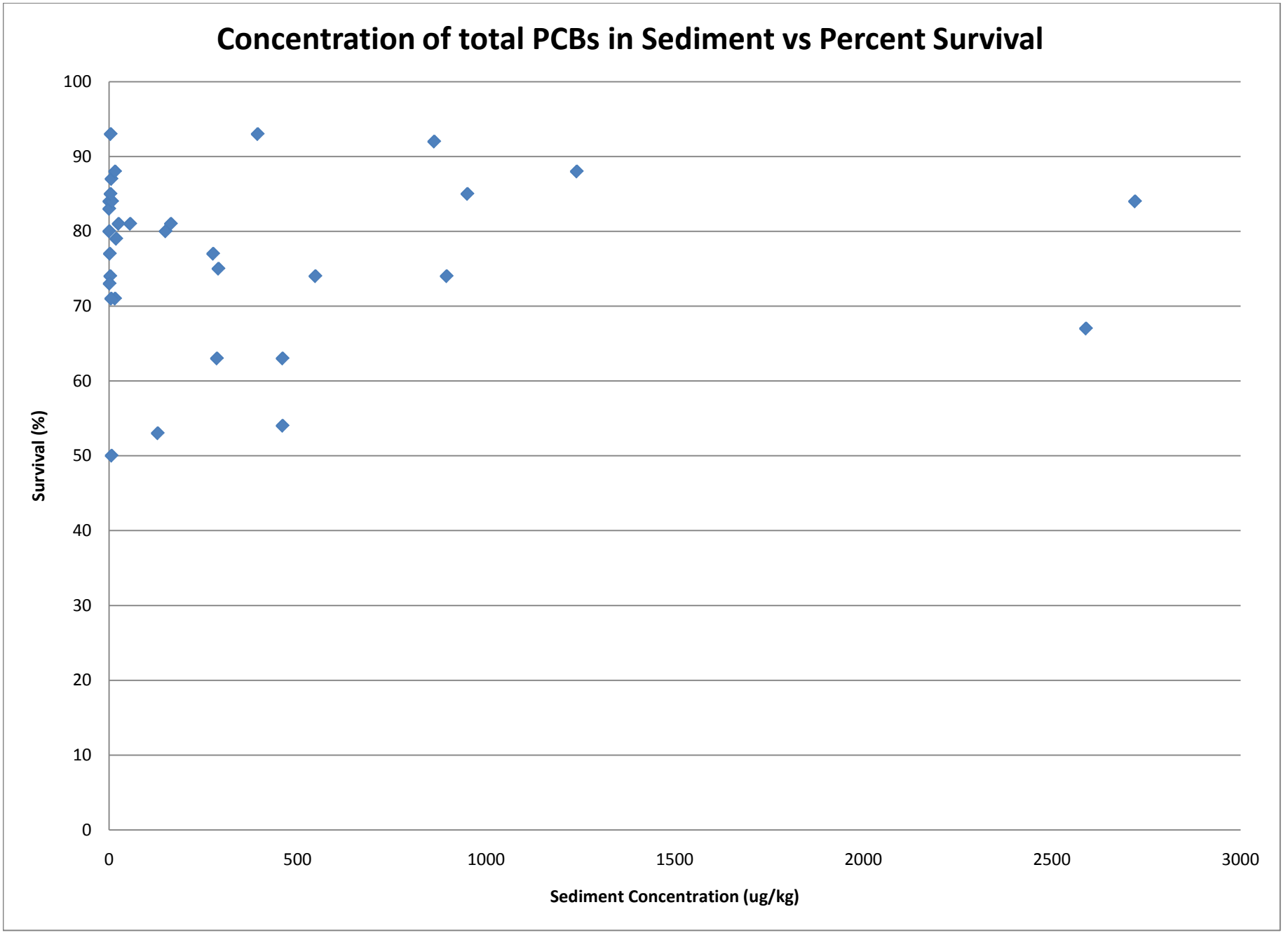

Concentration of Nickel in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
30
35
40
Sediment Concentration (mg/kg)

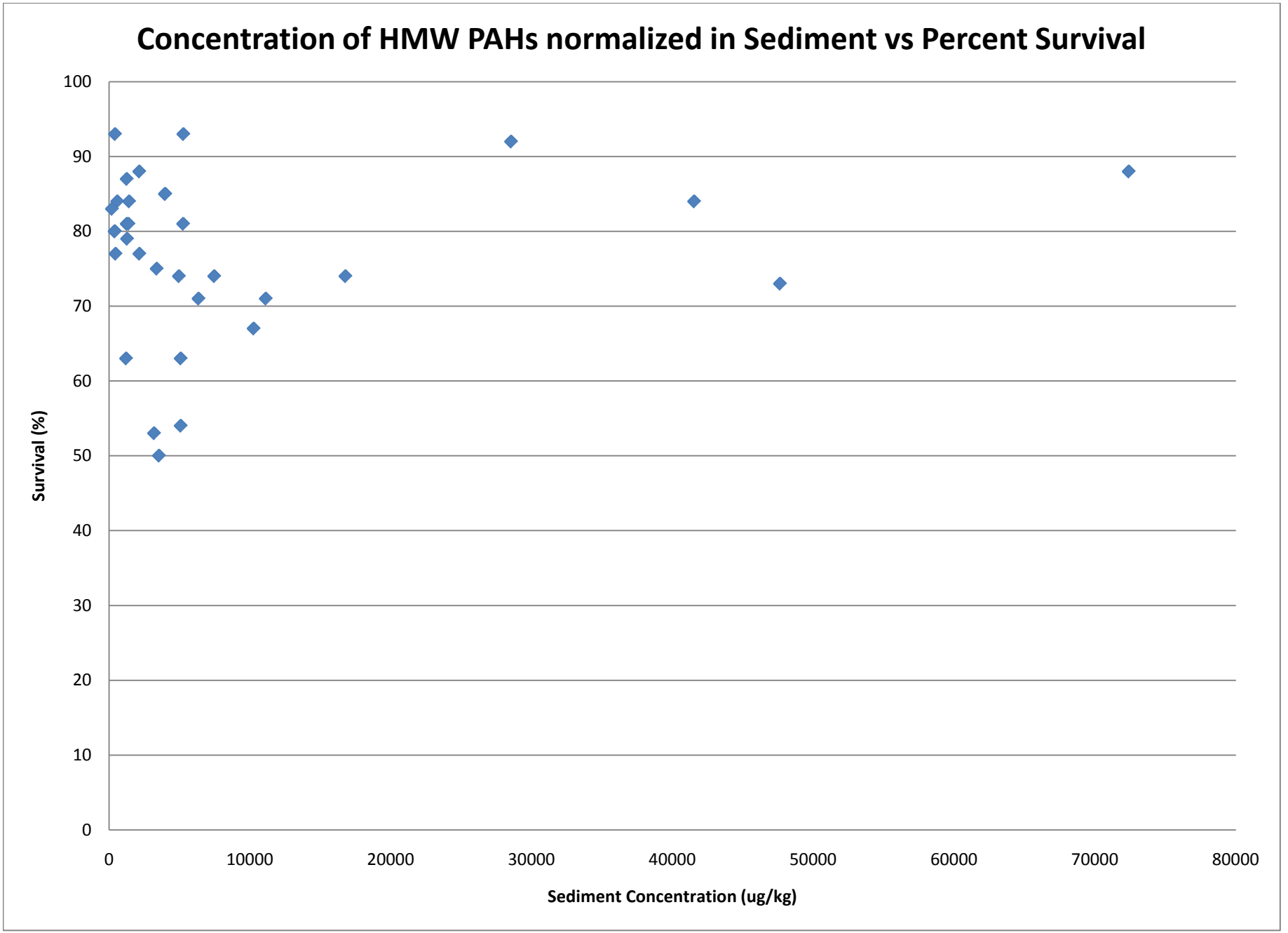

Concentration of Silver in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
0.1
0.2
0.3
0.4
0.5
0.6
Sediment Concentration (mg/kg)

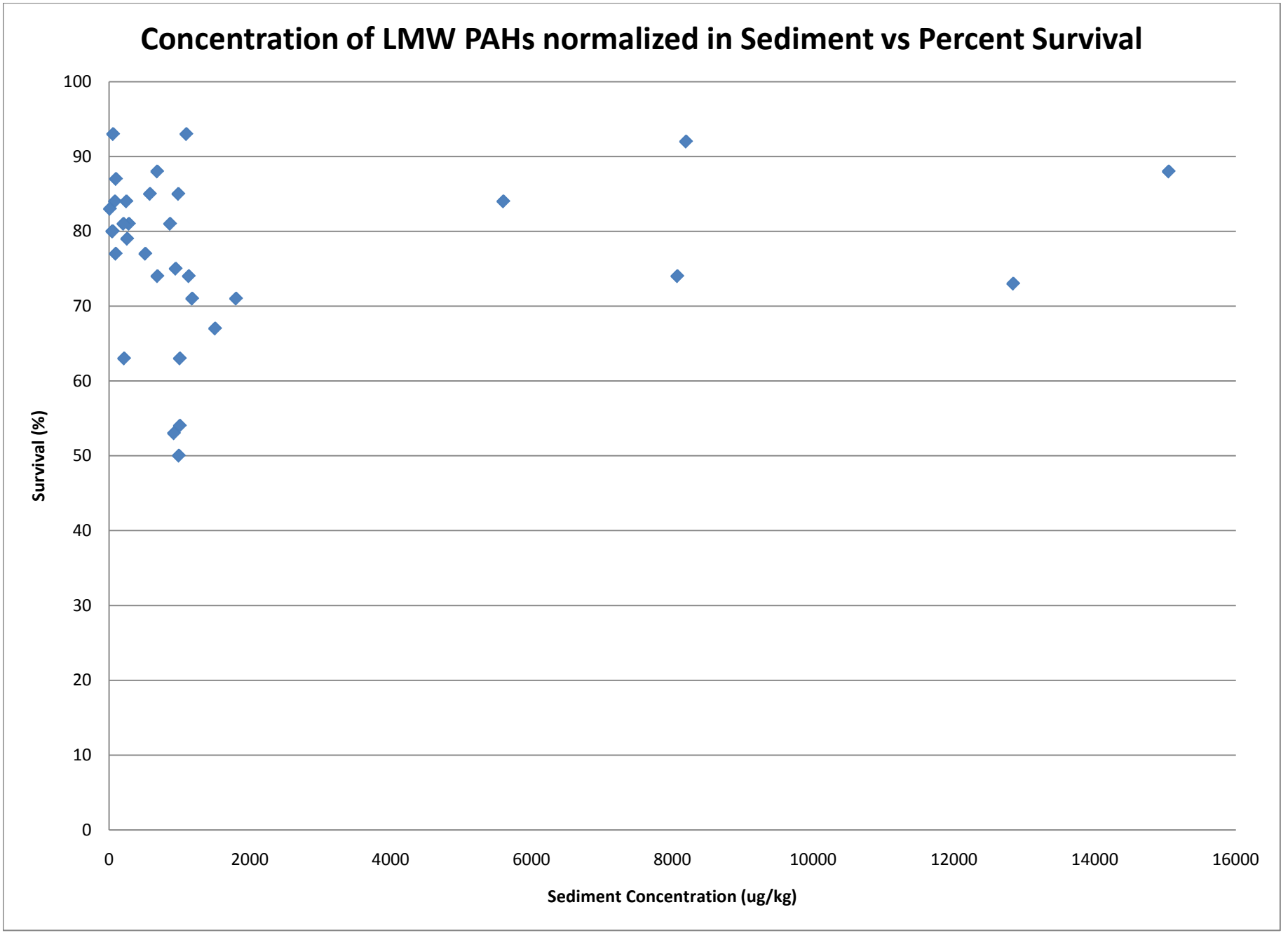

Concentration of HMW PAHs in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
10000
20000
30000
40000
50000
60000
Sediment Concentration (ug/kg)

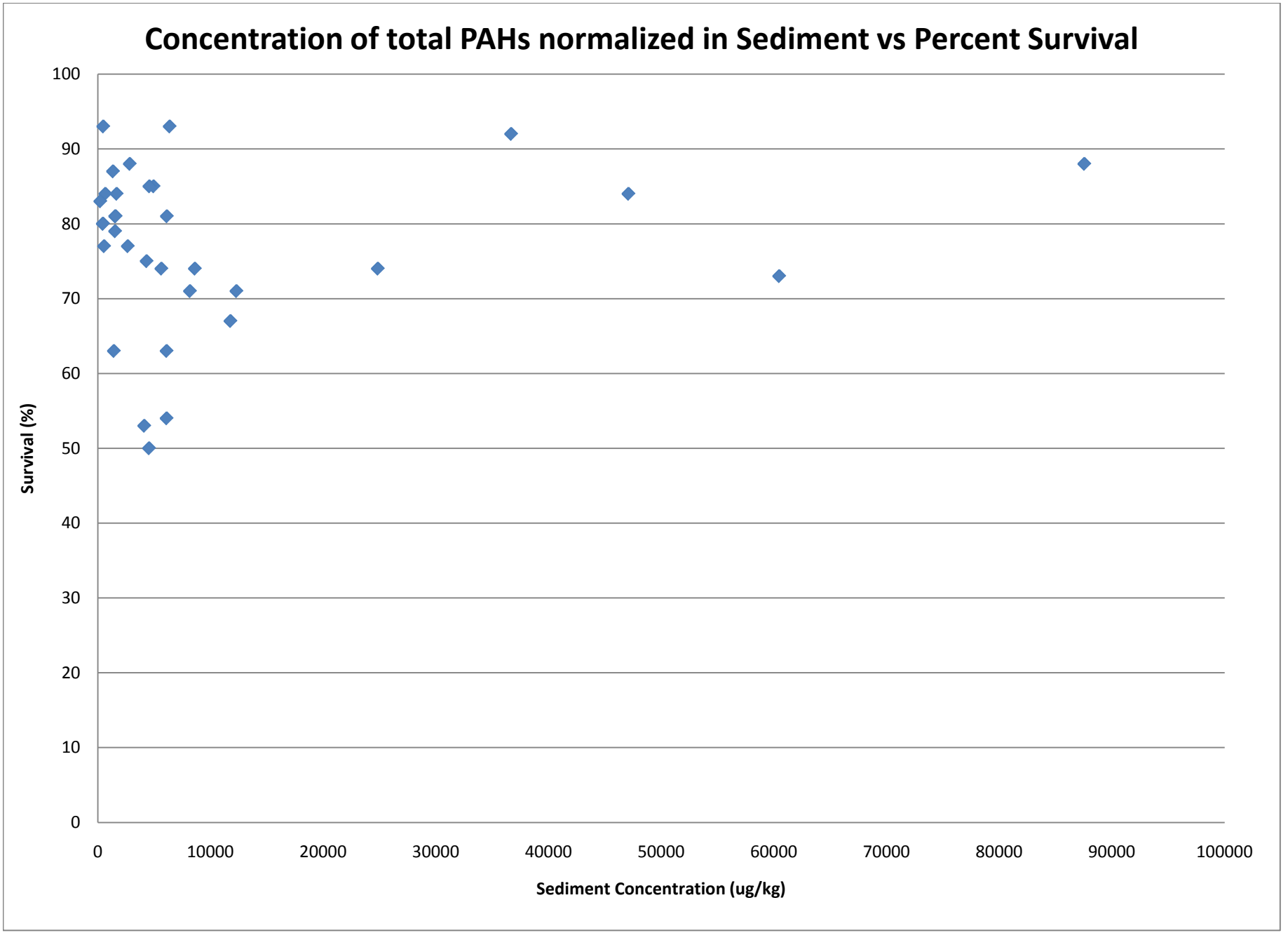

Concentration of LMW PAHs in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
Sediment Concentration (ug/kg)

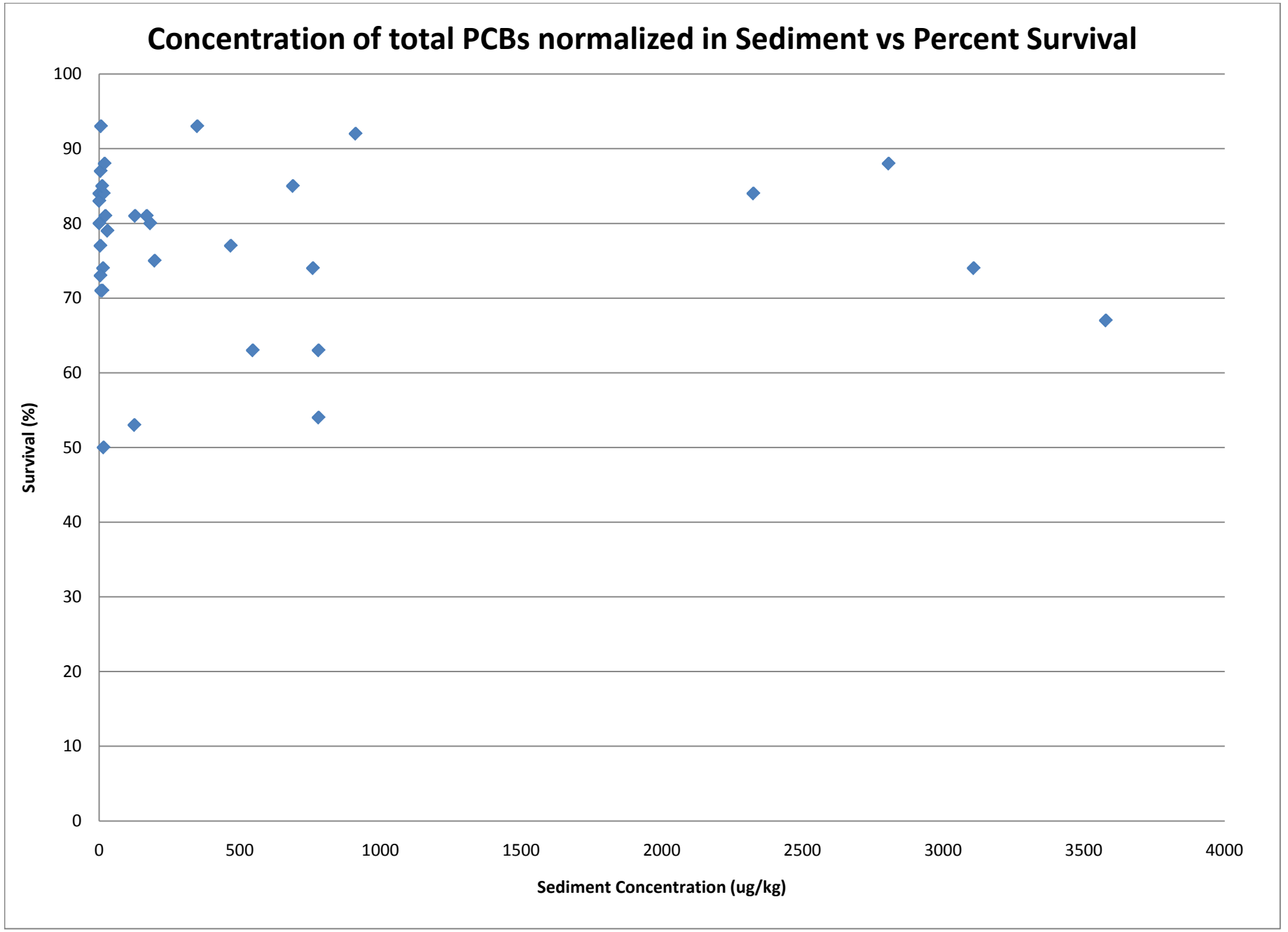

Concentration of total PAHs in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
10000
20000
30000
40000
50000
60000
Sediment Concentration (ug/kg)

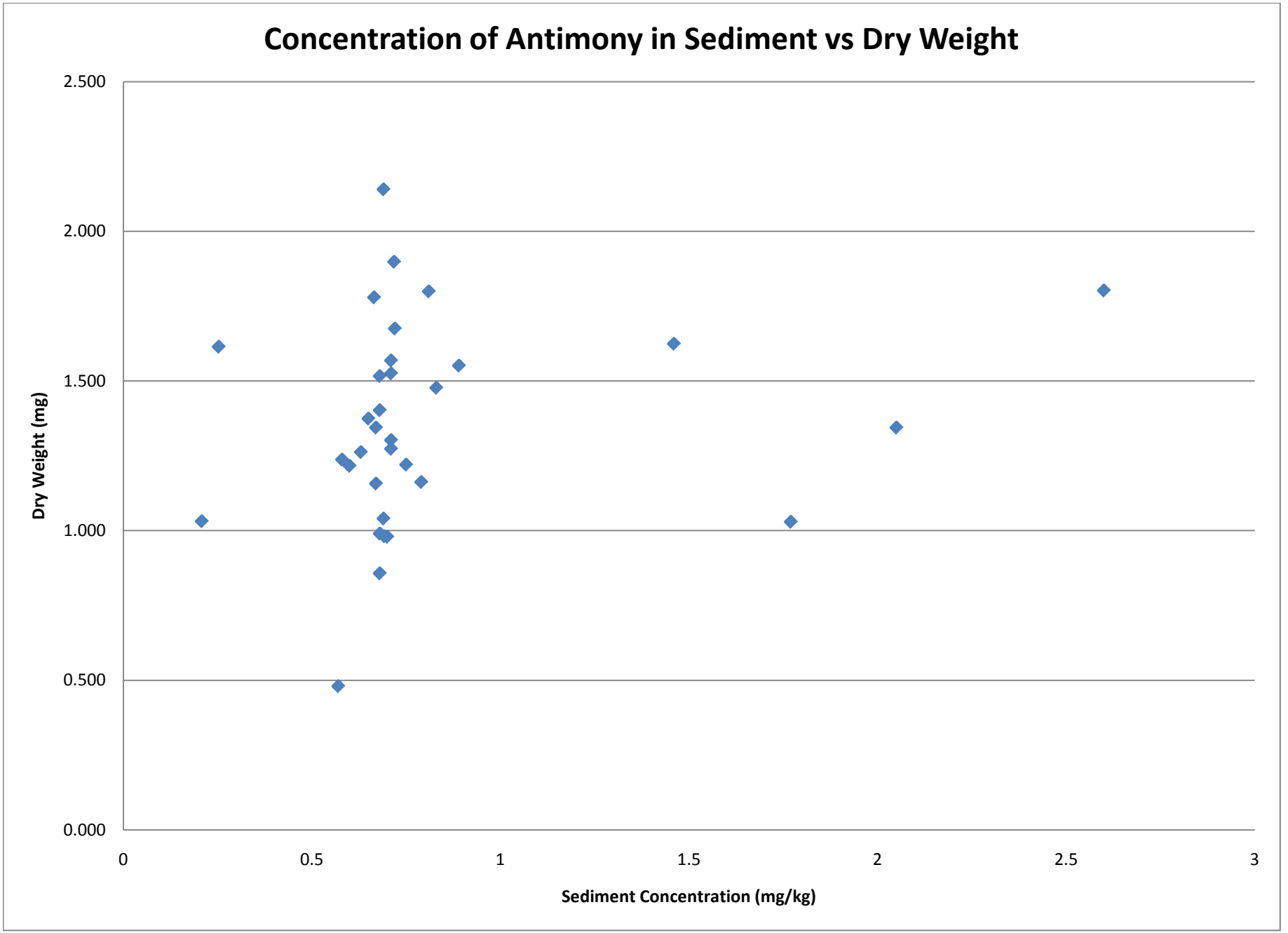

Concentration of total PCBs in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
500
1000
1500
2000
2500
3000
Sediment Concentration (ug/kg)

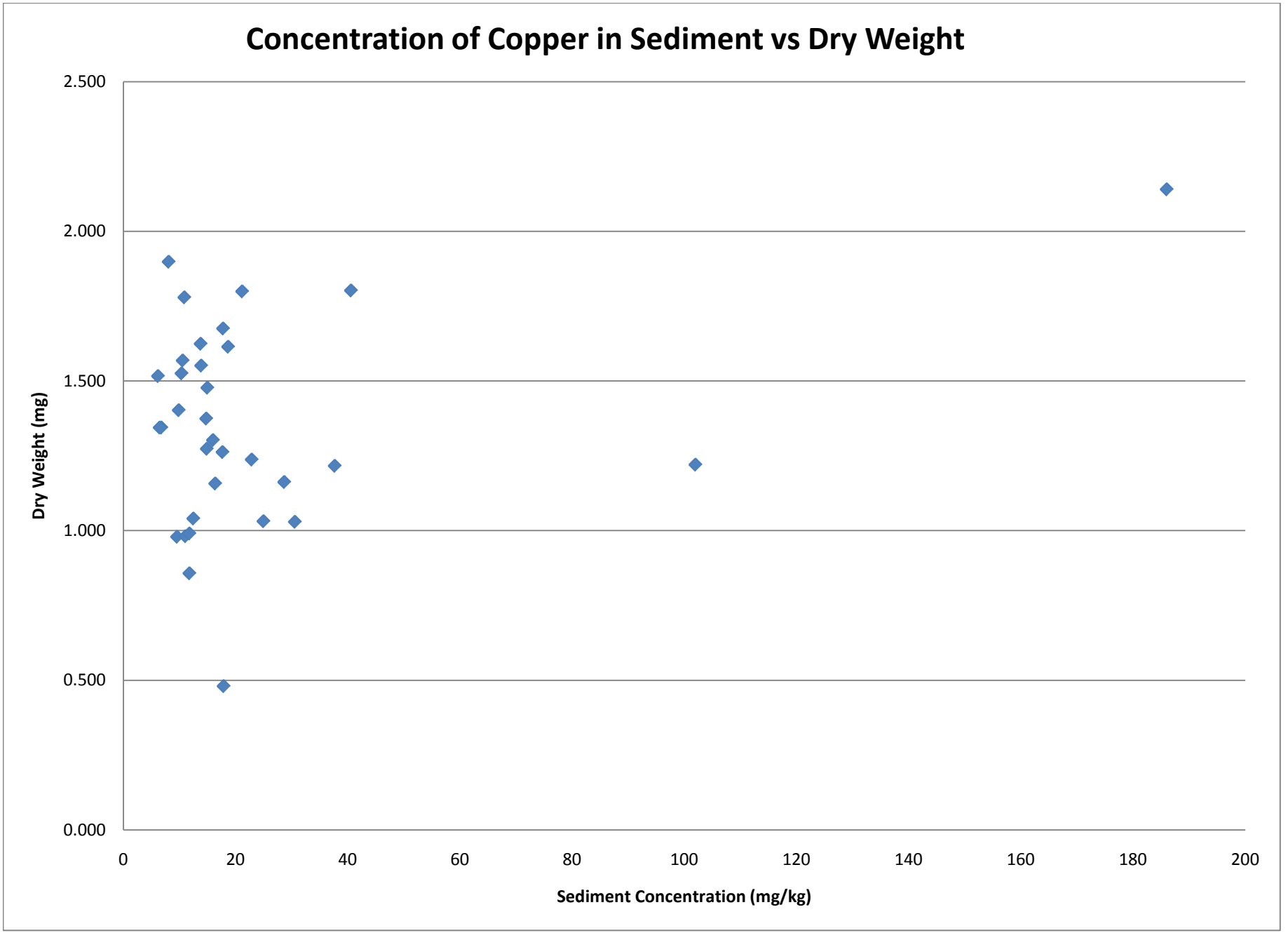

Concentration of HMW PAHs normalized in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
10000
20000
30000
40000
50000
60000
70000
80000
Sediment Concentration (ug/kg)

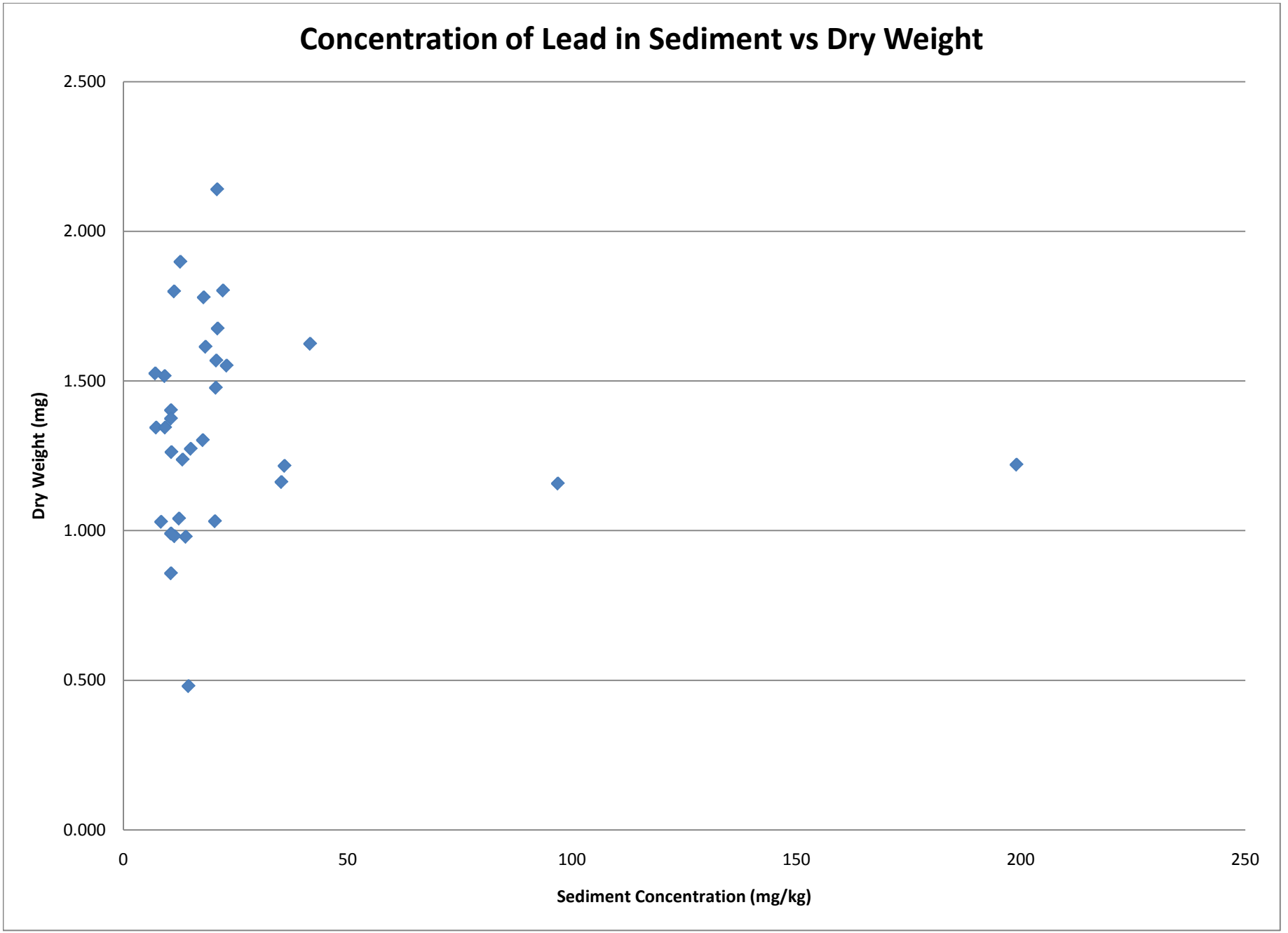

Concentration of LMW PAHs normalized in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
2000
4000
6000
8000
10000
12000
14000
16000
Sediment Concentration (ug/kg)

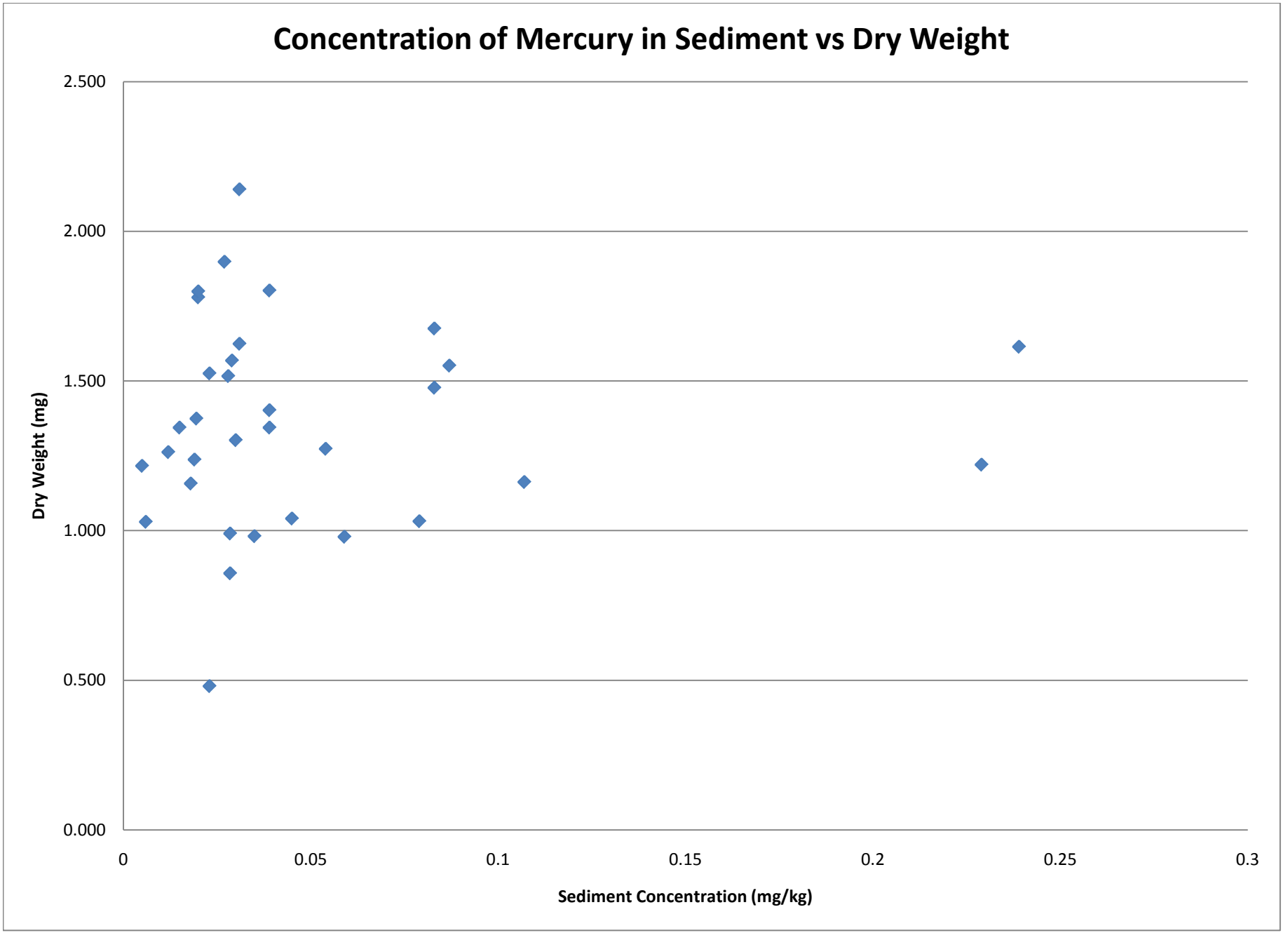

Concentration of total PAHs normalized in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
10000
20000
30000
40000
50000
60000
70000
80000
90000
100000
Sediment Concentration (ug/kg)

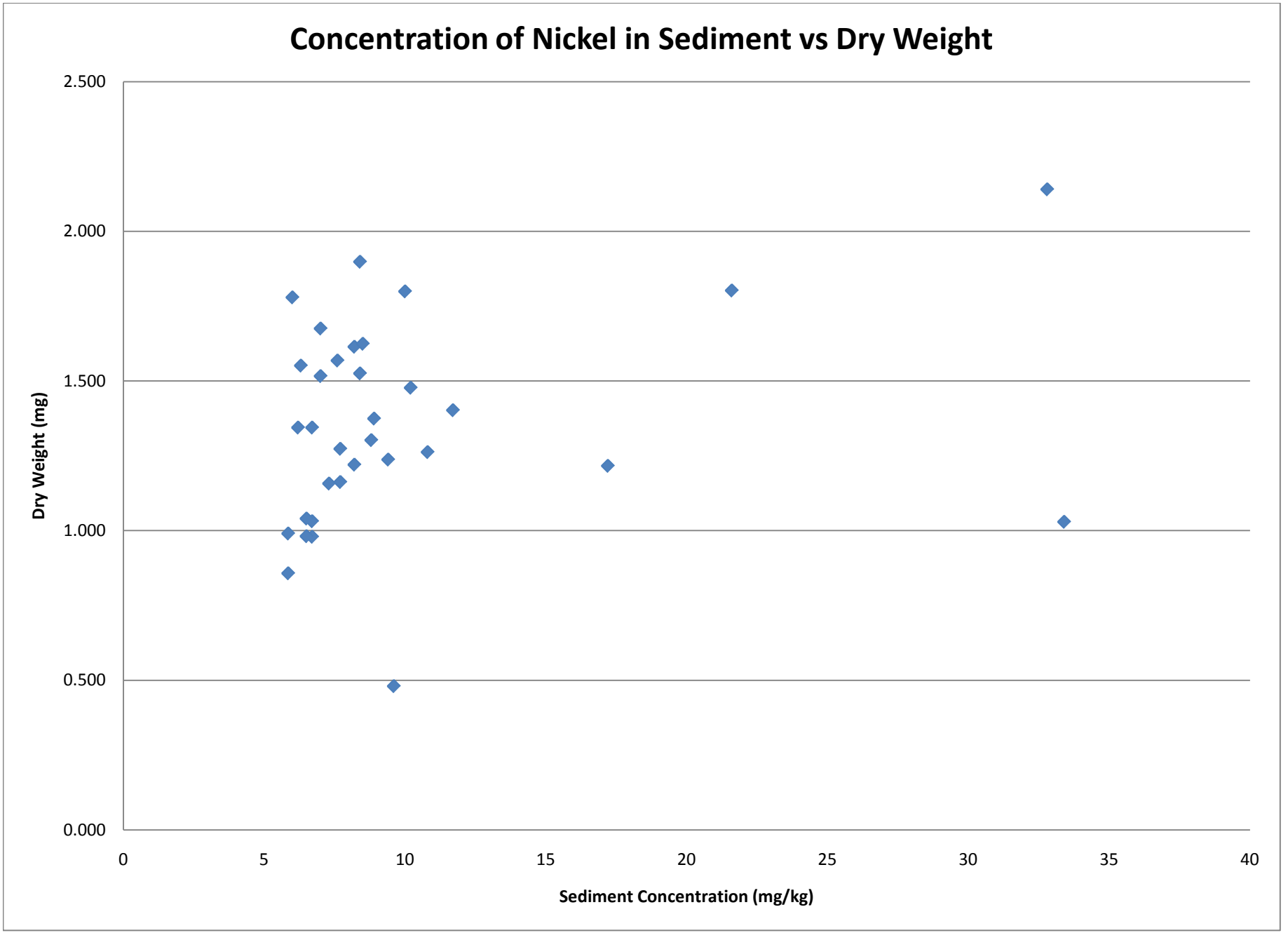

Concentration of total PCBs normalized in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0
500
1000
1500
2000
2500
3000
3500
4000
Sediment Concentration (ug/kg)

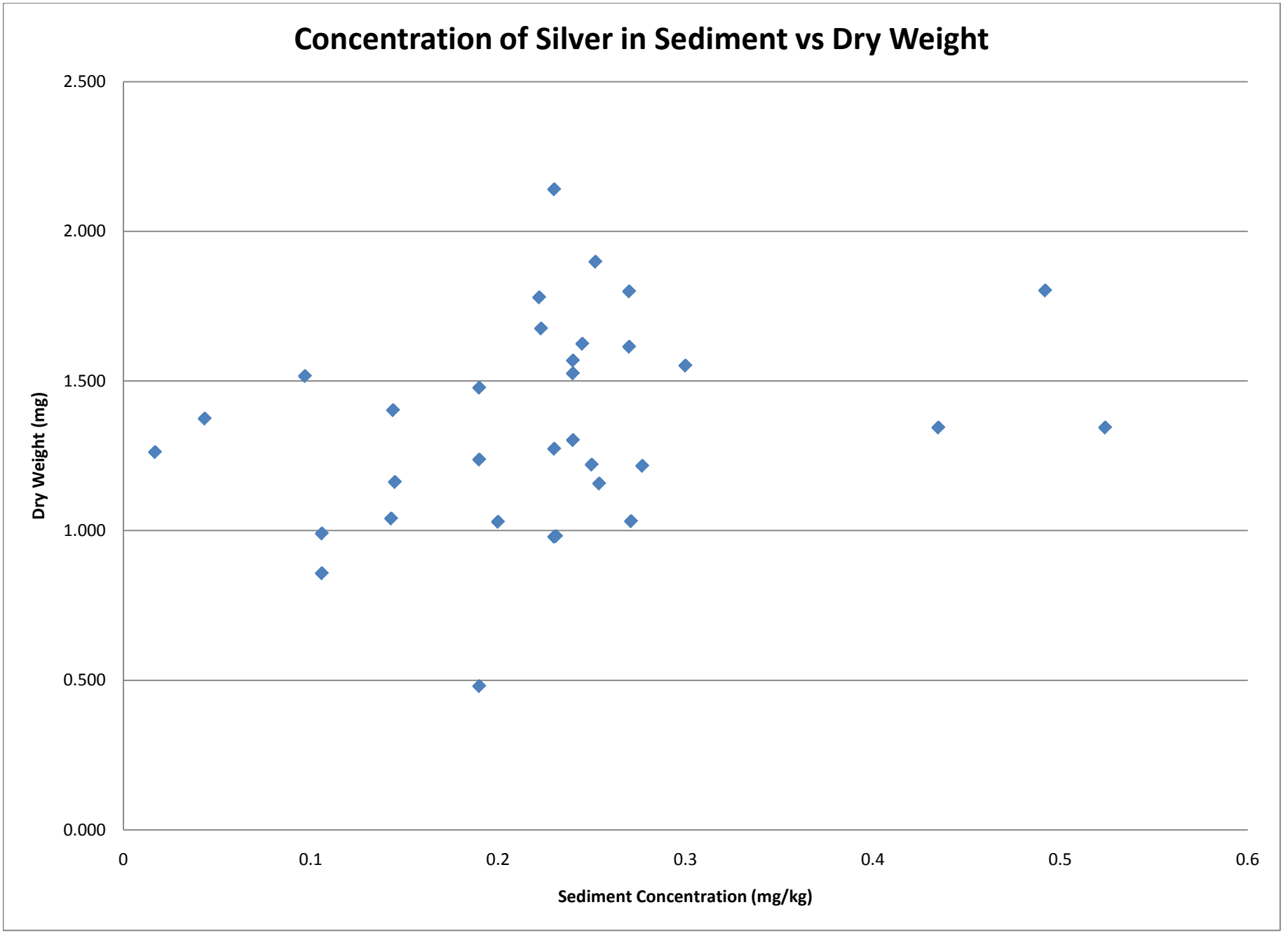

Concentration of Antimony in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0
0.5
1
1.5
2
2.5
3
Sediment Concentration (mg/kg)

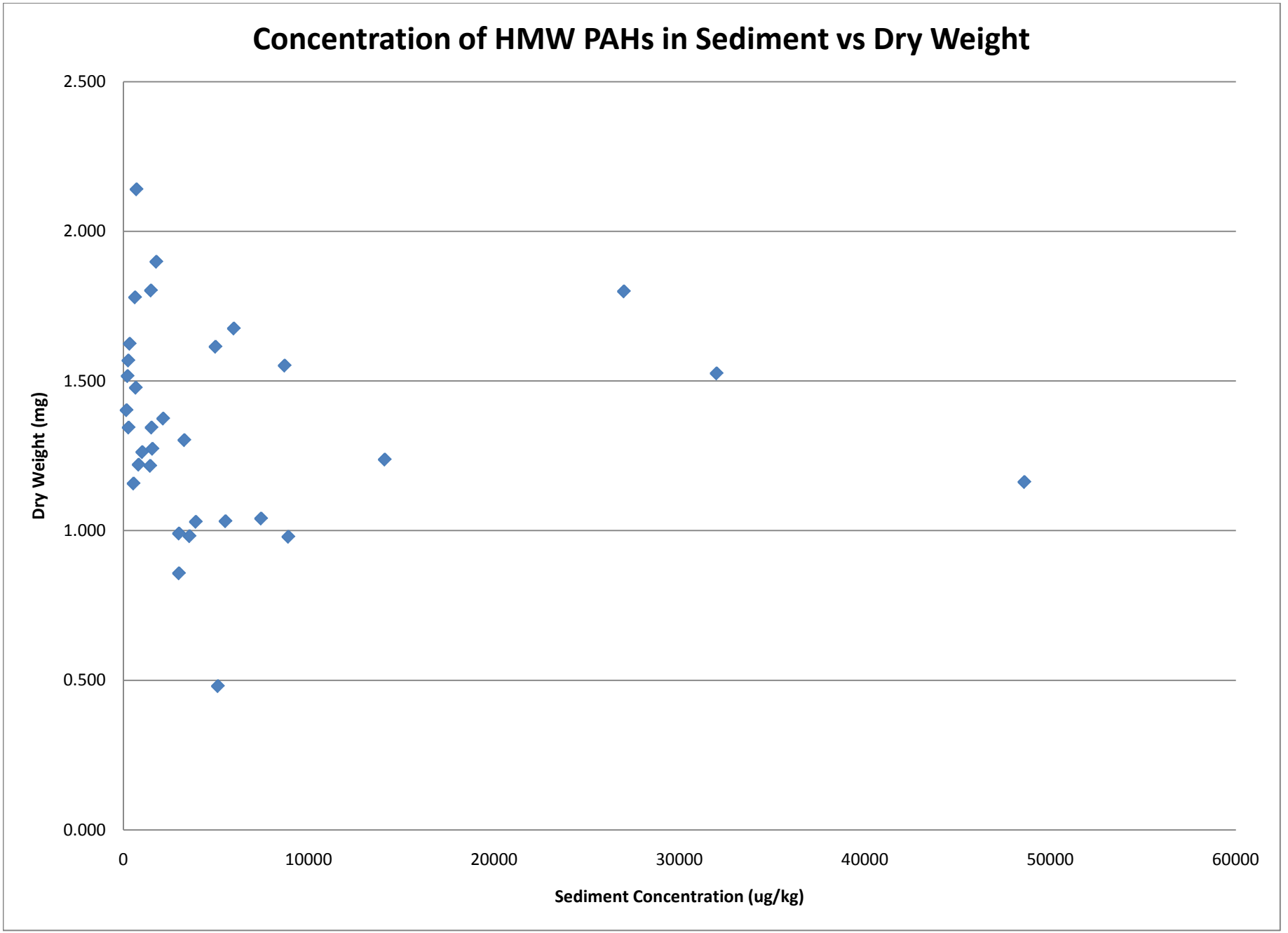

Concentration of Copper in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0
20
40
60
80
100
120
140
160
180
200
Sediment Concentration (mg/kg)

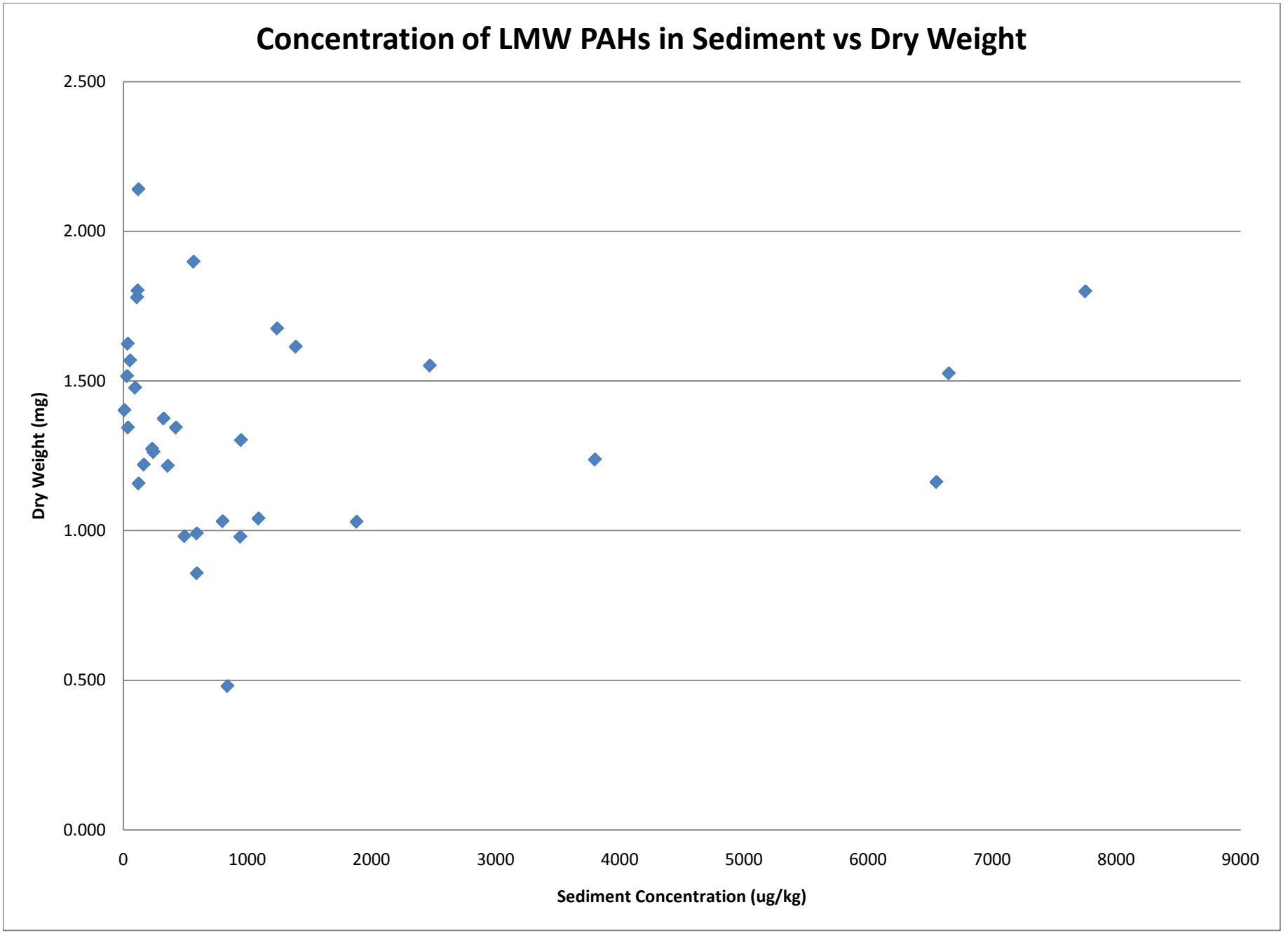

Concentration of Lead in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0
50
100
150
200
250
Sediment Concentration (mg/kg)

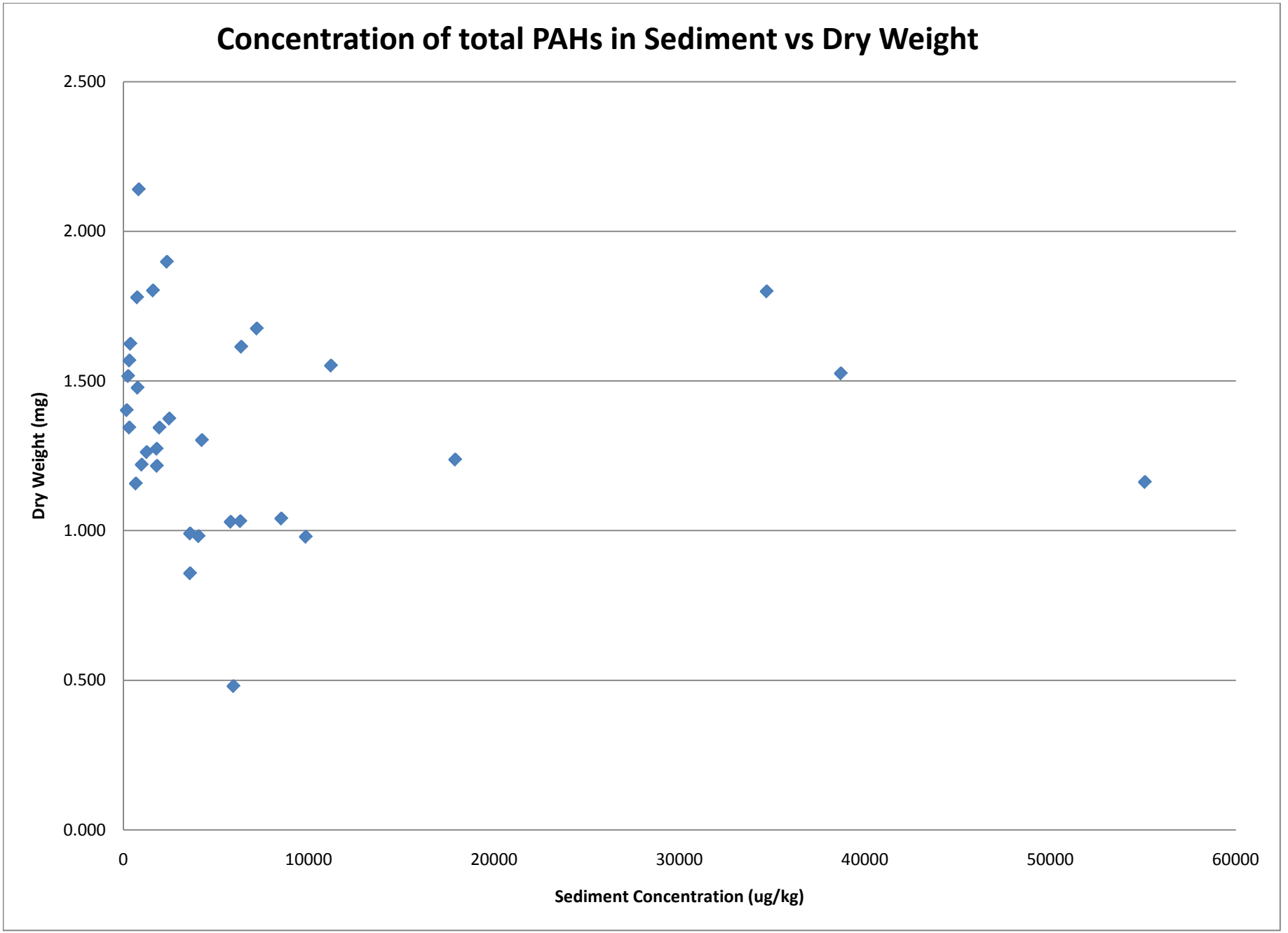

Concentration of Mercury in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0
0.05
0.1
0.15
0.2
0.25
0.3
Sediment Concentration (mg/kg)

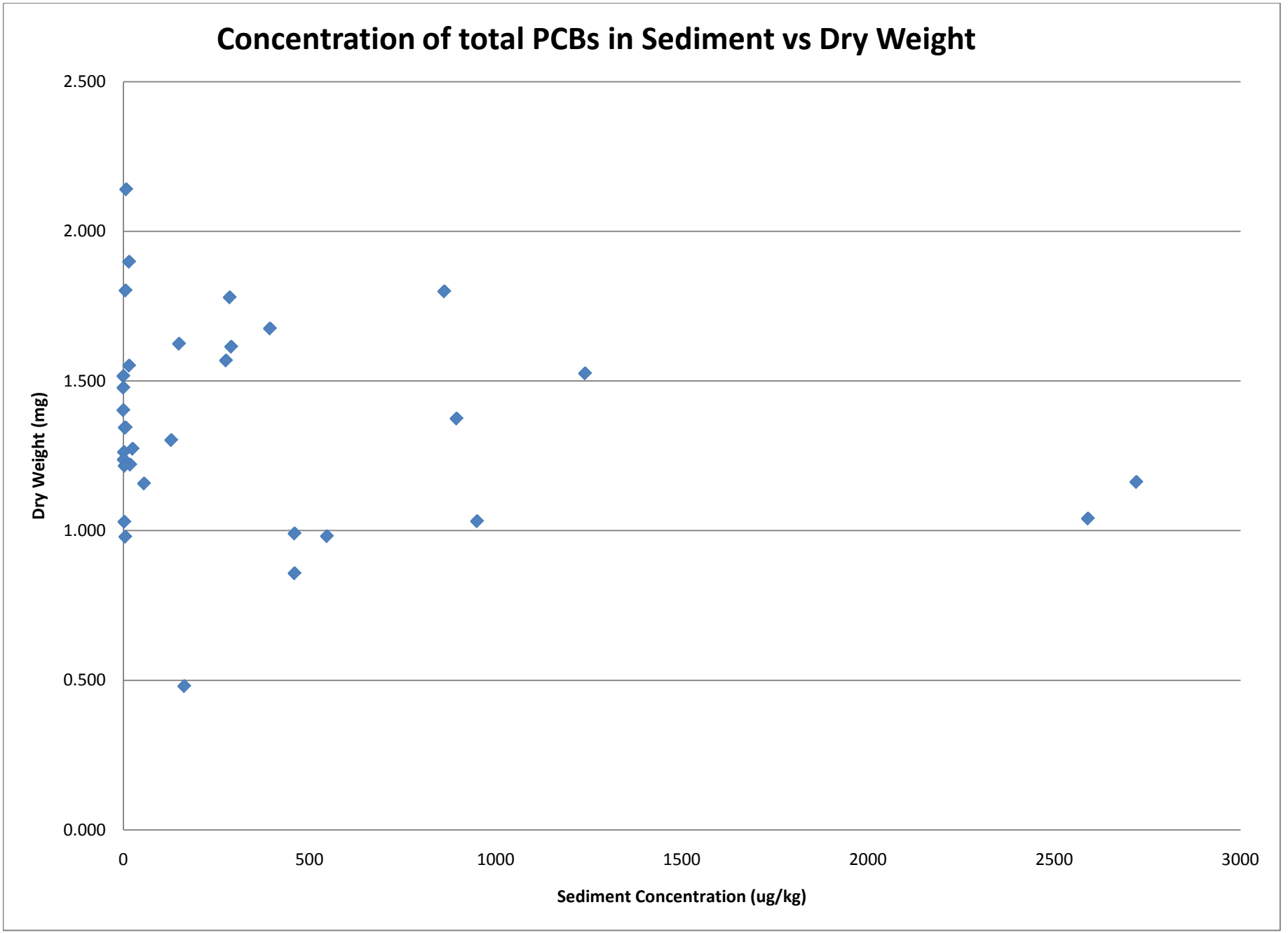

Concentration of Nickel in Sediment vs Dry Weight
Dry Weight (mg)
2.500
2.000
1.500
1.000
0.500
0.000
0
5
10
15
20
25
30
35
40
Sediment Concentration (mg/kg)

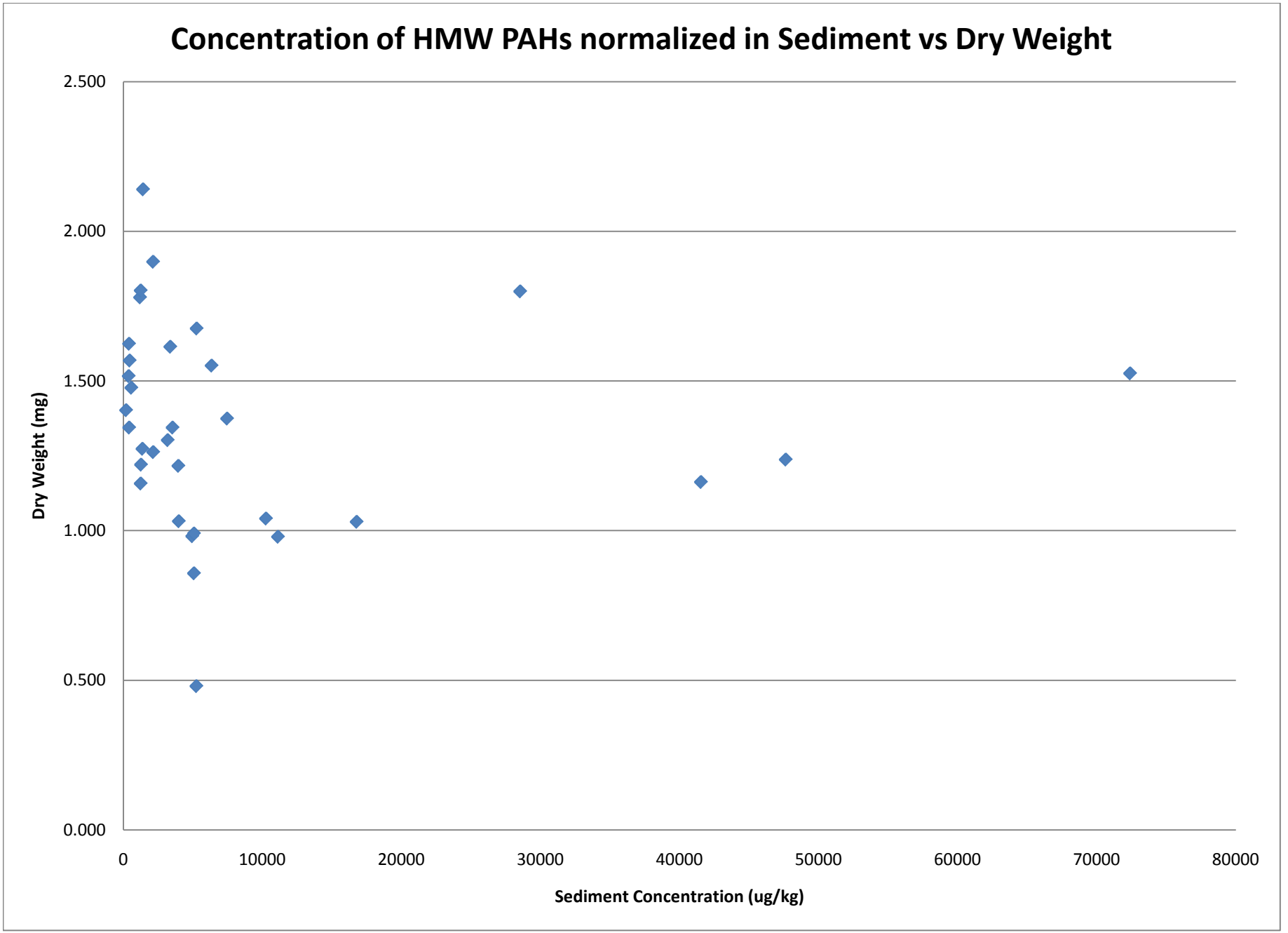

Concentration of Silver in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0
0.1
0.2
0.3
0.4
0.5
0.6
Sediment Concentration (mg/kg)

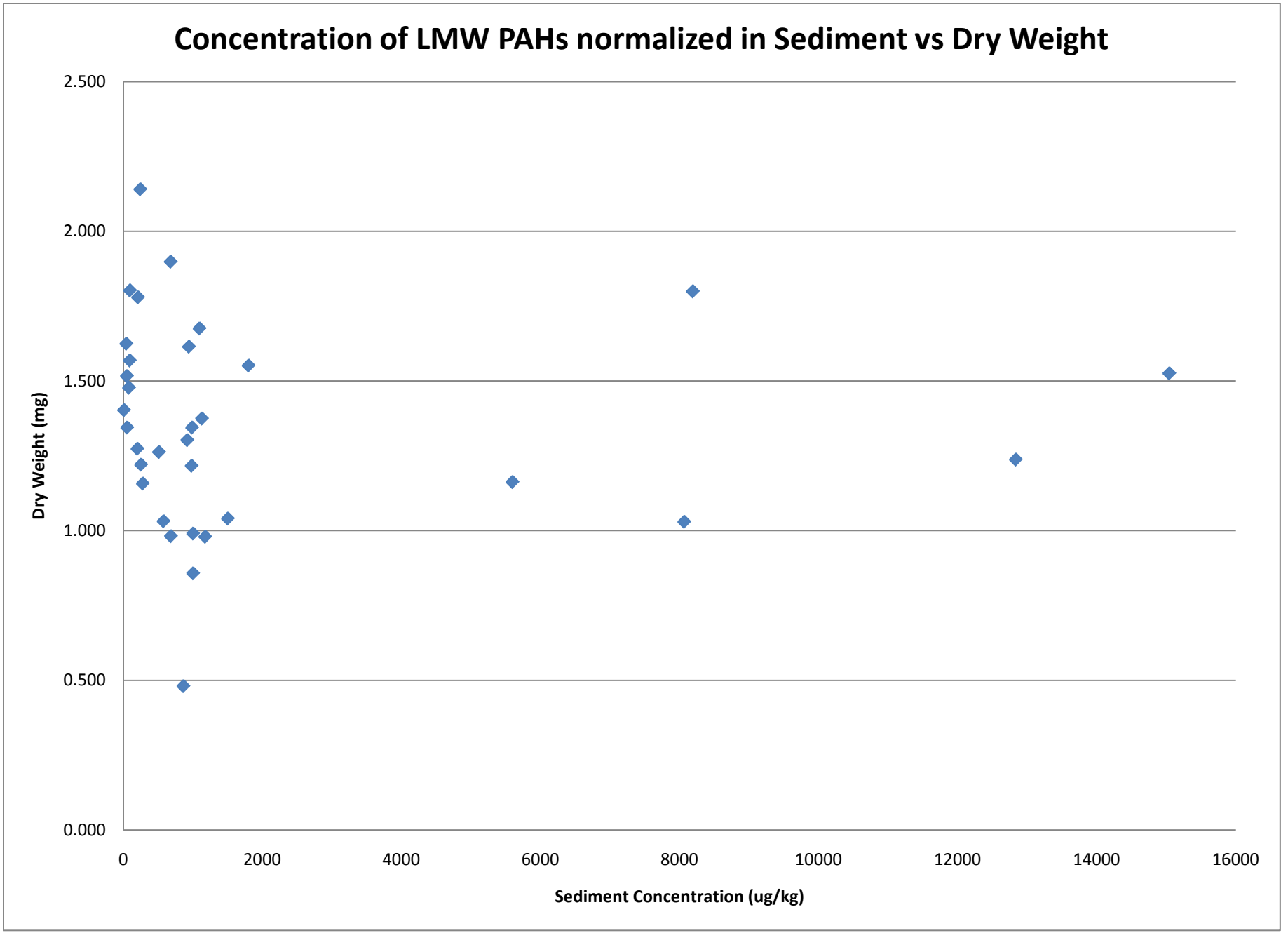

Concentration of HMW PAHs in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0
10000
20000
30000
40000
50000
60000
Sediment Concentration (ug/kg)

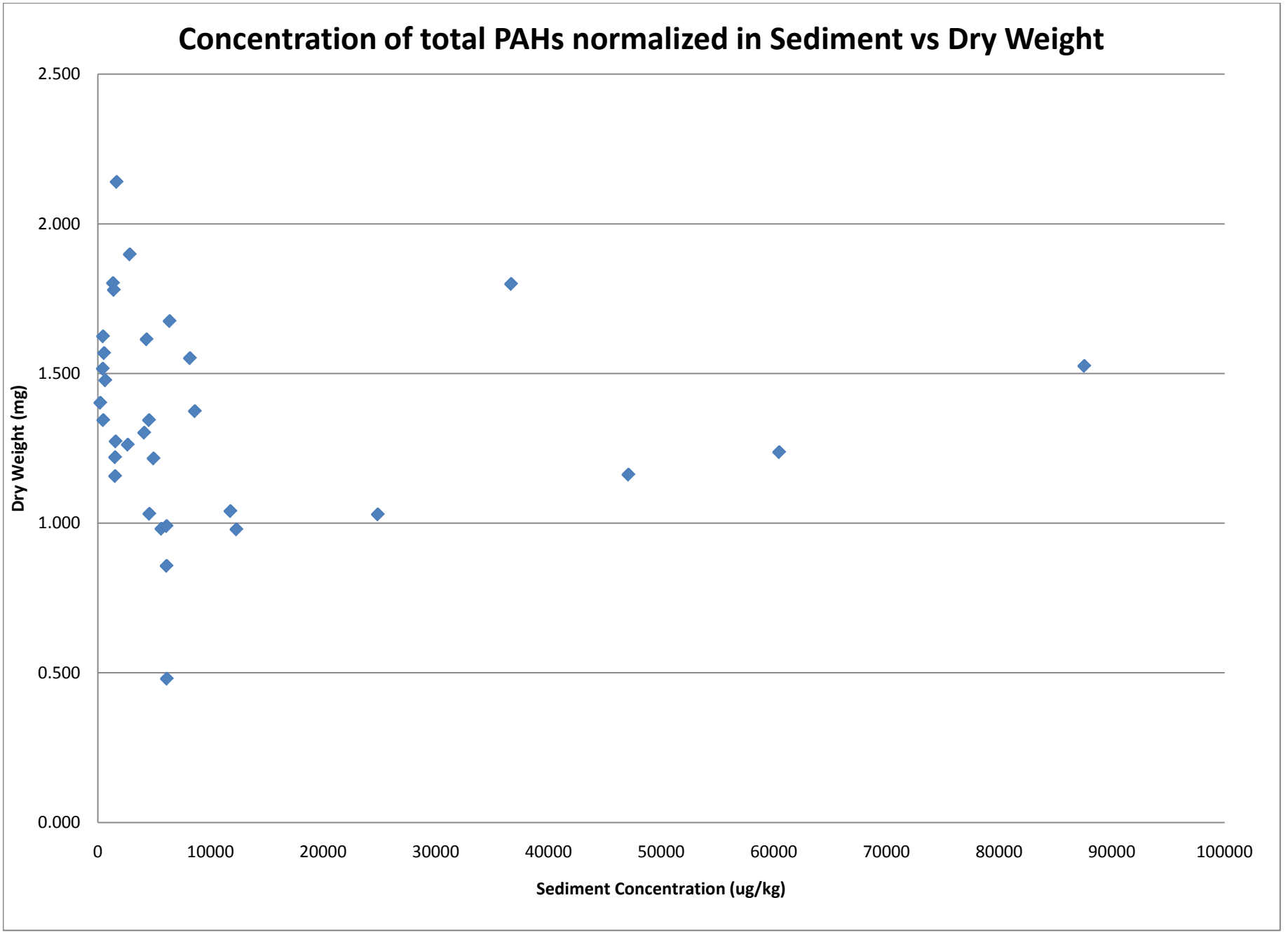

Concentration of LMW PAHs in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
Sediment Concentration (ug/kg)

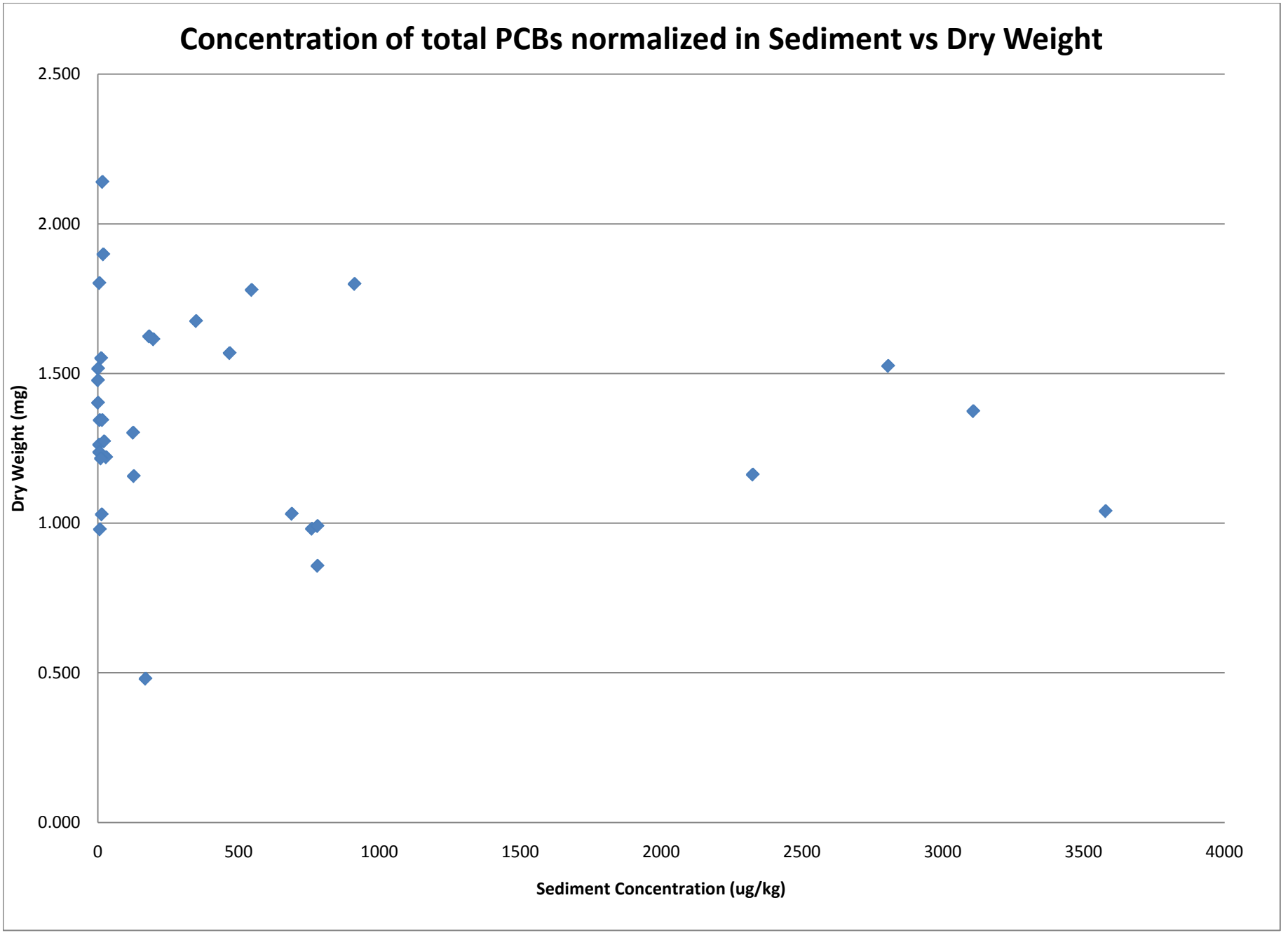

Concentration of total PAHs in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0
10000
20000
30000
40000
50000
60000
Sediment Concentration (ug/kg)

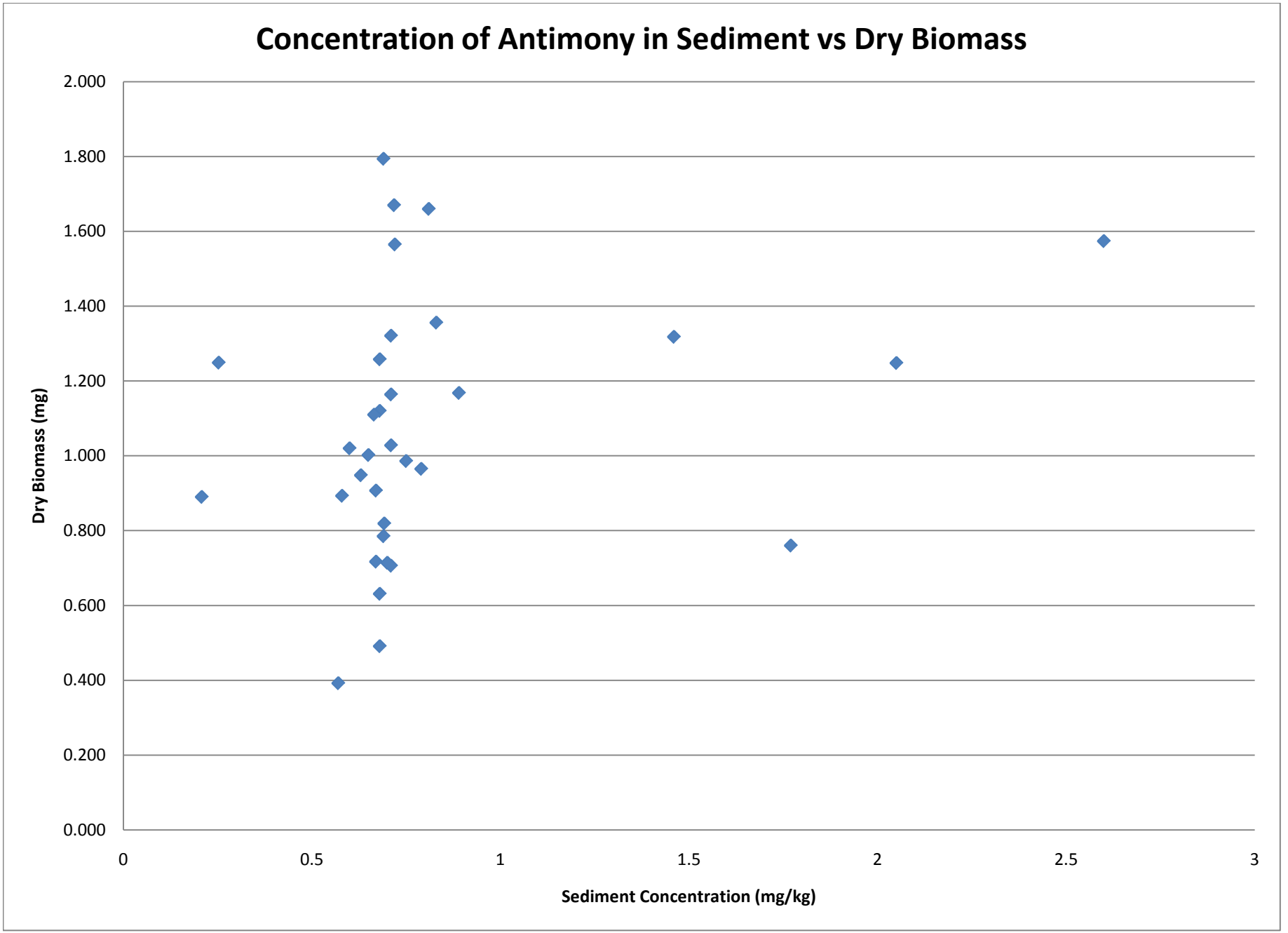

Concentration of total PCBs in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0
500
1000
1500
2000
2500
3000
Sediment Concentration (ug/kg)

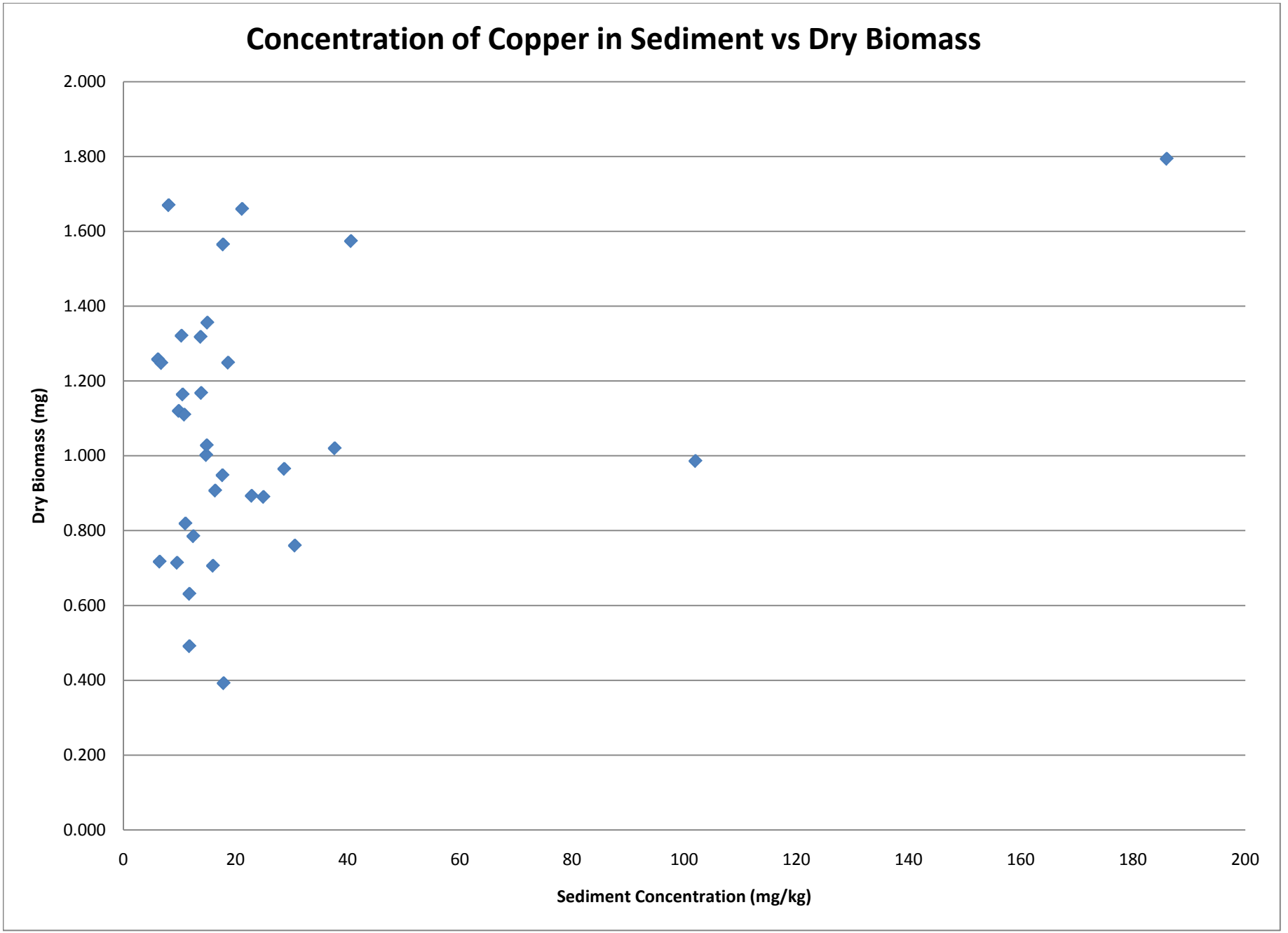

Concentration of HMW PAHs normalized in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0
10000
20000
30000
40000
50000
60000
70000
80000
Sediment Concentration (ug/kg)

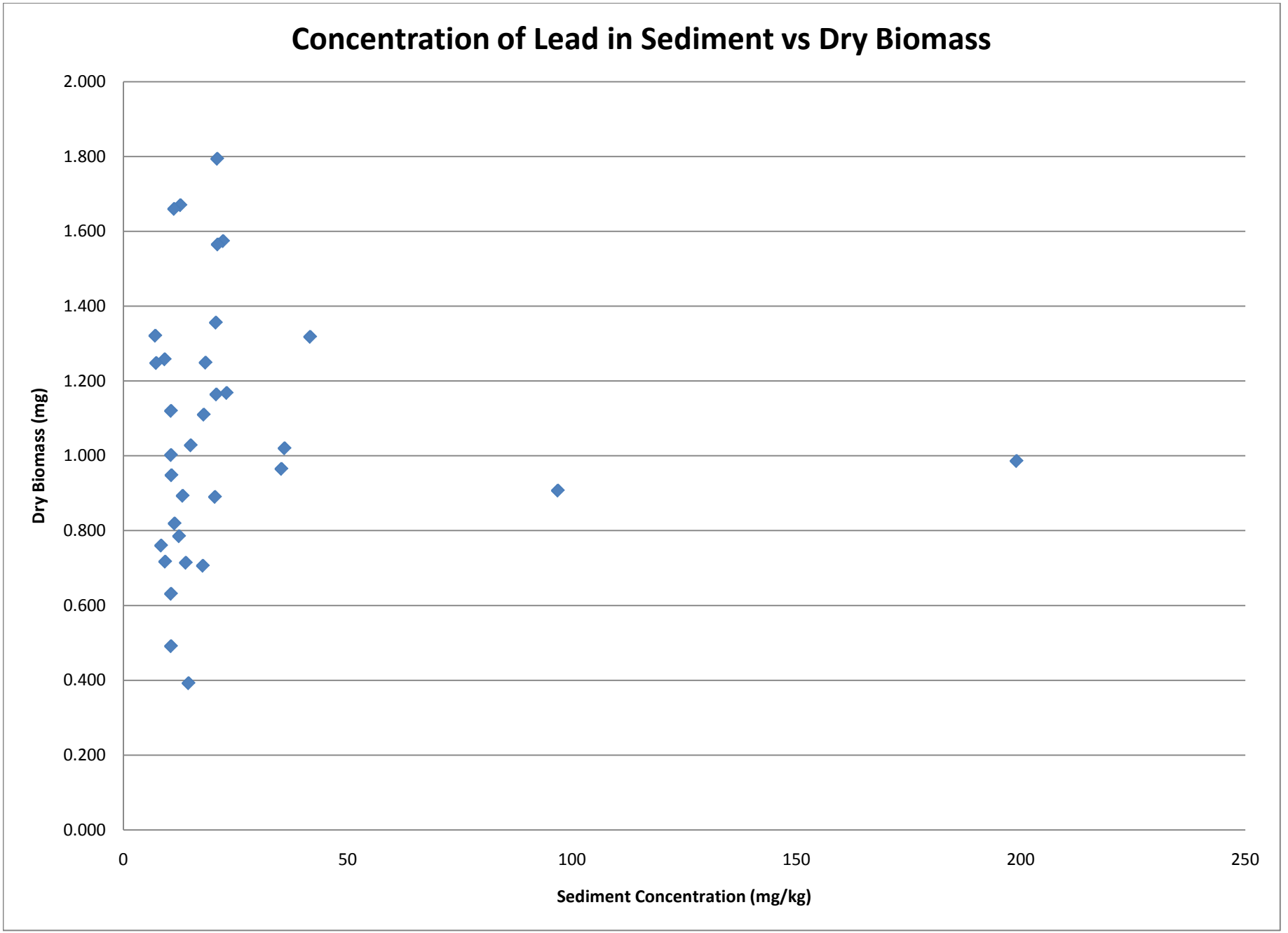

Concentration of LMW PAHs normalized in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0
2000
4000
6000
8000
10000
12000
14000
16000
Sediment Concentration (ug/kg)

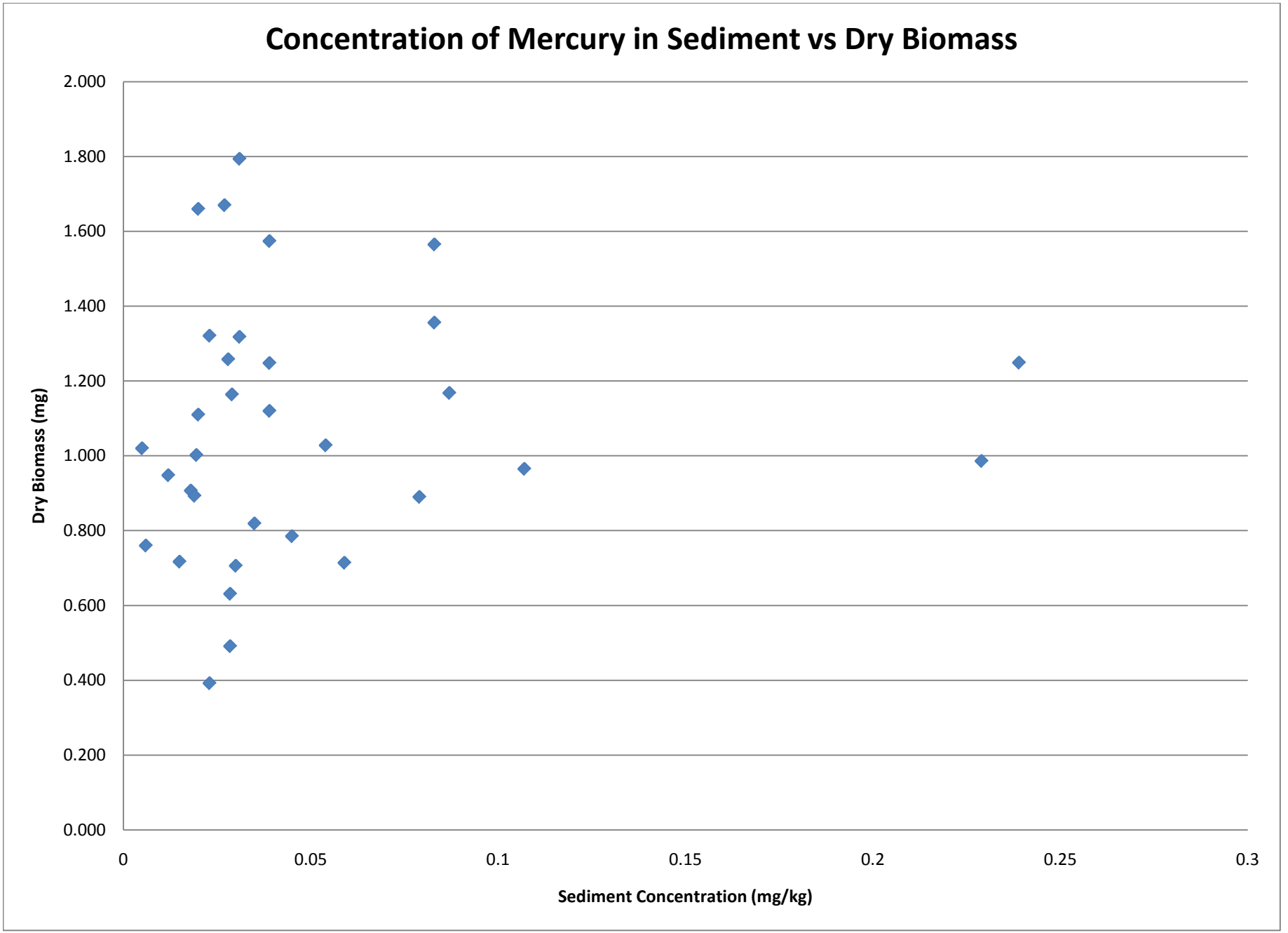

Concentration of total PAHs normalized in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0
10000
20000
30000
40000
50000
60000
70000
80000
90000
100000
Sediment Concentration (ug/kg)

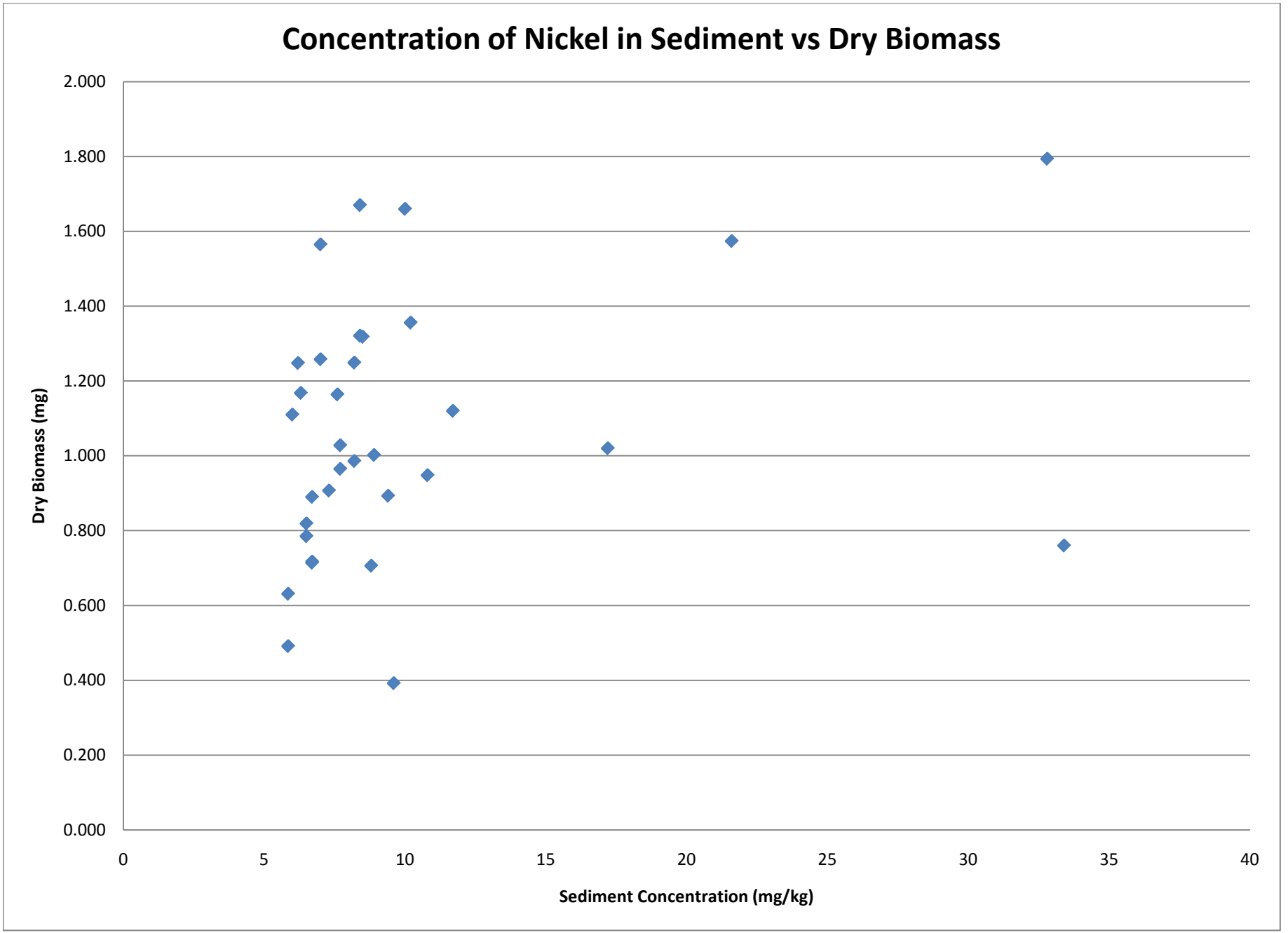

Concentration of total PCBs normalized in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0
500
1000
1500
2000
2500
3000
3500
4000
Sediment Concentration (ug/kg)

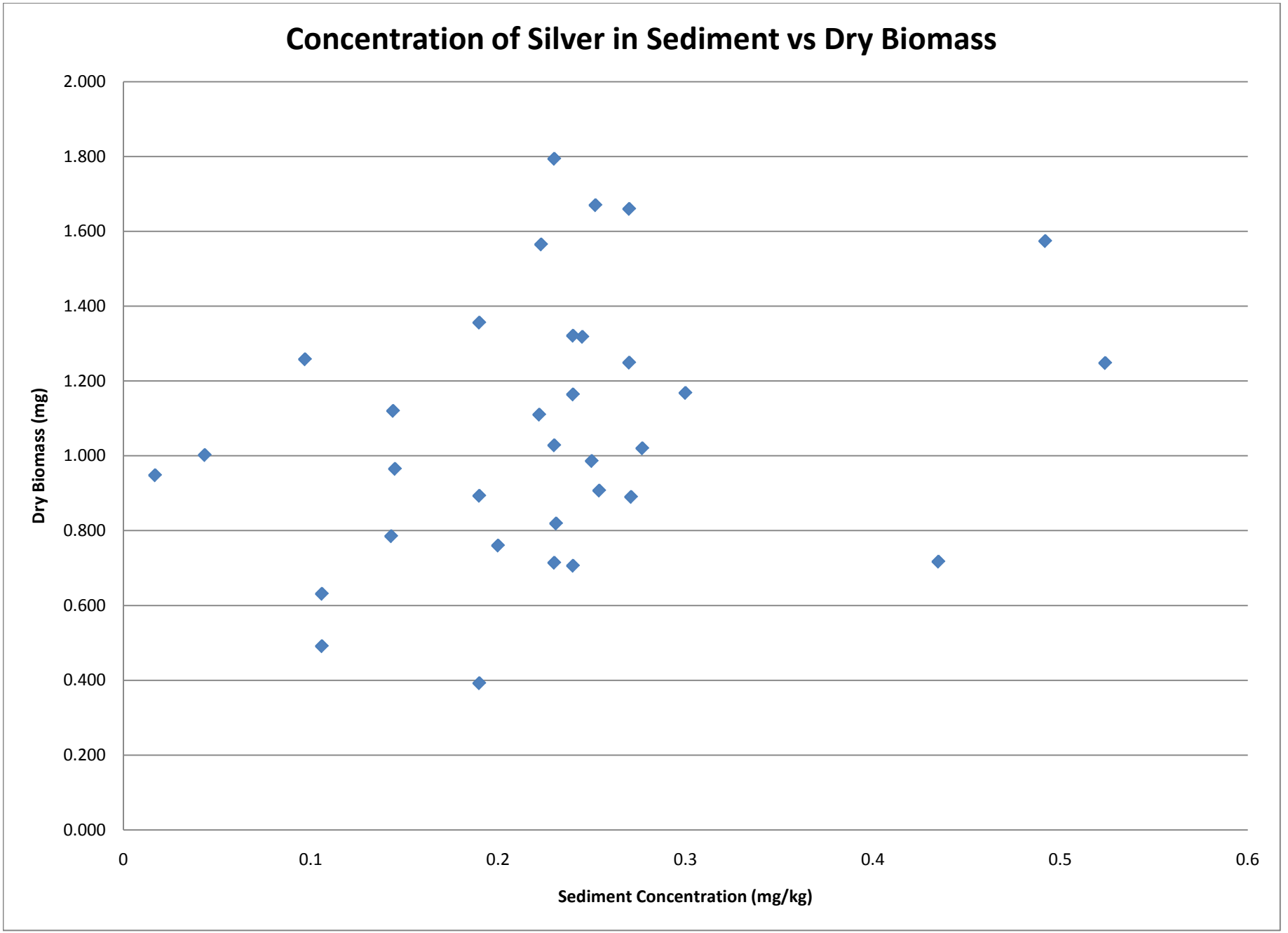

Concentration of Antimony in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
0.5
1
1.5
2
2.5
3
Sediment Concentration (mg/kg)

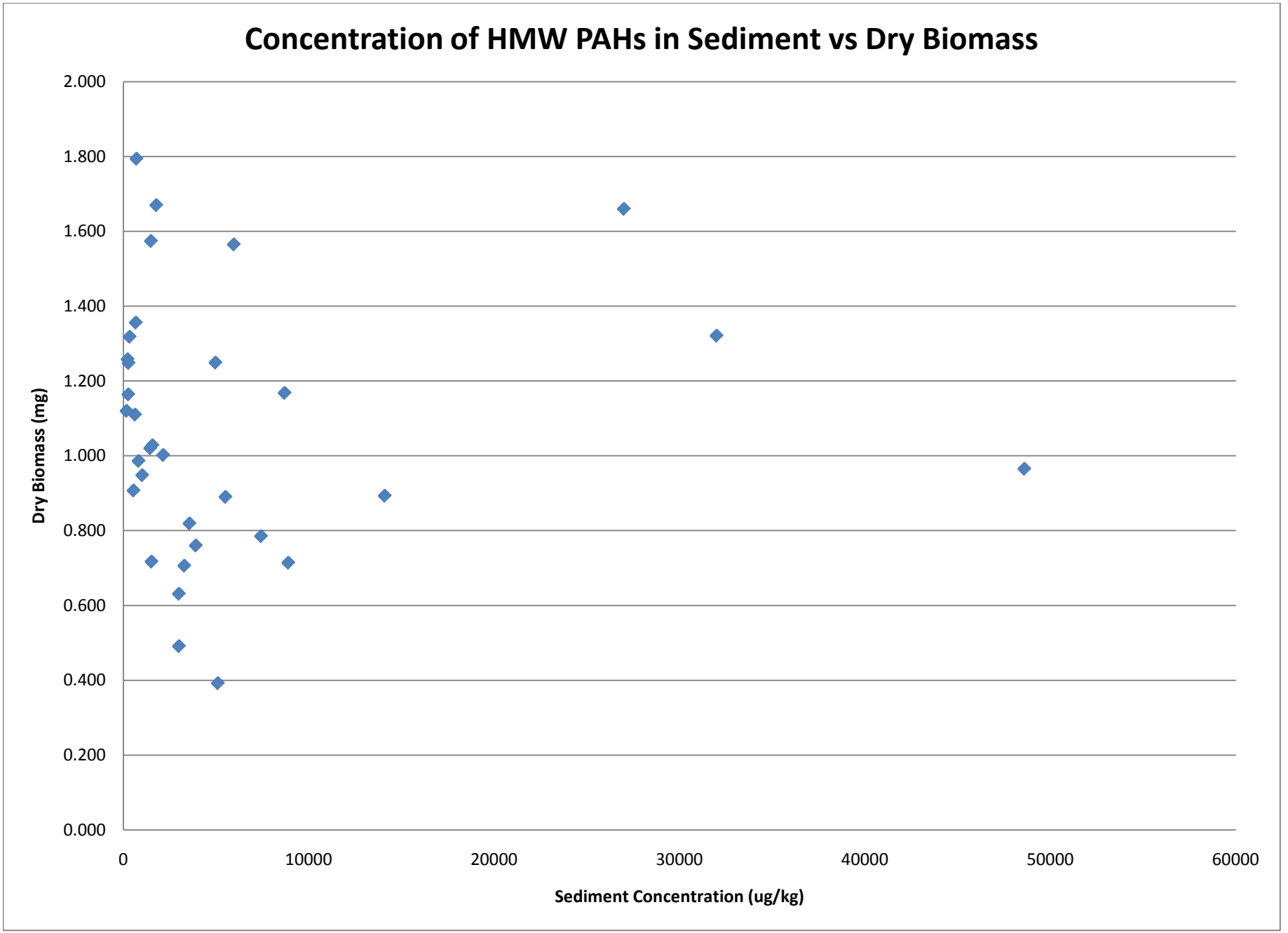

Concentration of Copper in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
20
40
60
80
100
120
140
160
180
200
Sediment Concentration (mg/kg)

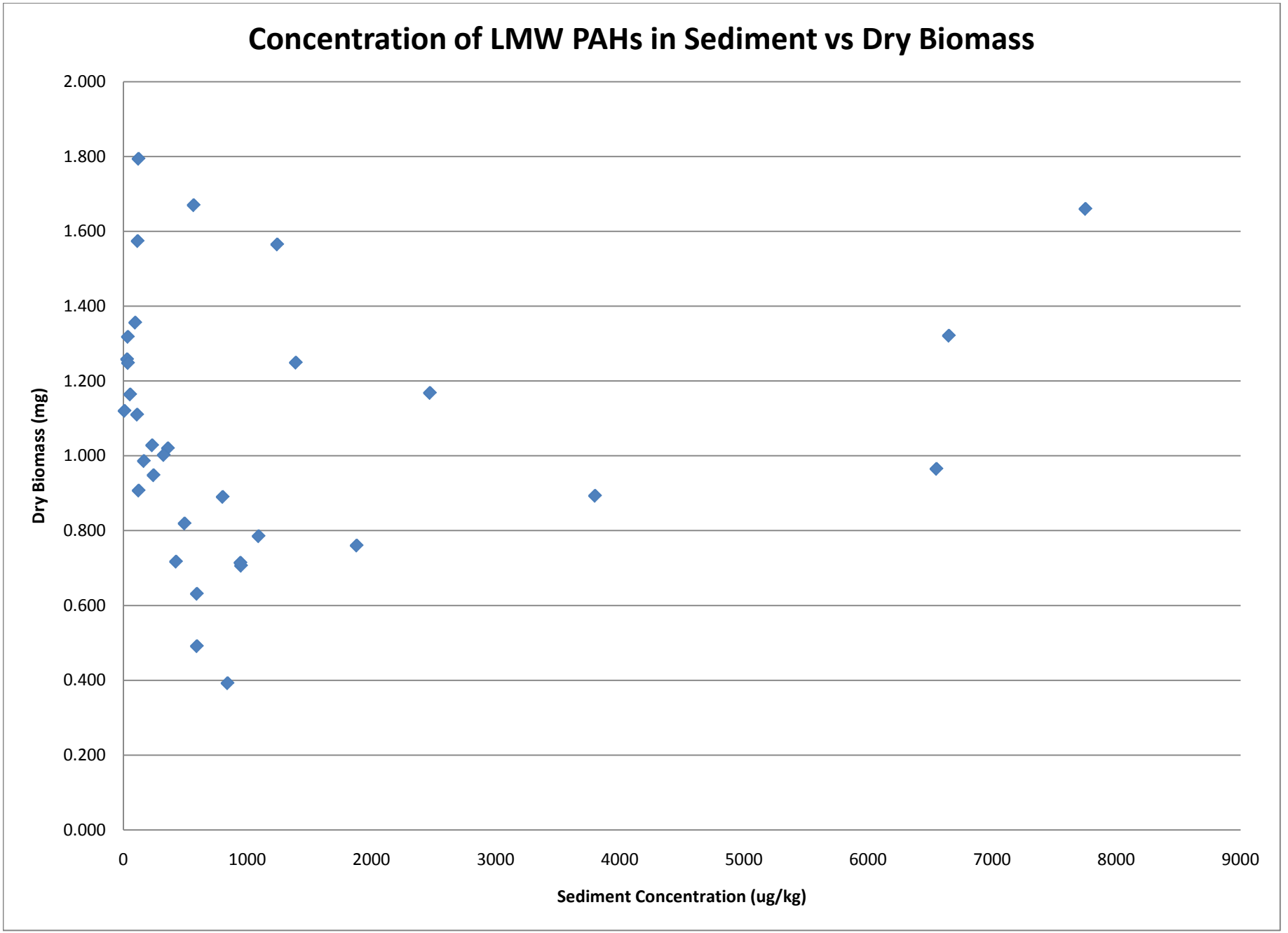

Concentration of Lead in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
50
100
150
200
250
Sediment Concentration (mg/kg)

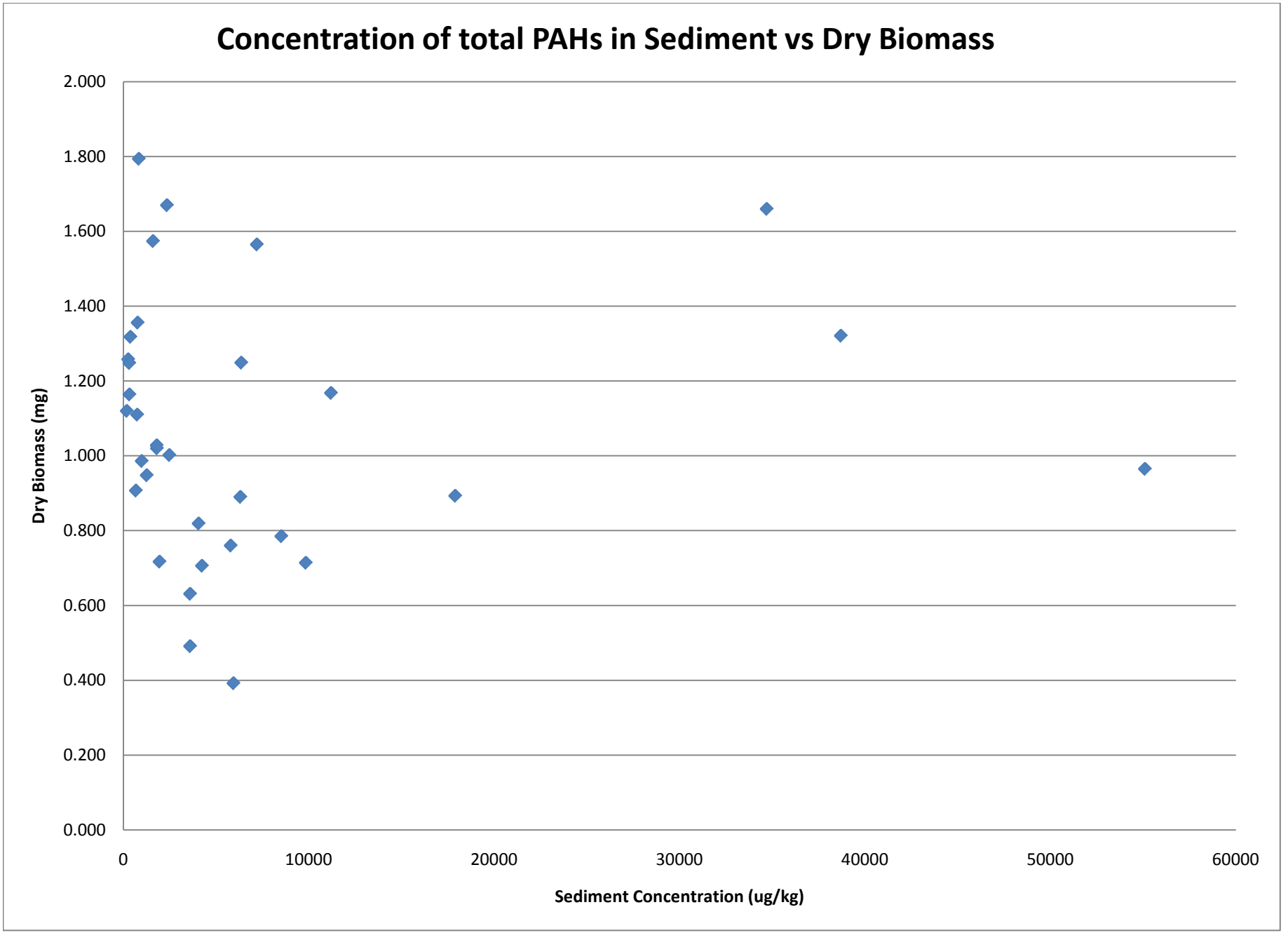

Concentration of Mercury in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
0.05
0.1
0.15
0.2
0.25
0.3
Sediment Concentration (mg/kg)

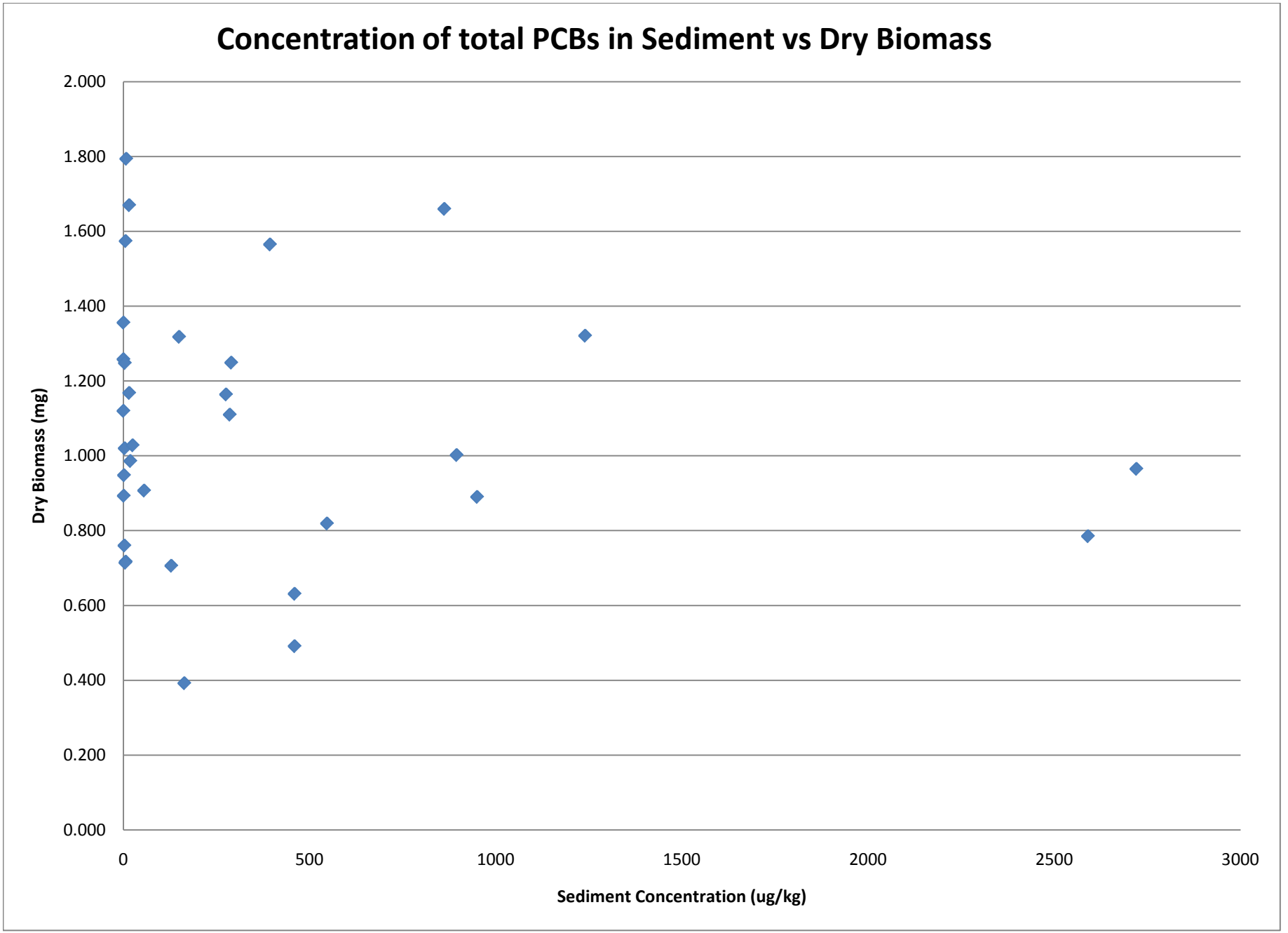

Concentration of Nickel in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
5
10
15
20
25
30
35
40
Sediment Concentration (mg/kg)

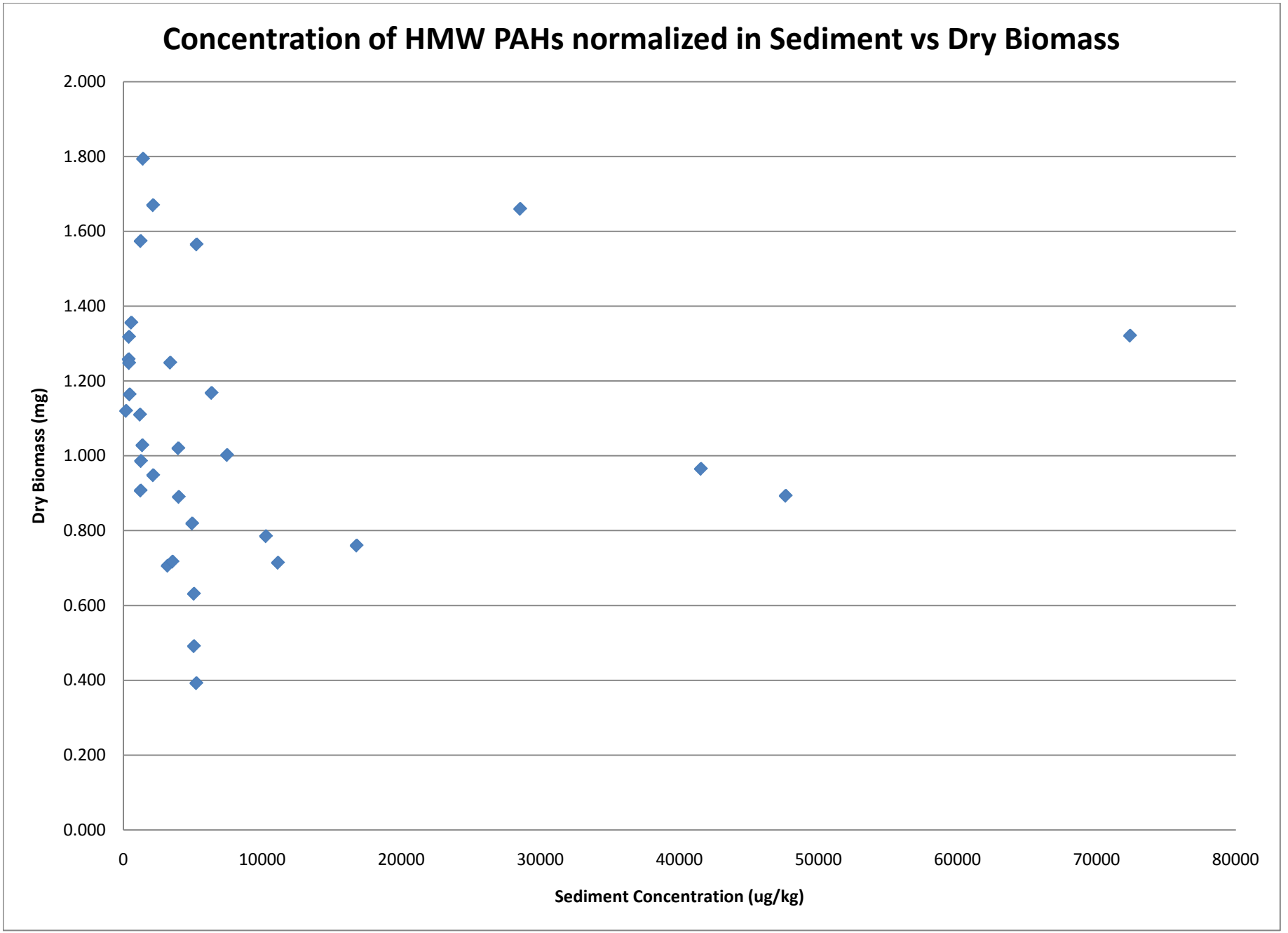

Concentration of Silver in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
0.1
0.2
0.3
0.4
0.5
0.6
Sediment Concentration (mg/kg)

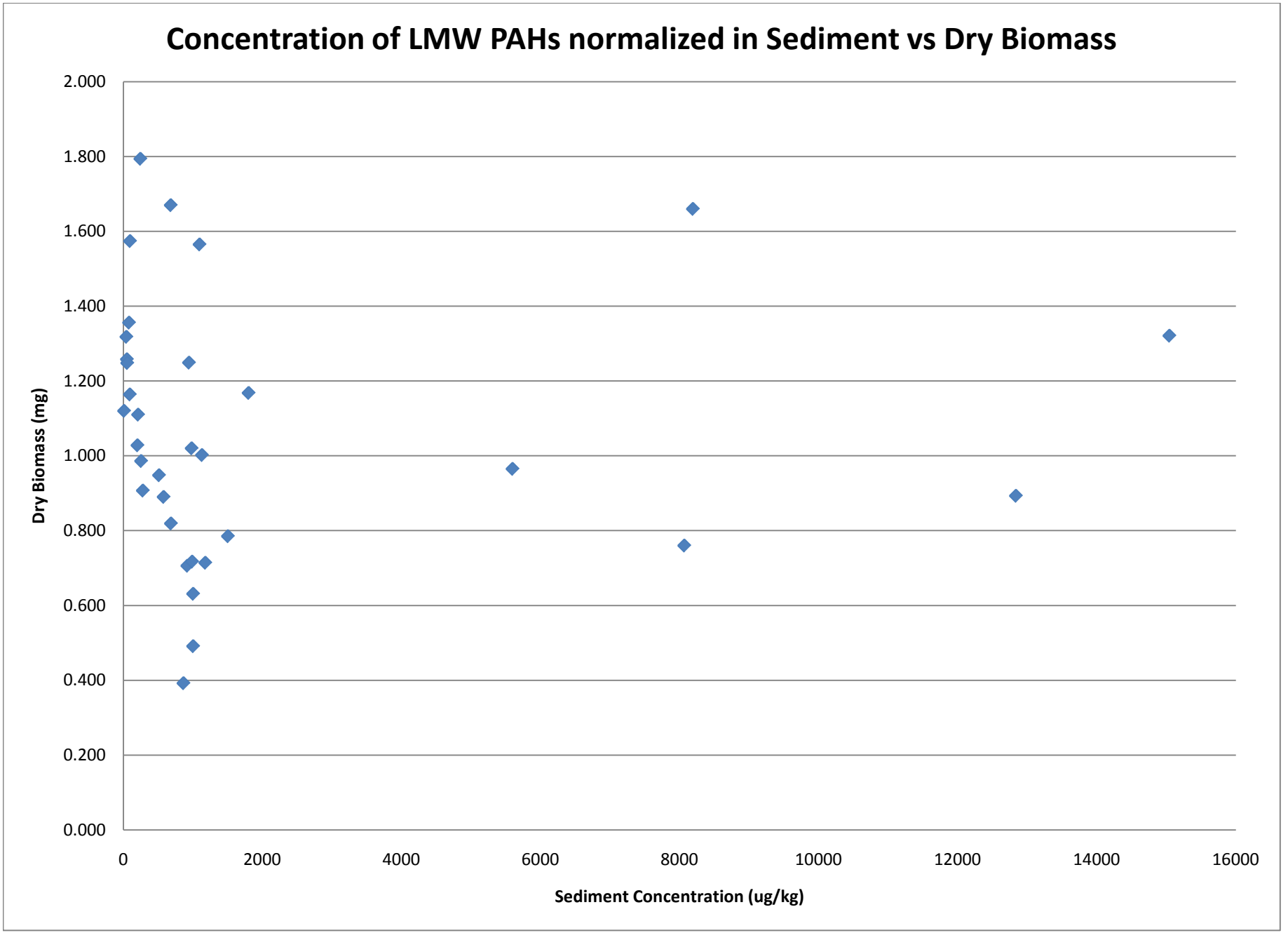

Concentration of HMW PAHs in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
10000
20000
30000
40000
50000
60000
Sediment Concentration (ug/kg)

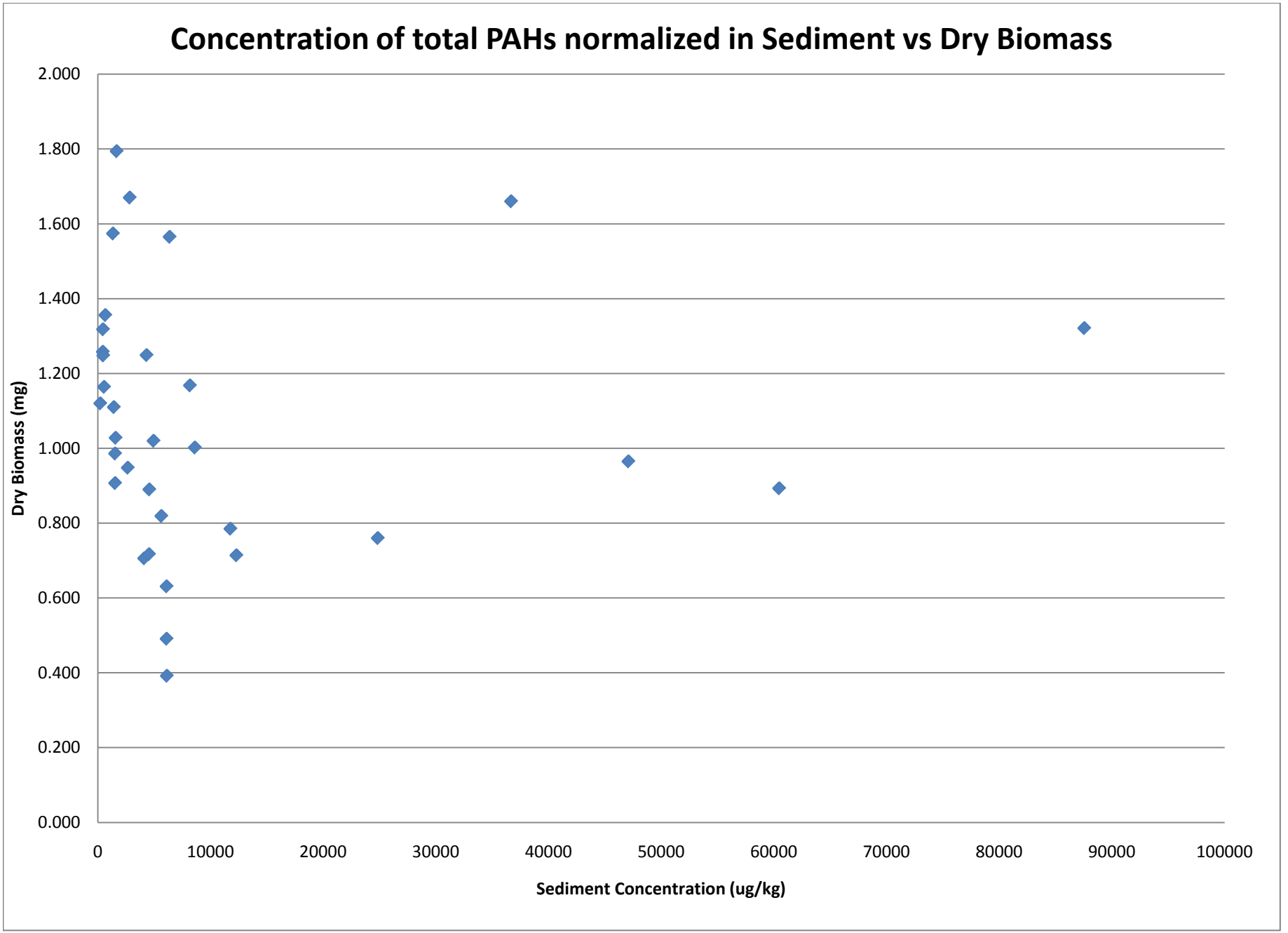

Concentration of LMW PAHs in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
Sediment Concentration (ug/kg)

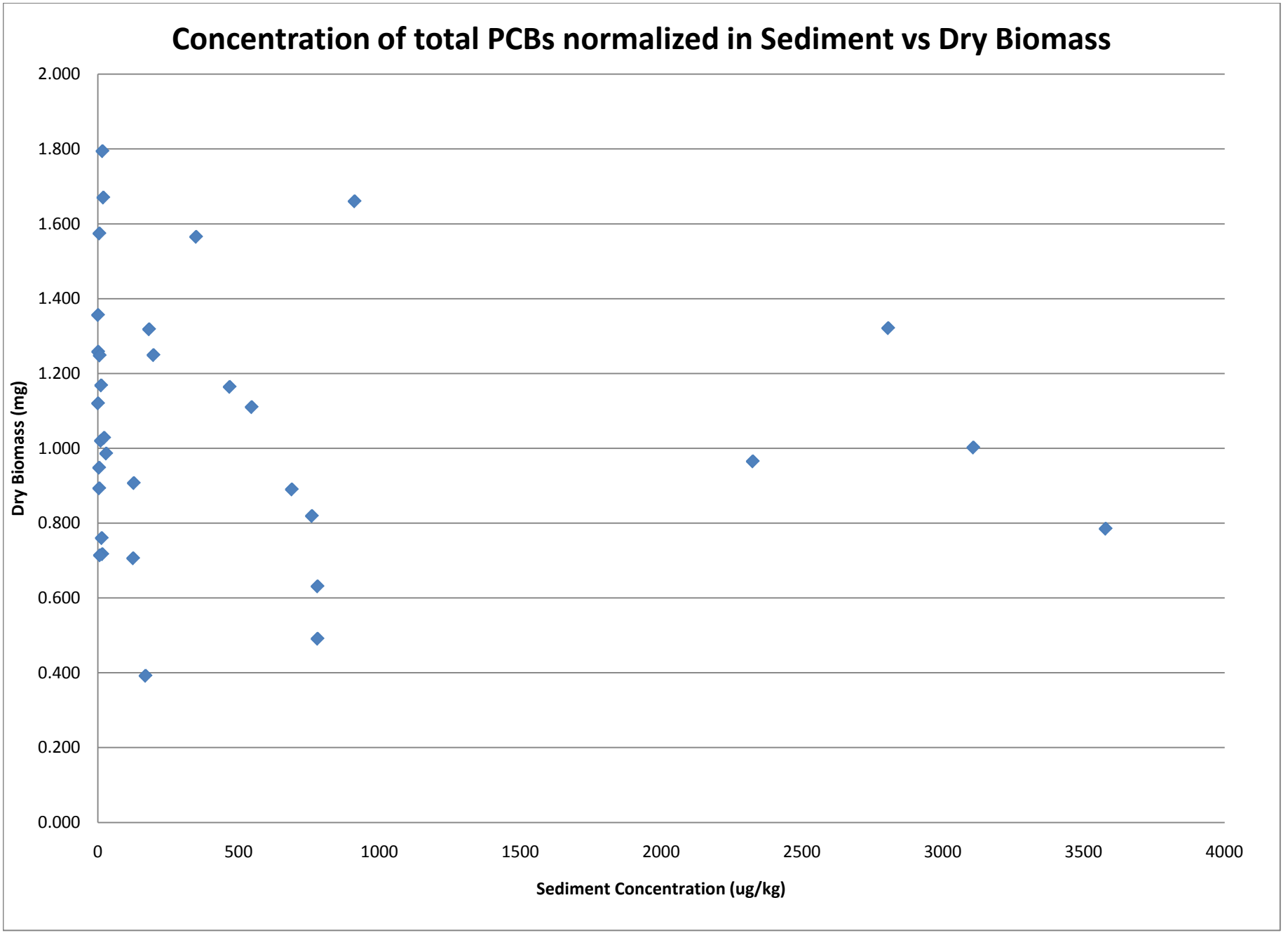

Concentration of total PAHs in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
10000
20000
30000
40000
50000
60000
Sediment Concentration (ug/kg)

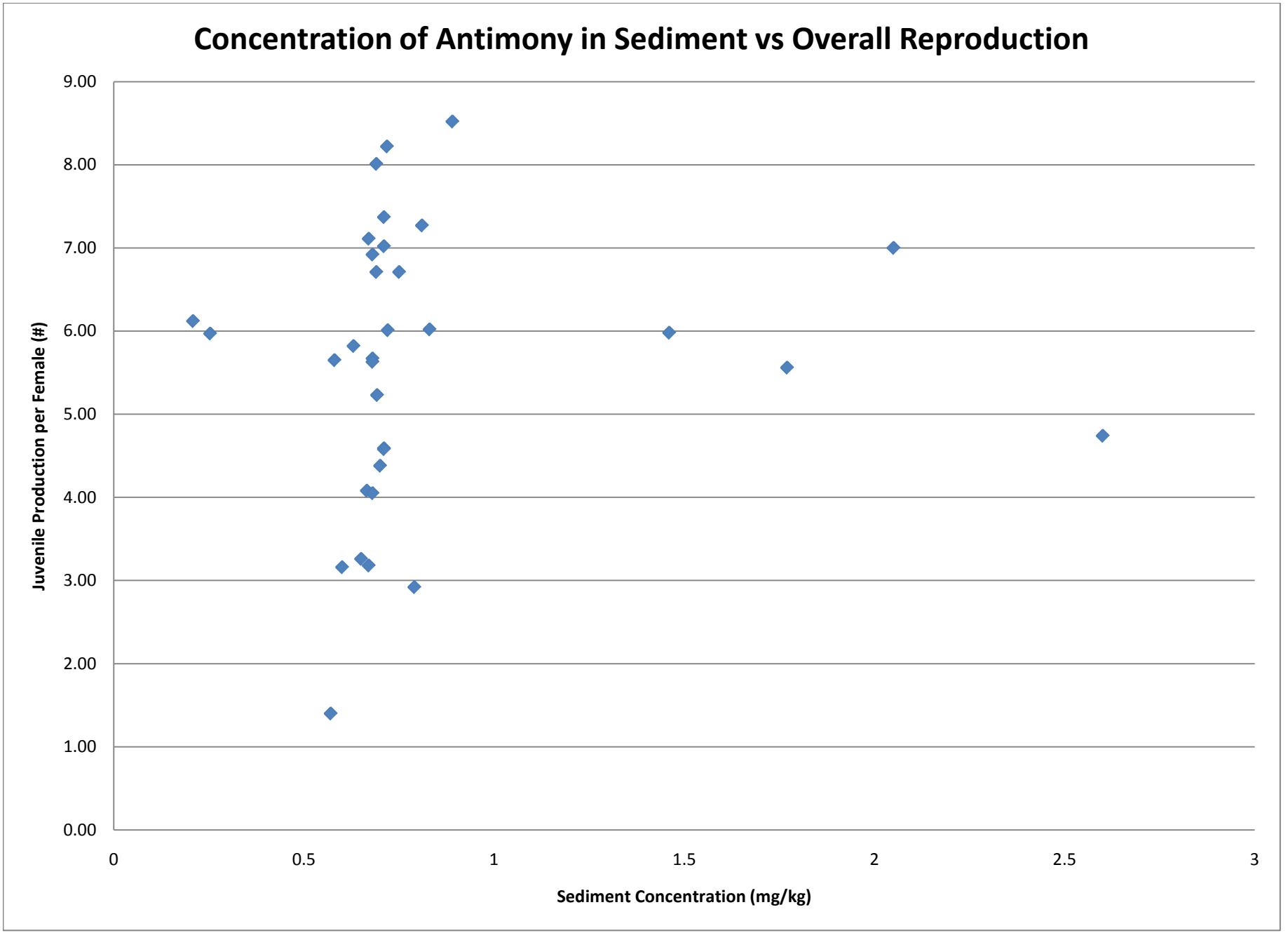

Concentration of total PCBs in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
500
1000
1500
2000
2500
3000
Sediment Concentration (ug/kg)

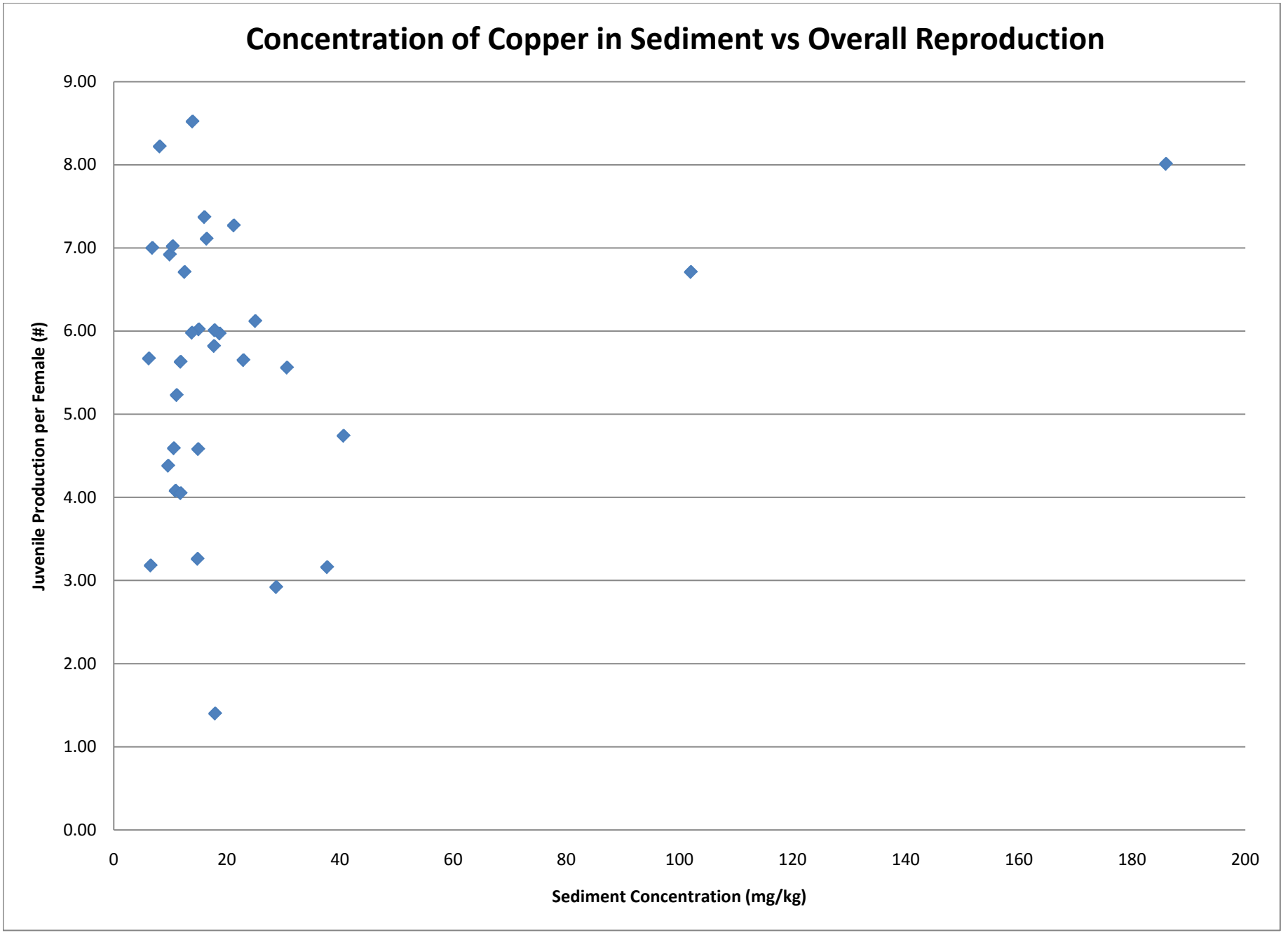

Concentration of HMW PAHs normalized in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
10000
20000
30000
40000
50000
60000
70000
80000
Sediment Concentration (ug/kg)

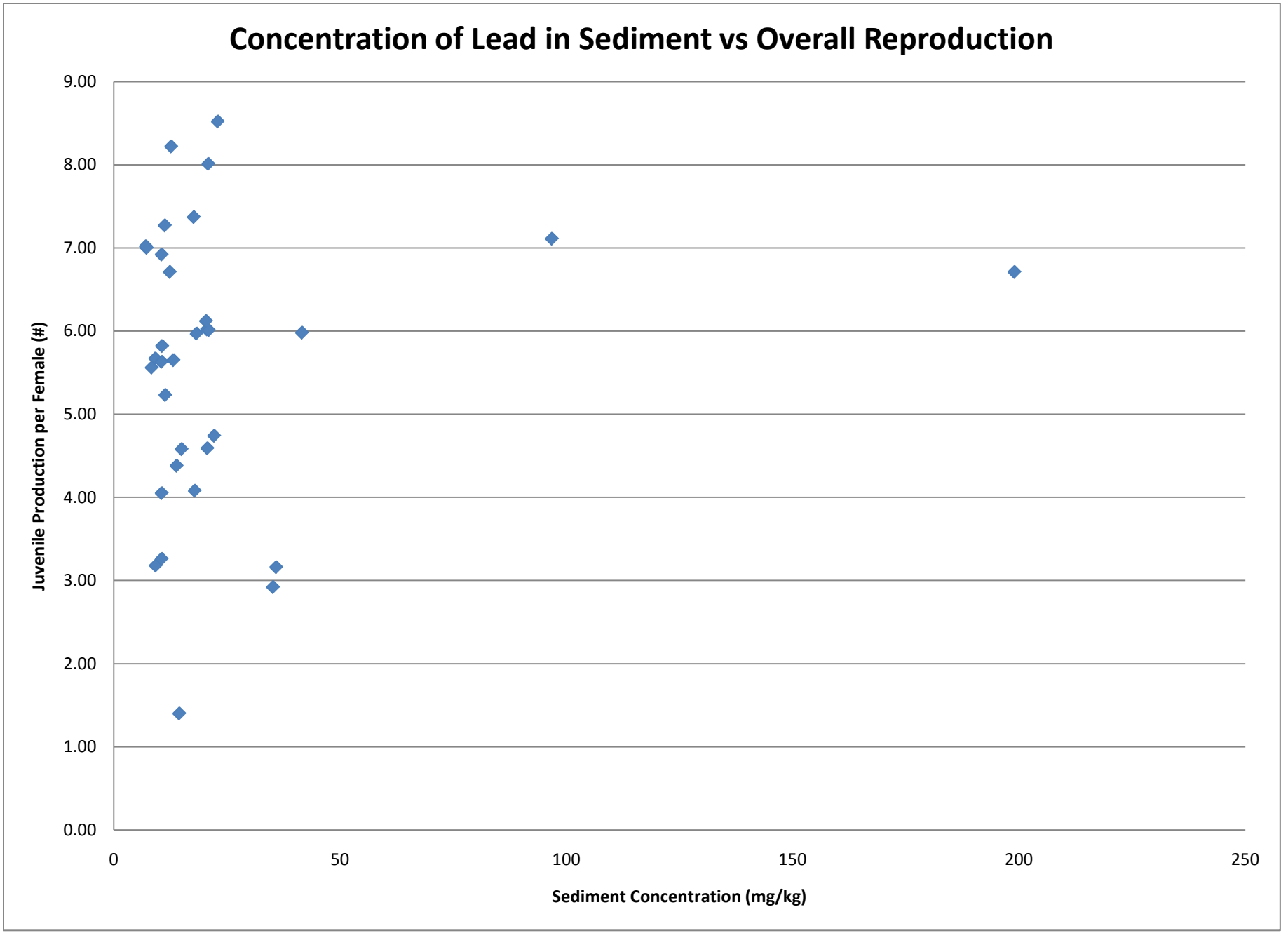

Concentration of LMW PAHs normalized in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
2000
4000
6000
8000
10000
12000
14000
16000
Sediment Concentration (ug/kg)

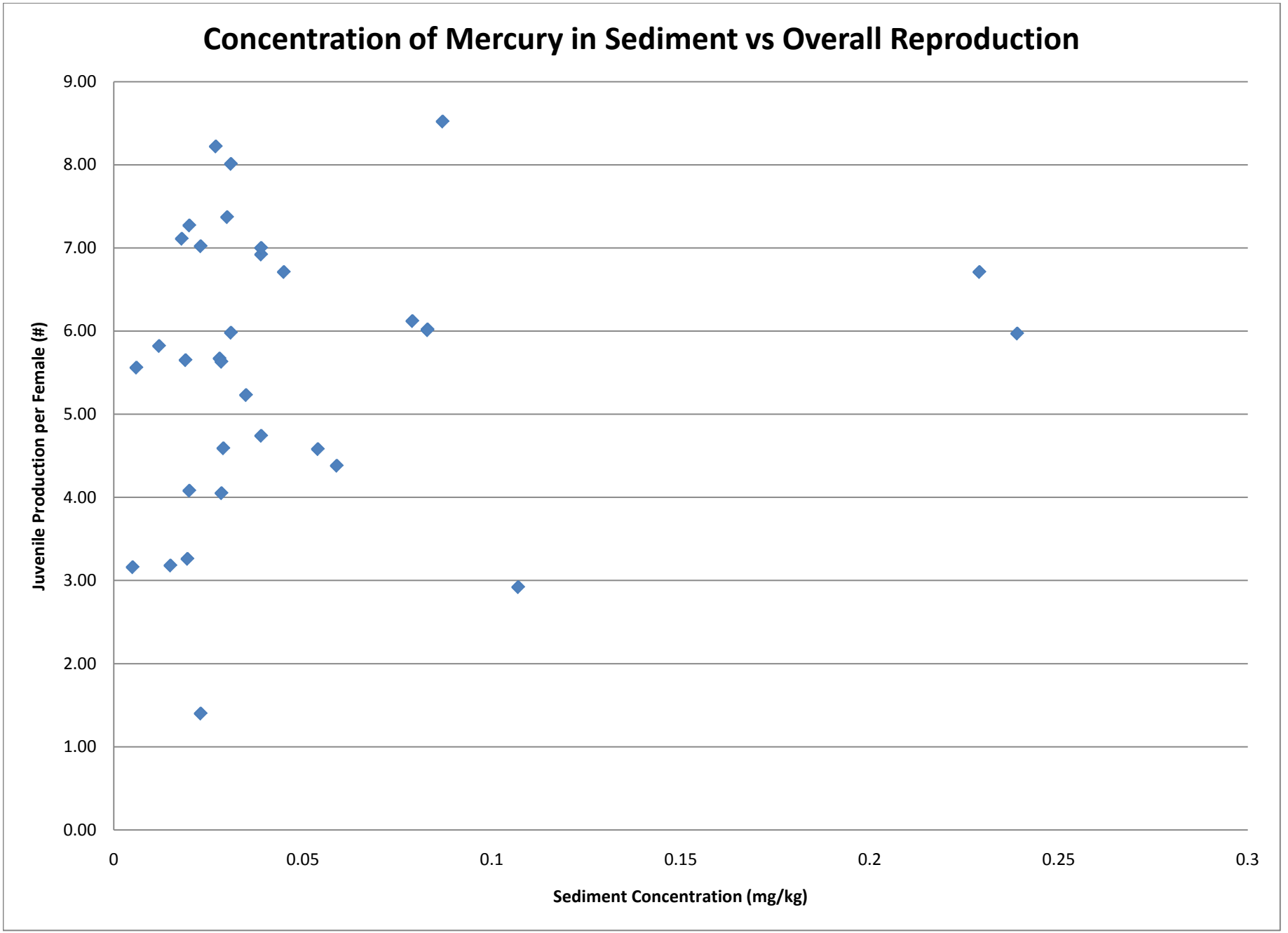

Concentration of total PAHs normalized in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
10000
20000
30000
40000
50000
60000
70000
80000
90000
100000
Sediment Concentration (ug/kg)

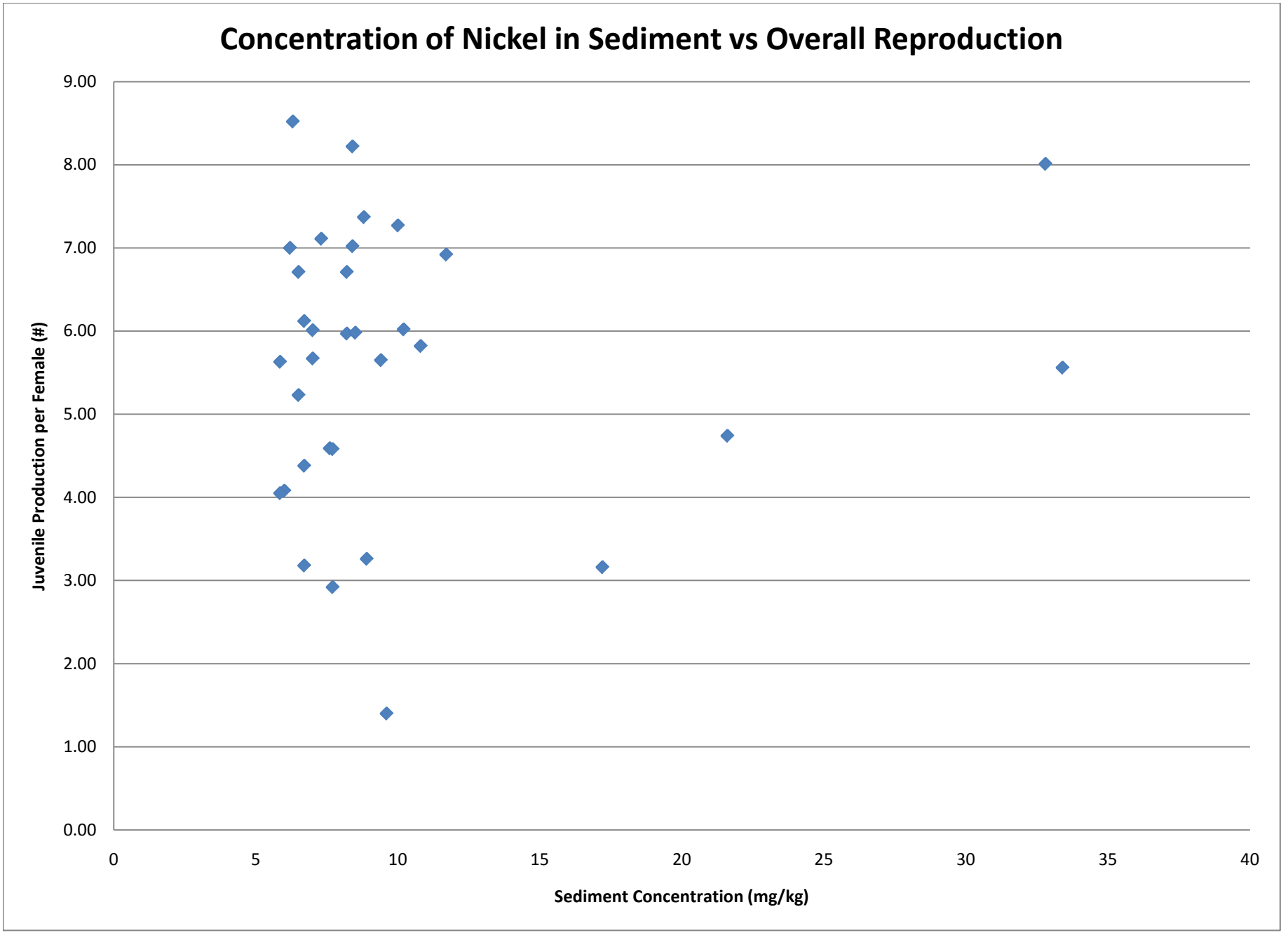

Concentration of total PCBs normalized in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
500
1000
1500
2000
2500
3000
3500
4000
Sediment Concentration (ug/kg)

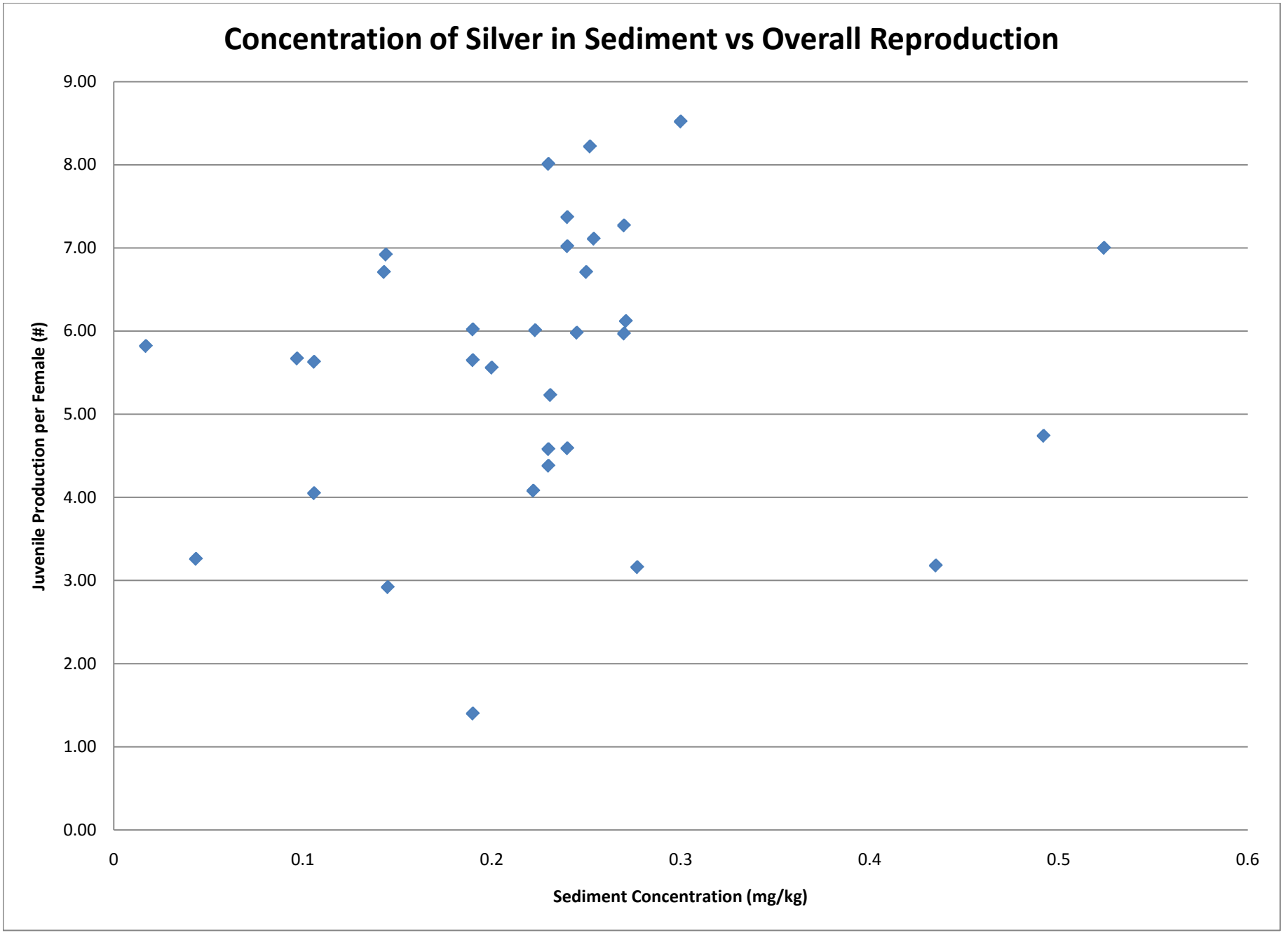

Concentration of Antimony in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
0.5
1
1.5
2
2.5
3
Sediment Concentration (mg/kg)

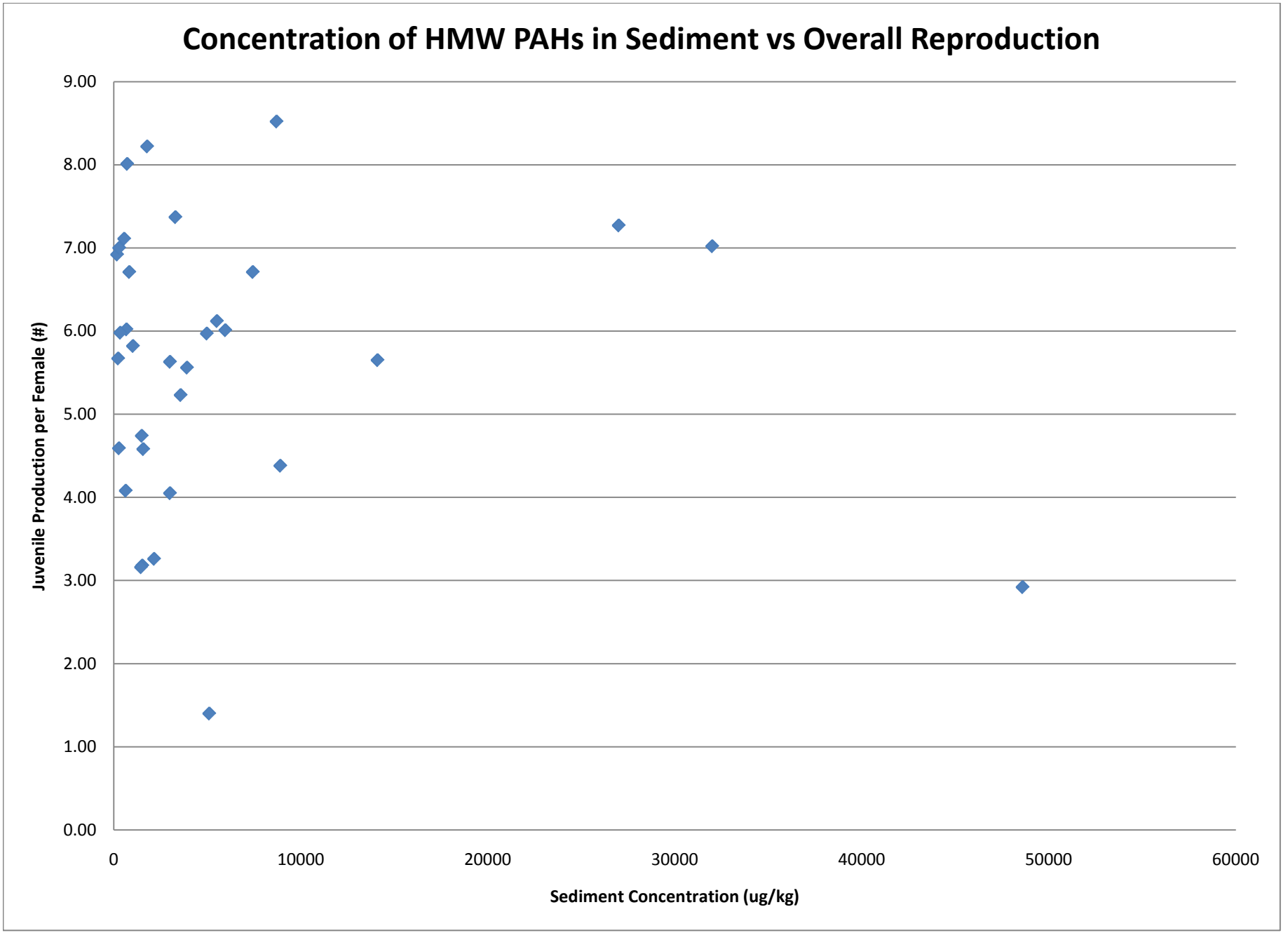

Concentration of Copper in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
20
40
60
80
100
120
140
160
180
200
Sediment Concentration (mg/kg)

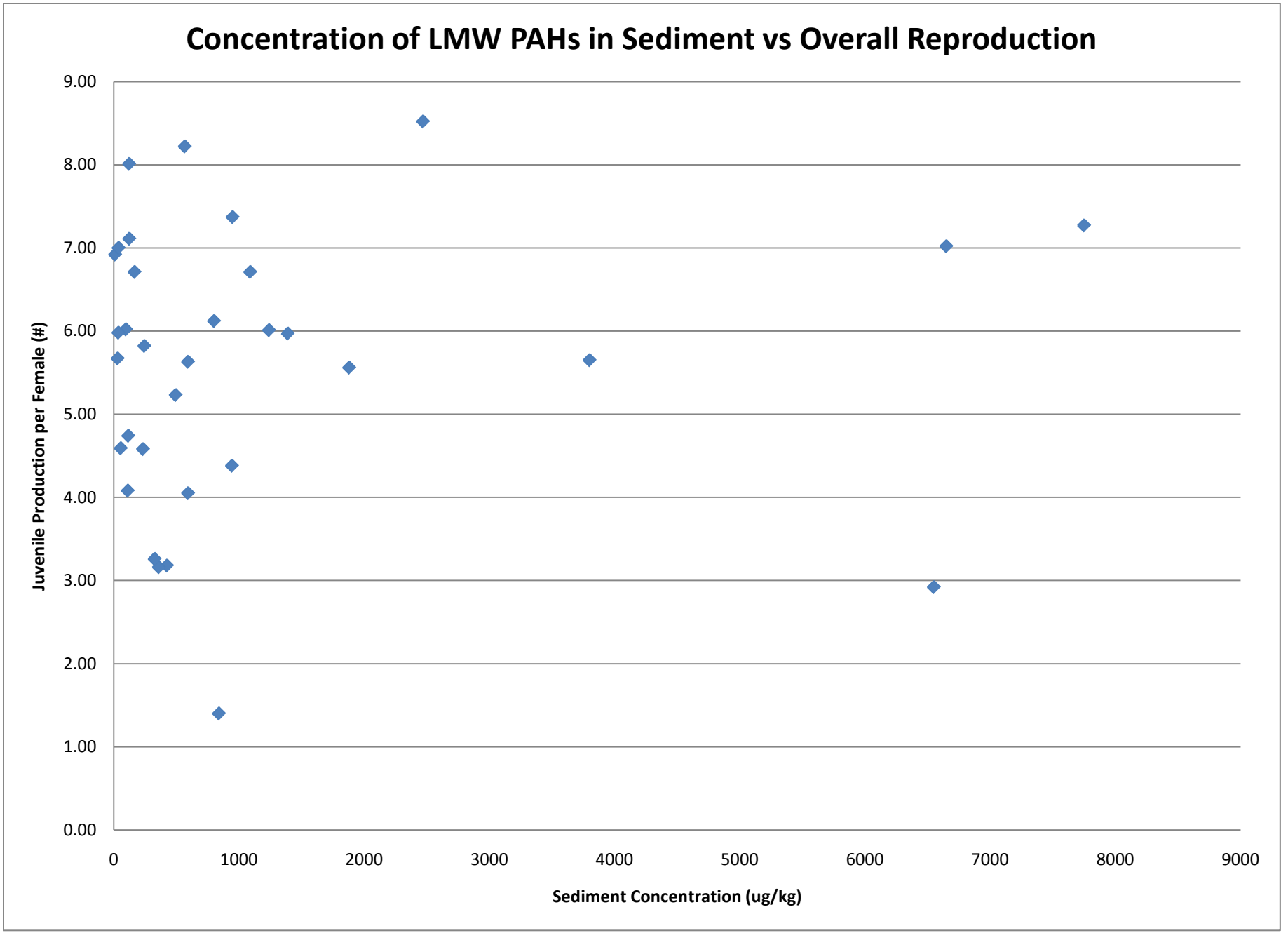

Concentration of Lead in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
50
100
150
200
250
Sediment Concentration (mg/kg)

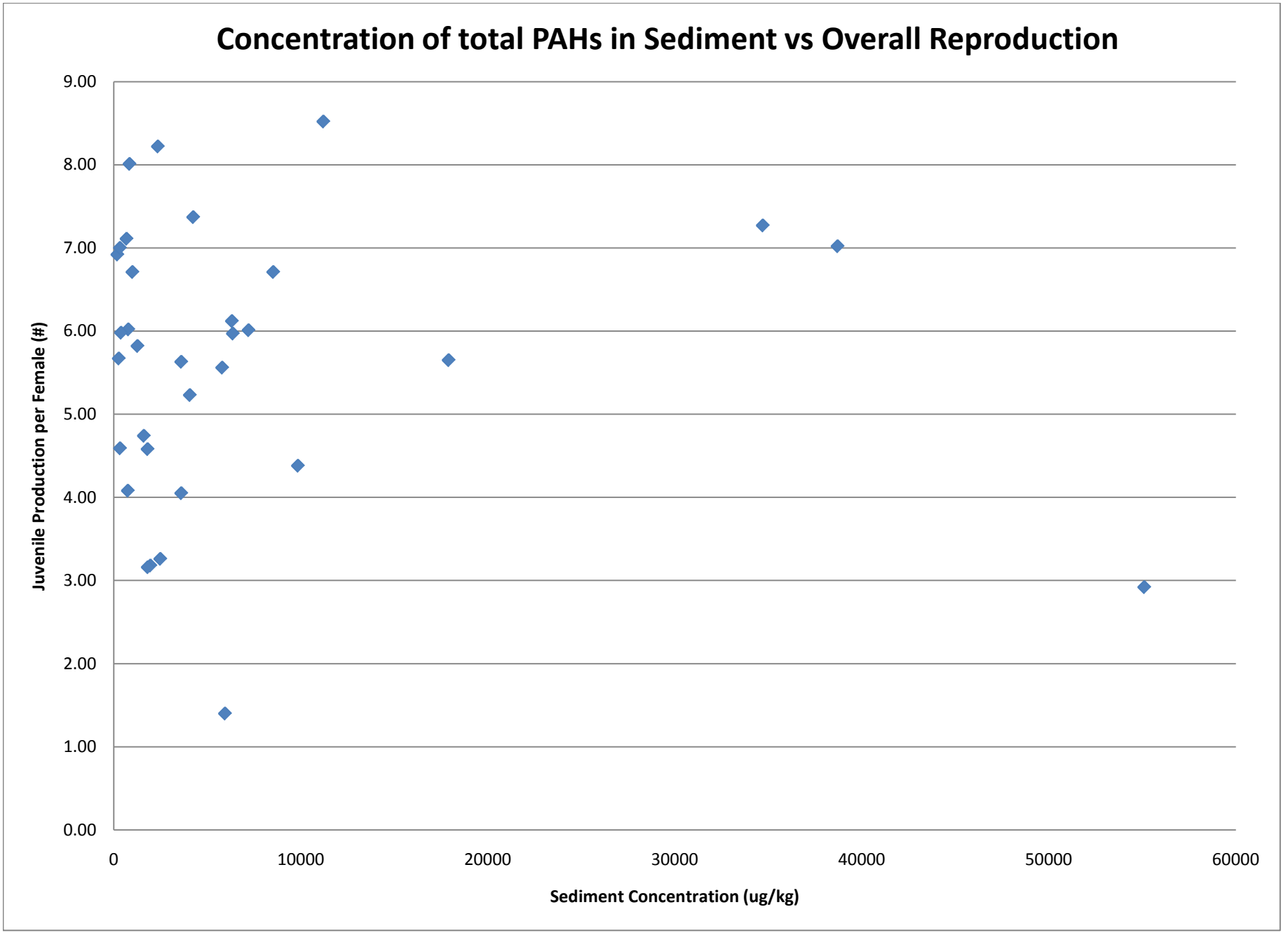

Concentration of Mercury in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
0.05
0.1
0.15
0.2
0.25
0.3
Sediment Concentration (mg/kg)

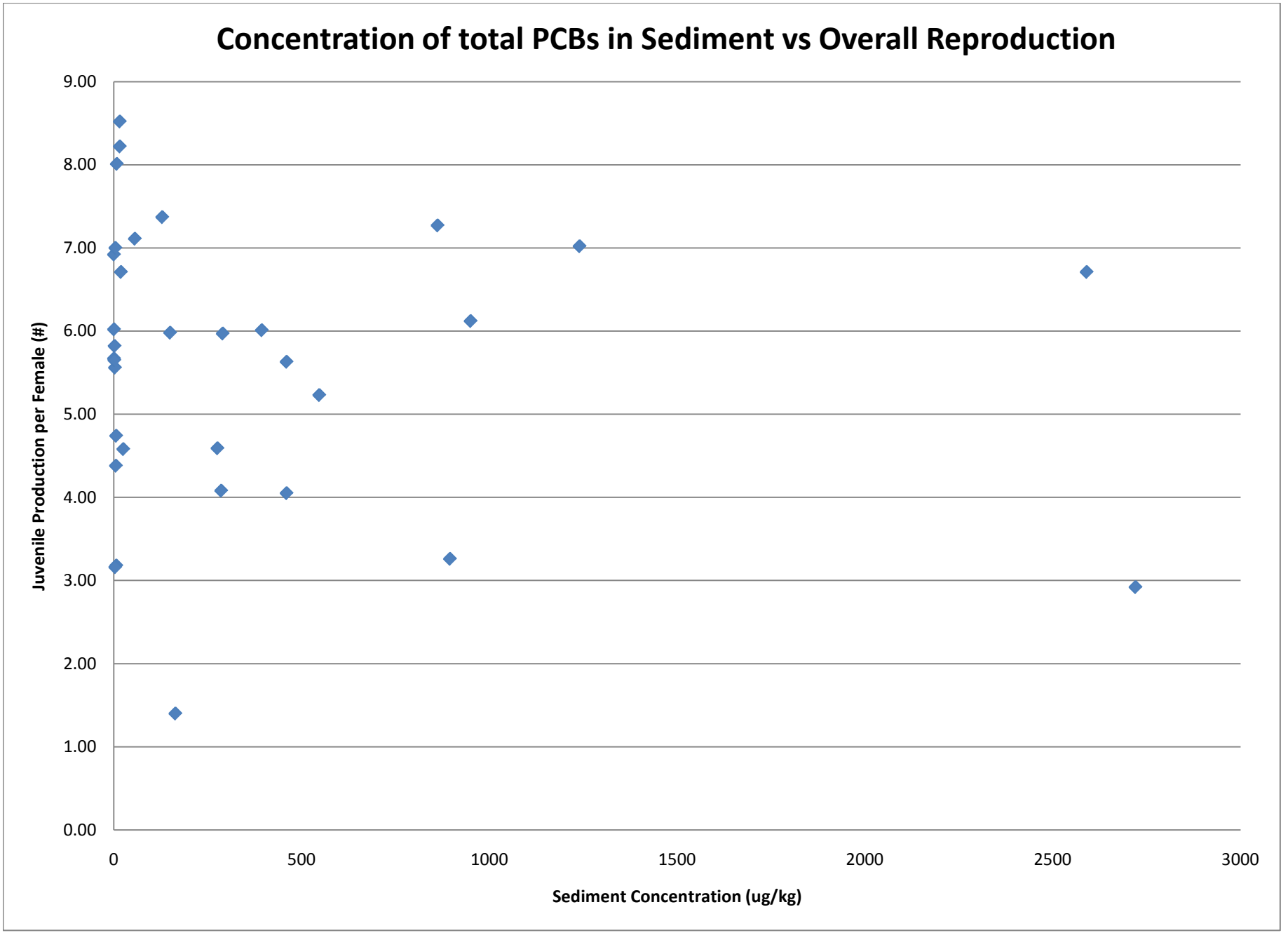

Concentration of Nickel in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
5
10
15
20
25
30
35
40
Sediment Concentration (mg/kg)

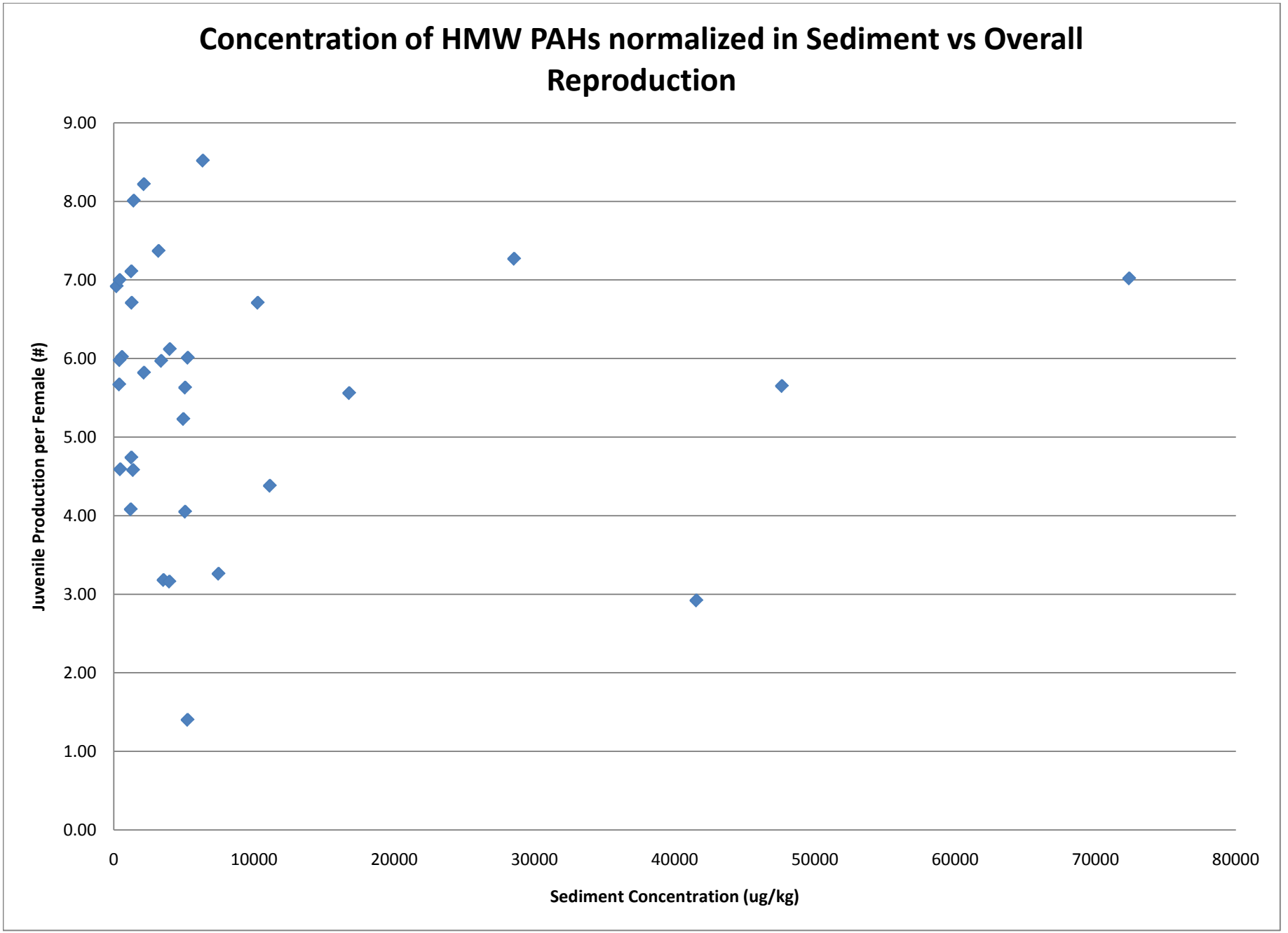

Concentration of Silver in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
0.1
0.2
0.3
0.4
0.5
0.6
Sediment Concentration (mg/kg)

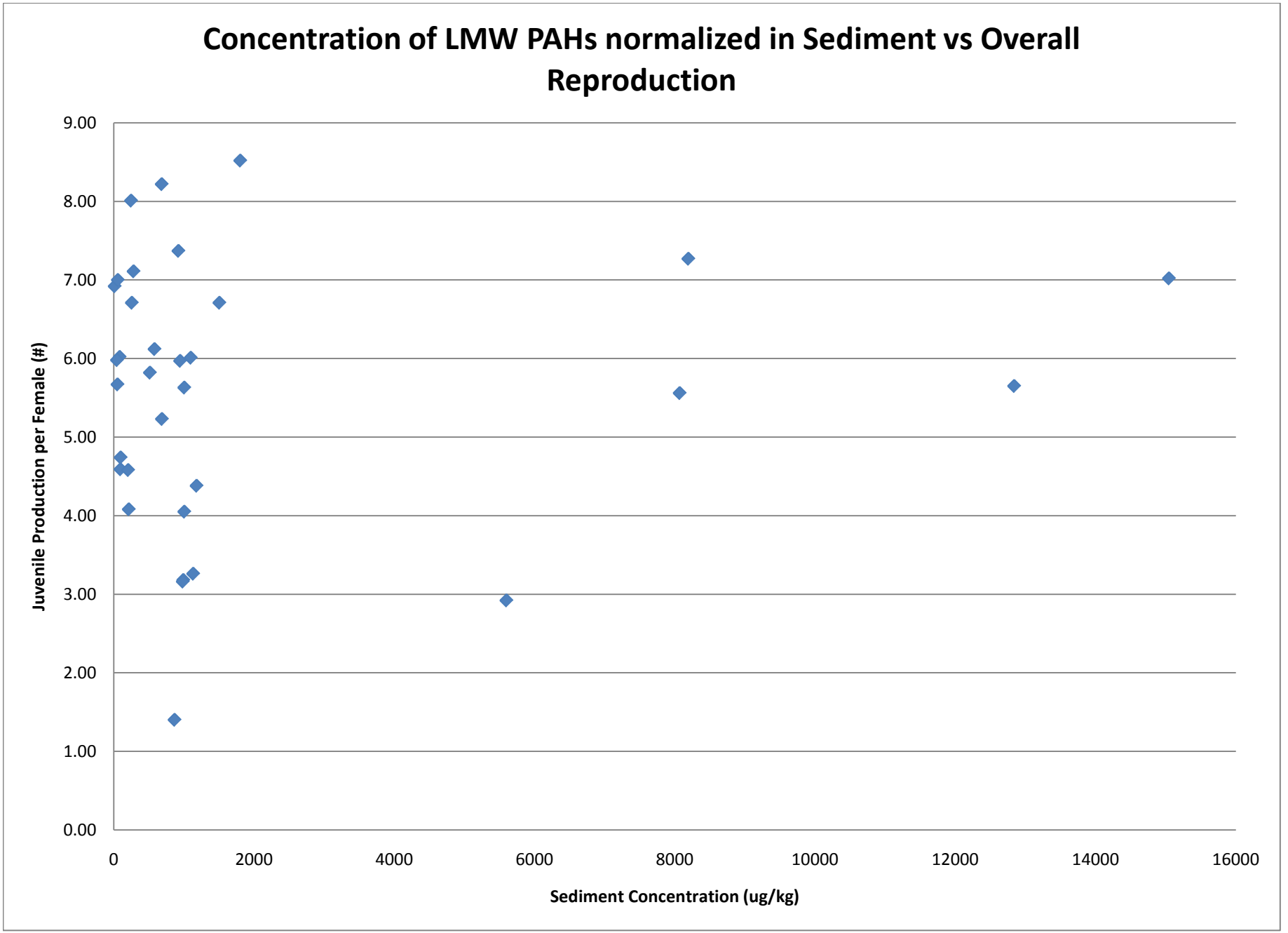

Concentration of HMW PAHs in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
10000
20000
30000
40000
50000
60000
Sediment Concentration (ug/kg)

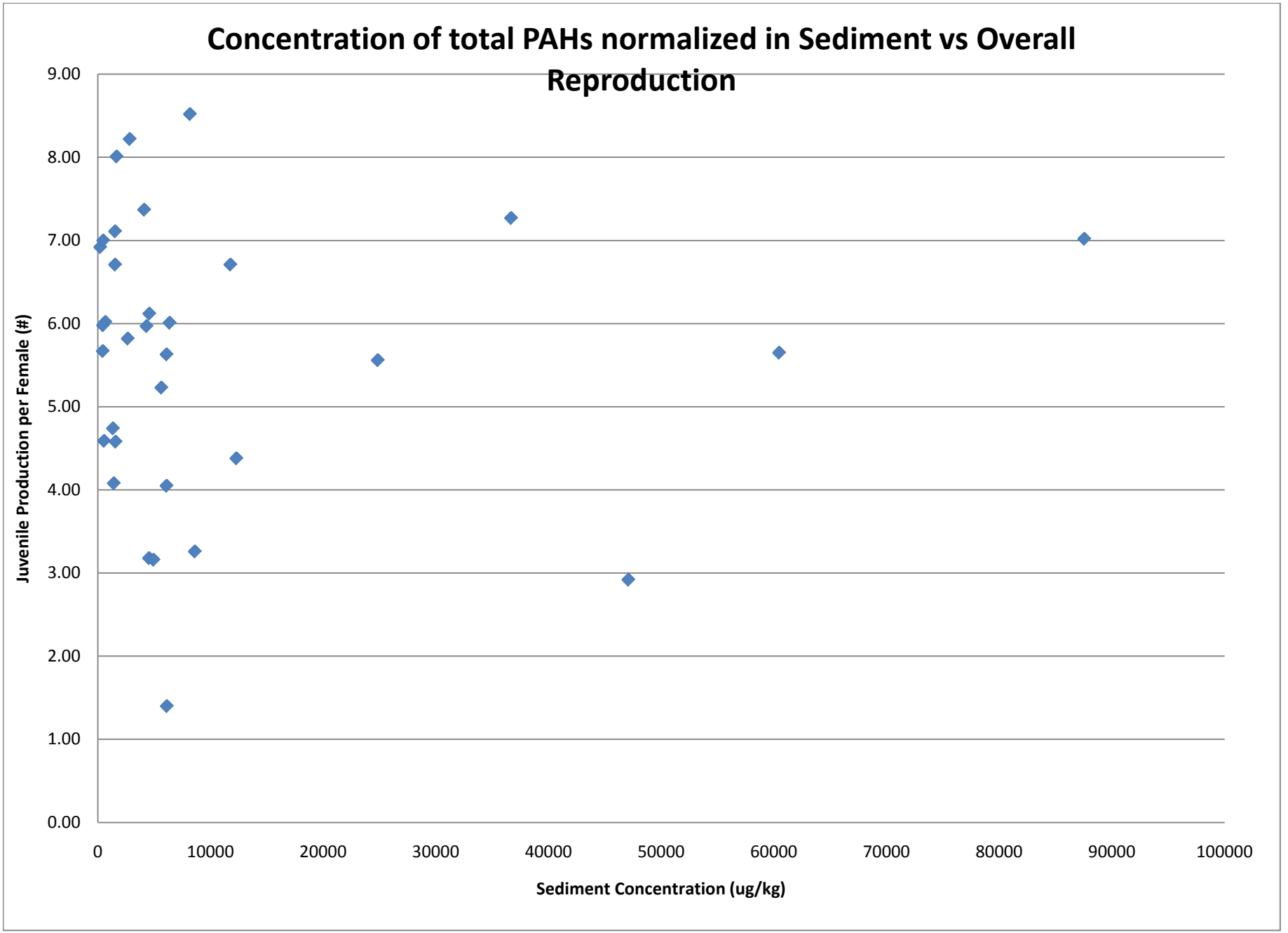

Concentration of LMW PAHs in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
Sediment Concentration (ug/kg)

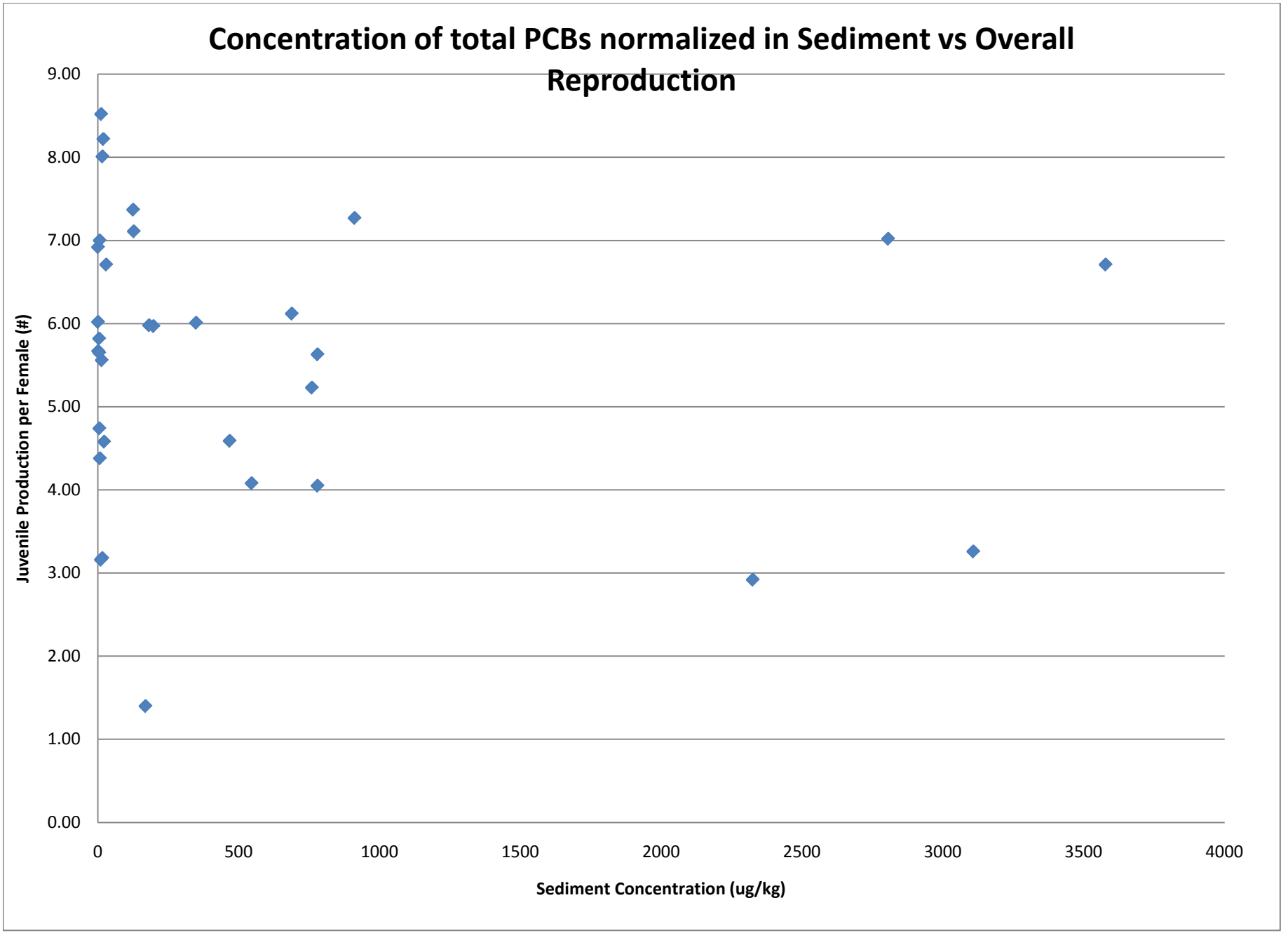

Concentration of total PAHs in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
10000
20000
30000
40000
50000
60000
Sediment Concentration (ug/kg)

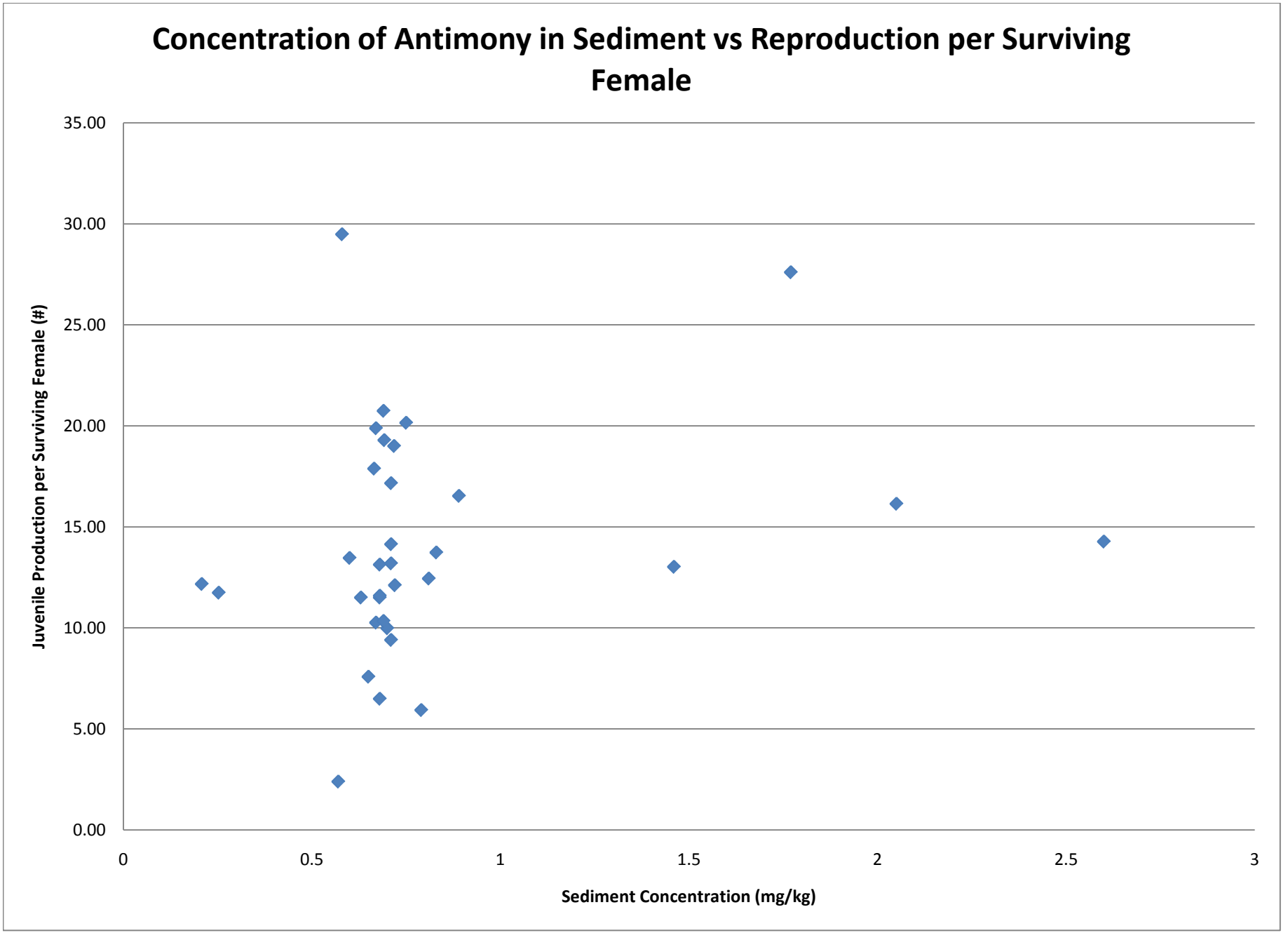

Concentration of total PCBs in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
500
1000
1500
2000
2500
3000
Sediment Concentration (ug/kg)

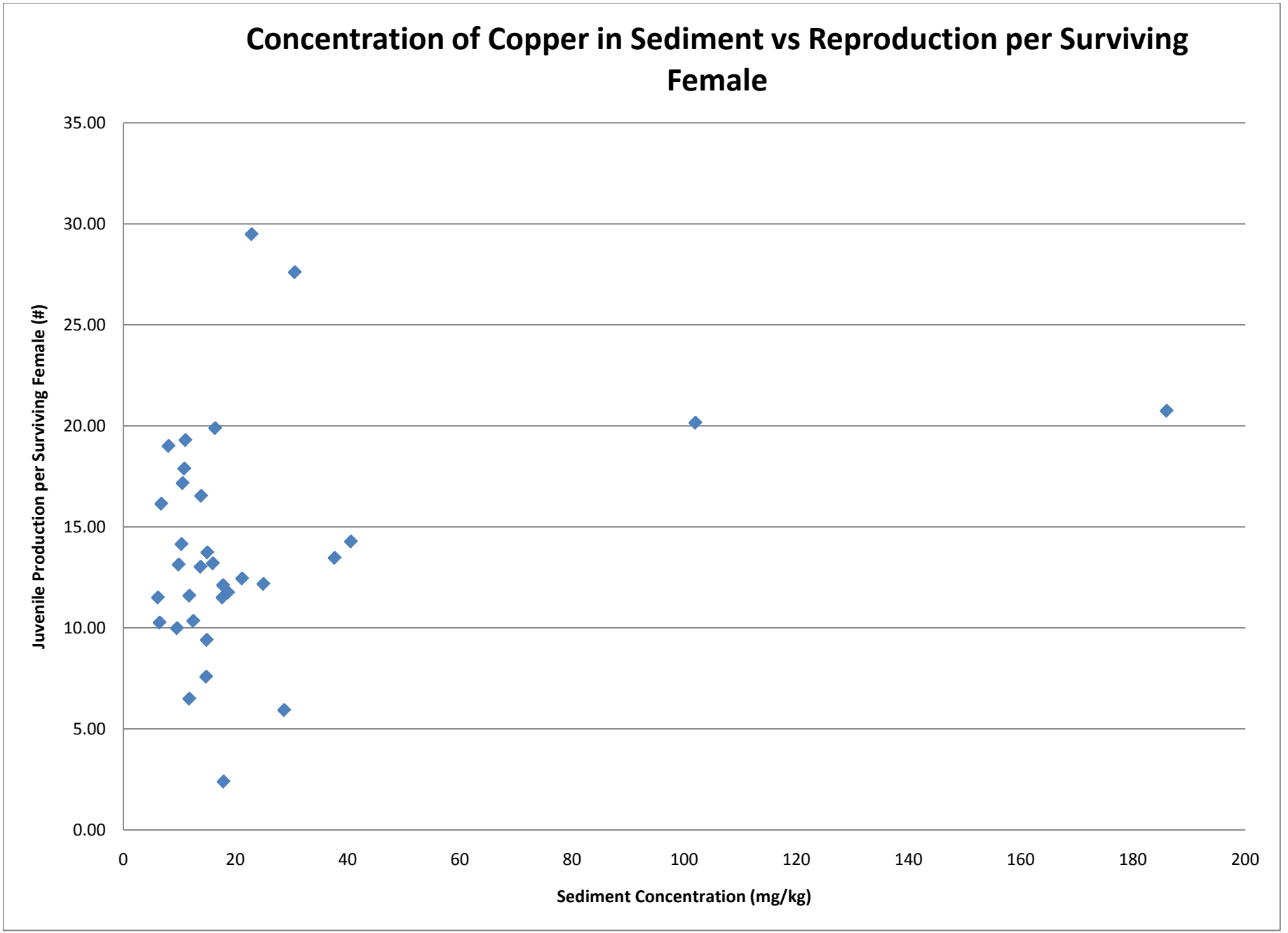

Concentration of HMW PAHs normalized in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
10000
20000
30000
40000
50000
60000
70000
80000
Sediment Concentration (ug/kg)

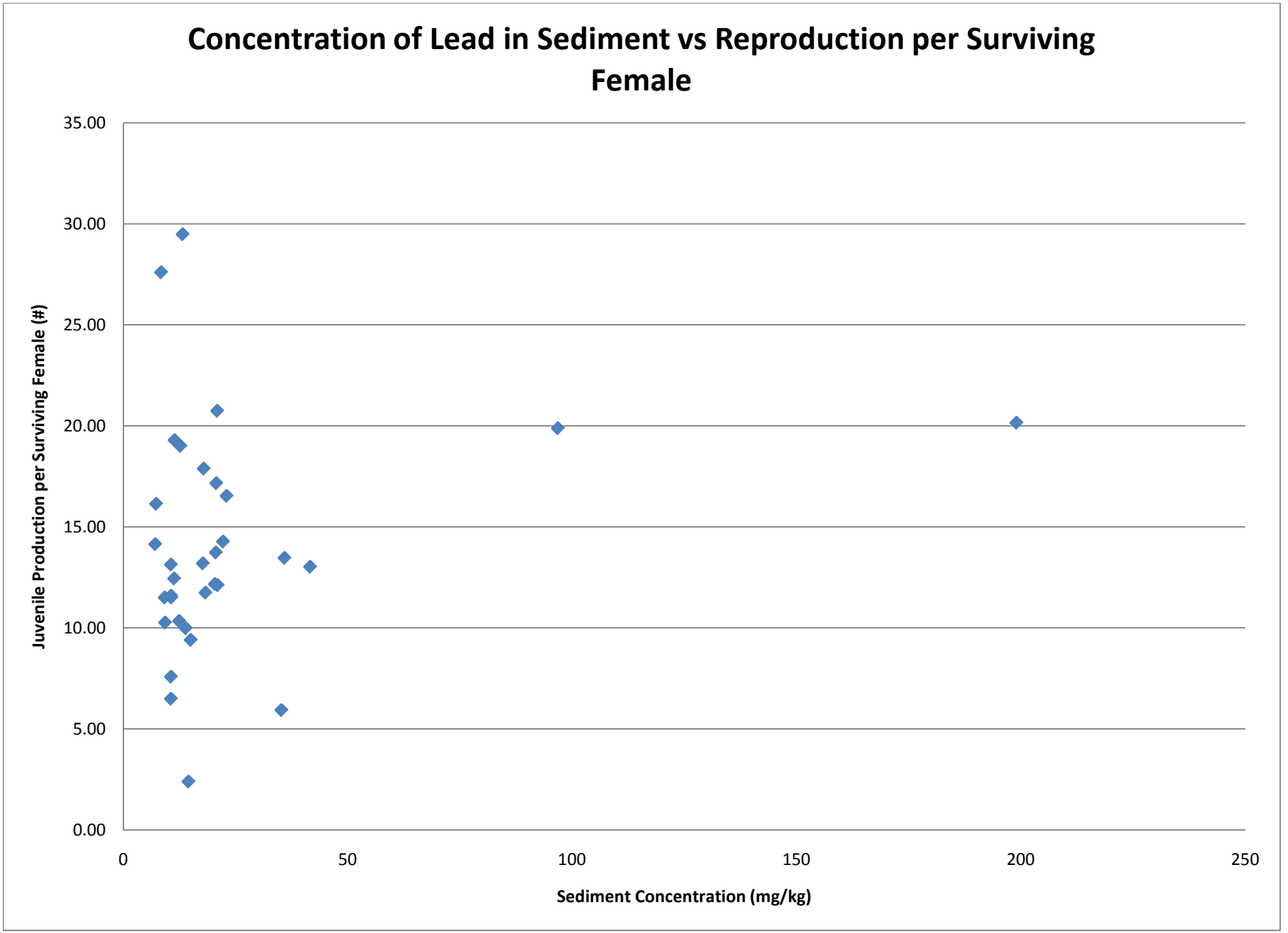

Concentration of LMW PAHs normalized in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
2000
4000
6000
8000
10000
12000
14000
16000
Sediment Concentration (ug/kg)

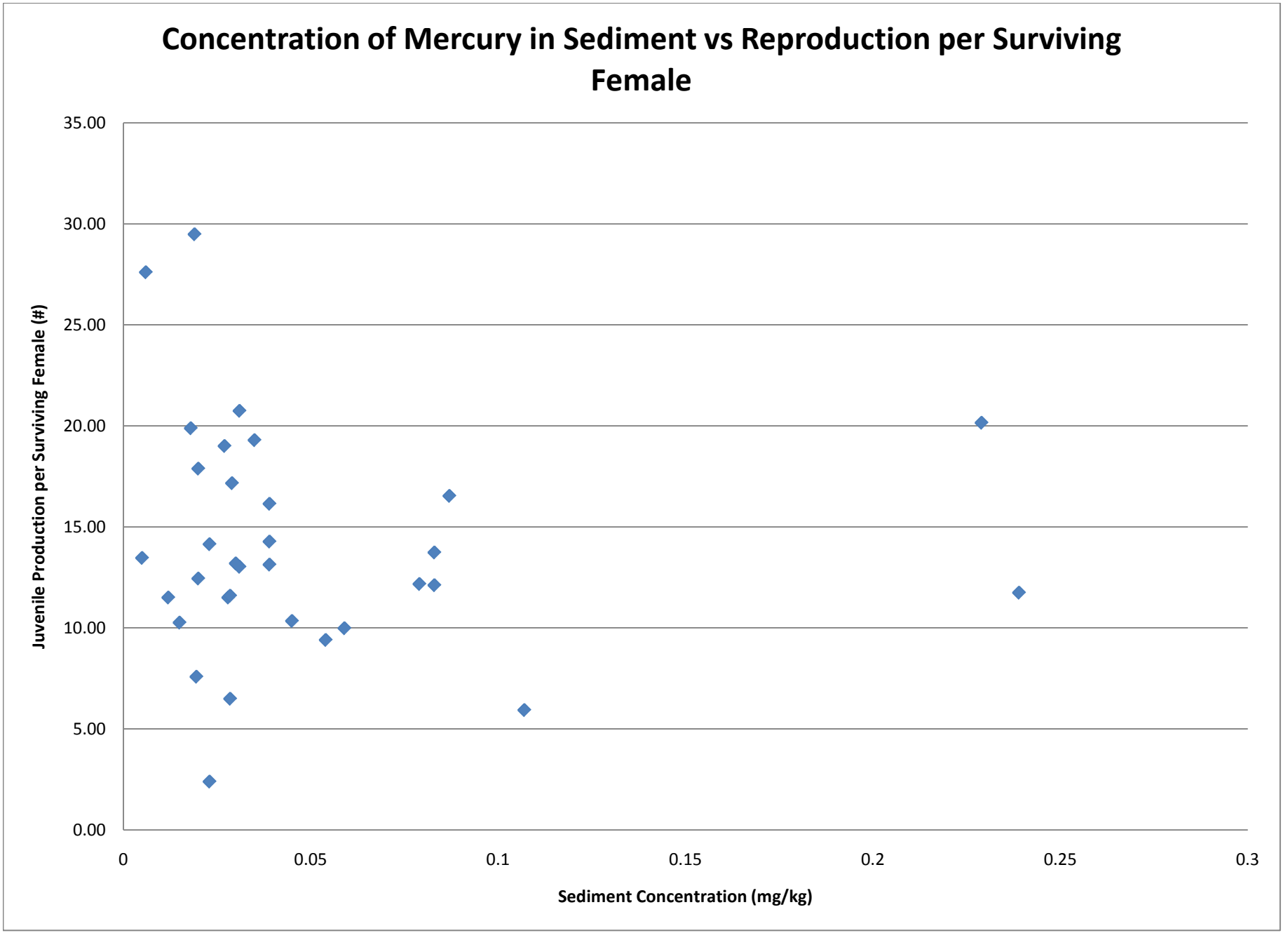

Concentration of total PAHs normalized in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
10000
20000
30000
40000
50000
60000
70000
80000
90000
100000
Sediment Concentration (ug/kg)

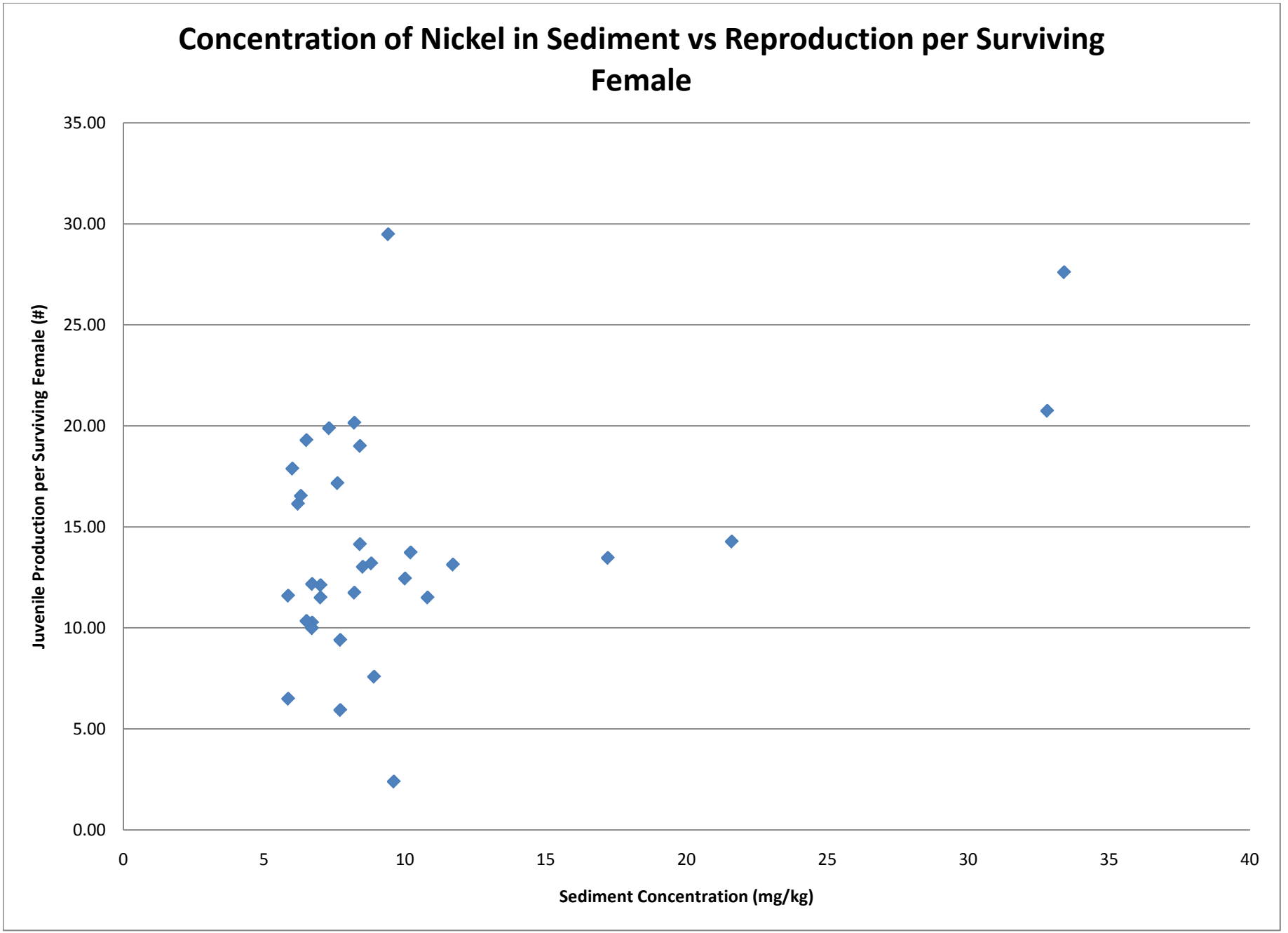

Concentration of total PCBs normalized in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
500
1000
1500
2000
2500
3000
3500
4000
Sediment Concentration (ug/kg)

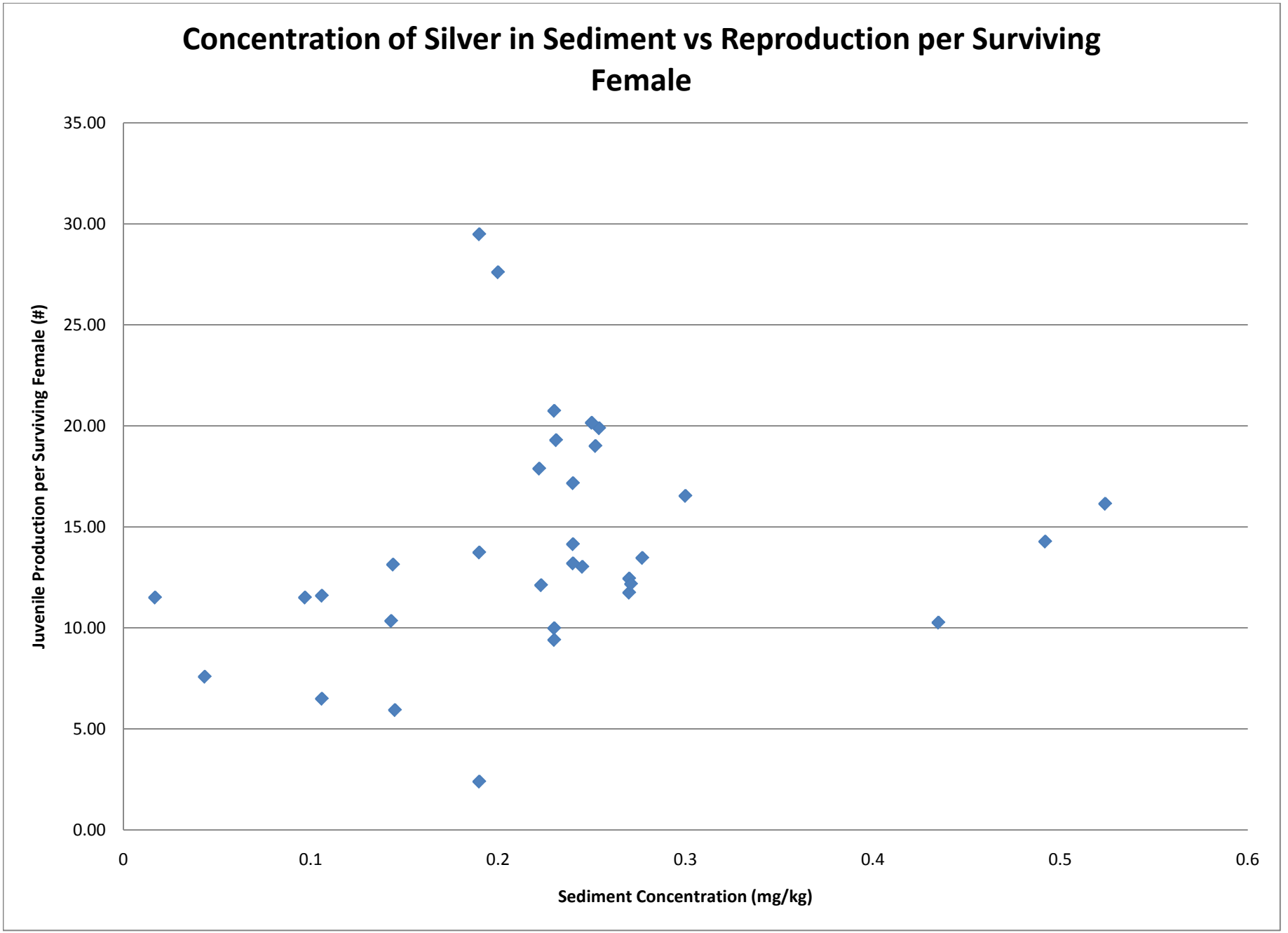

Concentration of Antimony in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
0.5
1
1.5
2
2.5
3
Sediment Concentration (mg/kg)

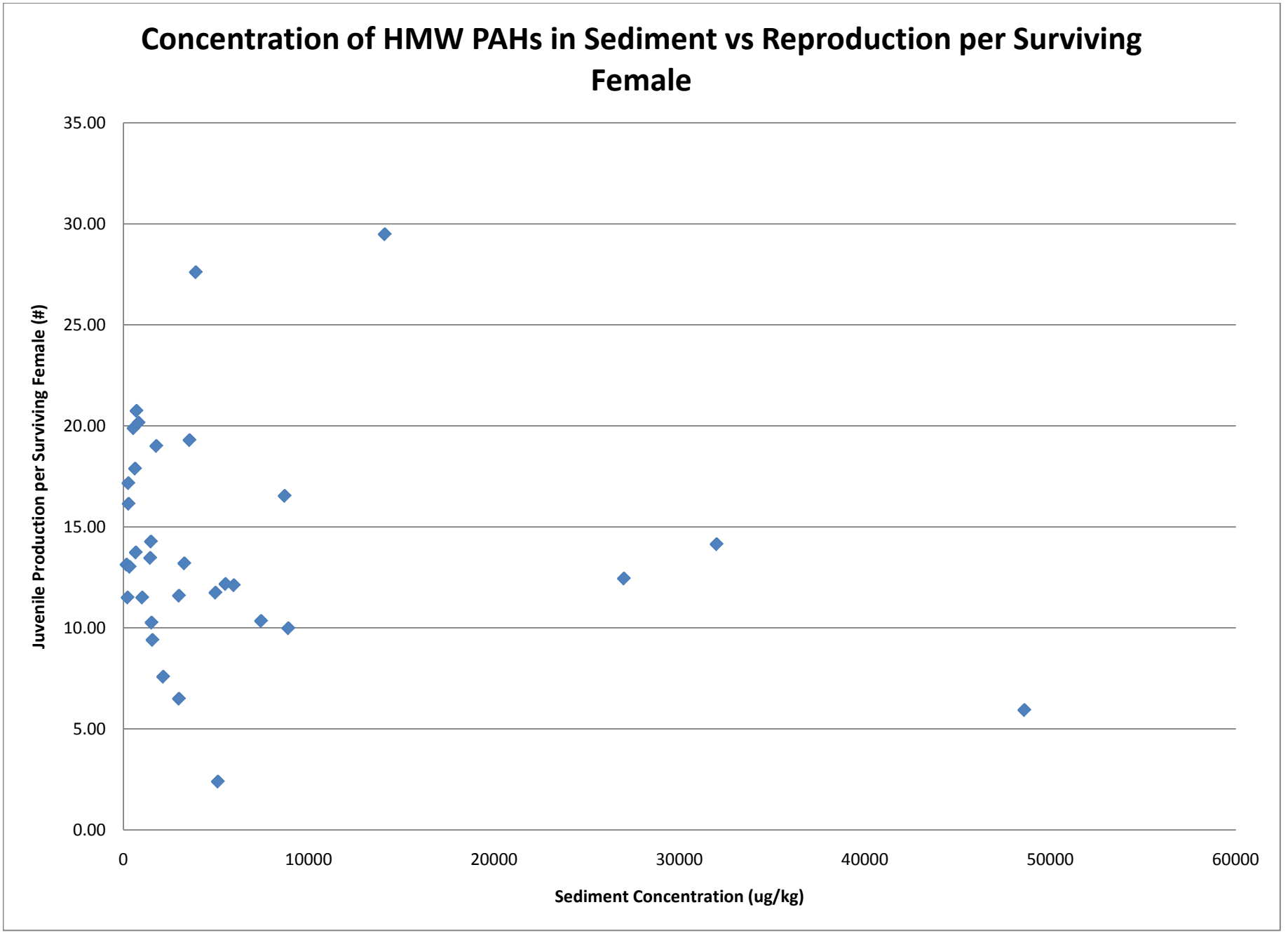

Concentration of Copper in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
20
40
60
80
100
120
140
160
180
200
Sediment Concentration (mg/kg)

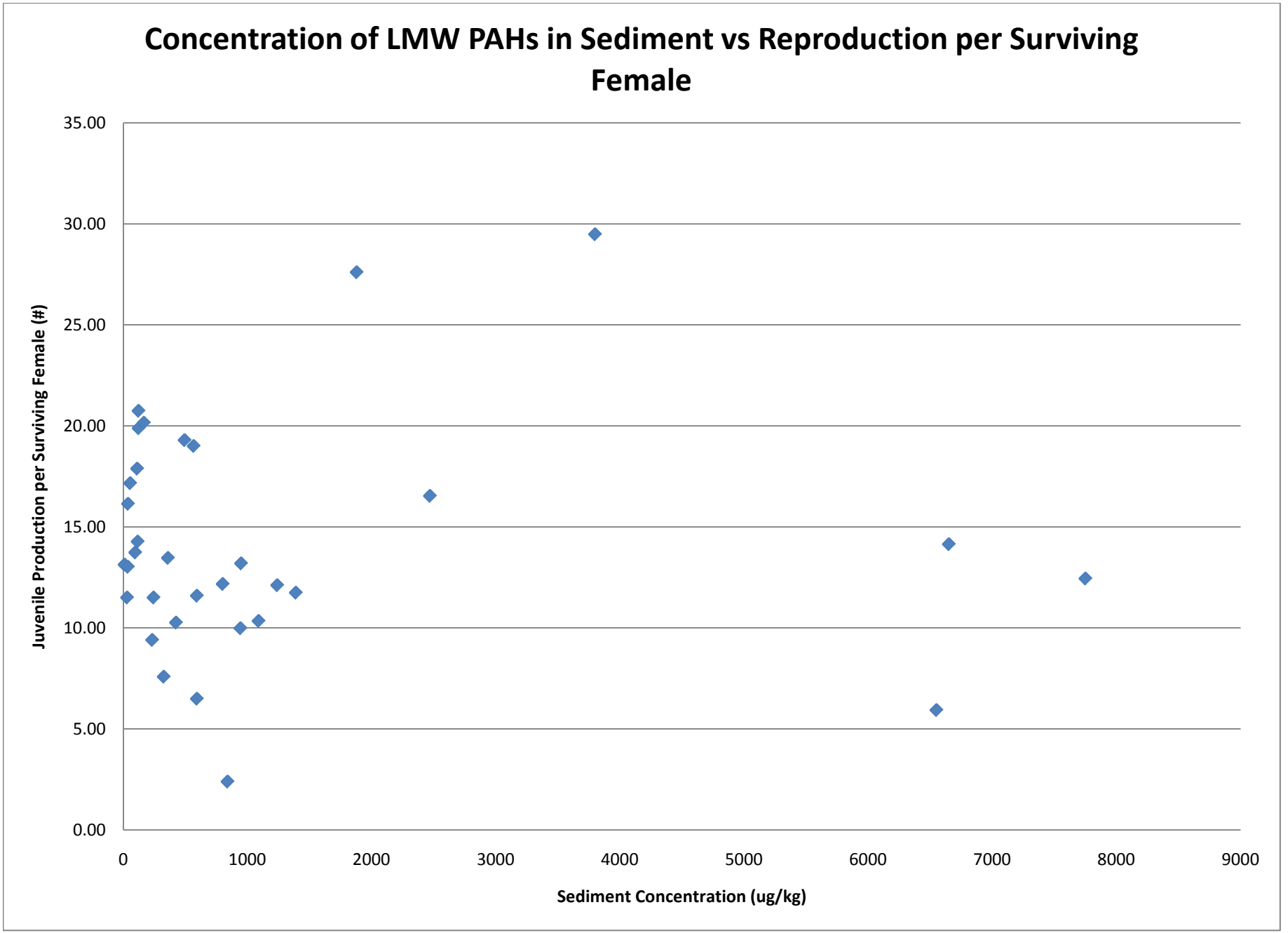

Concentration of Lead in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
50
100
150
200
250
Sediment Concentration (mg/kg)

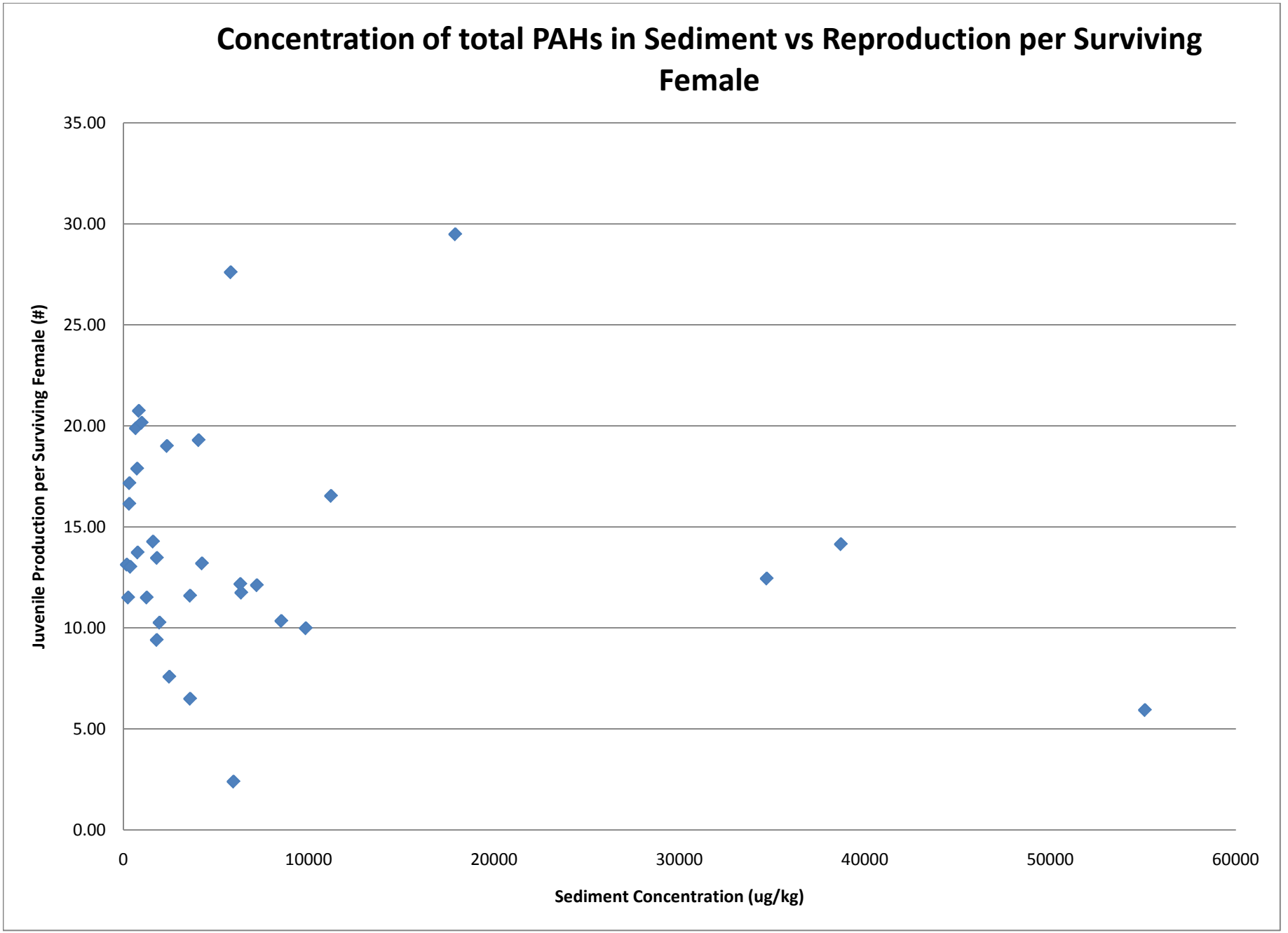

Concentration of Mercury in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
0.05
0.1
0.15
0.2
0.25
0.3
Sediment Concentration (mg/kg)

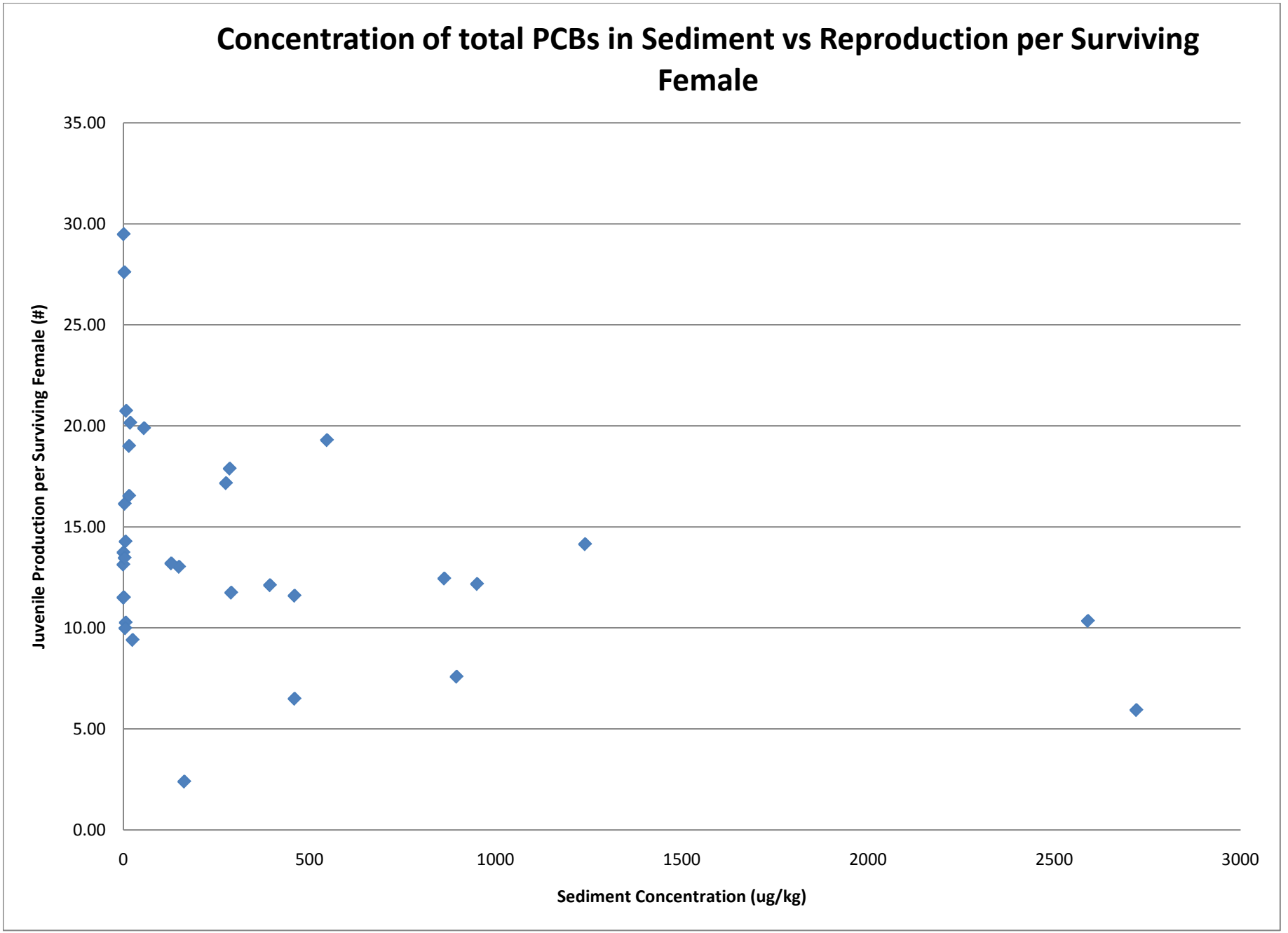

Concentration of Nickel in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
5
10
15
20
25
30
35
40
Sediment Concentration (mg/kg)

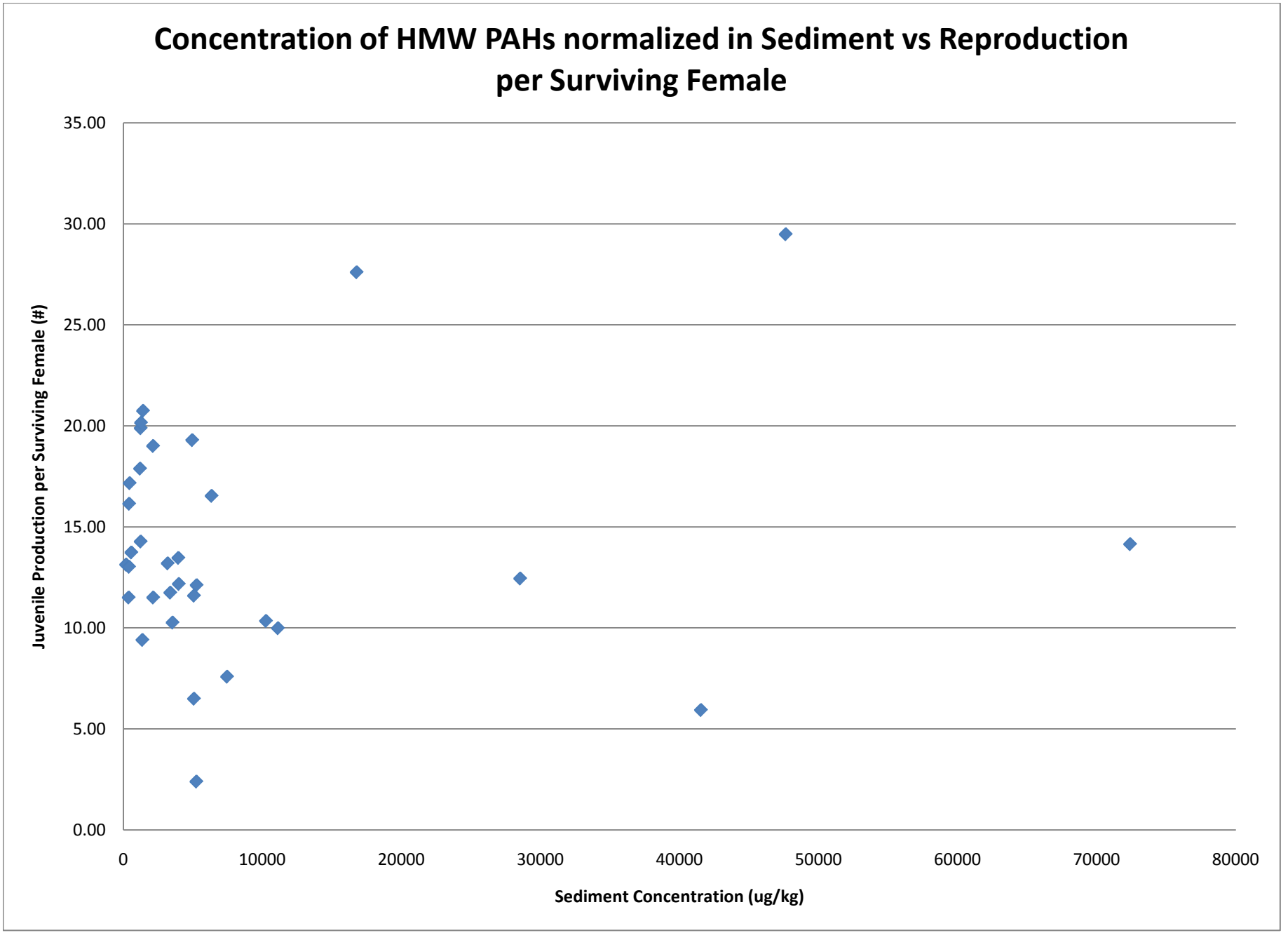

Concentration of Silver in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
0.1
0.2
0.3
0.4
0.5
0.6
Sediment Concentration (mg/kg)

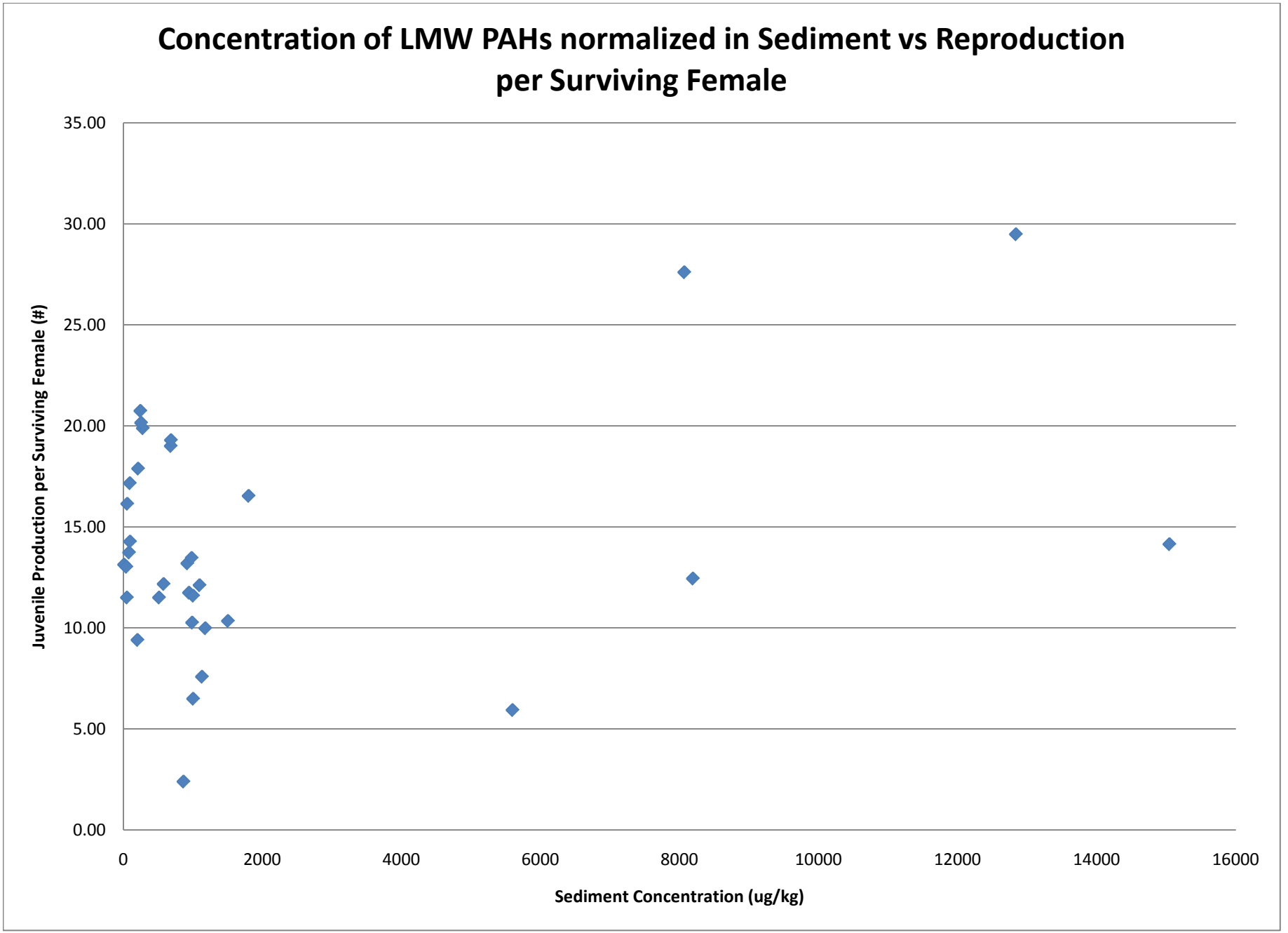

Concentration of HMW PAHs in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
10000
20000
30000
40000
50000
60000
Sediment Concentration (ug/kg)

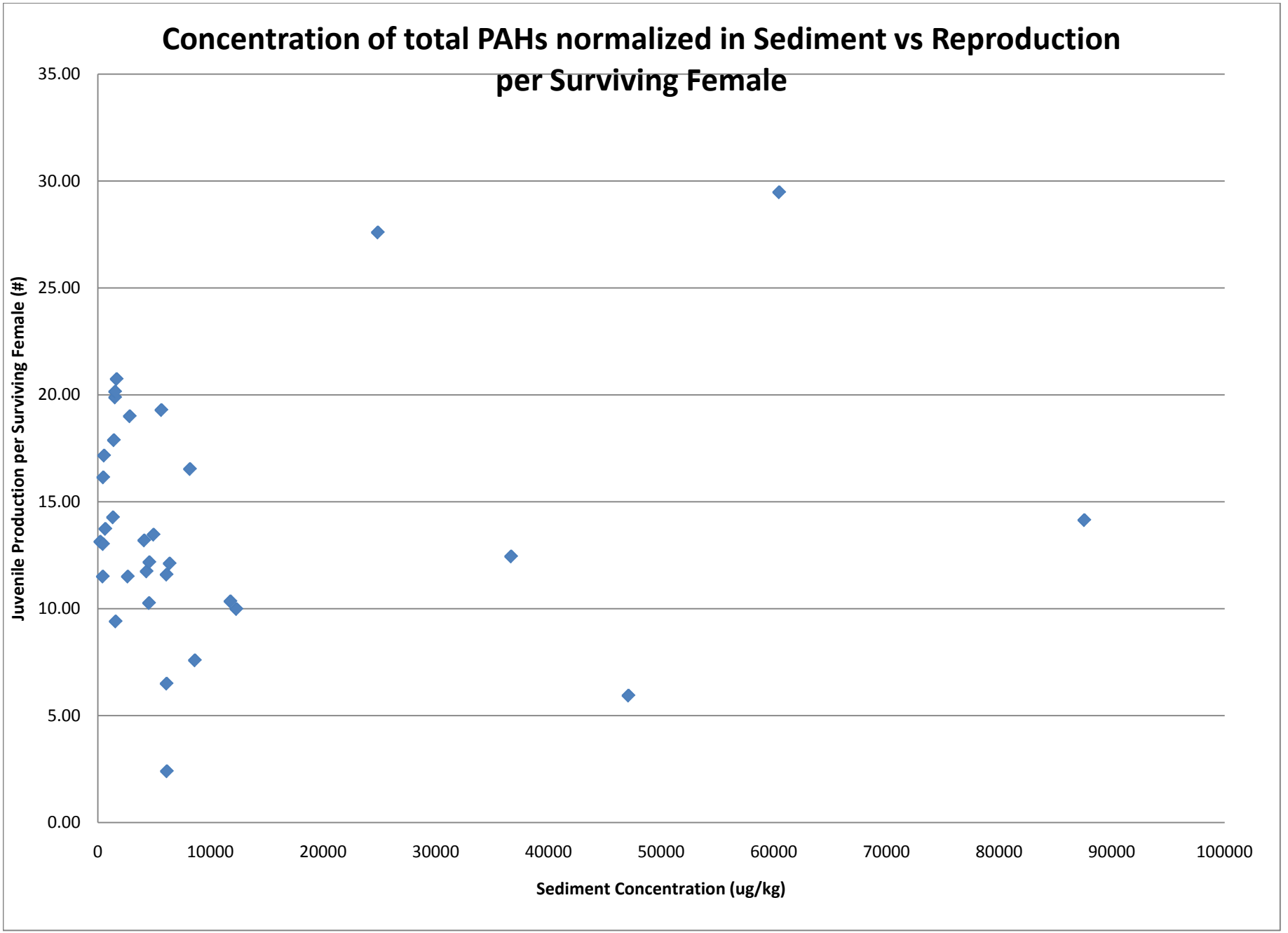

Concentration of LMW PAHs in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
Sediment Concentration (ug/kg)

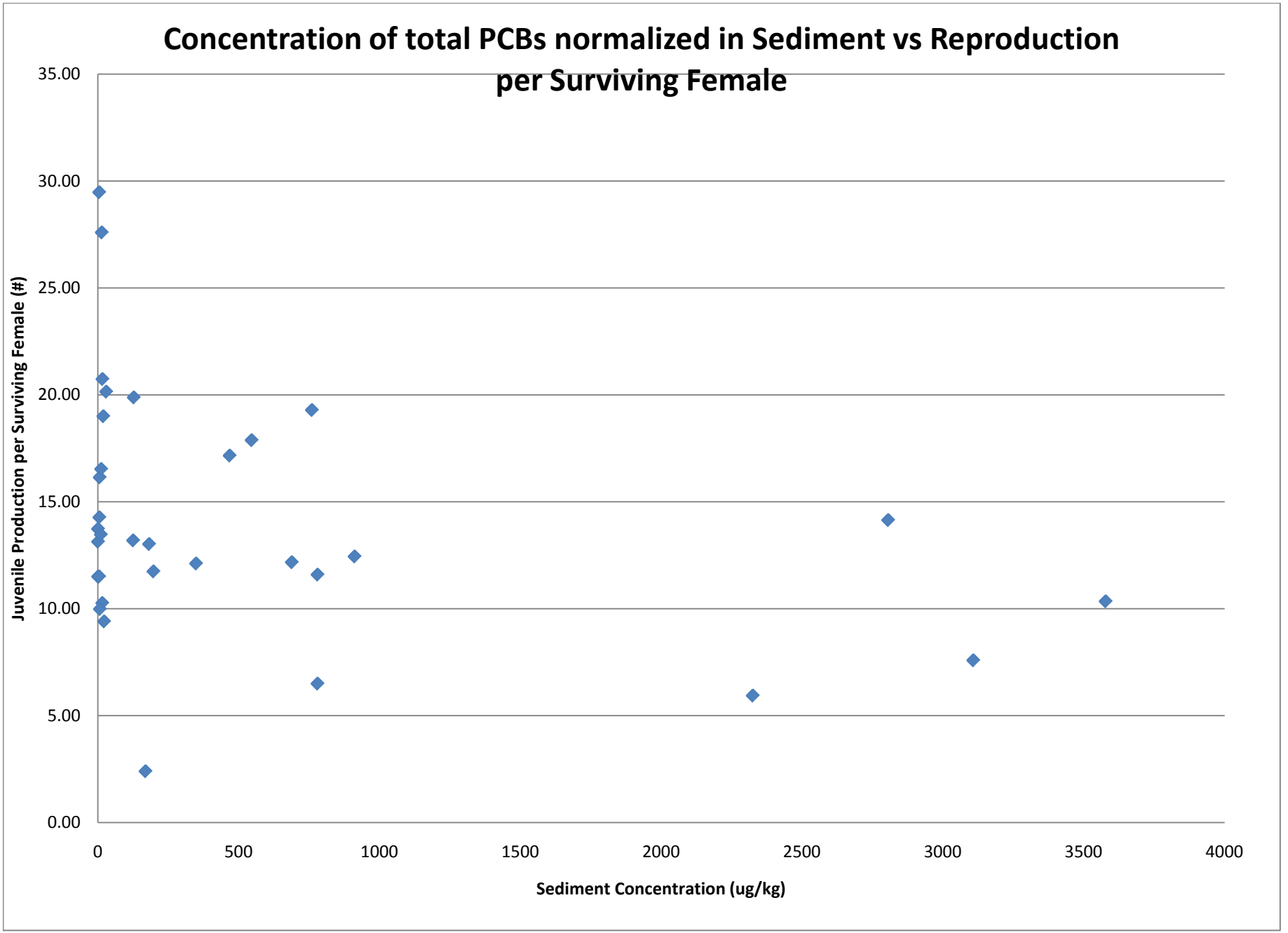

Concentration of total PAHs in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
10000
20000
30000
40000
50000
60000
Sediment Concentration (ug/kg)

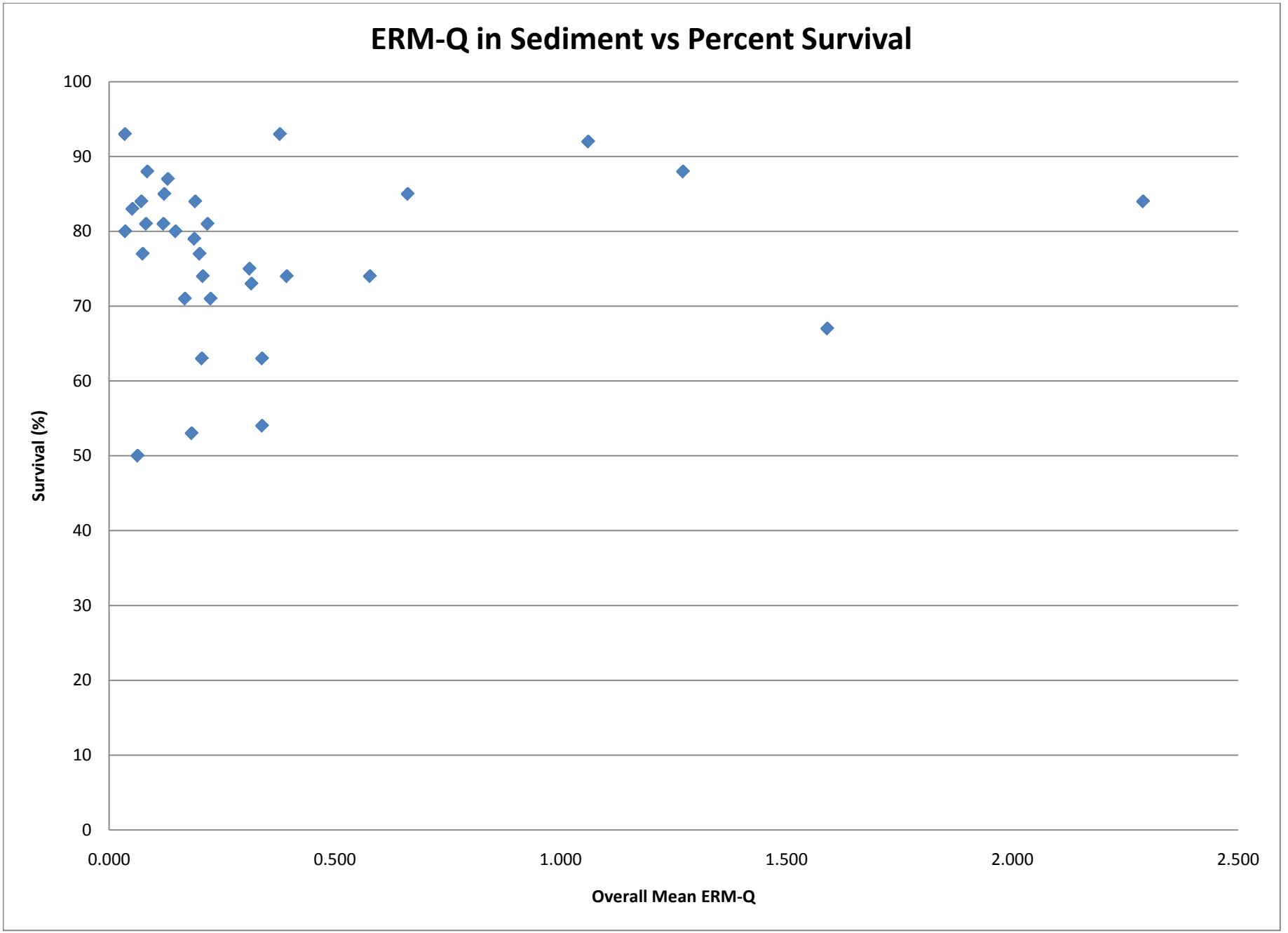

Concentration of total PCBs in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
500
1000
1500
2000
2500
3000
Sediment Concentration (ug/kg)

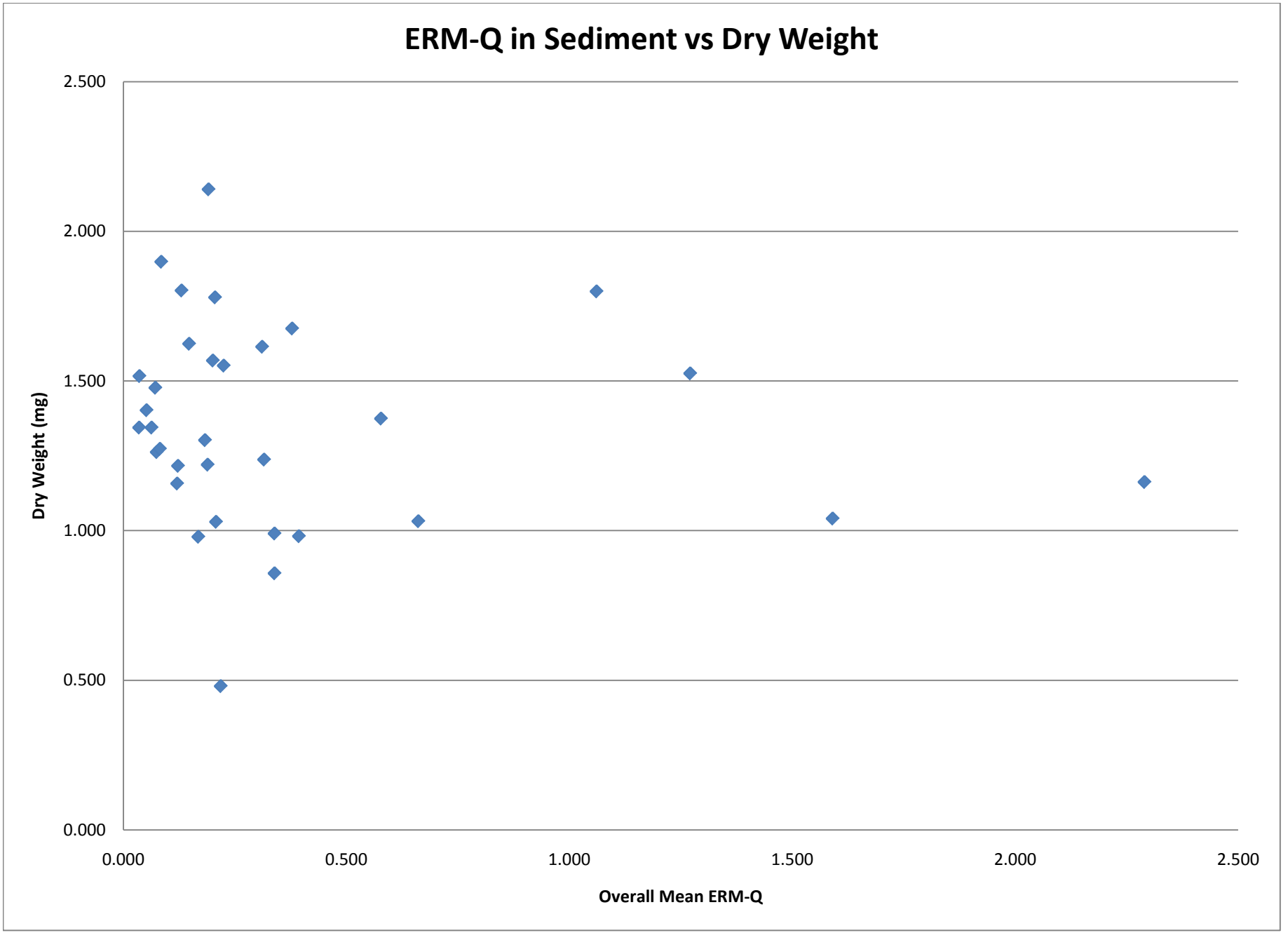

Concentration of HMW PAHs normalized in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
10000
20000
30000
40000
50000
60000
70000
80000
Sediment Concentration (ug/kg)

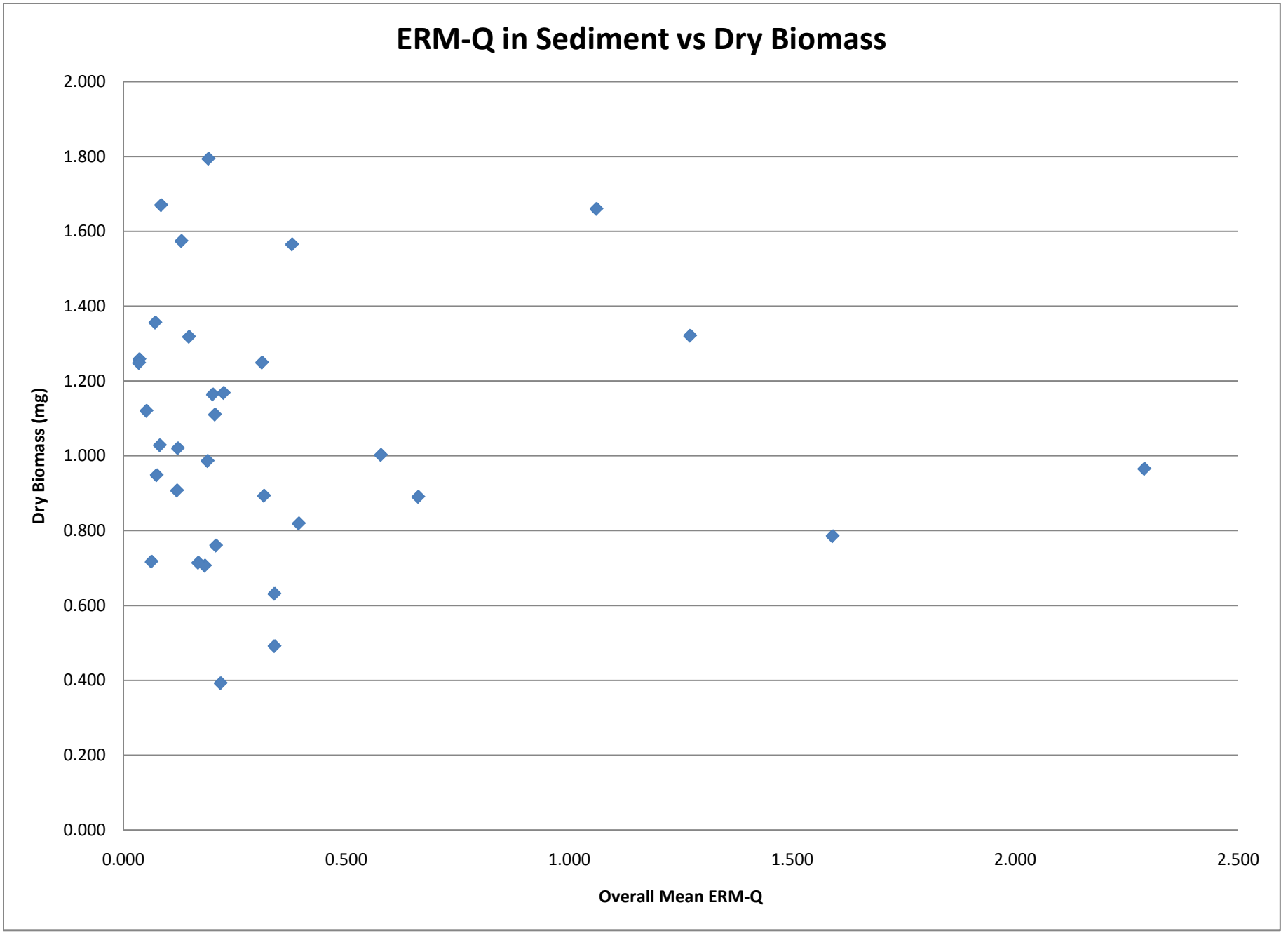

Concentration of LMW PAHs normalized in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
2000
4000
6000
8000
10000
12000
14000
16000
Sediment Concentration (ug/kg)

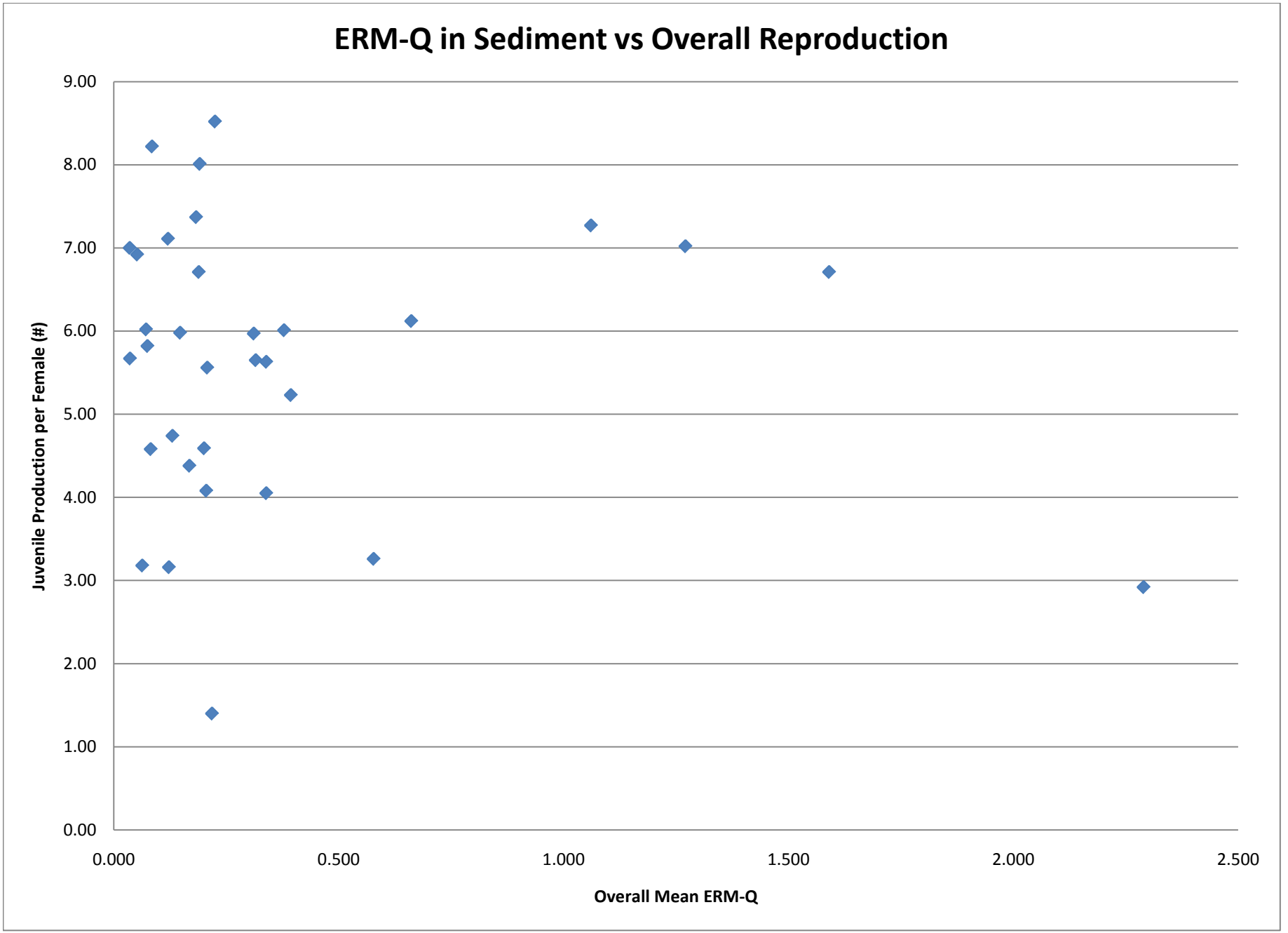

Concentration of total PAHs normalized in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
10000
20000
30000
40000
50000
60000
70000
80000
90000
100000
Sediment Concentration (ug/kg)

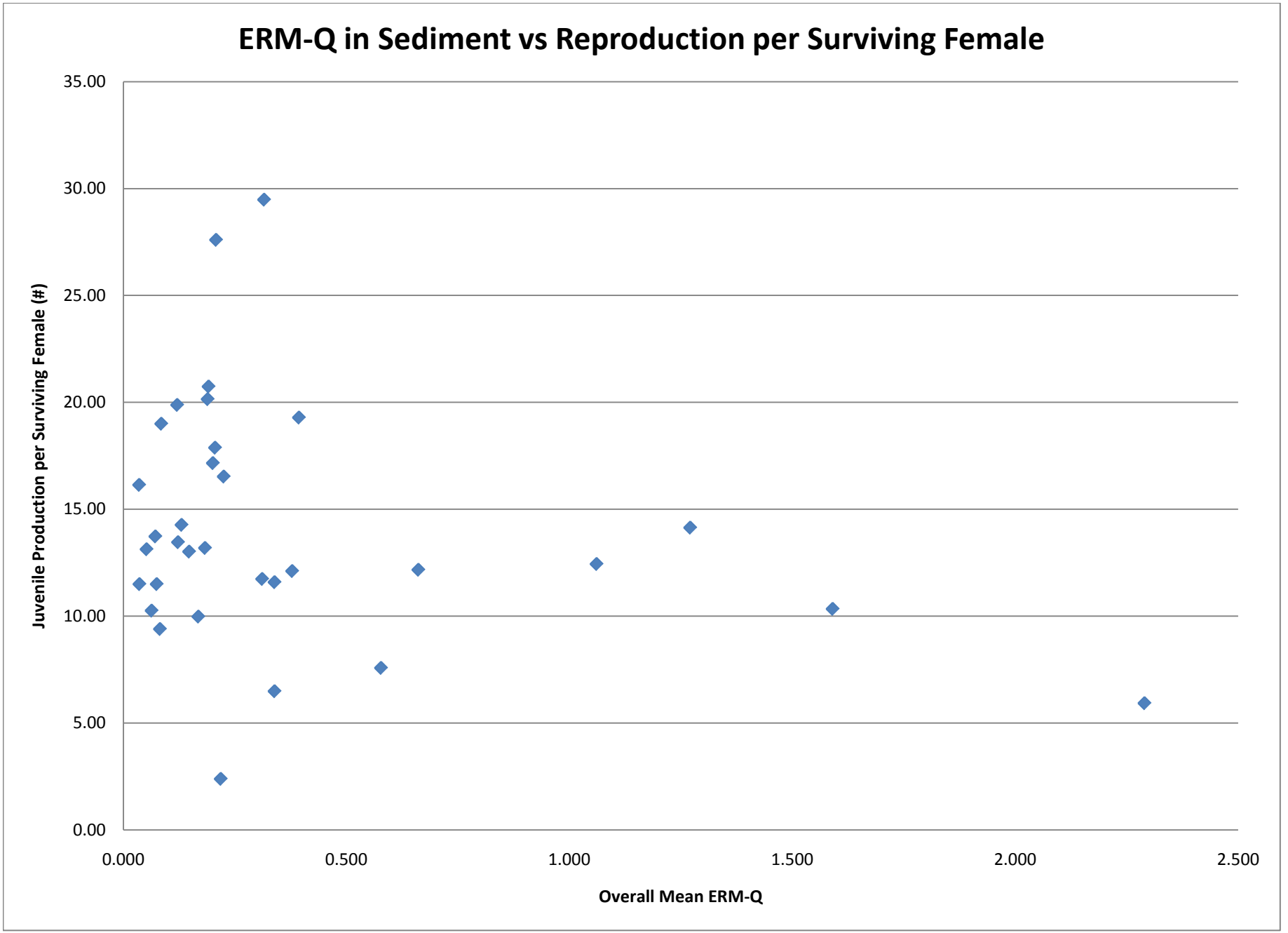

Concentration of total PCBs normalized in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0
500
1000
1500
2000
2500
3000
3500
4000
Sediment Concentration (ug/kg)


ERM-Q in Sediment vs Percent Survival
Survival (%)
100
90
80
70
60
50
40
30
20
10
0
0.000
0.500
1.000
1.500
2.000
2.500
Overall Mean ERM-Q


ERM-Q in Sediment vs Dry Weight
2.500
2.000
1.500
1.000
0.500
0.000
Dry Weight (mg)
0.000
0.500
1.000
1.500
2.000
2.500
Overall Mean ERM-Q


ERM-Q in Sediment vs Dry Biomass
Dry Biomass (mg)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0.000
0.500
1.000
1.500
2.000
2.500
Overall Mean ERM-Q


ERM-Q in Sediment vs Overall Reproduction
Juvenile Production per Female (#)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.000
0.500
1.000
1.500
2.000
2.500
Overall Mean ERM-Q


ERM-Q in Sediment vs Reproduction per Surviving Female
Juvenile Production per Surviving Female (#)
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0.000
0.500
1.000
1.500
2.000
2.500
Overall Mean ERM-Q

APPENDIX G.7

CRITICAL TISSUE LEVELS

APPENDIX G.7
CRITICAL TISSUE LEVELS

Chemical	Species	Species Common Name	Concentration (wet-weight)	Effect	Endpoint	BodyPart	StartLifeStage	Habitat	FeedingBehavior	Comments
Beryllium	Lepomis macrochirus	Bluegill	5.13 MG/KG	Mortality	NOED	Whole Body	Immature	Vegetation in lakes, ponds, streams	Carnivore-aquatic insects, fish, inverts	No Effect On Mortality
Benzaldehyde	Oncorhynchus mykiss	Trout - Rainbow	1400 MG/KG	Mortality	LOED	Whole Body	Adult	Cool streams	Carnivore-juv fish, inverts	Lethal Body Burden
Cadmium	Corbicula fluminea	Clam - Asiatic	20 MG/KG	Mortality	NOED	Whole Body	NS	Columbia River, WA south to Baja Cal., east to New Jersey south to Florida; silty clay, silty sand, shallow water to 18 m	Filter feeders; phytoplankton, detritus, bacteria, small zooplankters	Cellulase Enzyme Activity
Cadmium	Orconectes virilis	Crayfish	16.94 MG/KG	Mortality	LD100	Whole Body	Adult	Not Specified	Not Specified	Data further partitioned into gill, hepatopancreas, abdominal muscle, carapace, antennal gland - gill had the highest accumulation
Cadmium	Orconectes virilis	Crayfish	18.74 MG/KG	Mortality	LD100	Whole Body	Adult	Not Specified	Not Specified	Data further partitioned into gill, hepatopancreas, abdominal muscle, carapace, antennal gland - gill had the highest accumulation
Cadmium	Orconectes virilis	Crayfish	28.46 MG/KG	Mortality	LD100	Whole Body	Adult	Not Specified	Not Specified	Data further partitioned into gill, hepatopancreas, abdominal muscle, carapace, antennal gland - gill had the highest accumulation
Cadmium	Orconectes virilis	Crayfish	4.82 MG/KG	Mortality	LD25	Whole Body	Adult	Not Specified	Not Specified	Data further partitioned into gill, hepatopancreas, abdominal muscle, carapace, antennal gland - gill had the highest accumulation
Cadmium	Orconectes virilis	Crayfish	10.32 MG/KG	Mortality	LD74	Whole Body	Adult	Not Specified	Not Specified	Data further partitioned into gill, hepatopancreas, abdominal muscle, carapace, antennal gland - gill had the highest accumulation
Cadmium	Cambarus latimanus	Crayfish	22 MG/KG	Mortality	LOED	Whole Body	Adult	Streams, lakes, swamps, North Carolina to Florida	Feeds on both plant and animal material	Significant increase in mortality. Feed contaminated with 0.17 ug Cd/g.
Cadmium	Cambarus latimanus	Crayfish	14.9 MG/KG	Mortality	NOED	Whole Body	Adult	Streams, lakes, swamps, North Carolina to Florida	Feeds on both plant and animal material	No significant increase in mortality. Feed contaminated with 0.17 ug Cd/g.
Cadmium	Cambarus latimanus	Crayfish	22 MG/KG	Growth	NOED	Whole Body	Adult	Streams, lakes, swamps, North Carolina to Florida	Feeds on both plant and animal material	No significant difference in length and weight. Feed contaminated with 0.17 ug Cd/g.
Cadmium	Cambarus latimanus	Crayfish	22 MG/KG	Physiological	NOED	Whole Body	Adult	Streams, lakes, swamps, North Carolina to Florida	Feeds on both plant and animal material	No significant difference in tolerance to elevated temperatures (thermal stress) after exposure period.
Cadmium	Orconectes propinquus	Crayfish	534 MG/KG	Mortality	NOED	Whole Body	NA	Not Specified	Not Specified	No significant difference in mortality. Only 1 of 15 dead at end of exposure period.
Cadmium	Orconectes propinquus	Crayfish	540 MG/KG	Behavior	NOED	Whole Body	NS	Not Specified	Not Specified	Onconectes propinquus propinquus initial weight 0.2-1.5g
Cadmium	Orconectes propinquus	Crayfish	540 MG/KG	Survival	NOED	Whole Body	NS	Not Specified	Not Specified	Onconectes propinquus propinquus initial weight 0.2-1.5g
Cadmium	Crassostrea angulata	Cupped oyster	0.684 MG/KG	Lesions	NOED	Whole Body	Juvenile			Tissue Quality
Cadmium	Crassostrea angulata	Cupped oyster	1.066 MG/KG	Lesions	TD	Whole Body	Juvenile			Tissue Quality
Cadmium	Crassostrea virginica	Eastern oyster	54 MG/KG	Reproduction	LOED	Whole Body	Adult	Intertidal flats to depth of 40 ft.	Filter phytoplankton, zooplankton, detritus	24% Increase in abnormal embryos from exposed parents.
Cadmium	Crassostrea virginica	Eastern oyster	18.2 MG/KG	Reproduction	NOED	Whole Body	Adult	Intertidal flats to depth of 40 ft.	Filter phytoplankton, zooplankton, detritus	No increased abnormalities in embryos from exposed parents.
Cadmium	Crassostrea virginica	Eastern oyster	54 MG/KG	Reproduction	NOED	Whole Body	Adult	Intertidal flats to depth of 40 ft.	Filter phytoplankton, zooplankton, detritus	No significant difference in fecundity.
Cadmium	Crassostrea virginica	Eastern oyster	58.4 MG/KG	Mortality	NOED	Whole Body	Adult	Intertidal flats to depth of 40 ft.	Filter phytoplankton, zooplankton, detritus	No increase in mortality.
Cadmium	Anodonta grandis	Freshwater mussel	25.8 MG/KG	Growth	ED290	Whole Body	Adult	Not Specified	Not Specified	Plastic enclosures within lake-Metallothionen, Control group native to the polluted lake
Cadmium	Anodonta grandis	Freshwater mussel	26.1 MG/KG	Biochemical	IP415	Whole Body	Adult	Not Specified	Not Specified	Plastic enclosures within lake- Metallothionen, Control group native to the polluted lake
Cadmium	Anodonta grandis	Freshwater mussel	34.2 MG/KG	Biochemical	IP465	Whole Body	Adult	Not Specified	Not Specified	Plastic enclosures within lake- Metallothionen, Control group native to the polluted lake

Chemical	Species	Species Common Name	Concentration (wet-weight)	Effect	Endpoint	BodyPart	StartLifeStage	Habitat	FeedingBehavior	Comments
Cadmium	Anodonta grandis	Freshwater mussel	7.87 MG/KG	Biochemical	IP90	Whole Body	Adult	Not Specified	Not Specified	Plastic enclosures within lake- Metallothionen, Group transferred to polluted lake
Cadmium	Anodonta grandis	Freshwater mussel	11.5 MG/KG	Growth	NOED	Whole Body	Adult	Not Specified	Not Specified	Plastic enclosures within lake, Group transferred to polluted lake
Cadmium	Artemia salina	Great Salt Lake Brine Shrimp	5.34 MG/KG	Growth	ED15	Whole Body	Larval	Not Specified	Not Specified	length
Cadmium	Artemia salina	Great Salt Lake Brine Shrimp	7.48 MG/KG	Growth	ED16	Whole Body	Larval	Not Specified	Not Specified	length
Cadmium	Patella vulgata	Limpet - common	82 MG/KG	Physiological	LOED	Whole Body	Other	Not Specified	Not Specified	Rate of glycolysis no control
Cadmium	Patella vulgata	Limpet - common	52 MG/KG	Physiological	NOED	Whole Body	Other	Not Specified	Not Specified	Rate of glycolysis no control
Cadmium	Mytilus galloprovincialis	Mediterranean Mussel	0.074 MG/KG	Physiological	ED50	Whole Body	Larval	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	Cd, Cu and Zn bioaccumualtion assessed. Effects are based on mixture. Condition Index was measurement body wt/shell height of larvae = ug/um
Cadmium	Mytilus galloprovincialis	Mediterranean Mussel	39.1 MG/KG	Mortality	LD20	Whole Body	Adult	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	
Cadmium	Mytilus galloprovincialis	Mediterranean Mussel	55.59 MG/KG	Mortality	LD90	Whole Body	Adult	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	
Cadmium	Mytilus galloprovincialis	Mediterranean Mussel	0.044 MG/KG	Physiological	LOED	Whole Body	Larval	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	Cd, Cu and Zn bioaccumualtion assessed. Effects are based on mixture. Condition Index was measurement body wt/shell height of larvae = ug/um
Cadmium	Mytilus galloprovincialis	Mediterranean Mussel	0.04 MG/KG	Physiological	NOED	Whole Body	Larval	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	Cd, Cu and Zn bioaccumulation assessed. Effects are based on mixture. Condition Index was measurement body wt/shell height of larvae = ug/um
Cadmium	Mytilus galloprovincialis	Mediterranean Mussel	28.7 MG/KG	Mortality	NOED	Whole Body	Adult	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	
Cadmium	Mytilus edulis	Mussel	3.74 MG/KG	Physiological	LOED	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	Significant decrease in ability to survive anoxic stress after exposure period. Measured as anoxic survival time.
Cadmium	Mytilus edulis	Mussel	4.22 MG/KG	Physiological	LOED	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	Significant decrease in ability to survive anoxic stress after exposure period. Measured as anoxic survival time.
Cadmium	Mytilus edulis	Mussel	8.06 MG/KG	Physiological	LOED	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	Significant decrease in ability to survive anoxic stress after exposure period. Measured as anoxic survival time.
Cadmium	Mytilus edulis	Mussel	8.06 MG/KG	Physiological	LOED	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	Significant decrease in ability to survive anoxic stress after exposure period. Measured as anoxic survival time.
Cadmium	Mytilus edulis	Mussel	6.45 MG/KG	Mortality	NOED	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	Estimated Wet Weight
Cadmium	Mytilus edulis	Mussel	8.06 MG/KG	Physiological	NOED	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	No Significant Changes In Adenylate Energy Charge Or Glycogen Content
Cadmium	Mytilus edulis	Mussel	30 MG/KG	Growth	NOED	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	
Cadmium	Mytilus edulis	Mussel	30 MG/KG	Mortality	NOED	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	Highest Body Burden Reported
Cadmium	Dreissena polymorpha	Mussel - Zebra	108 MG/KG	Behavior	ED100	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	100% Decrease in filtration rate.
Cadmium	Dreissena polymorpha	Mussel - Zebra	40 MG/KG	Behavior	ED33	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	33% Decrease in filtration rate.
Cadmium	Dreissena polymorpha	Mussel - Zebra	108 MG/KG	Mortality	LD50	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	50% Mortality in 27 days.

Chemical	Species	Species Common Name	Concentration (wet-weight)	Effect	Endpoint	BodyPart	StartLifeStage	Habitat	FeedingBehavior	Comments
Cadmium	Dreissena polymorpha	Mussel - Zebra	160 MG/KG	Mortality	LD96	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	96% Mortality in 27 days.
Cadmium	Dreissena polymorpha	Mussel - Zebra	16 MG/KG	Behavior	LOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	17% Decrease in filtration rate.
Cadmium	Dreissena polymorpha	Mussel - Zebra	4 MG/KG	Behavior	NOED	Whole Body	NA	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No difference in filtration rate.
Cadmium	Dreissena polymorpha	Mussel - Zebra	4 MG/KG	Biochemical	NOED	Whole Body	NA	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No significant increase in metallothionein.
Cadmium	Dreissena polymorpha	Mussel - Zebra	4 MG/KG	Mortality	NOED	Whole Body	NA	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No increase in mortality.
Cadmium	Dreissena polymorpha	Mussel - Zebra	8 MG/KG	Behavior	NOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No difference in filtration rate. Residue was determined from graph and is approximate.
Cadmium	Dreissena polymorpha	Mussel - Zebra	32 MG/KG	Behavior	NOED	Whole Body	NA	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No difference in filtration rate.
Cadmium	Dreissena polymorpha	Mussel - Zebra	32 MG/KG	Mortality	NOED	Whole Body	NA	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No increase in mortality.
Cadmium	Dreissena polymorpha	Mussel - Zebra	114 MG/KG	Mortality	NOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No increase in mortality.
Cadmium	Crassostrea gigas	Pacific oyster	0.011 MG/KG	Biochemical	IP91	Whole Body	Embryo	Introduced from Japan; British Columbia south to northern California	Filter feeder; bacteria, protozoa, diatoms, algae, small larvae, detritus	medium is sediment collected at a polluted site, effects are MT induction, y=13693x+730.5, CBB=0.6mg/kg
Cadmium	Crassostrea gigas	Pacific oyster	0.004 MG/KG	Development	NOED	Whole Body	Embryo	Introduced from Japan; British Columbia south to northern California	Filter feeder; bacteria, protozoa, diatoms, algae, small larvae, detritus	medium is sediment collected at a polluted site; effects: MT induction
Cadmium	Crassostrea gigas	Pacific oyster	0.0078 MG/KG	Development	NOED	Whole Body	Embryo	Introduced from Japan; British Columbia south to northern California	Filter feeder; bacteria, protozoa, diatoms, algae, small larvae, detritus	medium is elutriate from sediments collected at a polluted site; effects: MT induction
Cadmium	Crassostrea gigas	Pacific oyster	6.2 MG/KG	Development	NOED	Whole Body	Embryo	Introduced from Japan; British Columbia south to northern California	Filter feeder; bacteria, protozoa, diatoms, algae, small larvae, detritus	medium is elutriate from sediments collected at a polluted site; effects: MT induction
Cadmium	Scrobicularia plana	Peppery furrow shell clam	0.52 MG/KG	Lesions	NOED	Whole Body	Juvenile			Tissue Quality
Cadmium	Scrobicularia plana	Peppery furrow shell clam	0.524 MG/KG	Lesions	TD	Whole Body	Juvenile			Tissue Quality
Cadmium	Hydrobia ulvae	Prosobranch mud snail	0.02 MG/KG	Behavior	NOED	Whole Body	Adult			Feeding
Cadmium	Saccostrea cucullata	rock oyster	2.54 MG/KG	Physiological	IP106	Whole Body	Adult			Cd-MT isoform concentration in leiblain gland, Cd + Zn exposure
Cadmium	Saccostrea cucullata	rock oyster	2.54 MG/KG	Physiological	IP47	Whole Body	Adult			MT concentration in leiblain gland, Cd +Zn exposure
Cadmium	Saccostrea cucullata	rock oyster	2.88 MG/KG	Physiological	IP55	Whole Body	Adult			MT concentration in leiblain gland, Cd exposure
Cadmium	Saccostrea cucullata	rock oyster	5.82 MG/KG	Physiological	IP58	Whole Body	Adult			Cd-MT isoform concentration in leiblain gland, Cd exposure
Cadmium	Saccostrea cucullata	rock oyster	2.54 MG/KG	Physiological	IP626	Whole Body	Adult			Zn partitioning- % MTLP, Cd + Zn exposure
Cadmium	Saccostrea cucullata	rock oyster	5.82 MG/KG	Physiological	IP73	Whole Body	Adult			MT concentration in leiblain gland, Cd exposure

Chemical	Species	Species Common Name	Concentration (wet-weight)	Effect	Endpoint	BodyPart	StartLifeStage	Habitat	FeedingBehavior	Comments
Cadmium	Saccostrea cucullata	rock oyster	2.88 MG/KG	Physiological	IP82	Whole Body	Adult			Cd partitioning- % heat sensitive protein (hsp), Cd exposure
Cadmium	Saccostrea cucullata	rock oyster	2.88 MG/KG	Physiological	IP85	Whole Body	Adult			Cd-MT isoform concentration in leiblain gland, Cd exposure
Cadmium	Saccostrea cucullata	rock oyster	2.54 MG/KG	Physiological	IP86	Whole Body	Adult			Cd partitioning- % heat sensitive protein (hsp), Cd + Zn exposure
Cadmium	Palaemonetes pugio	Shrimp - Grass	2.6 MG/KG	Mortality	LOED	Whole Body	NA	Nova Scotia south to Corpus Christi, TX; estuaries on beds of submerged vegetation	Detritus with associated bacteria, diatoms	20% Increase in mortality. Salinity 5 ppt.
Cadmium	Palaemonetes pugio	Shrimp - Grass	4.6 MG/KG	Mortality	LOED	Whole Body	NA	Nova Scotia south to Corpus Christi, TX; estuaries on beds of submerged vegetation	Detritus with associated bacteria, diatoms	10% Increase in mortality. Salinity 10 ppt.
Cadmium	Palaemonetes pugio	Shrimp - Grass	4.6 MG/KG	Physiological	LOED	Whole Body	NA	Nova Scotia south to Corpus Christi, TX; estuaries on beds of submerged vegetation	Detritus with associated bacteria, diatoms	Significant increase in molting. Salinity 10 ppt. Residue at 14 days.
Cadmium	Palaemonetes pugio	Shrimp - Grass	5.8 MG/KG	Physiological	LOED	Whole Body	NA	Nova Scotia south to Corpus Christi, TX; estuaries on beds of submerged vegetation	Detritus with associated bacteria, diatoms	Inhibition of molting but not statistically significant. Salinity 5 ppt. Residue at 14 days.
Cadmium	Palaemonetes pugio	Shrimp - Grass	7 MG/KG	Mortality	LOED	Whole Body	NA	Nova Scotia south to Corpus Christi, TX; estuaries on beds of submerged vegetation	Detritus with associated bacteria, diatoms	25% Increase in mortality. Salinity 5 ppt.
Cadmium	Palaemonetes pugio	Shrimp - Grass	0.9 MG/KG	Mortality	NOED	Whole Body	Adult	Nova Scotia south to Corpus Christi, TX; estuaries on beds of submerged vegetation	Detritus with associated bacteria, diatoms	Estimated Wet Weight
Cadmium	Palaemonetes pugio	Shrimp - Grass	1.6 MG/KG	Mortality	NOED	Whole Body	NA	Nova Scotia south to Corpus Christi, TX; estuaries on beds of submerged vegetation	Detritus with associated bacteria, diatoms	No increase in mortality. Salinity 30 ppt.
Cadmium	Physa sp.	Snail	10 MG/KG	Survival	ED117	Whole Body	Adult	Not Specified	Not Specified	
Cadmium	Physa sp.	Snail	5 MG/KG	Survival	ED132	Whole Body	Adult	Not Specified	Not Specified	Abnormal behavior preceded death: snail extended from shell but unable to attach foot
Cadmium	Physa sp.	Snail	28 MG/KG	Survival	ED84	Whole Body	Adult	Not Specified	Not Specified	
Cadmium	Helisoma sp.	Snail	625 MG/KG	Mortality	LD50	Whole Body	Adult	Not Specified	Not Specified	50% Mortality
Cadmium	Physa sp.	Snail	28 MG/KG	NA	LOED	Whole Body	Adult	Not Specified	Not Specified	
Cadmium	Helisoma sp.	Snail	300 MG/KG	Mortality	NOED	Whole Body	Adult	Not Specified	Not Specified	No Effect On Mortality
Cadmium	Helisoma sp.	Snail	460 MG/KG	Mortality	NOED	Whole Body	Adult	Not Specified	Not Specified	No Effect On Mortality
Cadmium	Thais clavigera	Whelk	1.34 MG/KG	Biochemical	IP1242	Whole Body	Adult	Not Specified	Not Specified	MT Induction, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	4.54 MG/KG	Biochemical	IP1242	Whole Body	Adult	Not Specified	Not Specified	MT Induction, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	2.36 MG/KG	Biochemical	IP1785	Whole Body	Adult	Not Specified	Not Specified	MT Induction, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	2.22 MG/KG	Biochemical	IP2370	Whole Body	Adult	Not Specified	Not Specified	MT Induction, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	4.82 MG/KG	Biochemical	IP2370	Whole Body	Adult	Not Specified	Not Specified	MT Induction, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	4.68 MG/KG	Biochemical	IP2670	Whole Body	Adult	Not Specified	Not Specified	MT Induction, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	8.2 MG/KG	Biochemical	IP2670	Whole Body	Adult	Not Specified	Not Specified	MT Induction, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	4 MG/KG	Biochemical	IP785	Whole Body	Adult	Not Specified	Not Specified	MT Induction, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	1.34 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Condition index, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	1.34 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Carbohyrdate level, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	1.34 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Protein content, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	1.34 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Lipid content, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	1.34 MG/KG	Biochemical	NOED	Whole Body	Adult	Not Specified	Not Specified	MDA, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	2.22 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Condition index, fed snails, recirculating water system

Chemical	Species	Species Common Name	Concentration (wet-weight)	Effect	Endpoint	BodyPart	StartLifeStage	Habitat	FeedingBehavior	Comments
Cadmium	Thais clavigera	Whelk	2.22 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Carbohyrdate level, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	2.22 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Protein content, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	2.22 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Lipid content, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	2.22 MG/KG	Biochemical	NOED	Whole Body	Adult	Not Specified	Not Specified	MDA, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	2.36 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Condition index, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	2.36 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Carbohyrdate level, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	2.36 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Protein content, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	2.36 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Lipid content, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	2.36 MG/KG	Biochemical	NOED	Whole Body	Adult	Not Specified	Not Specified	MDA, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	4 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Condition index, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	4 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Carbohyrdate level, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	4 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Protein content, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	4 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Lipid content, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	4 MG/KG	Biochemical	NOED	Whole Body	Adult	Not Specified	Not Specified	MDA, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	4.54 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Condition index, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	4.54 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Carbohyrdate level, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	4.54 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Protein content, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	4.54 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Lipid content, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	4.54 MG/KG	Biochemical	NOED	Whole Body	Adult	Not Specified	Not Specified	MDA, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	4.68 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Condition index, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	4.68 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Carbohyrdate level, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	4.68 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Protein content, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	4.68 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Lipid content, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	4.68 MG/KG	Biochemical	NOED	Whole Body	Adult	Not Specified	Not Specified	MDA, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	4.82 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Condition index, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	4.82 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Carbohyrdate level, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	4.82 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Protein content, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	4.82 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Lipid content, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	4.82 MG/KG	Biochemical	NOED	Whole Body	Adult	Not Specified	Not Specified	MDA, fed snails, recirculating water system
Cadmium	Thais clavigera	Whelk	8.2 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Condition index, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	8.2 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Carbohyrdate level, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	8.2 MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Protein content, fed oyster, recirculating water system

Chemical	Species	Species Common Name	Concentration (wet-weight)		Effect	Endpoint	BodyPart	StartLifeStage	Habitat	FeedingBehavior	Comments
Cadmium	Thais clavigera	Whelk	8.2	MG/KG	Physiological	NOED	Whole Body	Adult	Not Specified	Not Specified	Lipid content, fed oyster, recirculating water system
Cadmium	Thais clavigera	Whelk	8.2	MG/KG	Biochemical	NOED	Whole Body	Adult	Not Specified	Not Specified	MDA, fed oyster, recirculating water system
Lead	Crassostrea virginica	Eastern oyster	2.28	MG/KG	Growth	NOED	Whole Body	Adult	Intertidal flats to depth of 40 ft.	Filter phytoplankton, zooplankton, detritus	No significant difference in weight gain.
Lead	Crassostrea virginica	Eastern oyster	2.28	MG/KG	Mortality	NOED	Whole Body	Adult	Intertidal flats to depth of 40 ft.	Filter phytoplankton, zooplankton, detritus	No increase in mortality.
Lead	Crassostrea virginica	Eastern oyster	2.6	MG/KG	Reproduction	NOED	Whole Body	Adult	Intertidal flats to depth of 40 ft.	Filter phytoplankton, zooplankton, detritus	No effect on larva viability or development.
Lead	Dreissena polymorpha	Mussel - Zebra	200	MG/KG	Physiological	ED100	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	Decreased filtration rate and eventual cessation of filtration at 9 weeks.
Lead	Dreissena polymorpha	Mussel - Zebra	200	MG/KG	Growth	LOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	Decreased weight gain in surviving mussels.
Lead	Dreissena polymorpha	Mussel - Zebra	200	MG/KG	Mortality	LOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	52% Mortality
Lead	Dreissena polymorpha	Mussel - Zebra	35	MG/KG	Physiological	LOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	19% Decrease in filtration rate.
Lead	Dreissena polymorpha	Mussel - Zebra	35	MG/KG	Growth	NOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No effect on weight gain in surviving mussels.
Lead	Dreissena polymorpha	Mussel - Zebra	35	MG/KG	Mortality	NOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No Effect On Mortality
Lead	Dreissena polymorpha	Mussel - Zebra	7	MG/KG	Physiological	NOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No Effect On Filtration Rate
Manganese	Mytilus edulis	Mussel	9.6	MG/KG	Mortality	NOED	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	
Manganese	Mytilus edulis	Mussel	9.6	MG/KG	Growth	NOED	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	Length - Growth in test animals increased in direct proportion to proximity to pulpmill effluent plume which was deemed to reflect not the contaminants, but the increased amounts of nutrients.
Silver	Corbicula fluminea	Clam - Asiatic	1650	MG/KG	Growth	LOED	Whole Body	Immature	Columbia River, WA south to Baja Cal., east to New Jersey south to Florida; silty clay, silty sand, shallow water to 18 m	Filter feeders; phytoplankton, detritus, bacteria, small zooplankters	Reduction In Growth measured as weight
Silver	Corbicula fluminea	Clam - Asiatic	2510	MG/KG	Mortality	LOED	Whole Body	Immature	Columbia River, WA south to Baja Cal., east to New Jersey south to Florida; silty clay, silty sand, shallow water to 18 m	Filter feeders; phytoplankton, detritus, bacteria, small zooplankters	Reduced Survival
Silver	Corbicula fluminea	Clam - Asiatic	800	MG/KG	Growth	NOED	Whole Body	Immature	Columbia River, WA south to Baja Cal., east to New Jersey south to Florida; silty clay, silty sand, shallow water to 18 m	Filter feeders; phytoplankton, detritus, bacteria, small zooplankters	No Effect On Growth measured as weight.
Silver	Corbicula fluminea	Clam - Asiatic	1650	MG/KG	Mortality	NOED	Whole Body	Immature	Columbia River, WA south to Baja Cal., east to New Jersey south to Florida; silty clay, silty sand, shallow water to 18 m	Filter feeders; phytoplankton, detritus, bacteria, small zooplankters	No Effect On Survival

Chemical	Species	Species Common Name	Concentration (wet-weight)	Effect	Endpoint	BodyPart	StartLifeStage	Habitat	FeedingBehavior	Comments
Silver	Mercenaria mercenaria	Clam - Quahog	0.8 MG/KG	Physiological	LOED	Whole Body	Adult	Sand and muddy sand bottoms of intertidal zones, to about 50 ft.	Filter feeders; feed primarily on phytoplankton	Significant increase in oxygen consumption rate in gill tissue after exposure period. Animals exposed at 25 ppt salinity.
Silver	Mya arenaria	Clam - Soft Shell	10.4 MG/KG	Physiological	LOED	Whole Body	Adult	Coastal Maine to Maryland, tidal flats to depths around 20 - 30 ft.	Filter selectively; zooplankton, bacteria, decomposing fragments of large organisms.	Significant increase in oxygen consumption rate in gill tissue after exposure period. Animals exposed at 25 ppt salinity.
Silver	Crassostrea virginica	Eastern oyster	12.4 MG/KG	Physiological	LOED	Whole Body	Adult	Intertidal flats to depth of 40 ft.	Filter phytoplankton, zooplankton, detritus	Significant increase in oxygen consumption rate in gill tissue after exposure period. Animals exposed at 25 ppt salinity.
Silver	Mytilus edulis	Mussel	3.7 MG/KG	Physiological	LOED	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	Significant increase in oxygen consumption rate in gill tissue after exposure period. Animals exposed at 25 ppt salinity.
Silver	Crepidula fornicata	Slipper Limpet	10.05 MG/KG	Reproduction	ED10	Whole Body	Adult	Bay of Fundy to Cape Hatteras, rare to Florida, South America; in shallow water on rocks, oyster and mussel shells, hard surfaces	Browsers on encrusting organisms	F1 generation; generation time (egg-adult-1st spawning)
Silver	Crepidula fornicata	Slipper Limpet	7.66 MG/KG	Reproduction	ED137	Whole Body	Adult	Bay of Fundy to Cape Hatteras, rare to Florida, South America; in shallow water on rocks, oyster and mussel shells, hard surfaces	Browsers on encrusting organisms	P generation; # larval releases (female)
Silver	Crepidula fornicata	Slipper Limpet	10.05 MG/KG	Reproduction	ED14	Whole Body	Adult	Bay of Fundy to Cape Hatteras, rare to Florida, South America; in shallow water on rocks, oyster and mussel shells, hard surfaces	Browsers on encrusting organisms	F1 generation; generation time (egg-adult-1st spawning)
Silver	Crepidula fornicata	Slipper Limpet	9.67 MG/KG	Reproduction	ED150	Whole Body	Adult	Bay of Fundy to Cape Hatteras, rare to Florida, South America; in shallow water on rocks, oyster and mussel shells, hard surfaces	Browsers on encrusting organisms	F1 generation; # abortions
Silver	Crepidula fornicata	Slipper Limpet	234 MG/KG	Reproduction	ED22	Whole Body	Adult	Bay of Fundy to Cape Hatteras, rare to Florida, South America; in shallow water on rocks, oyster and mussel shells, hard surfaces	Browsers on encrusting organisms	F1 generation; females significantly smaller than controls @ 1st larval release
Silver	Crepidula fornicata	Slipper Limpet	10.05 MG/KG	Reproduction	ED35	Whole Body	Adult	Bay of Fundy to Cape Hatteras, rare to Florida, South America; in shallow water on rocks, oyster and mussel shells, hard surfaces	Browsers on encrusting organisms	F1 generation; mean # larvae released
Silver	Crepidula fornicata	Slipper Limpet	6.44 MG/KG	Reproduction	ED43	Whole Body	Adult	Bay of Fundy to Cape Hatteras, rare to Florida, South America; in shallow water on rocks, oyster and mussel shells, hard surfaces	Browsers on encrusting organisms	Parental generation; # larval releases (female)
Silver	Crepidula fornicata	Slipper Limpet	10.05 MG/KG	Reproduction	ED517	Whole Body	Adult	Bay of Fundy to Cape Hatteras, rare to Florida, South America; in shallow water on rocks, oyster and mussel shells, hard surfaces	Browsers on encrusting organisms	F1 generation; # releases/female
Silver	Crepidula fornicata	Slipper Limpet	10.05 MG/KG	Reproduction	ED517	Whole Body	Adult	Bay of Fundy to Cape Hatteras, rare to Florida, South America; in shallow water on rocks, oyster and mussel shells, hard surfaces	Browsers on encrusting organisms	F1 generation; inc. in % abortions
Silver	Crepidula fornicata	Slipper Limpet	9.67 MG/KG	Reproduction	ED521	Whole Body	Adult	Bay of Fundy to Cape Hatteras, rare to Florida, South America; in shallow water on rocks, oyster and mussel shells, hard surfaces	Browsers on encrusting organisms	F1 generation; inc. in % abortions
Silver	Crepidula fornicata	Slipper Limpet	4.1 MG/KG	Reproduction	ED8	Whole Body	Adult	Bay of Fundy to Cape Hatteras, rare to Florida, South America; in shallow water on rocks, oyster and mussel shells, hard surfaces	Browsers on encrusting organisms	F1 generation; generation time (egg-adult-1st spawning)
Silver	Crepidula fornicata	Slipper Limpet	7.66 MG/KG	Reproduction	ED80	Whole Body	Adult	Bay of Fundy to Cape Hatteras, rare to Florida, South America; in shallow water on rocks, oyster and mussel shells, hard surfaces	Browsers on encrusting organisms	F1 generation; generation time (egg-adult-1st spawning)

Chemical	Species	Species Common Name	Concentration (wet-weight)	Effect	Endpoint	BodyPart	StartLifeStage	Habitat	FeedingBehavior	Comments
Silver	Crepidula fornicata	Slipper Limpet	9.67 MG/KG	Reproduction	NOED	Whole Body	Adult	Bay of Fundy to Cape Hatteras, rare to Florida, South America; in shallow water on rocks, oyster and mussel shells, hard surfaces	Browsers on encrusting organisms	F1 generation; # releases/female
Vanadium	Carcinus maenas	Crab - Shore	0.6 MG/KG	Mortality	NOED	Whole Body	NA	Maine to New Jersey, among rocks in shallow water	Feeds on living and dead animals	No Effect On Mortality After 3 Weeks
Vanadium	Lysmata seticaudata	Shrimp	0.58 MG/KG	Mortality	NOED	Whole Body	NA	Not Specified	Not Specified	No Effect On Mortality After 3 Weeks
Zinc	Mysella anomala	Bivalve	18 MG/KG	Mortality	LD28	Whole Body	Adult	Not Specified	Not Specified	
Zinc	Mysella anomala	Bivalve	18 MG/KG	Mortality	LD62	Whole Body	Adult	Not Specified	Not Specified	
Zinc	Mysella anomala	Bivalve	30 MG/KG	Mortality	LD65	Whole Body	Adult	Not Specified	Not Specified	
Zinc	Mysella anomala	Bivalve	5 MG/KG	Mortality	NOED	Whole Body	Adult	Not Specified	Not Specified	
Zinc	Orconectes virilis	Crayfish	35.2 MG/KG	Mortality	LD23	Whole Body	Adult	Not Specified	Not Specified	23% Significant increase in mortality.
Zinc	Orconectes virilis	Crayfish	37.8 MG/KG	Mortality	LD43	Whole Body	Adult	Not Specified	Not Specified	43% Increase in mortality.
Zinc	Orconectes virilis	Crayfish	69.2 MG/KG	Mortality	LD61	Whole Body	Adult	Not Specified	Not Specified	61% Increase in mortality.
Zinc	Orconectes virilis	Crayfish	12.7 MG/KG	Mortality	NOED	Whole Body	Adult	Not Specified	Not Specified	No significant increase in mortality.
Zinc	Crassostrea angulata	Cupped oyster	1831 MG/KG	Biochemical	ED20	Whole Body	Adult			Malondialdehyde concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	2240 MG/KG	Biochemical	ED20	Whole Body	Adult			Malondialdehyde concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	1831 MG/KG	Biochemical	ED40	Whole Body	Adult			SOD concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	2240 MG/KG	Biochemical	ED40	Whole Body	Adult			SOD concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	3016 MG/KG	Biochemical	ED40	Whole Body	Adult			Malondialdehyde concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	15494 MG/KG	Biochemical	ED40	Whole Body	Adult			Malondialdehyde concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	3016 MG/KG	Biochemical	ED60	Whole Body	Adult			8-oxodG/10^5 dG concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	15494 MG/KG	Biochemical	ED60	Whole Body	Adult			8-oxodG/10^5 dG concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	1831 MG/KG	Biochemical	ED64	Whole Body	Adult			8-oxodG/10^5 dG concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	2240 MG/KG	Biochemical	ED64	Whole Body	Adult			8-oxodG/10^5 dG concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	3016 MG/KG	Biochemical	IP113	Whole Body	Adult			GPx concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	15494 MG/KG	Biochemical	IP113	Whole Body	Adult			GPx concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	3016 MG/KG	Biochemical	IP138	Whole Body	Adult			Taurine concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	15494 MG/KG	Biochemical	IP138	Whole Body	Adult			Taurine concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	1831 MG/KG	Biochemical	IP150	Whole Body	Adult			Taurine concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	2240 MG/KG	Biochemical	IP150	Whole Body	Adult			Taurine concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	3016 MG/KG	Biochemical	IP200	Whole Body	Adult			SOD concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	15494 MG/KG	Biochemical	IP200	Whole Body	Adult			SOD concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	3016 MG/KG	Biochemical	IP266	Whole Body	Adult			Catalase concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	3016 MG/KG	Biochemical	IP266	Whole Body	Adult			GST concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	15494 MG/KG	Biochemical	IP266	Whole Body	Adult			Catalase concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	15494 MG/KG	Biochemical	IP266	Whole Body	Adult			GST concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	1720.6 MG/KG	Lesions	NOED	Whole Body	Juvenile			Tissue Quality
Zinc	Crassostrea angulata	Cupped oyster	1831 MG/KG	Biochemical	NOED	Whole Body	Adult			Catalase concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	1831 MG/KG	Biochemical	NOED	Whole Body	Adult			GPx concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	1831 MG/KG	Biochemical	NOED	Whole Body	Adult			SeGPx concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	1831 MG/KG	Biochemical	NOED	Whole Body	Adult			GST concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	2240 MG/KG	Biochemical	NOED	Whole Body	Adult			Catalase concentration. Location: Punta Umbria

Chemical	Species	Species Common Name	Concentration (wet-weight)	Effect	Endpoint	BodyPart	StartLifeStage	Habitat	FeedingBehavior	Comments
Zinc	Crassostrea angulata	Cupped oyster	2240 MG/KG	Biochemical	NOED	Whole Body	Adult			GPx concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	2240 MG/KG	Biochemical	NOED	Whole Body	Adult			SeGPx concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	2240 MG/KG	Biochemical	NOED	Whole Body	Adult			GST concentration. Location: Punta Umbria
Zinc	Crassostrea angulata	Cupped oyster	3016 MG/KG	Biochemical	NOED	Whole Body	Adult			SeGPx concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	15494 MG/KG	Biochemical	NOED	Whole Body	Adult			SeGPx concentration. Location: Mazagon
Zinc	Crassostrea angulata	Cupped oyster	1773 MG/KG	Lesions	TD	Whole Body	Juvenile			Tissue Quality
Zinc	Mytilus galloprovincialis	Mediterranean Mussel	40 MG/KG	Physiological	ED50	Whole Body	Larval	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	Cd, Cu and Zn bioaccumualtion assessed. Effects are based on mixture. Condition Index was measurement body wt/shell height of larvae = ug/um
Zinc	Mytilus galloprovincialis	Mediterranean Mussel	73 MG/KG	Biochemical	ED50	Whole Body	Adult	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	Taurine concentration. Location: Punta Umbria
Zinc	Mytilus galloprovincialis	Mediterranean Mussel	73 MG/KG	Biochemical	IP25	Whole Body	Adult	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	GST concentration. Location: Punta Umbria
Zinc	Mytilus galloprovincialis	Mediterranean Mussel	73 MG/KG	Biochemical	IP43	Whole Body	Adult	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	8-oxodG/10^5 dG concentration. Location: Punta Umbria
Zinc	Mytilus galloprovincialis	Mediterranean Mussel	73 MG/KG	Biochemical	IP43	Whole Body	Adult	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	Malondialdehyde concentration. Location: Punta Umbria
Zinc	Mytilus galloprovincialis	Mediterranean Mussel	30 MG/KG	Physiological	LOED	Whole Body	Larval	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	Cd, Cu and Zn bioaccumualtion assessed. Effects are based on mixture. Condition Index was measurement body wt/shell height of larvae = ug/um
Zinc	Mytilus galloprovincialis	Mediterranean Mussel	18 MG/KG	Physiological	NOED	Whole Body	Larval	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	Cd, Cu and Zn bioaccumualtion assessed. Effects are based on mixture. Condition Index was measurement body wt/shell height of larvae = ug/um
Zinc	Mytilus galloprovincialis	Mediterranean Mussel	73 MG/KG	Biochemical	NOED	Whole Body	Adult	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	Catalase concentration. Location: Punta Umbria
Zinc	Mytilus galloprovincialis	Mediterranean Mussel	73 MG/KG	Biochemical	NOED	Whole Body	Adult	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	GPx concentration. Location: Punta Umbria
Zinc	Mytilus galloprovincialis	Mediterranean Mussel	73 MG/KG	Biochemical	NOED	Whole Body	Adult	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	SeGPx concentration. Location: Punta Umbria
Zinc	Mytilus galloprovincialis	Mediterranean Mussel	73 MG/KG	Biochemical	NOED	Whole Body	Adult	Extensive in southern European waters; along California coast; littoral and sub-littoral on variety of substrata	Filter feeder; plankton, bacteria, fine detrital particles	SOD concentration. Location: Punta Umbria
Zinc	Mytilus edulis	Mussel	130 MG/KG	Mortality	LD100	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	100% Mortality In 14 Days
Zinc	Mytilus edulis	Mussel	25 MG/KG	Growth	LOED	Whole Body	Juvenile	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	LOED for growth is based on increase in length of juveniles as well as weight increases.
Zinc	Mytilus edulis	Mussel	26 MG/KG	Mortality	LOED	Whole Body	Juvenile	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	
Zinc	Mytilus edulis	Mussel	26 MG/KG	Development	LOED	Whole Body	Juvenile	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	LOED for development is based on the condition index of the surviving juveniles.
Zinc	Mytilus edulis	Mussel	71.4 MG/KG	Mortality	NA	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	7.5% Mortality In 14 Days
Zinc	Mytilus edulis	Mussel	26 MG/KG	Mortality	NOED	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	

Chemical	Species	Species Common Name	Concentration (wet-weight)	Effect	Endpoint	BodyPart	StartLifeStage	Habitat	FeedingBehavior	Comments
Zinc	Mytilus edulis	Mussel	26 MG/KG	Growth	NOED	Whole Body	Adult	Intertidal zone on rocks, pilings and flats; may extend to depths over 40 ft.	Filter plankton, diatoms, bottom vegetation	Length - Growth in test animals increased in direct proportion to proximity to pulpmill effluent plume which was deemed to reflect not the contaminants, but the increased amounts of nutrients.
Zinc	Dreissena polymorpha	Mussel - Zebra	140 MG/KG	Physiological	LOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	77% Decrease in filtration rate by end of exposure period.
Zinc	Dreissena polymorpha	Mussel - Zebra	621 MG/KG	Mortality	LOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	56% Mortality
Zinc	Dreissena polymorpha	Mussel - Zebra	30 MG/KG	Behavior	NOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No difference in filtration rate. Residue was determined from graph and is approximate.
Zinc	Dreissena polymorpha	Mussel - Zebra	50 MG/KG	Physiological	NOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No Effect On Filtration Rate
Zinc	Dreissena polymorpha	Mussel - Zebra	120 MG/KG	Mortality	NOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No increase in mortality. Residue was determined from graph and is approximate.
Zinc	Dreissena polymorpha	Mussel - Zebra	140 MG/KG	Mortality	NOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No Effect On Mortality
Zinc	Dreissena polymorpha	Mussel - Zebra	621 MG/KG	Growth	NOED	Whole Body	Adult	Introduced; spread to all Great Lakes, some rivers in Atlantic, Mississippi drainage basins; attaches to rocks, other hard surface	Filter feeder; phytoplankton, bacteria, fine detrital particles	No Effect On Weight Gain Of Surviving Mussels
Zinc	Crassostrea gigas	Pacific oyster	10 MG/KG	Biochemical	IP91	Whole Body	Embryo	Introduced from Japan; British Columbia south to northern California	Filter feeder; bacteria, protozoa, diatoms, algae, small larvae, detritus	medium is sediment collected at a polluted site; effects: MT induction, y=30.52x+603.9, CBB=50mg/kg
Zinc	Crassostrea gigas	Pacific oyster	7.6 MG/KG	Biochemical	IP96	Whole Body	Embryo	Introduced from Japan; British Columbia south to northern California	Filter feeder; bacteria, protozoa, diatoms, algae, small larvae, detritus	medium is sediment collected at a polluted site; effects: MT induction, y=30.52x+603.9, CBB=50mg/kg
Zinc	Scrobicularia plana	Peppery furrow shell clam	160 MG/KG	Lesions	NOED	Whole Body	Juvenile			Tissue Quality
Zinc	Scrobicularia plana	Peppery furrow shell clam	172.4 MG/KG	Lesions	TD	Whole Body	Juvenile			Tissue Quality
Zinc	Saccostrea cucullata	rock oyster	500 MG/KG	Physiological	IP106	Whole Body	Adult			Cd-MT isoform concentration in leiblain gland, Cd + Zn exposure
Zinc	Saccostrea cucullata	rock oyster	500 MG/KG	Physiological	IP47	Whole Body	Adult			MT concentration in leiblain gland, Cd + Zn exposure
Zinc	Saccostrea cucullata	rock oyster	500 MG/KG	Physiological	IP626	Whole Body	Adult			Zn partitioning- % MTLP), Zn + Cd exposure
Zinc	Saccostrea cucullata	rock oyster	460 MG/KG	Physiological	IP640	Whole Body	Adult			Zn partitioning- % MTLP, Zn exposure
Zinc	Saccostrea cucullata	rock oyster	500 MG/KG	Physiological	IP86	Whole Body	Adult			Cd partitioning- % heat sensitive protein (hsp), Cd + Zn exposure
Zinc	Saccostrea cucullata	rock oyster	460 MG/KG	Physiological	IP87	Whole Body	Adult			Cd partitioning- % heat sensitive protein (hsp), Zn exposure

Source of Critical Tissue Levels:
The Environmental Residue-Effects Database (US Army Corps of Engineers, 2009) available at http://el.erdc.usace.army.mil/ered/.

APPENDIX G.8

ERM QUOTIENT CALCULATIONS

APPENDIX G.8

SUMMARY OF SEDIMENT RESULTS AND ER-M QUOTIENTS
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT
JAMESTOWN, RHODE ISLAND

		Sample Concentration[1]										ERM-Q[2]										
Sample Area	Sample Number	ARSENIC	CADMIUM	CHROMIUM	COPPER	LEAD	NICKEL	ZINC	HIGH MW PAHS	LOW MW PAHS	TOTAL AROCLOR	ARSENIC	CADMIUM	CHROMIUM	COPPER	LEAD	NICKEL	ZINC	HIGH MW PAHS	LOW MW PAHS	TOTAL AROCLOR	AVG ERM-Q
	ERM	70	9.6	370	270	218	51.6	410	9600	3160	180	70	9.6	370	270	218	51.6	410	9600	3160	180	NA
GI_SD_NE_2005	G32-SD309F-000.5-D	3.3 J	1.7 J	12.2 J	24.7	35.8	8.3 J	50.9 J	2540 J	944 J	16.5 U	0.047	0.177	0.033	0.091	0.164	0.161	0.124	0.265	0.299	0.092	0.145
GI_SD_NE_2005	G32-SD310A-000.5	2.7 J	0.03 UJ	15.1	21.8	8.8 J	8.7 J	33.6 J	1260 J	433 J	21 U	0.039	0.003	0.041	0.081	0.040	0.169	0.082	0.131	0.137	0.117	0.084
GI_SD_NE_2005	G32-SD310A-000.5-AVG	2.5 J	0.038 UJ	14.6	20.7	9.85 J	9 J	40.2 J	1050 J	306 J	21.5 U	0.036	0.004	0.039	0.077	0.045	0.174	0.098	0.109	0.097	0.119	0.080
GI_SD_NE_2005	G32-SD310A-000.5-D	2.3 J	0.046 UJ	14.1	19.6	10.9 J	9.3 J	46.7 J	838 J	178 J	22 U	0.033	0.005	0.038	0.073	0.050	0.180	0.114	0.087	0.056	0.122	0.076
GI_SD_NE_2005	G32-SD310B-000.5	2.4 J	0.065 UJ	21.4	24.5	178 J	14.8 J	65.8 J	196	27.4	41	0.034	0.007	0.058	0.091	0.817	0.287	0.160	0.020	0.009	0.228	0.171
GI_SD_NE_2005	G32-SD310C-000.5	2.2 J	3.2 J	16.5	20.7	11.7 J	11 J	44.9 J	428	134	23 U	0.031	0.333	0.045	0.077	0.054	0.213	0.110	0.045	0.042	0.128	0.108
GI_SD_NE_2005	G32-SD310D-000.5	2 J	0.055 UJ	10.5	14.7	13.2 J	5.9 J	51.6 J	12500 J	7680	21.5 U	0.029	0.006	0.028	0.054	0.061	0.114	0.126	1.302	2.430	0.119	0.427
GI_SD_NE_2005	G32-SD310E-000.5	3 J	0.0385 UJ	10.6	15.9	14.1 J	7.7 J	55.1 J	312	53.2	20.5 U	0.043	0.004	0.029	0.059	0.065	0.149	0.134	0.033	0.017	0.114	0.065
GI_SD_NE_2005	G32-SD310F-000.5	5.2 J	0.18 UJ	15.2 J	33.4	32.6 J	11 J	73 J	329	60.6	16.5 U	0.074	0.019	0.041	0.124	0.150	0.213	0.178	0.034	0.019	0.092	0.094
GI_SD_NE_2005	G32-SD315-000.5	1.7 J	0.075 UJ	10.6	17.2	14 J	6.9 J	36.8 J	735	90.8	500	0.024	0.008	0.029	0.064	0.064	0.134	0.090	0.077	0.029	2.778	0.330
GI_SD_NE_2005	G32-SD317-000.5	4.8 J	398	72.1	36.5	56.4 J	8.7 J	145 J	187	49.8	19.5 U	0.069	41.458	0.195	0.135	0.259	0.169	0.354	0.019	0.016	0.108	4.278
GI_SD_NE_2005	G32-SD304A-000.5	2.4 J	0.00285 UJ	13.7 *	23.1 J	20.5 J	8.1 J	41 J	5200 J	1360	880 J	0.034	0.000	0.037	0.086	0.094	0.157	0.100	0.542	0.430	4.889	0.637
GI_SD_NE_2005	G32-SD304B-000.5	2 J	0.00265 UJ	12.9 J	15.7 J	23.5 J	7.9 J	39.7 J	3340 J	1150	3600 J	0.029	0.000	0.035	0.058	0.108	0.153	0.097	0.348	0.364	20.000	2.119
GI_SD_NE_2005	G32-SD304C-000.5	2.9 J	0.097 J	16.2	22.7 J	59.6 J	8.6 J	41.7 J	1710 J	506 J	3800 J	0.041	0.010	0.044	0.084	0.273	0.167	0.102	0.178	0.160	21.111	2.217
GI_SD_NE_2005	G32-SD304D-0.51.0	1.9 J	0.0028 UJ	8.8 J	14.8 J	15.7 J	6.5 J	31.7 J	5450 J	1430 J	300 J	0.027	0.000	0.024	0.055	0.072	0.126	0.077	0.568	0.453	1.667	0.307
GI_SD_NE_2005	G32-SD304D-000.5	2.4 J	0.00285 UJ	10.7 J	34 J	43.6 J	8.3 J	44.3 J	3350 J	891	840 J	0.034	0.000	0.029	0.126	0.200	0.161	0.108	0.349	0.282	4.667	0.596
GI_SD_NE_2005	G32-SD304D-000.5-AVG	2.25 J	0.00275 UJ	10.8 J	25.2 J	39.5 J	8.1 J	44.6 J	2240 J	551 J	880 J	0.032	0.000	0.029	0.093	0.181	0.157	0.109	0.233	0.174	4.889	0.590
GI_SD_NE_2005	G32-SD304D-000.5-D	2.1 J	0.00265 UJ	10.9 J	16.3 J	35.4 J	7.9 J	44.9 J	1120 J	211 J	920 J	0.030	0.000	0.029	0.060	0.162	0.153	0.110	0.117	0.067	5.111	0.584
GI_SD_NE_2005	G32-SD304E-000.5	2.6 J	0.0028 UJ	11.7 J	23.2 J	41.9 J	8.5 J	98.1 J	1810	342	3300 J	0.037	0.000	0.032	0.086	0.192	0.165	0.239	0.189	0.108	18.333	1.938
GI_SD_NE_2005	G32-SD304F-000.5	0.038 UJ	1.6 J	3910	46.8	21200	10.8 J	54.4 J	2850 J	250	360	0.001	0.167	10.568	0.173	97.248	0.209	0.133	0.297	0.079	2.000	11.087
GI_SD_NE_2005	G32-SD305A-000.5	2.9 J	0.61 J	12.8	15 J	31.6 J	6.4 J	32.4 J	363	67	21 UJ	0.041	0.064	0.035	0.056	0.145	0.124	0.079	0.038	0.021	0.117	0.072
GI_SD_NE_2005	G32-SD305B-000.5	4 J	0.69 J	14.6	21.5 J	55.5	8 J	44 J	1350	341	180	0.057	0.072	0.039	0.080	0.255	0.155	0.107	0.141	0.108	1.000	0.201
GI_SD_NE_2005	G32-SD305C-000.5	2.1 J	0.0027 UJ	14.1 J	23.3 J	35 J	7.6 J	47 J	1000	291	230	0.030	0.000	0.038	0.086	0.161	0.147	0.115	0.104	0.092	1.278	0.205
GI_SD_NE_2005	G32-SD305D-0.51.0	1.8 J	0.0028 UJ	17.4	26 J	24.6 J	7.1 J	44.8 J	921	270	350	0.026	0.000	0.047	0.096	0.113	0.138	0.109	0.096	0.085	1.944	0.265
GI_SD_NE_2005	G32-SD305D-000.5	2.3 J	0.00275 UJ	16.2	38 J	48.8 J	9.3 J	46.8 J	945	213	2200 J	0.033	0.000	0.044	0.141	0.224	0.180	0.114	0.098	0.067	12.222	1.312
GI_SD_NE_2005	G32-SD305E-000.5	2.1 J	0.00275 UJ	15.5 J	23.8 J	29.4 J	9.8 J	50 J	736	192	220	0.030	0.000	0.042	0.088	0.135	0.190	0.122	0.077	0.061	1.222	0.197
GI_SD_NE_2005	G32-SD305F-000.5	4.6 J	0.235 UJ	26.3 J	77.8	17.7 J	19 J	39.5 J	239	31.8	319 J	0.066	0.024	0.071	0.288	0.081	0.368	0.096	0.025	0.010	1.772	0.280
GI_SD_NE_2005	G32-SD306A-000.5	1.9 J	0.0028 UJ	13.9 J	20.4 J	419 J	9.1 J	64.4 J	414	73	230 J	0.027	0.000	0.038	0.076	1.922	0.176	0.157	0.043	0.023	1.278	0.374
GI_SD_NE_2005	G32-SD306B-000.5	3 J	0.15 UJ	12.5	20.7	690 J	9.8 J	131 J	326	64	100	0.043	0.016	0.034	0.077	3.165	0.190	0.320	0.034	0.020	0.556	0.445
GI_SD_NE_2005	G32-SD306C-0.51.0	2.1 J	0.00265 UJ	10.5 J	16.6 J	25.3 J	9.1 J	45.3 J	1030	108	16.5 U	0.030	0.000	0.028	0.061	0.116	0.176	0.110	0.107	0.034	0.092	0.076
GI_SD_NE_2005	G32-SD306C-000.5	1.8 J	0.00265 UJ	12.3 J	14.1 J	61.6 J	8 J	40.5 J	10100 J	4530	520 J	0.026	0.000	0.033	0.052	0.283	0.155	0.099	1.052	1.434	2.889	0.602
GI_SD_NE_2005	G32-SD306D-000.5	2.1 J	0.00265 UJ	12.2 J	17.3 J	68.8 J	9.2 J	44.6 J	1660 J	406 J	170 J	0.030	0.000	0.033	0.064	0.316	0.178	0.109	0.173	0.128	0.944	0.198
GI_SD_NE_2005	G32-SD306D-000.5-AVG	2.1 J	0.0027 UJ	11.6 J	16 J	77.4 J	8.75 J	42.9 J	964 J	237 J	93.2 J	0.030	0.000	0.031	0.059	0.355	0.170	0.105	0.100	0.075	0.518	0.144
GI_SD_NE_2005	G32-SD306D-000.5-D	2.1 J	0.00275 UJ	11 J	14.7 J	85.9 J	8.3 J	41.2 J	269 J	68.8 J	16.5 UJ	0.030	0.000	0.030	0.054	0.394	0.161	0.100	0.028	0.022	0.092	0.091
GI_SD_NE_2005	G32-SD306E-000.5	2.4 J	0.00265 UJ	12.1 J	18.5 J	32.9 J	9.3 J	43.5 J	1410 J	320 J	16.5 UJ	0.034	0.000	0.033	0.069	0.151	0.180	0.106	0.147	0.101	0.092	0.091
GI_SD_NE_2005	G32-SD306E-000.5-AVG	2.25 J	0.002725 UJ	11.6 J	19.6 J	38.3 J	9.2 J	40.3 J	2980 J	640 J	45.2 J	0.032	0.000	0.031	0.073	0.176	0.178	0.098	0.310	0.203	0.251	0.135
GI_SD_NE_2005	G32-SD306E-000.5-D	2.1 J	0.0028 UJ	11.1 J	20.7 J	43.7 J	9.1 J	37.1 J	4550 J	961 J	74 J	0.030	0.000	0.030	0.077	0.200	0.176	0.090	0.474	0.304	0.411	0.179
GI_SD_NE_2005	G32-SD306F-000.5	3.9 J	0.105 UJ	16.7 J	32.6	177	8.7 J	64.4 J	591	90.1	190 J	0.056	0.011	0.045	0.121	0.812	0.169	0.157	0.062	0.029	1.056	0.252
GI_SD_NE_2005	G32-SD307-000.5	1.6 J	0.0275 UJ	9.3	15.9	24.9 J	6.4 J	30.9 J	313	79.2	20.5 U	0.023	0.003	0.025	0.059	0.114	0.124	0.075	0.033	0.025	0.114	0.059
GI_SD_NE_2005	G32-SD309A-000.5	1.8 J	0.00265 UJ	11.8 J	11.6 J	14.9 J	8.1 J	46.2 J	466	177	16.5 U	0.026	0.000	0.032	0.043	0.068	0.157	0.113	0.049	0.056	0.092	0.064
GI_SD_NE_2005	G32-SD309B-000.5	2.6 J	0.0345 UJ	12.4	17.7	16.6 J	10.4 J	34 J	175	26.6	21 U	0.037	0.004	0.034	0.066	0.076	0.202	0.083	0.018	0.008	0.117	0.064
GI_SD_NE_2005	G32-SD309C-000.5	1.7 J	0.033 UJ	10.4	11.3	9.3 J	6.4 J	35.1 J	505	172	50	0.024	0.003	0.028	0.042	0.043	0.124	0.086	0.053	0.054	0.278	0.073
GI_SD_NE_2005	G32-SD309D-000.5	1.7 J	0.023 UJ	11.2	13.9	9.5 J	6.8 J	39 J	238	29.4	23 U	0.024	0.002	0.030	0.051	0.044	0.132	0.095	0.025	0.009	0.128	0.054
GI_SD_NE_2005	G32-SD309E-000.5	2.3 J	0.065 UJ	13.5	15.1	127 J	8.7 J	42.1 J	891	327	26 U	0.033	0.007	0.036	0.056	0.583	0.169	0.103	0.093	0.103	0.144	0.133
GI_SD_NE_2005	G32-SD309F-000.5	4.8 J	0.125 UJ	16.6 J	36.4	29.8 J	10.2 J	195 J	1260 J	73.9 J	170	0.069	0.013	0.045	0.135	0.137	0.198	0.476	0.131	0.023	0.944	0.217
GI_SD_NE_2005	G32-SD309F-000.5-AVG	4.05 J	0.912 J	14.4 J	30.6	32.8 J	9.25 J	123 J	1900 J	509 J	93.2	0.058	0.095	0.039	0.113	0.150	0.179	0.300	0.198	0.161	0.518	0.181
GI_SD_NE_2009	GI-SD421-0006	2.3	0.26	10.1 E	25.5 N	138 N*E	8 *E	26.1 E	211	54.1	16.5 U	0.033	0.027	0.027	0.094	0.633	0.155	0.064	0.022	0.017	0.092	0.116
GI_SD_NE_2009	GI-SD422-0006	2.8 *	0.028 B*	10.1 E	14.9 E	10.8 NE	6 E	31.1 E	1000	283	100	0.040	0.003	0.027	0.055	0.050	0.116	0.076	0.104	0.090	0.556	0.112
GI_SD_NE_2009	GI-SD423-0006	3.1	0.81	11.7 E	20.3 N	9.8 N*E	8.5 *E	119 E	21.1	1.65 U	16.5 U	0.044	0.084	0.032	0.075	0.045	0.165	0.290	0.002	0.001	0.092	0.083
GI_SD_NE_2009	GI-SD423-0006-AVG	2.85	0.615	11 E	16.6 N	7.75 N*E	8.15 *E	75.4 E	27.8	8.88	16.5 U	0.041	0.064	0.030	0.061	0.036	0.158	0.184	0.003	0.003	0.092	0.067
GI_SD_NE_2009	GI-SD423-0006-D	2.6	0.42	10.2 E	12.8 N	5.7 N*E	7.8 *E	31.9 E	34.5	16.1	16.5 U	0.037	0.044	0.028	0.047	0.026	0.151	0.078	0.004	0.005	0.092	0.051
GI_SD_NE_2009	GI-SD424-0006	4.1	0.59	16.5 E	19.4 N	32.8 N*E	9.5 *E	164 E	111	20.9	16.5 U	0.059	0.061	0.045	0.072	0.150	0.184	0.400	0.012	0.007	0.092	0.108
GI_SD_NE_2009	GI-SD425-0006	2.1 *	0.0059 U*	10.4 E	9.8 E	6.4 NE	5.9 E	27.2 E	114	3.4	16.5 U	0.030	0.001	0.028	0.036	0.029	0.114	0.066	0.012	0.001	0.092	0.041
GI_SD_NE_2009	GI-SD426-0006	2.6	0.33	12.2 E	16 N	34.7 N*E	9.3 *E	40.1 E	75.9	52.4	16.5 U	0.037	0.034	0.033	0.059	0.159	0.180	0.098	0.008	0.017	0.092	0.072
GI_SD_NE_2009	GI-SD427-0006	1.9 *	0.052 B*	10.2 E	7.3 E	8.2 NE	6.3 E	30.6 E	655	220	16.5 U	0.027	0.005	0.028	0.027	0.038	0.122	0.075	0.068	0.070	0.092	0.055
GI_SD_NE_2009	GI-SD428-0006	2.6 *	0.037 B*	9.3 E	28.2 E	7.6 NE	6.4 E	23.9 E	191	43.7	16.5 U	0.037	0.004	0.025	0.104	0.035	0.124	0.058	0.020	0.014	0.092	0.051
GI_SD_NE_2009	GI-SD430-0006	2.4 *	0.053 B*	10.5 E	7.5 E	11.4 NE	5.7 E	26.5 E	298	71.1	42	0.034	0.006	0.028	0.028	0.052	0.110	0.065	0.031	0.023	0.233	0.061
GI_SD_NE_2009	GI-SD431-0006	3.8	0.35	17.5 E	10.7 N	10.3 N*E	10.2 *E	36 E	221	130	16.5 U	0.054	0.036	0.047	0.040	0.047	0.198	0.088	0.023	0.041	0.092	0.067
GI_SD_NE_2009	GI-SD432-0006	2 *	0.011 B*	6.2 E	7.2 E	13.8 NE	3.8 E	19.3 E	5250	1230	360	0.029	0.001	0.017	0.027	0.063	0.074	0.047	0.547	0.389	2.000	0.319
GI_SD_NE_2009	GI-SD433-0006	4.5 *	0.083 B*	10.4 E	12.1 E	14.6 NE	4.1 E	29.9 E	3810	1290	170	0.064	0.009	0.028	0.045	0.067	0.079	0.073	0.397	0.408	0.944	0.211
GI_SD_NE_2009	GI-SD434-0006	7.6 *	0.26 *	25.8 E	21.4 E	9.3 NE	15.4 E	21.1 E	2600	961	400	0.109	0.027	0.070	0.079	0.043	0.298	0.051	0.271	0.304	2.222	0.347
GI_SD_NE_2009	GI-SD435-0006	2.4 *	0.091 B*	9.4 E	11.8 E	14.7 NE	5.1 E	33.9 E	1020	257	890	0.034	0.009	0.025	0.044	0.067	0.099	0.083	0.106	0.081	4.944	0.549
GI_SD_NE_2009	GI-SD436-0006	1.7 *	0.062 B*	7.9 E	12.6 E	18.6 NE	4.5 E	23.6 E	576	140	170	0.024	0.006	0.021	0.047	0.085	0.087	0.058	0.060	0.044	0.944	0.138
GI_SD_NE_2009	GI-SD437-0006	2.3 *	0.16 *	9.4 E	9.6 E	24.3 NE	5.9 E	28.1 E	1070	226	310	0.033	0.017	0.025	0.036	0.111	0.114	0.069	0.111	0.072	1.722	0.231
GI_SD_NE_2009	GI-SD446-0006	2.3 *	0.11 B*	10.5 E	17.1 E	9.8 NE	10.9 E	37.3 E	1040	205	140	0.033	0.011	0.028	0.063	0.045	0.211	0.091	0.108	0.065	0.778	0.143
GI_SD_NE_2009	GI-SD447-0006	2.8 *	0.15 *	9.9 E	29.7 E	20.3 NE	11.3 E	44.8 E	3770	826	240	0.040	0.016	0.027	0.110	0.093	0.219	0.109	0.393	0.261	1.333	0.260
GI_SD_NE_2009	GI-SD447-0006-AVG	2.6 *	0.14 *	10.4 E	26.6 E	17.6 NE	11.5 E	42.8 E	3420	724	185	0.037	0.015	0.028	0.099	0.081	0.223	0.104	0.356	0.229	1.028	0.220
GI_SD_NE_2009	GI-SD447-0006-D	2.4 *	0.13 *	11 E	23.4 E	14.9 NE	11.7 E	40.8 E	3070	622	130	0.034	0.014	0.030	0.087	0.068	0.227	0.100	0.320	0.197	0.722	0.180
GI_SD_NE_2009	GI-SD449-0006	2.5 *	0.11 B*	7.9 E	11 E	9 NE	13.1 E	78.9 E	372	484	340	0.036	0.011	0.021	0.041	0.041	0.254	0.192	0.039	0.153	1.889	0.268
GI_SD_NE_2009	GI-SD450-0006	2.9 *	0.0056 U*	9 E	11.9 E	10.1 NE	10.1 E	26.7 E	1.65 U	1.65 U	16.5 U	0.041	0.001	0.024	0.044	0.046	0.196	0.065	0.000	0.001	0.092	0.051
GI_SD_NE_2010	GI-SD304-0006	0.467 J	0.23	9.8 J	13.4 J	20.7 J	7.7	38.1 J	2210 J	690 J	1340	0.007	0.024	0.026	0.050	0.095	0.149	0.093	0.230	0.218	7.444	0.834
GI_SD_NE_2010	GI-SD429-0006	0.7 J	0.2 J	12	7.5 J	11.2	7.4	34.4 J	1970	730 J	12.4 J	0.010	0.021	0.032	0.028	0.051	0.143	0.084	0.205	0.231	0.069	0.087
GI_SD_NE_2010	GI-SD438-0006	2.6 J	0.283	15.5 J	15.7 J	108 J	11.4	35.8 J	2700 J	660 J	106 J	0.037	0.029	0.042	0.058	0.495	0.221	0.087	0.281	0.209	0.589	0.205
GI_SD_NE_2010	GI-SD510-0006	2.2 J	0.443 J	16.1 J	17.7 J	10.7 J	10.8 J	43.9 J	1020 J	244 J	1.07 UJ	0.031	0.046	0.044	0.066	0.049	0.209	0.107	0.106	0.077	0.006	0.074
GI_SD_NE_2010	GI-SD511-0006	0.278 J	0.301 J	11.9 J	10.6 J	20.7 J	7.6 J	32.2 J	271 J	55.8 J	276 J	0.004	0.031	0.032	0.039	0.095	0.147	0.079	0.028	0.018	1.533	0.201
GI_SD_NE_2010	GI-SD512-0006	2.9 J	0.555	19.9 J	30.6 J	8.4 J	33.4	43.4 J	3910 J	1880 J	3.2 J	0.041	0.058	0.054	0.113	0.039	0.647	0.106	0.407	0.595	0.018	0.208
GI_SD_NE_2010	GI-SD513-0006	0.065 UJ	0.166 J	8.4 J	6.8 J	7.3 J	6.2	27.6 J	283 J	38.4 J	4.3 J	0.001	0.017	0.023	0.025	0.033	0.120	0.067	0.029	0.012	0.024	0.035
GI_SD_NE_2010	GI-SD514-0006	0.295 UJ	0.1635 UJ	13.5 J	13.9 J	23 J	6.3 J	47.2 J	8700 J	2470 J	16 J	0.004	0.017	0.036	0.051	0.106	0.122	0.115	0.906	0.782	0.089	0.223
GI_SD_NE_2010	GI-SD515-0006	2.6 J	0.465 J	20.4 J	18.7 J	18.3 J	8.2 J	37 J	4970 J	1390 J	290 J	0.037	0.048	0.055	0.069	0.084	0.159	0.090	0.518	0.440	1.611	0.311
GI_SD_NE_2010	GI-SD517-0006	1.7 J	0.264	16.8 J	14.2 J	54.4 J	8.4	39.9 J	377 J	40.8 J	117 J	0.024	0.028	0.045	0.053	0.250	0.163	0.097	0.039	0.013	0.650	0.136
GI_SD_NE_2010	GI-SD517-0006-AVG	1.6 J	0.254	14.4 J	13.8 J	41.6 J	8.5	40.4 J	342 J	37.2 J	150 J	0.023	0.026	0.039	0.051	0.191	0.165	0.099	0.036	0.012	0.833	0.147
GI_SD_NE_2010	GI-SD517-0006-D	1.5 J	0.243	12.1 J	13.3 J	28.9 J	8.6	40.8 J	307 J	33.6 J	182 J	0.021	0.025	0.033	0.049	0.133	0.167	0.100	0.032	0.011	1.011	0.158
GI_SD_NE_2010	GI-SD518-0006	0.643 J	0.282 J	8.9 J	17.9 J	14.5 J	9.6 J	38.3 J	5100	840 J	164 J	0.009	0.029	0.024	0.066	0.067	0.186	0.093	0.531	0.266	0.911	0.218
GI_SD_NE_2010	GI-SD519-0006	0.554 J	0.177 J	9.3	10.9 J	17.9	6	30.9 J	633	112 J	286	0.008	0.018	0.025	0.040	0.082	0.116	0.075	0.066	0.035	1.589	0.206

APPENDIX G.8

SUMMARY OF SEDIMENT RESULTS AND ER-M QUOTIENTS
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT
JAMESTOWN, RHODE ISLAND

		Sample Concentration[1]										ERM-Q[2]										
Sample Area	Sample Number	ARSENIC	CADMIUM	CHROMIUM	COPPER	LEAD	NICKEL	ZINC	HIGH MW PAHS	LOW MW PAHS	TOTAL AROCLOR	ARSENIC	CADMIUM	CHROMIUM	COPPER	LEAD	NICKEL	ZINC	HIGH MW PAHS	LOW MW PAHS	TOTAL AROCLOR	AVG ERM-Q
	ERM	70	9.6	370	270	218	51.6	410	9600	3160	180	70	9.6	370	270	218	51.6	410	9600	3160	180	NA
GI_SD_NE_2010	GI-SD528-0006	0.841 J	0.17 J	8.9 J	16.4 J	96.8 J	7.3	40 J	551 J	124 J	56.1 J	0.012	0.018	0.024	0.061	0.444	0.141	0.098	0.057	0.039	0.312	0.121
GI_SD_NE_2010	GI-SD530-0006	5.6 J	0.724	28.1 J	186 J	20.9 J	32.8	41.2 J	711 J	123 J	8.1 J	0.080	0.075	0.076	0.689	0.096	0.636	0.100	0.074	0.039	0.045	0.191
GI_SD_NE_2010	GI-SD531-0006	1.4 J	0.288	11.3 J	102 J	199 J	8.2	47.2 J	824 J	166 J	19.1 J	0.020	0.030	0.031	0.378	0.913	0.159	0.115	0.086	0.053	0.106	0.189
GI_SD_NE_2010	GI-SD566-0006	0.84 J	0.256 J	11.9 J	16 J	17.7 J	8.8 J	36.4 J	3290 J	949 J	129 J	0.012	0.027	0.032	0.059	0.081	0.171	0.089	0.343	0.300	0.717	0.183
GI_SD_NW_2005	G32-SD313A-000.5	3.8 J	0.32 UJ	13.3	18	14.8 J	8.7 J	42.2 J	1060	238	16.5 U	0.054	0.033	0.036	0.067	0.068	0.169	0.103	0.110	0.075	0.092	0.081
GI_SD_NW_2005	G32-SD313B-000.5	2.7 J	0.235 UJ	10.8	11.8	13.2 J	7.8 J	35 J	2560 J	325	16.5 U	0.039	0.024	0.029	0.044	0.061	0.151	0.085	0.267	0.103	0.092	0.089
GI_SD_NW_2005	G32-SD313C-000.5	6.9 J	0.6 UJ	23.5	42.7	21.3 J	23.9 J	48.2 J	1640 J	527	16.5 U	0.099	0.063	0.064	0.158	0.098	0.463	0.118	0.171	0.167	0.092	0.149
GI_SD_NW_2005	G32-SD313D-000.5	4.6 J	20.7 J	15.5	37.7 J	19.3 J	10.2 J	37.5 J	584 J	165 J	16.5 U	0.066	2.156	0.042	0.140	0.089	0.198	0.091	0.061	0.052	0.092	0.299
GI_SD_NW_2005	G32-SD313D-000.5-AVG	4.05 J	12.3 J	13.2	27.2 J	16.6 J	9.5 J	38.4 J	1150 J	277 J	16.5 U	0.058	1.281	0.036	0.101	0.076	0.184	0.094	0.120	0.088	0.092	0.213
GI_SD_NW_2005	G32-SD313D-000.5-D	3.5 J	3.9 J	10.8	16.8 J	13.8 J	8.8 J	39.3 J	1720 J	389 J	16.5 U	0.050	0.406	0.029	0.062	0.063	0.171	0.096	0.179	0.123	0.092	0.127
GI_SD_NW_2005	G32-SD313E-000.5	4.4 J	0.75 J	11.9	20.9 J	15.8 J	7.8 J	45.7 J	956	262	16.5 U	0.063	0.078	0.032	0.077	0.072	0.151	0.111	0.100	0.083	0.092	0.086
GI_SD_NW_2005	G32-SD313F-000.5	7.3 J	0.3 UJ	37.7 J	64.4	17.9 J	47.4 J	39.7 J	12800	2680	16.5 U	0.104	0.031	0.102	0.239	0.082	0.919	0.097	1.333	0.848	0.092	0.385
GI_SD_NW_2005	G32-SD302A-000.5	7.1 J	0.83 J	28.4	26.5 J	33.6 J	13.1 J	72.3	958 J	313	46	0.101	0.086	0.077	0.098	0.154	0.254	0.176	0.100	0.099	0.256	0.140
GI_SD_NW_2005	G32-SD302B-000.5	4.6 J	0.62 J	22.1	18.2 J	21.7 J	13 J	48.1	1860 J	616	16.5 U	0.066	0.065	0.060	0.067	0.100	0.252	0.117	0.194	0.195	0.092	0.121
GI_SD_NW_2005	G32-SD302C-000.5	3.1 J	0.24 UJ	12.6	9.7 J	14.1 J	7.2 J	34.6 J	2360	825	16.5 U	0.044	0.025	0.034	0.036	0.065	0.140	0.084	0.246	0.261	0.092	0.103
GI_SD_NW_2005	G32-SD302D-000.5	4 J	0.6 J	16	16.2 J	40.3 J	10 J	63.2	620 J	202	33 J	0.057	0.063	0.043	0.060	0.185	0.194	0.154	0.065	0.064	0.183	0.107
GI_SD_NW_2005	G32-SD302E-000.5	3.3 J	0.5 J	12.7	9.1 J	12.5 J	7.1 J	33.3 J	677 J	187 J	16.5 U	0.047	0.052	0.034	0.034	0.057	0.138	0.081	0.071	0.059	0.092	0.066
GI_SD_NW_2005	G32-SD302F-000.5	3.4 J	0.155 UJ	13.1 J	35.1	23.4 J	11.6 J	54.1 J	3150 J	935	16.5 U	0.049	0.016	0.035	0.130	0.107	0.225	0.132	0.328	0.296	0.092	0.141
GI_SD_NW_2005	G32-SD308A-000.5	2.9 J	0.27 UJ	11	9.6 J	14 J	7.2 J	35.8 J	687 J	167	16.5 U	0.041	0.028	0.030	0.036	0.064	0.140	0.087	0.072	0.053	0.092	0.064
GI_SD_NW_2005	G32-SD308B-000.5	2.7 J	0.24 UJ	11.2	9 J	14.2 J	7.5 J	33.4 J	655	133	16.5 U	0.039	0.025	0.030	0.033	0.065	0.145	0.081	0.068	0.042	0.092	0.062
GI_SD_NW_2005	G32-SD308C-000.5	3.9 J	0.28 UJ	12.2	12.4 J	14.1 J	8.3 J	38.1 J	2610 J	479	16.5 U	0.056	0.029	0.033	0.046	0.065	0.161	0.093	0.272	0.152	0.092	0.100
GI_SD_NW_2005	G32-SD308D-000.5	3.9 J	0.63 J	14.2	13 J	13.5 J	8.9 J	34.9 J	767	197	16.5 U	0.056	0.066	0.038	0.048	0.062	0.172	0.085	0.080	0.062	0.092	0.076
GI_SD_NW_2005	G32-SD308E-000.5	3.2 J	0.23 UJ	10.4	10.1 J	11.8 J	6.8 J	32 J	10800 J	4920	16.5 U	0.046	0.024	0.028	0.037	0.054	0.132	0.078	1.125	1.557	0.092	0.317
GI_SD_NW_2005	G32-SD308F-000.5	2.1 J	0.205 UJ	9.3 J	26.4	18.9 J	6.4 J	34.7 J	9100	1680	16.5 U	0.030	0.021	0.025	0.098	0.087	0.124	0.085	0.948	0.532	0.092	0.204
GI_SD_NW_2009	GI-SD439-0006	6.8	0.9	21.8 E	33 N	51.4 N*E	16.9 *E	67.5 E	476	163	16.5 U	0.097	0.094	0.059	0.122	0.236	0.328	0.165	0.050	0.052	0.092	0.129
GI_SD_NW_2009	GI-SD440-0006	1.7	0.25	12.8 E	8.1 N	9.2 N*E	7.3 *E	32.2 E	73.3	10.9	16.5 U	0.024	0.026	0.035	0.030	0.042	0.141	0.079	0.008	0.003	0.092	0.048
GI_SD_NW_2009	GI-SD441-0006	2.7	0.42	19.3 E	9.9 N	11.5 N*E	11.2 *E	33.5 E	494	188	16.5 U	0.039	0.044	0.052	0.037	0.053	0.217	0.082	0.051	0.059	0.092	0.073
GI_SD_NW_2009	GI-SD442-0006	4.6	0.61	21.5 E	42 N	23.1 N*E	12.3 *E	48.5 E	1530	787	16.5 U	0.066	0.064	0.058	0.156	0.106	0.238	0.118	0.159	0.249	0.092	0.131
GI_SD_NW_2009	GI-SD443-0006	1.9 *	0.052 B*	9.7 E	6.9 E	8.6 NE	6 E	24.8 E	925	287	16.5 U	0.027	0.005	0.026	0.026	0.039	0.116	0.060	0.096	0.091	0.092	0.058
GI_SD_NW_2009	GI-SD444-0006	2 *	0.069 B*	9.5 E	7.3 E	9.2 NE	5.4 E	26.4 E	1120	181	16.5 U	0.029	0.007	0.026	0.027	0.042	0.105	0.064	0.117	0.057	0.092	0.057
GI_SD_NW_2009	GI-SD444-0006-AVG	1.95 *	0.0725 B*	14.8 E	7.25 E	21.8 NE	5.35 E	29.6 E	1460	308	16.5 U	0.028	0.008	0.040	0.027	0.100	0.104	0.072	0.152	0.097	0.092	0.072
GI_SD_NW_2009	GI-SD444-0006-D	1.9 *	0.076 B*	20 E	7.2 E	34.5 NE	5.3 E	32.7 E	1810	436	16.5 U	0.027	0.008	0.054	0.027	0.158	0.103	0.080	0.189	0.138	0.092	0.087
GI_SD_NW_2009	GI-SD445-0006	4.3 *	0.1 B*	19.2 E	18.2 E	21.3 NE	8.4 E	47.4 E	1240	291	16.5 U	0.061	0.010	0.052	0.067	0.098	0.163	0.116	0.129	0.092	0.092	0.088
GI_SD_NW_2010	GI-SD520-0006	0.193 J	0.15 J	8.2 J	6.5 J	9.3 J	6.7	26.8 J	1520 J	425 J	6.7 J	0.003	0.016	0.022	0.024	0.043	0.130	0.065	0.158	0.134	0.037	0.063
GI_SD_NW_2010	GI-SD521-0006	1.2 J	0.212	10.1 J	22.9 J	13.2 J	9.4	33.7 J	14100 J	3800 J	0.71 U	0.017	0.022	0.027	0.085	0.061	0.182	0.082	1.469	1.203	0.004	0.315
GI_SD_NW_2010	GI-SD522-0006	5.3 J	1	24.7 J	40.6 J	22.2 J	21.6	65.4 J	1490 J	116 J	6.4 J	0.076	0.104	0.067	0.150	0.102	0.419	0.160	0.155	0.037	0.036	0.130
GI_SD_NW_2010	GI-SD523-0006	3.3 J	0.783	18 J	37.7 J	35.9 J	17.2	50.7 J	1450 J	360 J	3.92 J	0.047	0.082	0.049	0.140	0.165	0.333	0.124	0.151	0.114	0.022	0.123
GI_SD_REF_2009	GI-JCC01-0006	2.3	0.048 B	11.6 E	7.5 E	8.9 E	6.4 E	30.7 E	517.1	103.3	16.5 U	0.033	0.005	0.031	0.028	0.041	0.124	0.075	0.054	0.033	0.092	0.051
GI_SD_REF_2009	GI-JCC02-0006	2.5	0.055 B	12.7 E	7.9 E	9.6 E	7.2 E	36.6 E	314.7	60.7	16.5 U	0.036	0.006	0.034	0.029	0.044	0.140	0.089	0.033	0.019	0.092	0.052
GI_SD_REF_2009	GI-JCC04-0006	1.5	0.063 B	11.2 E	7.2 E	8.7 E	8.2 E	30.5 E	101.5	11.8	16.5 U	0.021	0.007	0.030	0.027	0.040	0.159	0.074	0.011	0.004	0.092	0.046
GI_SD_REF_2009	GI-JPC01-0006	1.7	0.059 B	9.7 E	6.4 E	8.3 E	5.8 E	30.4 E	195.8	29.4	16.5 U	0.024	0.006	0.026	0.024	0.038	0.112	0.074	0.020	0.009	0.092	0.043
GI_SD_REF_2009	GI-JPC01-0006-AVG	1.65	0.059 B	9.65 E	6.45 E	8.1 E	5.7 E	29.3 E	197.4	31.55	16.5 U	0.024	0.006	0.026	0.024	0.037	0.110	0.071	0.021	0.010	0.092	0.042
GI_SD_REF_2009	GI-JPC01-0006-D	1.6	0.059 B	9.6 E	6.5 E	7.9 E	5.6 E	28.2 E	199	33.7	16.5 U	0.023	0.006	0.026	0.024	0.036	0.109	0.069	0.021	0.011	0.092	0.042
GI_SD_REF_2009	GI-JPC02-0006	2.7	0.18	13.5 E	11.3 E	13.7 E	7.4 E	46 E	217.5	45.7	16.5 U	0.039	0.019	0.036	0.042	0.063	0.143	0.112	0.023	0.014	0.092	0.058
GI_SD_REF_2009	GI-JPC03-0006	1.1	0.06 B	7.8 E	4.4 E	5.4 E	5.3 E	21.1 E	99	10.3	33 U	0.016	0.006	0.021	0.016	0.025	0.103	0.051	0.010	0.003	0.183	0.044
GI_SD_REF_2010	GI-SD524-0006	0.273 J	0.132 J	11.1 J	6.2 J	9.2 J	7 J	30.7 J	229 J	31 J	0.2715 U	0.004	0.014	0.030	0.023	0.042	0.136	0.075	0.024	0.010	0.002	0.036
GI_SD_REF_2010	GI-SD525-0006	1.6 J	0.367 J	19.8 J	15 J	20.6 J	10.2 J	61.8 J	673 J	96.6 J	0.3345 U	0.023	0.038	0.054	0.056	0.094	0.198	0.151	0.070	0.031	0.002	0.072
GI_SD_REF_2010	GI-SD526-0006	0.423 J	0.27 J	16.5 J	9.9 J	10.6 J	11.7 J	42.9 J	173 J	10.4 J	0.269 U	0.006	0.028	0.045	0.037	0.049	0.227	0.105	0.018	0.003	0.001	0.052
GI_SD_S_2005	G32-SD311-0.51.0	2.6 J	0.11 UJ	11.2 J	20.7	27.2	8.5 J	42.1 J	370	72.3	16.5 U	0.037	0.011	0.030	0.077	0.125	0.165	0.103	0.039	0.023	0.092	0.070
GI_SD_S_2005	G32-SD311-000.5	2.5 J	0.065 UJ	12 J	18	19.6 J	8 J	38.9 J	2080	299	16.5 U	0.036	0.007	0.032	0.067	0.090	0.155	0.095	0.217	0.095	0.092	0.088
GI_SD_S_2005	G32-SD314-0.51.0	1.2 J	0.024 UJ	13.8 J	13.6	12.8 J	10.9 J	42.3 J	1700	498	16.5 U	0.017	0.003	0.037	0.050	0.059	0.211	0.103	0.177	0.158	0.092	0.091
GI_SD_S_2005	G32-SD314-000.5	1.4 J	0.0305 UJ	11.9 J	14.1	12.1 J	9 J	37.3 J	2970 J	1030 J	270	0.020	0.003	0.032	0.052	0.056	0.174	0.091	0.309	0.326	1.500	0.256
GI_SD_S_2005	G32-SD314-000.5-AVG	1.3 J	0.03725 UJ	13.6 J	13.4	13.2 J	9.8 J	40.7 J	2100 J	706 J	230	0.019	0.004	0.037	0.050	0.061	0.190	0.099	0.219	0.223	1.278	0.218
GI_SD_S_2005	G32-SD314-000.5-D	1.2 J	0.044 UJ	15.3 J	12.6	14.4 J	10.6 J	44.1 J	1220 J	383 J	190	0.017	0.005	0.041	0.047	0.066	0.205	0.108	0.127	0.121	1.056	0.179
GI_SD_S_2005	G32-SD301-0.51.0	1.2 J	0.0245 UJ	10.1 J	11	9.5 J	6.8 J	28.2 J	3360 J	1060	16.5 U	0.017	0.003	0.027	0.041	0.044	0.132	0.069	0.350	0.335	0.092	0.111
GI_SD_S_2005	G32-SD301-000.5	1.3 J	0.02 UJ	10.2 J	9.3	10.5 J	6.2 J	29.5 J	3470 J	988 J	16.5 U	0.019	0.002	0.028	0.034	0.048	0.120	0.072	0.361	0.313	0.092	0.109
GI_SD_S_2005	G32-SD303-0.51.0	1.7 J	0.08 UJ	17.3 J	14.3	20.5 J	9.6 J	49.2 J	687	174	85	0.024	0.008	0.047	0.053	0.094	0.186	0.120	0.072	0.055	0.472	0.113
GI_SD_S_2005	G32-SD303-000.5	2.6 J	0.09 UJ	18.2 J	16.1	23.4 J	9.7 J	57.9 J	14900	6380	120	0.037	0.009	0.049	0.060	0.107	0.188	0.141	1.552	2.019	0.667	0.483
GI_SD_S_2010	GI-SD311-0006	0.293 J	0.22	8.3 J	17 J	14.1 J	6.4	29.8 J	812 J	242 J	0.4815 U	0.004	0.023	0.022	0.063	0.065	0.124	0.073	0.085	0.077	0.003	0.054
GI_SD_S_2010	GI-SD529-0006	0.49 J	0.205 J	11.3	8.1 J	12.7	8.4	35.2 J	1780	567 J	16	0.007	0.021	0.031	0.030	0.058	0.163	0.086	0.185	0.179	0.089	0.085
GI_SD_STILLWATER_2005	G32-SD312-0.51.0	3.8 J	0.16 UJ	14.8	25.2	23.4 J	7.7 J	67.4 J	75800	12400	41000	0.054	0.017	0.040	0.093	0.107	0.149	0.164	7.896	3.924	227.778	24.022
GI_SD_STILLWATER_2005	G32-SD312-000.5	3.9 J	0.09 UJ	17.1	25.3	18.3 J	9.1 J	55.6 J	31000 J	5360	8900	0.056	0.009	0.046	0.094	0.084	0.176	0.136	3.229	1.696	49.444	5.497
GI_SD_STILLWATER_2005	G32-SD316-0.51.0	6.1 J	0.24 UJ	31.5	92.5	90.6 J	12.5 J	144 J	4040	540	22000	0.087	0.025	0.085	0.343	0.416	0.242	0.351	0.421	0.171	122.222	12.436
GI_SD_STILLWATER_2005	G32-SD316-000.5	4.9 J	0.145 UJ	20.8	42.5	90.6 J	10.2 J	95.9 J	7770 J	1460 J	22000	0.070	0.015	0.056	0.157	0.416	0.198	0.234	0.809	0.462	122.222	12.464
GI_SD_STILLWATER_2009	GI-SD401-0006	2.6	0.34	10.1 E	13.9 N	10.3 N*E	8.6 *E	32.9 E	7440	463	980	0.037	0.035	0.027	0.051	0.047	0.167	0.080	0.775	0.147	5.444	0.681
GI_SD_STILLWATER_2009	GI-SD401-0612	3.6	0.65	14.9 E	21.4 N	12.8 N*E	14.1 *E	36.2 E	1850	305	600	0.051	0.068	0.040	0.079	0.059	0.273	0.088	0.193	0.097	3.333	0.428
GI_SD_STILLWATER_2009	GI-SD401-1218	3.7	0.57	16.8 E	22.1 N	18 N*E	11.9 *E	43 E	2020	415	2200	0.053	0.059	0.045	0.082	0.083	0.231	0.105	0.210	0.131	12.222	1.322
GI_SD_STILLWATER_2009	GI-SD402-0006	3.3 E	0.22	10.7 NE	19.9 NE	8.4 NE	10.5 NE	52.1 NE	6770	696	25000	0.047	0.023	0.029	0.074	0.039	0.203	0.127	0.705	0.220	138.889	14.036
GI_SD_STILLWATER_2009	GI-SD402-0006-AVG	3.4 E	0.21	10 NE	20 NE	9.9 NE	9.3 NE	50.6 NE	6540	673	20500	0.049	0.022	0.027	0.074	0.045	0.180	0.123	0.681	0.213	113.889	11.530
GI_SD_STILLWATER_2009	GI-SD402-0006-D	3.5 E	0.2	9.4 NE	20.2 NE	11.4 NE	8.1 NE	49.1 NE	6320	650	16000	0.050	0.021	0.025	0.075	0.052	0.157	0.120	0.658	0.206	88.889	9.025
GI_SD_STILLWATER_2009	GI-SD402-0612	4.5 E	0.22	14.2 NE	22.9 NE	38.4 NE	9.1 NE	46.9 NE	36500	1590	55000	0.064	0.023	0.038	0.085	0.176	0.176	0.114	3.802	0.503	305.556	31.054
GI_SD_STILLWATER_2009	GI-SD403-0006	5.3 E	0.34	13.3 NE	35.1 NE	14.6 NE	11.5 NE	38.5 NE	1100	107	4800	0.076	0.035	0.036	0.130	0.067	0.223	0.094	0.115	0.034	26.667	2.748
GI_SD_STILLWATER_2009	GI-SD404-0006	4.1 E	0.16	12.9 NE	19.1 NE	21.4 NE	6.3 NE	39.9 NE	1560	288	2000	0.059	0.017	0.035	0.071	0.098	0.122	0.097	0.163	0.091	11.111	1.186
GI_SD_STILLWATER_2009	GI-SD404-0612	4.6 E	0.22	16.3 NE	22.6 NE	21.7 NE	8.1 NE	54.8 NE	2410	295	2500	0.066	0.023	0.044	0.084	0.100	0.157	0.134	0.251	0.093	13.889	1.484
GI_SD_STILLWATER_2009	GI-SD404-1824	7.2 E	2.1	53.2 NE	497 NE	407 NE	12 NE	616 NE	5170	473	1200	0.103	0.219	0.144	1.841	1.867	0.233	1.502	0.539	0.150	6.667	1.326

APPENDIX G.8

SUMMARY OF SEDIMENT RESULTS AND ER-M QUOTIENTS
SITE 17, GOULD ISLAND
NAVAL STATION NEWPORT
JAMESTOWN, RHODE ISLAND

		Sample Concentration[1]										ERM-Q[2]										
Sample Area	Sample Number	ARSENIC	CADMIUM	CHROMIUM	COPPER	LEAD	NICKEL	ZINC	HIGH MW PAHS	LOW MW PAHS	TOTAL AROCLOR	ARSENIC	CADMIUM	CHROMIUM	COPPER	LEAD	NICKEL	ZINC	HIGH MW PAHS	LOW MW PAHS	TOTAL AROCLOR	AVG ERM-Q
ERM		70	9.6	370	270	218	51.6	410	9600	3160	180	70	9.6	370	270	218	51.6	410	9600	3160	180	NA
GI_SD_STILLWATER_2009	GI-SD404-2834	5.1 E	0.44	30.1 NE	139 NE	51.9 NE	9.5 NE	121 NE	9820	788	45	0.073	0.046	0.081	0.515	0.238	0.184	0.295	1.023	0.249	0.250	0.295
GI_SD_STILLWATER_2009	GI-SD405-0006	3.4	0.56	11.2 E	27.7 N	21.2 N*E	7.7 *E	42.2 E	4720	1150	2100	0.049	0.058	0.030	0.103	0.097	0.149	0.103	0.492	0.364	11.667	1.311
GI_SD_STILLWATER_2009	GI-SD405-0006-AVG	3.55 E	0.475	15.8 E	36.8 N	21.5 N*E	8.75 *E	82.6 E	4500	1080	2200	0.051	0.049	0.043	0.136	0.099	0.170	0.201	0.469	0.342	12.222	1.378
GI_SD_STILLWATER_2009	GI-SD405-0006-D	3.7 E	0.39	20.3 NE	46 NE	21.8 NE	9.8 NE	123 NE	4280	1020	2300	0.053	0.041	0.055	0.170	0.100	0.190	0.300	0.446	0.323	12.778	1.446
GI_SD_STILLWATER_2009	GI-SD405-0612	3.5	0.36	11.9 E	18.1 N	19.6 N*E	9.5 *E	65.7 E	544	95.5	250	0.050	0.038	0.032	0.067	0.090	0.184	0.160	0.057	0.030	1.389	0.210
GI_SD_STILLWATER_2009	GI-SD405-1218	1.7	0.23	9.7 E	9.7 N	5.3 N*E	7.1 *E	20.6 E	19	1.65 U	16.5 U	0.024	0.024	0.026	0.036	0.024	0.138	0.050	0.002	0.001	0.092	0.042
GI_SD_STILLWATER_2009	GI-SD406-0006	3.8 E	0.14	11.2 NE	20 NE	19.7 NE	6.5 NE	54.6 NE	73700	6620	5100	0.054	0.015	0.030	0.074	0.090	0.126	0.133	7.677	2.095	28.333	3.863
GI_SD_STILLWATER_2009	GI-SD406-0612	2.2 E	0.05 B	13.5 NE	13.6 NE	6.3 NE	10.6 NE	23.7 NE	9230	1650	300	0.031	0.005	0.036	0.050	0.029	0.205	0.058	0.961	0.522	1.667	0.357
GI_SD_STILLWATER_2009	GI-SD407-0006	2.3 E	0.033 B	9.6 NE	47.4 NE	6.9 NE	9.5 NE	27.3 NE	816	68.3	190	0.033	0.003	0.026	0.176	0.032	0.184	0.067	0.085	0.022	1.056	0.168
GI_SD_STILLWATER_2009	GI-SD407-0612	3.9 E	0.11	62.3 NE	28.4 NE	18.9 NE	30.1 NE	48.3 NE	7690	801	6000	0.056	0.011	0.168	0.105	0.087	0.583	0.118	0.801	0.253	33.333	3.552
GI_SD_STILLWATER_2009	GI-SD408-0006	1.5 E	0.0087 B	6 E	7.3 E	5 E	5.6 E	16 E	304	92.5	160	0.021	0.001	0.016	0.027	0.023	0.109	0.039	0.032	0.029	0.889	0.119
GI_SD_STILLWATER_2009	GI-SD408-0612	1.7 E	0.018 B	7 E	8.6 E	5.4 E	6.1 E	17.4 E	335	45.4	96	0.024	0.002	0.019	0.032	0.025	0.118	0.042	0.035	0.014	0.533	0.084
GI_SD_STILLWATER_2009	GI-SD408-1218	1.7 E	0.0083 B	8.5 E	7.8 E	4.8 E	11.2 E	21.4 E	1.65 U	1.65 U	16.5 U	0.024	0.001	0.023	0.029	0.022	0.217	0.052	0.000	0.001	0.092	0.046
GI_SD_STILLWATER_2009	GI-SD409-0006	1.6 E	0.058 B	7 E	8.3 NE	3.7 NE	6 E	13.6 *E	1.65 U	1.65 U	16.5 U	0.023	0.006	0.019	0.031	0.017	0.116	0.033	0.000	0.001	0.092	0.034
GI_SD_STILLWATER_2009	GI-SD409-0612	1.8 E	0.079 B	6.9 E	9.7 NE	4.5 NE	6.1 E	14.1 *E	24.4	71.3	40	0.026	0.008	0.019	0.036	0.021	0.118	0.034	0.003	0.023	0.222	0.051
GI_SD_STILLWATER_2009	GI-SD409-1824	2.2 E	0.14	12.8 E	18.9 NE	8.7 NE	7.8 E	27.3 *E	1220	192	310	0.031	0.015	0.035	0.070	0.040	0.151	0.067	0.127	0.061	1.722	0.232
GI_SD_STILLWATER_2009	GI-SD409-4248	2.5 E	0.12	9.5 E	14.9 NE	6 NE	9.7 E	24.9 *E	4	1.65 U	320	0.036	0.013	0.026	0.055	0.028	0.188	0.061	0.000	0.001	1.778	0.218
GI_SD_STILLWATER_2009	GI-SD410-0006	1.7 E	0.081 B	7.6 E	9.5 NE	7.4 NE	5.5 E	20.1 *E	813	132	4100	0.024	0.008	0.021	0.035	0.034	0.107	0.049	0.085	0.042	22.778	2.318
GI_SD_STILLWATER_2009	GI-SD410-0612	2.2 E	0.12 B	8.5 E	12.7 NE	7.3 NE	7.7 E	23.1 *E	165	25.3	410	0.031	0.013	0.023	0.047	0.033	0.149	0.056	0.017	0.008	2.278	0.266
GI_SD_STILLWATER_2009	GI-SD410-1824	2.5 E	0.11	8.2 E	11.1 NE	6.8 NE	7.1 E	20.9 *E	25.7	1.65 U	54	0.036	0.011	0.022	0.041	0.031	0.138	0.051	0.003	0.001	0.300	0.063
GI_SD_STILLWATER_2009	GI-SD410-2632	2.3 E	0.11 B	8.2 E	10.6 NE	6.7 NE	7.1 E	20.7 *E	158	70.6	88	0.033	0.011	0.022	0.039	0.031	0.138	0.050	0.016	0.022	0.489	0.085
GI_SD_STILLWATER_2009	GI-SD411-0006	1.6 E	0.1 B	6.2 E	8.9 NE	6 NE	4.6 E	16.7 *E	2840	1950	570	0.023	0.010	0.017	0.033	0.028	0.089	0.041	0.296	0.617	3.167	0.432
GI_SD_STILLWATER_2009	GI-SD411-0612	2.4 E	0.12	7.8 E	11.1 NE	6.6 NE	6.6 E	19.6 *E	47.6	1.65 U	101	0.034	0.013	0.021	0.041	0.030	0.128	0.048	0.005	0.001	0.561	0.088
GI_SD_STILLWATER_2009	GI-SD411-1218	1.9 E	0.093 B	6.7 E	10 NE	5.5 NE	5.7 E	16.5 *E	4	1.65 U	16.5 U	0.027	0.010	0.018	0.037	0.025	0.110	0.040	0.000	0.001	0.092	0.036
GI_SD_STILLWATER_2009	GI-SD411-1824	2.4 E	0.11 B	7.9 E	9.4 NE	6.7 NE	6.4 E	19.8 *E	37.3	8.5	16.5 U	0.034	0.011	0.021	0.035	0.031	0.124	0.048	0.004	0.003	0.092	0.040
GI_SD_STILLWATER_2009	GI-SD412-0006	4.8 E	0.26	17.3 NE	26.6 NE	25.7 NE	9.2 NE	68.2 NE	10200	2450	5300	0.069	0.027	0.047	0.099	0.118	0.178	0.166	1.063	0.775	29.444	3.199
GI_SD_STILLWATER_2009	GI-SD412-0612	9.6 E	1.3	33.7 NE	162 NE	345 NE	13.8 NE	1160 NE	6530	959	7200	0.137	0.135	0.091	0.600	1.583	0.267	2.829	0.680	0.303	40.000	4.663
GI_SD_STILLWATER_2009	GI-SD412-1218	11.3 E	1.3	34.4 NE	109 NE	202 NE	13.6 NE	599 NE	4560	585	1720	0.161	0.135	0.093	0.404	0.927	0.264	1.461	0.475	0.185	9.556	1.366
GI_SD_STILLWATER_2009	GI-SD412-1824	10 E	1.1	41.9 NE	130 NE	111 NE	20.9 NE	207 NE	2480	319	129	0.143	0.115	0.113	0.481	0.509	0.405	0.505	0.258	0.101	0.717	0.335
GI_SD_STILLWATER_2009	GI-SD413-0006	6	0.77	23.1 E	37.4 N	27 N*E	13.3 *E	237 E	4550	1040	2800	0.086	0.080	0.062	0.139	0.124	0.258	0.578	0.474	0.329	15.556	1.769
GI_SD_STILLWATER_2009	GI-SD413-0612	5.2	0.89	25.9 E	41.9 N	31.9 N*E	12.5 *E	326 E	3320	472	2400	0.074	0.093	0.070	0.155	0.146	0.242	0.795	0.346	0.149	13.333	1.540
GI_SD_STILLWATER_2009	GI-SD414-0006	3.9 E	0.2	17.4 E	25 E	22.4 E	8.7 E	84.6 E	2090	295	300	0.056	0.021	0.047	0.093	0.103	0.169	0.206	0.218	0.093	1.667	0.267
GI_SD_STILLWATER_2009	GI-SD414-0006-AVG	3.75 E	0.195	16.4 E	25 E	21.6 E	8.1 E	80.2 E	1940	278	390	0.054	0.020	0.044	0.093	0.099	0.157	0.196	0.202	0.088	2.167	0.312
GI_SD_STILLWATER_2009	GI-SD414-0006-D	3.6 E	0.19	15.4 E	25 E	20.9 E	7.5 E	75.7 E	1800	261	480	0.051	0.020	0.042	0.093	0.096	0.145	0.185	0.188	0.083	2.667	0.357
GI_SD_STILLWATER_2009	GI-SD414-0612	2.6 E	0.071 B	9.5 E	11.9 E	7.8 E	8.3 E	26.2 E	170	13.8	16.5 U	0.037	0.007	0.026	0.044	0.036	0.161	0.064	0.018	0.004	0.092	0.049
GI_SD_STILLWATER_2009	GI-SD414-1218	2.3 E	0.036 B	8.5 E	14.2 E	5.6 E	9 E	20.2 E	30.1	1.65 U	16.5 U	0.033	0.004	0.023	0.053	0.026	0.174	0.049	0.003	0.001	0.092	0.046
GI_SD_STILLWATER_2009	GI-SD414-1824	2.6 E	0.051 B	11.8 E	14.6 E	4.7 E	9.5 E	20.7 E	1.65 U	1.65 U	16.5 U	0.037	0.005	0.032	0.054	0.022	0.184	0.050	0.000	0.001	0.092	0.048
GI_SD_STILLWATER_2009	GI-SD414-1824-AVG	2.5 E	0.052 B	11.6 E	15 E	4.8 E	9.6 E	21.3 E	16.2	1.65 U	16.5 U	0.036	0.005	0.031	0.056	0.022	0.186	0.052	0.002	0.001	0.092	0.048
GI_SD_STILLWATER_2009	GI-SD414-1824-D	2.4 E	0.053 B	11.5 E	15.4 E	4.9 E	9.7 E	21.9 E	30.7	1.65 U	16.5 U	0.034	0.006	0.031	0.057	0.022	0.188	0.053	0.003	0.001	0.092	0.049
GI_SD_STILLWATER_2009	GI-SD415-0006	4.9 E	0.052 B	10.5 E	7.3 E	8.5 E	6.8 E	26.3 E	115	14.2	16.5 U	0.070	0.005	0.028	0.027	0.039	0.132	0.064	0.012	0.004	0.092	0.047
GI_SD_STILLWATER_2009	GI-SD415-0612	5 E	0.083 B	12.9 E	9.6 E	12 E	7.4 E	33.3 E	1120	121	35	0.071	0.009	0.035	0.036	0.055	0.143	0.081	0.117	0.038	0.194	0.078
GI_SD_STILLWATER_2009	GI-SD415-1824	9.8 E	0.11	30.3 E	7.9 E	9 E	16.6 E	32.9 E	150	15.7	16.5 U	0.140	0.011	0.082	0.029	0.041	0.322	0.080	0.016	0.005	0.092	0.082
GI_SD_STILLWATER_2009	GI-SD415-4248	3.8 E	0.049 B	9.4 E	8.2 E	4.9 E	7.7 E	20.2 E	1.65 U	4.4	16.5 U	0.054	0.005	0.025	0.030	0.022	0.149	0.049	0.000	0.001	0.092	0.043
GI_SD_STILLWATER_2009	GI-SD415-4248-AVG	3.5 E	0.0425 B	9.2 E	7.65 E	4.4 E	7.95 E	20.4 E	1.65 U	3.02	16.5 U	0.050	0.004	0.025	0.028	0.020	0.154	0.050	0.000	0.001	0.092	0.042
GI_SD_STILLWATER_2009	GI-SD415-4248-D	3.2 E	0.036 B	9 E	7.1 E	3.9 E	8.2 E	20.6 E	1.65 U	1.65 U	16.5 U	0.046	0.004	0.024	0.026	0.018	0.159	0.050	0.000	0.001	0.092	0.042
GI_SD_STILLWATER_2009	GI-SD416-0006	6.5 E	0.53	30.7 E	39 NE	38.6 NE	11.5 E	82.8 *E	8640	879	16.5 U	0.093	0.055	0.083	0.144	0.177	0.223	0.202	0.900	0.278	0.092	0.225
GI_SD_STILLWATER_2009	GI-SD416-0612	6.5 E	0.091 B	15.3 E	14.6 E	19.1 E	7.2 E	38.6 E	6210	2130	16.5 U	0.093	0.009	0.041	0.054	0.088	0.140	0.094	0.647	0.674	0.092	0.193
GI_SD_STILLWATER_2009	GI-SD416-1218	3.9 E	0.055 B	13 E	10.5 E	14.1 E	6.8 E	32.8 E	540	70.2	16.5 U	0.056	0.006	0.035	0.039	0.065	0.132	0.080	0.056	0.022	0.092	0.058
GI_SD_STILLWATER_2009	GI-SD417-0006	4.1 E	1.1	20.1 E	31.3 E	30.6 E	8.5 E	77.8 E	1920	358	16.5 U	0.059	0.115	0.054	0.116	0.140	0.165	0.190	0.200	0.113	0.092	0.124
GI_SD_STILLWATER_2009	GI-SD417-0612	2.3 E	0.042 B	7.5 E	7.6 E	5.8 E	6.2 E	18.1 E	76.3	12.4	16.5 U	0.033	0.004	0.020	0.028	0.027	0.120	0.044	0.008	0.004	0.092	0.038
GI_SD_STILLWATER_2009	GI-SD417-1218	2.1 E	0.019 B	7.9 E	8.2 E	5.2 E	7.2 E	16.4 E	1.65 U	1.65 U	16.5 U	0.030	0.002	0.021	0.030	0.024	0.140	0.040	0.000	0.001	0.092	0.038
GI_SD_STILLWATER_2009	GI-SD418-0006	6.7 E	0.46	29.5 E	41 NE	38.7 NE	12.3 E	78.2 *E	1710	266	135	0.096	0.048	0.080	0.152	0.178	0.238	0.191	0.178	0.084	0.750	0.199
GI_SD_STILLWATER_2009	GI-SD418-0612	3.1 E	0.15	10.8 E	16.1 NE	10 NE	8.8 E	29.6 *E	174	61.1	16.5 U	0.044	0.016	0.029	0.060	0.046	0.171	0.072	0.018	0.019	0.092	0.057
GI_SD_STILLWATER_2009	GI-SD419-0006	7.1 E	0.3	25.7 E	25.5 NE	28 NE	12.9 E	72.2 *E	9850	1350	61	0.101	0.031	0.069	0.094	0.128	0.250	0.176	1.026	0.427	0.339	0.264
GI_SD_STILLWATER_2009	GI-SD419-0612	3.7 E	0.13	11.4 E	8.7 NE	39.9 NE	6.2 E	37.6 *E	1010	131	120	0.053	0.014	0.031	0.032	0.183	0.120	0.092	0.105	0.041	0.667	0.134
GI_SD_STILLWATER_2009	GI-SD419-1824	4.3 E	0.2	13 E	11 NE	14 NE	7.1 E	38.1 *E	4830	560	34	0.061	0.021	0.035	0.041	0.064	0.138	0.093	0.503	0.177	0.189	0.132
GI_SD_STILLWATER_2009	GI-SD419-2632	8.6 E	0.2	12.6 E	7.8 NE	9.4 NE	9.3 E	31.8 *E	202	29	16.5 U	0.123	0.021	0.034	0.029	0.043	0.180	0.078	0.021	0.009	0.092	0.063
GI_SD_STILLWATER_2009	GI-SD420-0006	1.6 E	0.086 B	6.8 E	10.5 NE	5.9 NE	8 E	22 *E	356	95.9	65	0.023	0.009	0.018	0.039	0.027	0.155	0.054	0.037	0.030	0.361	0.075
GI_SD_STILLWATER_2009	GI-SD420-0006-AVG	1.7 E	0.0575 B	7 E	10.1 NE	6.25 NE	7.3 E	21.8 *E	432	136	40.8	0.024	0.006	0.019	0.037	0.029	0.141	0.053	0.045	0.043	0.227	0.062
GI_SD_STILLWATER_2009	GI-SD420-0006-D	1.8 E	0.029 B	7.2 E	9.7 E	6.6 E	6.6 E	21.5 E	508	176	16.5 U	0.026	0.003	0.019	0.036	0.030	0.128	0.052	0.053	0.056	0.092	0.050
GI_SD_STILLWATER_2009	GI-SD420-0612	2.1	0.11 B	8	15.6	5.4 E	8 E	19.9 E	42	1.65 U	56	0.030	0.011	0.022	0.058	0.025	0.155	0.049	0.004	0.001	0.311	0.067
GI_SD_STILLWATER_2010	GI-SD501-0006	1.6 J	0.307 J	18.8 J	28.7 J	35.2 J	7.7 J	51.9 J	48600	6550 J	2720 J	0.023	0.032	0.051	0.106	0.161	0.149	0.127	5.063	2.073	15.111	2.290
GI_SD_STILLWATER_2010	GI-SD502-0006	2.7 J	0.507 J	12.4 J	21.2 J	11.3 J	10 J	43.8 J	27000 J	7750 J	862 J	0.039	0.053	0.034	0.079	0.052	0.194	0.107	2.813	2.453	4.789	1.061
GI_SD_STILLWATER_2010	GI-SD503-0006	2 J	0.211 J	13.7 J	9.6 J	13.9 J	6.7 J	43.8 J	8900	944 J	2.855 U	0.029	0.022	0.037	0.036	0.064	0.130	0.107	0.927	0.299	0.016	0.167
GI_SD_STILLWATER_2010	GI-SD504-0006	1.9 J	0.305 J	14.1 J	17.8 J	21 J	7 J	76.9 J	5960	1240 J	394 J	0.027	0.032	0.038	0.066	0.096	0.136	0.188	0.621	0.392	2.189	0.378
GI_SD_STILLWATER_2010	GI-SD505-0006	0.2715 UJ	0.288 J	13.9	25 J	20.4	6.7	48.2 J	5510	801 J	950	0.004	0.030	0.038	0.093	0.094	0.130	0.118	0.574	0.253	5.278	0.661
GI_SD_STILLWATER_2010	GI-SD506-0006	0.999 J	0.103 J	10.1	11.1 J	11.4	6.5	40 J	3570	494 J	547	0.014	0.011	0.027	0.041	0.052	0.126	0.098	0.372	0.156	3.039	0.394
GI_SD_STILLWATER_2010	GI-SD507-0006	1.3 J	0.145 J	11.2 J	12.5 J	12.4 J	6.5 J	42 J	7430 J	1090 J	2590	0.019	0.015	0.030	0.046	0.057	0.126	0.102	0.774	0.345	14.389	1.590
GI_SD_STILLWATER_2010	GI-SD508-0006	0.854 J	0.328 J	9.4 J	13.5 J	9.5 J	8.4 J	36.8 J	1990	389 J	630 J	0.012	0.034	0.025	0.050	0.044	0.163	0.090	0.207	0.123	3.500	0.425
GI_SD_STILLWATER_2010	GI-SD508-0006-AVG	1.03 J	0.43 J	9.85 J	14.8 J	10.6 J	8.9 J	47.2 J	2150 J	326 J	895 J	0.015	0.045	0.027	0.055	0.049	0.172	0.115	0.224	0.103	4.972	0.578
GI_SD_STILLWATER_2010	GI-SD508-0006-D	1.2 J	0.531 J	10.3 J	16 J	11.7 J	9.4 J	57.5 J	2310 J	263 J	1160 J	0.017	0.055	0.028	0.059	0.054	0.182	0.140	0.241	0.083	6.444	0.730
GI_SD_STILLWATER_2010	GI-SD509-0006	1.3 J	0.156 J	10.5 J	13.3 J	11.8 J	6.4 J	34.5 J	2540 J	448 J	413 J	0.019	0.016	0.028	0.049	0.054	0.124	0.084	0.265	0.142	2.294	0.308
GI_SD_STILLWATER_2010	GI-SD509-0006-AVG	0.795 J	0.15 J	9.8 J	11.8 J	10.6 J	5.85 J	30.6 J	3000 J	593 J	460 J	0.011	0.016	0.026	0.044	0.049	0.113	0.075	0.313	0.188	2.556	0.339
GI_SD_STILLWATER_2010	GI-SD509-0006-D	0.29 J	0.143 J	9.1 J	10.3 J	9.4 J	5.3 J	26.6 J	3470 J	738 J	508 J	0.004	0.015	0.025	0.038	0.043	0.103	0.065	0.361	0.234	2.822	0.371
GI_SD_STILLWATER_2010	GI-SD527-0006	0.975 J	0.222 J	14.2 J	14.9 J	15 J	7.7 J	38.3 J	1570	233 J	25.3	0.014	0.023	0.038	0.055	0.069	0.149	0.093	0.164	0.074	0.141	0.082
GI_SD_STILLWATER_2010	GI-SD532-0006	0.876 J	0.324 J	10 J	10.4 J	7.1 J	8.4 J	31 J	32000	6650 J	1240	0.013	0.034	0.027	0.039	0.033	0.163	0.076	3.333	2.104	6.889	1.271

Footnotes:
1 Concentrations are presented in mg/kg for metals and ug/kg for organics.
2 Calculated by dividing sample concentration by ER-M.

Notes:
One-half the detection limit is presented for nondetected results and used to calculate the ERM-Q.
ER-M - Effects range medium
ERM-Q - Effects range medium quotient

APPENDIX H

CONCEPTUAL SITE MODEL

CONCEPTUAL SITE MODEL

Using the information provided in this report, a conceptual site model has been developed to better summarize the understandings of the site conditions and the risks that the site poses. The conceptual model for this site was developed from four tiers of information as described below.

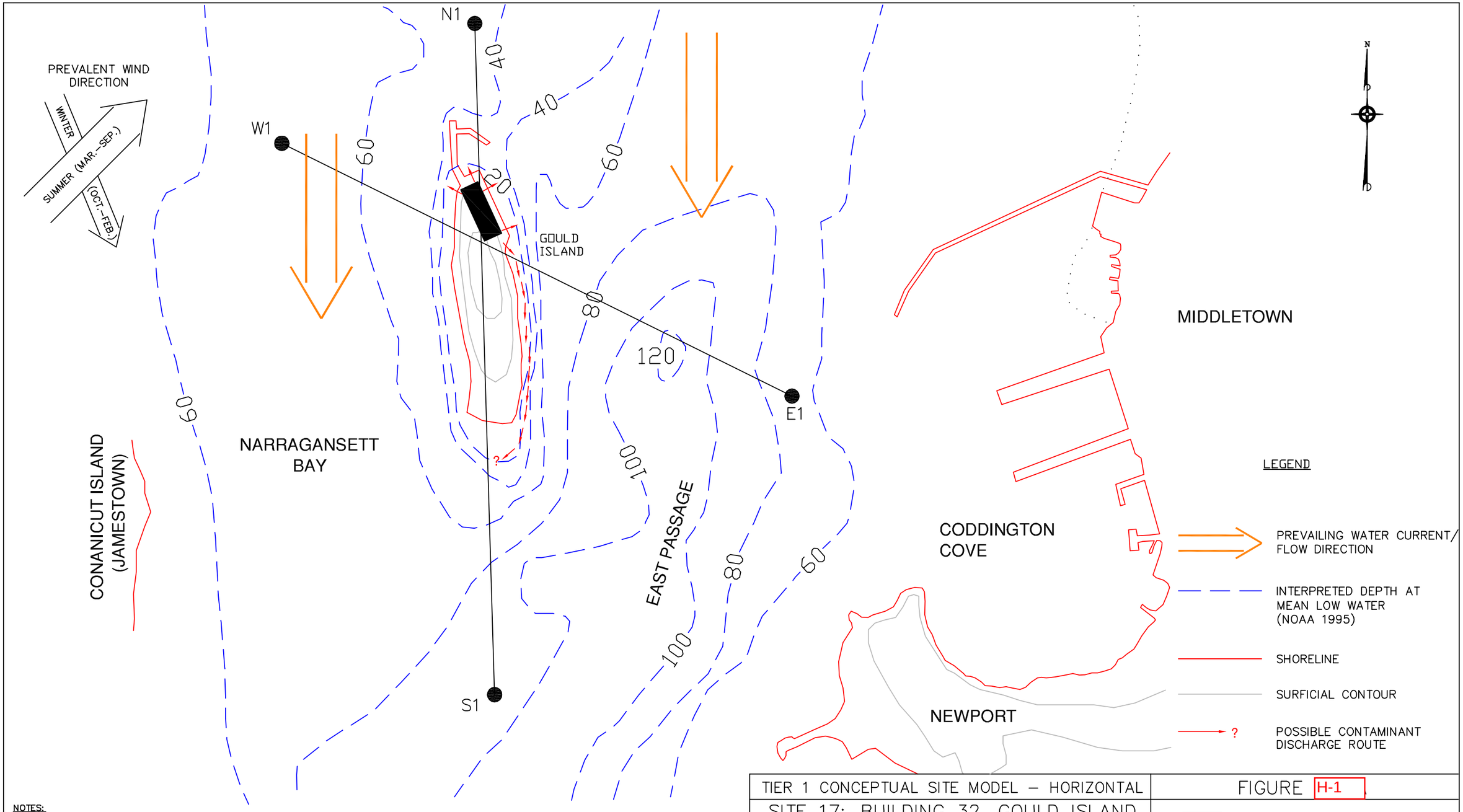
The first tier was developed during the planning stages of the RI and is consists of two dimensional views of the site and its surrounding landforms provided as Figures H-1 and H-2. Figure H-1 presents a plan view of the island and its surrounding influences, and Figure H-2 presents cross-sectional views. These views show scale height and subtidal slopes of the island. These figures illustrate, on the simplest level, contaminant inputs to the environment at the site, and forces acting on them based on data collected.

The second-tier is a diagram presented as Figure H-3. This is a schematic diagram that illustrates the general movement of contaminants based on the mechanical systems and physical properties found at the site. Specific sources, flow paths, and discharge areas are identified within the diagram for reference.

The third tier is presented as Table H-1. Table H-1 presents a summary of information specific to the chemical constituents found and the predicted risks they pose to the different receptors.

The fourth tier is a summary of the predicted risks to human health and the ecological receptors at the site. Table H-2 presents risks and risk drivers for the human receptors. Similar detail for ecological risk is presented on Table H-3.

Figure H-4 presents a conceptual plan that presents the setting, the contaminant inputs and possible forces acting on them, and the risks as presented in the tables described above.



NOTES:

1. ALL LOCATIONS ARE TO BE CONSIDERED APPROXIMATE.
2. PLAN NOT TO BE USED FOR DESIGN.
3. BOTTOM CONTOUR DATA INTERPRETED FROM NOAA CHART 13221, APRIL 15, 1995.
4. WIND ROSE INFORMATION FROM NORTHEAST REGIONAL CLIMATE CENTER, CORNELL UNIVERSITY, AUGUST 2000.

TIER 1 CONCEPTUAL SITE MODEL – HORIZONTAL

SITE 17: BUILDING 32, GOULD ISLAND

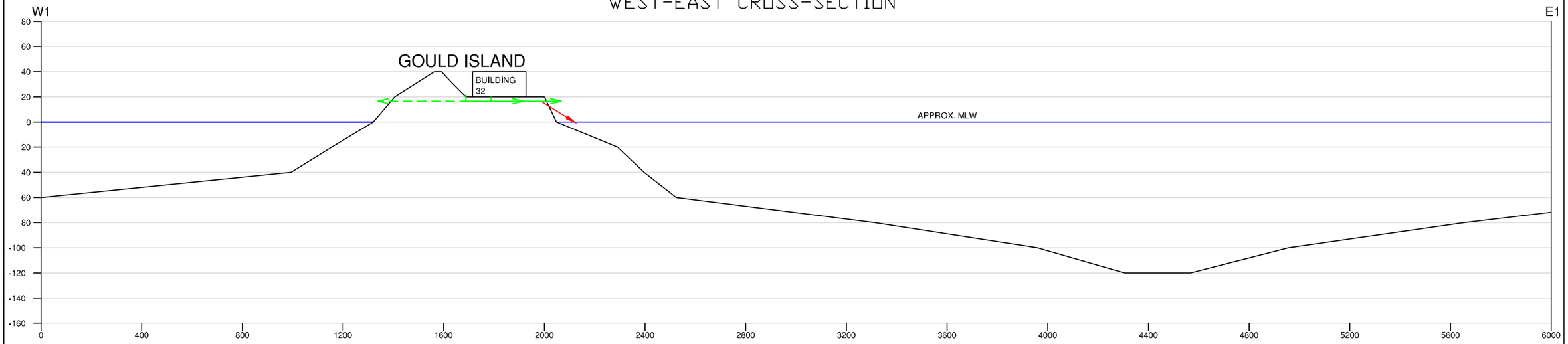
NAVSTA NEWPORT, RHODE ISLAND

DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	L. SEYDEWITZ	DATE:	MARCH 24, 2006
SCALE:	AS SHOWN	FILE NO.:	DWG\00065\0410\FIG_8-2A.DWG

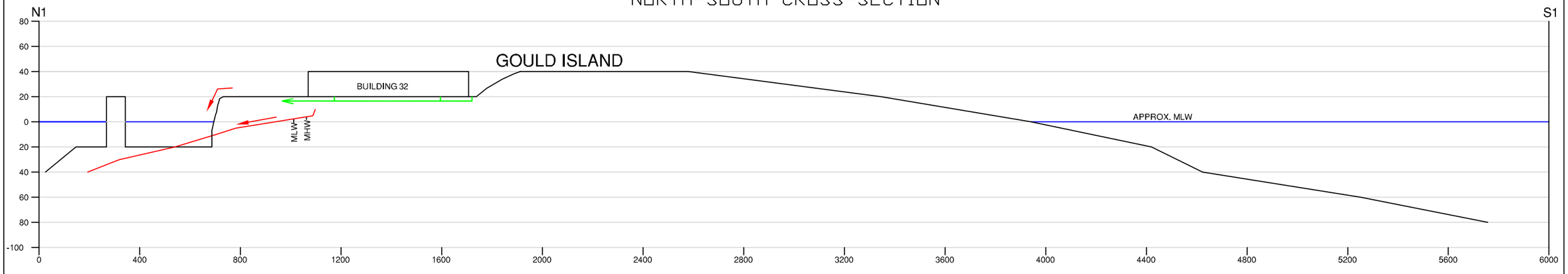
FIGURE H-1

TETRA TECH NUS, INC.
55 Jonspin Road Wilmington, MA 01887
(978)658-7899

WEST-EAST CROSS-SECTION



NORTH-SOUTH CROSS-SECTION



LEGEND

CONTAMINANT DISCHARGE ROUTE

PRE-CONSTRUCTION ELEVATION TAKEN FROM 'GOULD ISLAND FACILITIES GENERAL PLAN', DATED DECEMBER 29, 1941

PIPE

MHW - MEAN HIGH WATER
MLW - MEAN LOW WATER

NOTES:

1. ALL LOCATIONS ARE TO BE CONSIDERED APPROXIMATE.
2. PLAN NOT TO BE USED FOR DESIGN.
3. BOTTOM CONTOUR DATA INTERPRETED FROM NOAA CHART 13221, APRIL 15, 1995.

VERTICAL GRAPHIC SCALE

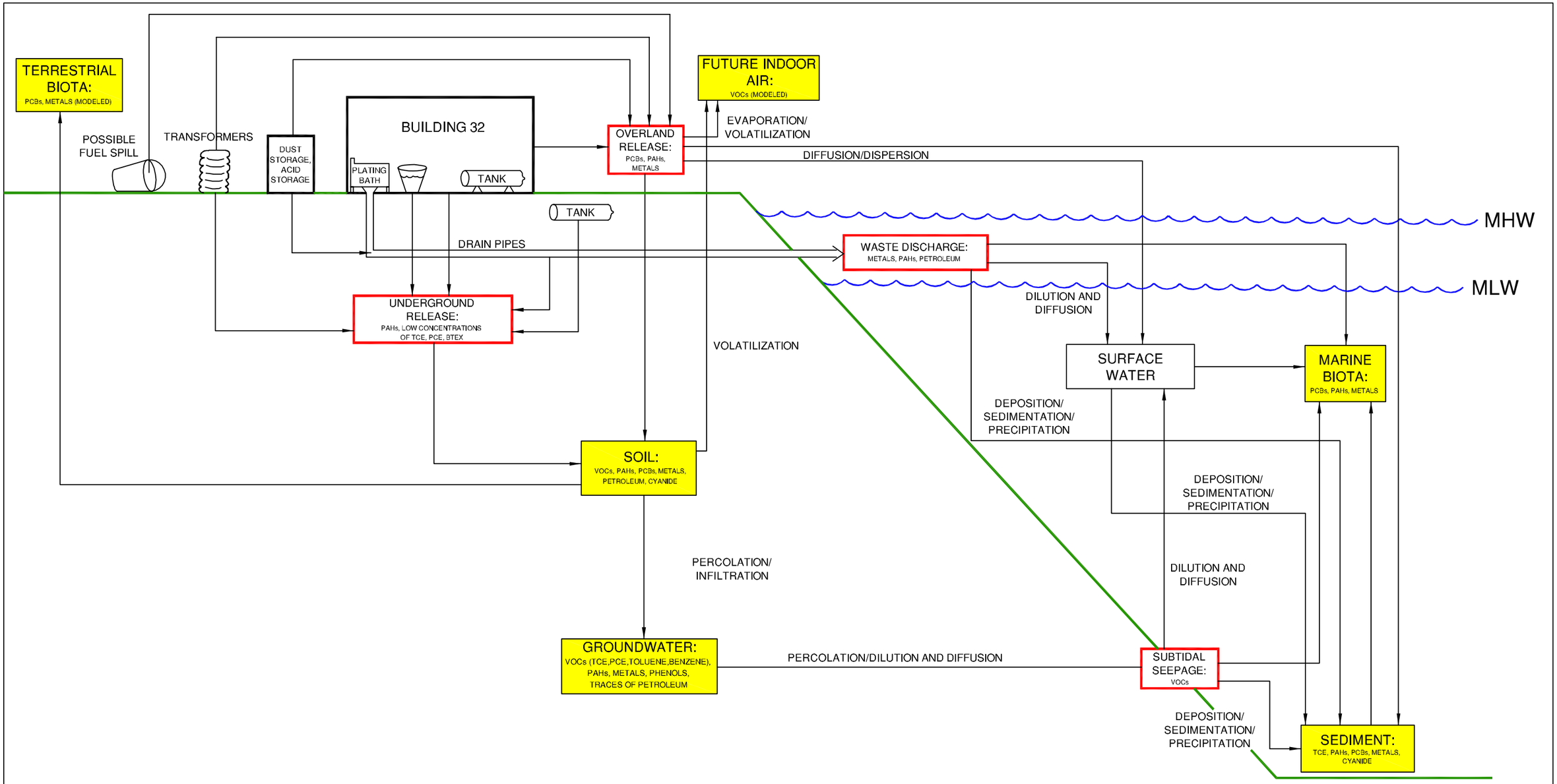
0′ 80′ 160′

HORIZONTAL GRAPHIC SCALE

0′ 400′ 800′

TIER 1 CONCEPTUAL SITE MODEL – VERTICAL			FIGURE H-2
SITE 17: BUILDING 32, GOULD ISLAND			
NAVSTA NEWPORT, RHODE ISLAND			
DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	L. SEYDEWITZ	DATE:	MARCH 24, 2006
SCALE:	AS SHOWN	FILE NO.:	DWG\00065\0410\FIG_8-2B.DWG

TETRA TECH NUS, INC.
55 Jonspin Road Wilmington, MA 01887
(978)658-7899



RED BOXES SIGNIFY CONFIRMED CONTAMINANT TRANSPORT ROUTES

YELLOW BOXES SIGNIFY MEDIA IMPACTED BY CONTAMINANTS FOUND (OR PREDICTED BY MODELING)

MHW - MEAN HIGH WATER
MLW - MEAN LOW WATER

TIER 2 CONCEPTUAL SITE MODEL
SITE 17: BUILDING 32, GOULD ISLAND
NAVSTA NEWPORT, RHODE ISLAND

FIGURE H-3

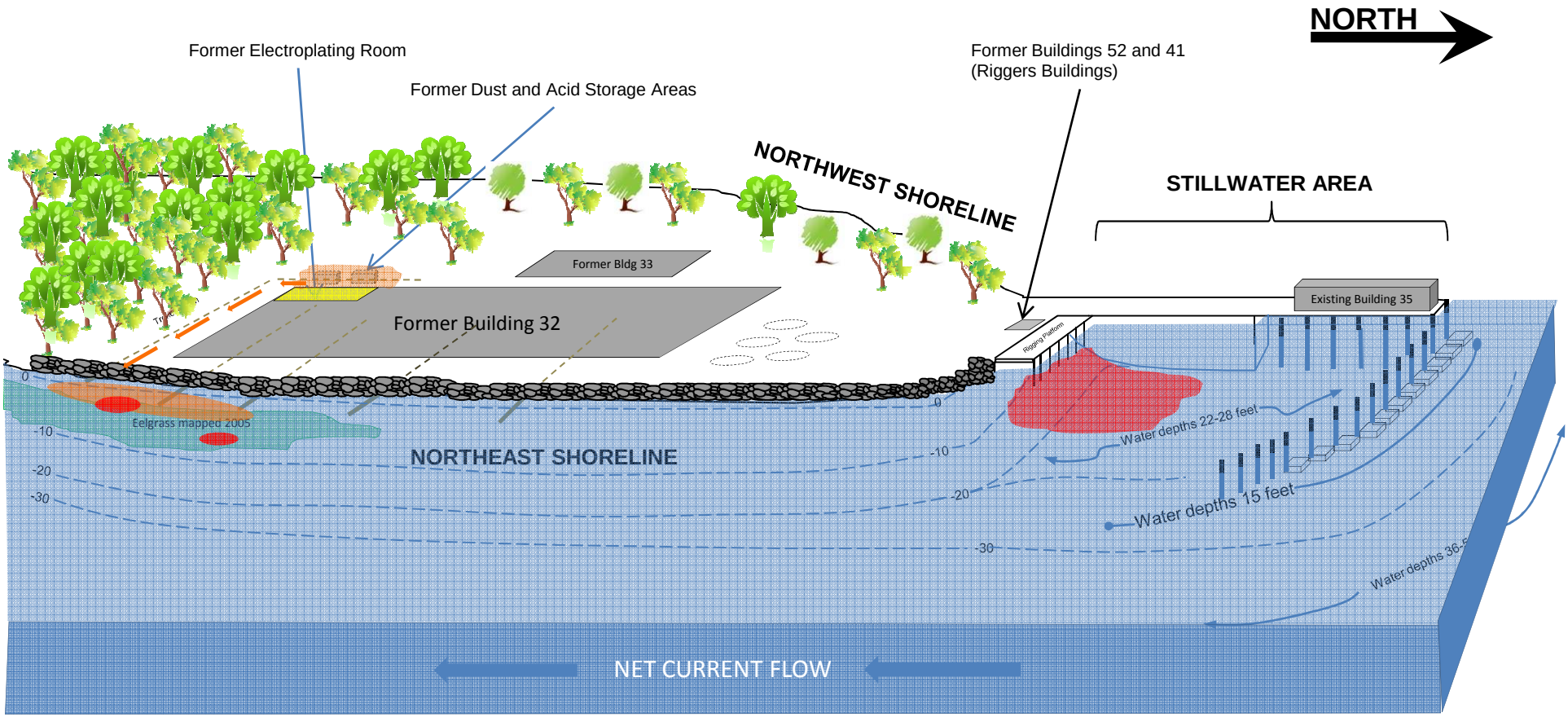
DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	L. SEYDEWITZ	DATE:	MARCH 24, 2006
SCALE:	NOT TO SCALE	FILE NO.:	DWG\00065\0410\FIG_8-3.DWG

TETRA TECH NUS, INC.
55 Jonspin Road Wilmington, MA 01887
(978)658-7899

W5206382D

CT035

FIGURE H-4
Summary Conceptual Site Model
Site 17 Gould Island



LEGEND/KEY

- PCBs/PAHs in sediment
- "Trench Drain" flow path
- Extent of eelgrass mapped in 2005
- Former concrete underground fuel storage tank
- PAHs and metals in soil and sediment
- Existing Building Foundation

FIGURE IS NOT TO SCALE

TABLE H-1

THIRD AND FOURTH TIER CONCEPTUAL SITE MODEL – CONTAMINANTS IN SURFACE SOIL
SITE 17: BUILDING 32, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

SURFACE SOIL: 0-2 FEET

Contaminant	Fate and Transport	Receptors Affected	Predicted Risk
PCBs	Adhere to soil particles, possible erosion and physical transport Hydrophobic, lipophilic Do not decompose Bioaccumulate in animal tissues Do not move with groundwater	None	No Actionable Risk
VOCs	Degrade to breakdown products Chlorinated solvents sink, potentially to bedrock	None	No Actionable Risk
	Lighter solvents dissolve, move with groundwater Volatilize from ground slowly	None	No Actionable Risk
PAHs	Dispersion, dilution Adhere to soil particles, possible erosion and physical transport Hydrophobic and resist dissolution in water Degrade or decompose over time Volatilize (lighter fractions)	Terrestrial Plants, Invertebrates	Possible mortality in limited areas, not actionable
		Current and Future Industrial Workers	No Actionable Risk
Petroleum	Volatilize (lighter fractions) Some fractions may dissolve and move with groundwater	None	No Actionable Risk
Cyanide	Dissolve/Disperse Dissipate in water Remnants may remain	None	No Actionable Risk
Metals	Adsorption to soil Possible erosion and physical transport Precipitation under certain conditions Transport to shoreline through pipeline flow	Terrestrial Plants, Invertebrates	Possible mortality, limited areas, not actionable
		Insectiverous Birds	Possible uptake of zinc, not actionable
		Current and Future Industrial Workers	No Actionable Risk

TABLE H-1

THIRD AND FOURTH TIER CONCEPTUAL SITE MODEL – CONTAMINANTS IN SUBSURFACE SOIL
SITE 17: BUILDING 32, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

SUBSURFACE SOIL 0-10 FEET

Contaminant	Fate and Transport	Receptors	Predicted Risk
PCBs	Adhere to soil particles, possible erosion and physical transport Hydrophobic, lipophilic Do not decompose Bioaccumulate in animal tissues Do not move with groundwater	Future Industrial Worker	Marginal Non-Cancer Risk
VOCs	Degrade to breakdown products Chlorinated solvents sink, potentially to bedrock	None	No Actionable Risk
	Lighter solvents dissolve, move with groundwater Volatilize from ground slowly	None	No Actionable Risk
PAHs	Dispersion, dilution Hydrophobic Degrade or decompose over time Volatilize (lighter fractions) Adhere to soil particles, possible erosion and physical transport	Future Industrial Worker	Marginal Cancer Risk
Petroleum	Volatilize (lighter fractions) to soil gas Dissolved fraction will move with groundwater Residual petroleum trapped in soil will degrade over time	None	No Actionable Risk
Cyanide	Dissolve/Disperse Dissipate in water Remnants may remain	None	No Actionable Risk
Metals	Adsorption to soil Precipitation under certain conditions Transport to shoreline through pipeline flow Erosion and physical transport of dust particles	Future Industrial Worker Future Construction Worker	Marginal Cancer, non-cancer risk

TABLE H-1

THIRD AND FOURTH TIER CONCEPTUAL SITE MODEL – CONTAMINANTS IN GROUNDWATER
SITE 17: BUILDING 32, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

GROUNDWATER IN WELLS

Contaminants	Fate and Transport	Receptors	Predicted Risk
VOCs (TCE, PCE, toluene, benzene)	Dissolve/disperse Volatilize Will not bioaccumulate	None	No Actionable Risk
PAHs, Phenols	Soluble fraction will be transported with groundwater, disperse when released to surface water bodies.	None	No Actionable Risk

WATER (AND MODELED AIR EXPOSURES) IN TEST PITS

Contaminants	Fate and Transport	Receptors	Predicted Risk
VOCs	Dissolve/disperse Volatilize Will not bioaccumulate	Future Construction Worker	**Cancer Risk**
PCBs	Adhere to soil particles, possible erosion and physical transport Hydrophobic, lipophilic Do not decompose Bioaccumulate in animal tissues Do not move with groundwater	Future Construction Worker	**Cancer, Non-Cancer Risk**
PAHs	Soluble fraction will be transported with groundwater, disperse when released to surface water bodies.	Future Construction Worker	**Cancer, Non-Cancer Risks**
Metals	Adsorption to soil Precipitation under certain conditions Transport to shoreline through pipeline flow Erosion and physical transport of disturbed and soluble metals	Future Construction Worker	No Actionable Risk

TABLE H-1

THIRD AND FOURTH TIER CONCEPTUAL SITE MODEL – CONTAMINANTS IN SEDIMENT
SITE 17: BUILDING 32, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Human Exposure to Intertidal Sediment

Contaminants	Fate and Transport	Receptors	Predicted Risk
Solvents, VOCs	Dissolve, Disperse, Volatilize	None	No Actionable Risk
PCBs	Strong adhesion to fine sediments, movement with sediment, will not degrade but can be buried through deposition.	None	No Actionable Risk
Metals	Disperse, or bioaccumulate	Future Child Recreational Visitor	**Non-Cancer Risk**
Cyanide	Dissolve, disperse or precipitate Some adsorption to sediments	None	No Actionable Risk
PAHs	Adhesion to fine sediments, movement with sediment, biodegradation in oxygenated sediment over time.	Future Child Recreational Visitor	No Actionable Risk

Ecological Exposure to Sediment

Contaminants	Fate and Transport	Receptors	Predicted Risk
Solvents, VOCs	Subtidal Seepage at very low concentrations. Consituents will dissolve, disperse, volatilize	None	No Actionable Risk
PCBs	Strong adhesion to fine sediments, movement with sediment, will not degrade but can be buried through deposition. PCBs bioaccumulate in fatty tissue.	Marine Organisms	**See Table H3**
Metals	Disperse Some bioaccumulate	Marine Organisms	**See Table H3**
Cyanide	Dissolve, disperse or precipitate Some adsorption to sediments	None	**See Table H3**
PAHs	Adhesion to fine sediments, movement with sediment, biodegradation in oxygenated sediment over time. Burial through deposition will slow degradation.	Marine Organisms	**See Table H3**

TABLE H-1

THIRD AND FOURTH TIER CONCEPTUAL SITE MODEL – CONTAMINANTS IN BIOTA
SITE 17: BUILDING 32, GOULD ISLAND
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Biota

Contaminant	Fate and Transport	Receptors	Predicted Risk
Polychlorinated Biphenyls (PCBs)	Bioaccumulate in animal tissues, will be passed up through the food chain. PCBs do not metabolize.	Humans Ingesting Mussels or Clams Pisciverous birds and mammals	**Cancer Risk, Non-Cancer Risk** No Actionable Risk
PAHs	Adhesion to fine sediments, movement with sediment, biodegradation over time, metabolized by many marine organisms	Marine Organisms Humans Ingesting Mussels	No Actionable Risk **Cancer Risk**
Metals	Dissolve, disperse or precipitate Some adsorption to sediments, some bioaccumulate	Humans Ingesting Mussels or Clams	**Cancer Risk, Non-Cancer Risk**

H-2
FOURTH TIER CONCEPTUAL SITE MODEL - HUMAN HEALTH RISKS
SITE 17: BUILDING 32, GOULD ISLAND
REMEDIAL INVESTIGATION REPORT
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Surface Soil 0-2 feet						
Receptor		Type	Cancer Risk and Drivers		Non Cancer HI and Drivers	
Future Recreational Visitor	Adult	RME	1.70E-06	NA	<0.01	NA
	Adult	CTE	1.30E-07	NA	<0.01	NA
	Child	RME	3.40E-06	NA	0.03	NA
	Child	CTE	2.40E-07	NA	<0.01	NA
Current Trespasser	Adolescent	RME	2.30E-06	NA	<0.01	NA
	Adolescent	CTE	1.40E-07	NA	<0.01	NA
Current And Future Industrial Worker	Adult	RME	1.10E-05	PAHs, As	0.02	NA
	Adult	CTE	1.10E-06	NA	<0.01	NA

Soil 0-10 Feet						
Receptor		Type	Cancer Risk and Drivers		Non Cancer HI and Drivers	
Future Industrial Worker	Adult	RME	1.06E-05	PAHs, As	1.4	PCBs, As, Cd, Cr
	Adult	CTE	1.40E-06	PAHs, As	0.5	NA
Future Construction Worker	Adult	RME	5.10E-06	NA	1.4	Cd
	Adult	CTE	7.08E-08	NA	0.3	NA

Subsurface Soil Dust						
Receptor		Type	Cancer Risk and Drivers		Non Cancer HI and Drivers	
Future Industrial Worker	Adult	RME	2.80E-07	NA	<0.01	NA
	Adult	CTE	3.40E-08	NA	<0.01	NA
Future Construction Worker	Adult	RME	5.70E-06	NA	<0.01	NA
	Adult	CTE	8.60E-07	NA	<0.01	NA

Shallow Groundwater (From Test Pits)						
Receptor		Type	Cancer Risk and Drivers		Non Cancer HI and Drivers	
Future Construction Worker	Adult	RME	1.80E-03	PAHs, Pcp	1.40	NA (1)
	Adult	CTE	7.10E-04	PAHs, Pcp	0.23	NA

Pcp = Pentachlorophenol

Trench Air (Modeled from Shallow Groundwater)(2)						
Receptor		Type	Cancer Risk and Drivers		Non Cancer HI and Drivers	
Future Construction Worker	Adult	RME	3.60E-04	PCBs, PAHs	561	PCBs, PAHs
	Adult	CTE	2.00E-05	PCBs, PAHs	32	PCBs, PAHs

Intertidal Sediment						
Receptor		Type	Cancer Risk and Drivers		Non Cancer HI and Drivers	
Future Recreational Visitor	Adult	RME	1.20E-06	NA	0.28	NA
	Adult	CTE	8.70E-08	NA	0.01	NA
	Child	RME	2.30E-06	NA	2.36	Chromuim
	Child	CTE	1.64E-07	NA	0.10	NA
Current Trespasser	Adolescent	RME	6.76E-06	NA	0.50	NA
	Adolescent	CTE	1.62E-07	NA	0.02	NA

Clams and Mussels (3, 4)						
Receptor		Type	Cancer Risk and Drivers		Non Cancer HI and Drivers	
Current/Future Clam Ingestion	Adult	RME	1.40E-03	PCBs, As	12.50	PCBs, As
	Adult	CTE	6.50E-05	PCBs, As	1.50	As
	Child	RME	5.10E-04	PCBs, As	18.20	PCBs, As, Th
	Child	CTE	1.90E-05	As	2.00	As
Current/Future Mussel Ingestion	Adult	RME	1.40E-03	PCBs, PAHs, As	23.10	PCBs, As
	Adult	CTE	6.40E-05	PCBs, PAHs, As	2.90	PCBs, As
	Child	RME	5.10E-04	PCBs, PAHs, As	33.80	PCBs, As
	Child	CTE	1.90E-05	As	3.80	PCBs, As

Notes:

All calculated risks are provided in Tables 9-1 through 9-7, Appendix G-1.

(1) No organ specific HI or chemical specific HQ > 1.0 was determined for this receptor

(2) Trench air risk is based on trench dimensions and is biased high

(3) For shellfish ingestion, RME=Subsistence level exposure, and CTE=Recreational exposure

(4) Arsenic is present in reference shellfish samples at concentrations > site samples & therefore not actionable

NA - Not Applicable, calculated risk is below acceptable levels.

Yellow shading indicates Cancer risk >/= 1E-5.

Red shading indicates Cancer risk >/= 1E-4.

Green shading indicated non cancer risk HQ >/= 1

TABLE H-3
FOURTH TIER CONCEPTUAL SITE MODEL - ECOLOGICAL RISKS
SITE 17: BUILDING 32, GOULD ISLAND
REMEDIAL INVESTIGATION REPORT
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Ecological Risk Endpoint	Risk Measured	COPCs	Qualifying factors	Comments	Conclusions
Sediment Chemistry	Criteria exceeded in surface and subsurface sediment samples	Total PCBs, Total PAHs	Depositional area while protection remains in place	Concentrations appear highest near rigging platform	Potential for Risk from PCBs and PAHs
Toxicty - Mortality	Leptochiris 28 day survival	All detected constituents considered	None	None	NOEC and LOEC developed indicating Potential for Risk from PCBs and PAHs
Toxicity - Growth	Leptochirus 28 day weight and biomass	All detected constituents considered	None	None	
Toxicity - Reproduction	leptochirus 28 day juvinile production & production per surviving female	All detected constituents considered	None	None	
Average Toxicity	ERMQ compared to Site Data	All detected constituents considered	None	Exceedances of NOEC/LOEC focus on the Stillwater Area	Potential for elevated risk at Stillwater Area
Tissue Chemistry	CTLs and other criteria exceeded	Cadmium, chromium manganese, vanaidium zinc	Site concentrations close to or within reference	No Pattern	Low or no potential for risk
Food Chain Modeling	Predicted uptake of COPCs into tissues of higher trophic level animals	Aluminum, Iron	Site concentrations close to or within reference	No Pattern	Low or no potential for risk

APPENDIX I

PCB EXCAVATIONS CONDUCTED BY OTHERS

Building 53					
Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium
GI-B53-CS-1	10 U	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B53-CS-2	0.733	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B53-CS-3	30,803.00	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B53-CS-4	3.73	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B53-CS-5	2.11	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B53-CS-6	10 U	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B53-CS-7	3.04	4/12/2001	Fixed Lab Analysis	I	Soil
GIPI-53-B1-11	0.036	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B5-1	0.018	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B5-2	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B5-8	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B5-9	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B5-10	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B6-1	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B6-2	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B6-8	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B6-9	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B6-10	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B7-1	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B7-2	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B9-1	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B9-2	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B9-8	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B9-9	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B9-10	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B10-1	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B10-2	10 U	1/16/2002	Fixed Lab Analysis		SED
GIPI-53-B10-8	10 U	1/14/2002	Fixed Lab Analysis		SED
GIPI-53-B10-9	10 U	1/14/2002	Fixed Lab Analysis		SED
GIPI-53-B10-10	10 U	1/14/2002	Fixed Lab Analysis		SED
GIPI-53-B11-1	0.118	1/9/2002	Fixed Lab Analysis		Soil
GIPI-53-B11-2	10 U	1/9/2002	Fixed Lab Analysis		Soil
GIPI-53-B11-8	10 U	1/9/2002	Fixed Lab Analysis		SED
GIPI-53-B11-9	10 U	1/9/2002	Fixed Lab Analysis		SED
GIPI-53-B11-10	10 U	1/9/2002	Fixed Lab Analysis		SED
GIPI-53-B12-1	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B12-2	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B12-8	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B12-9	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B12-10	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B13-1	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B13-2	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B13-8	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B13-9	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B13-10	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B14-1	0.364	1/17/2002	Fixed Lab Analysis		SED
GIPI-53-B14-2	10 U	1/17/2002	Fixed Lab Analysis		SED
GIPI-53-B14-8	10 U	1/17/2002	Fixed Lab Analysis		SED
GIPI-53-B14-9	10 U	1/17/2002	Fixed Lab Analysis		SED
GIPI-53-B14-10	10 U	1/17/2002	Fixed Lab Analysis		SED
GIPI-53-B15-1	1.12	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B15-2	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B15-8	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B15-9	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B15-10	10 U	1/15/2002	Fixed Lab Analysis		SED

Building 53

Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium
GIPI-53-B16-1	0.505	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B16-2	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B17-1	0.252	1/9/2002	Fixed Lab Analysis		Soil
GIPI-53-B17-2	10 U	1/9/2002	Fixed Lab Analysis		Soil
GIPI-53-B17-8	10 U	1/9/2002	Fixed Lab Analysis		SED
GIPI-53-B17-9	10 U	1/9/2002	Fixed Lab Analysis		SED
GIPI-53-B17-10	10 U	1/9/2002	Fixed Lab Analysis		SED
GIPI-53-B18-1	0.239	1/17/2002	Fixed Lab Analysis		SED
GIPI-53-B18-2	10 U	1/17/2002	Fixed Lab Analysis		SED
GIPI-53-B18-8	10 U	1/17/2002	Fixed Lab Analysis		SED
GIPI-53-B18-9	10 U	1/17/2002	Fixed Lab Analysis		SED
GIPI-53-B18-10	10 U	1/17/2002	Fixed Lab Analysis		SED
GIPI-53-B19-8	1.19	1/9/2002	Fixed Lab Analysis		SED
GIPI-53-B19-9	0.294	1/9/2002	Fixed Lab Analysis		SED
GIPI-53-B19-10	10 U	1/9/2002	Fixed Lab Analysis		SED
GIPI-53-B20-1	0.482	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B20-2	10 U	1/15/2002	Fixed Lab Analysis		SED
GIPI-53-B21-1	0.366	1/14/2002	Fixed Lab Analysis		Soil
GIPI-53-B21-2	10 U	1/14/2002	Fixed Lab Analysis		Soil
GIPI-53-B21-8	10 U	1/14/2002	Fixed Lab Analysis		SED
GIPI-53-B21-9	10 U	1/14/2002	Fixed Lab Analysis		SED
GIPI-53-B21-10	10 U	1/14/2002	Fixed Lab Analysis		SED
GIPI-53-B23-1	10 U	1/14/2002	Fixed Lab Analysis		Soil
GIPI-53-B23-2	10 U	1/14/2002	Fixed Lab Analysis		Soil
GIPI-53-B23-8	10 U	1/14/2002	Fixed Lab Analysis		SED
GIPI-53-B23-9	10 U	1/14/2002	Fixed Lab Analysis		SED
GIPI-53-B23-10	10 U	1/14/2002	Fixed Lab Analysis		SED
GIPI-53-B24-1	10 U	1/14/2002	Fixed Lab Analysis		Soil
GIPI-53-B24-2	10 U	1/14/2002	Fixed Lab Analysis		Soil
GIPI-53-B24-8	10 U	1/14/2002	Fixed Lab Analysis		SED
GIPI-53-B24-9	10 U	1/14/2002	Fixed Lab Analysis		SED
GIPI-53-B24-10	0.034	1/14/2002	Fixed Lab Analysis		SED
GIPII-B53-SWN-CS1	1.15	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B53-SWN-CS2	10 U	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B53-SWE-CS1	10 U	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B53-SWE-CS2	0.12	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B53-SWS-CS1	10 U	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B53-SWS-CS2	10 U	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B53-SWW-CS1	10 U	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B53-SWW-CS2	0.128	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B53-BOT-CS1	0.187	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B53-BOT-CS2	10 U	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B53-BOT-CS3	10 U	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B53-BOT-CS4	0.176	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-53B19-SWN-CS1	0.14	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-53B19-SWE-CS1	0.105	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-53B19-SWS-CS1	0.017	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-53B19-SWW-CS1A	10 U	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-53B19-BOT-CS1	0.146	8/14/2002	Fixed Lab Analysis	C	Soil

Concrete Roadway				
Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory
Concrete samples				
GI-B54-FS-1A	>126	5/9/2001	SDI Rapid Assay Field Test	I
GI-B54R-FS-1A	15.12	5/9/2001	SDI Rapid Assay Field Test	I
GI-B56R-FS-1A	9.07	5/9/2001	SDI Rapid Assay Field Test	I
Soil Samples				
GI-B54-FS-1B	2.52	2/25/2002	SDI Rapid Assay Field Test	I
GI-B54R-FS-1B	<6.3	2/25/2002	SDI Rapid Assay Field Test	I
GI-B32R-FS-1	6.55	2/25/2002	SDI Rapid Assay Field Test	I
GI-B32R-FS-2	2.52	2/25/2002	SDI Rapid Assay Field Test	I
GI-B32R-FS-4	6.55	2/25/2002	SDI Rapid Assay Field Test	I
GI-B56R-FS-1B	5.54	2/25/2002	SDI Rapid Assay Field Test	I
GI-B56-FS-1	3.28	2/25/2002	SDI Rapid Assay Field Test	I
GIPI-E34-B1-S	0.161	2/25/2002	Fixed Lab Analysis	
GIPI-E34-B1-1	0.103	2/25/2002	Fixed Lab Analysis	
GIPI-E34-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E35-B1-S	1.94	2/25/2002	Fixed Lab Analysis	
GIPI-E35-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E35-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E36-B1-S	0.178	2/25/2002	Fixed Lab Analysis	
GIPI-E36-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E36-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E37-B1-S	0.229	2/25/2002	Fixed Lab Analysis	
GIPI-E37-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E37-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E38-B1-S	0.268	2/25/2002	Fixed Lab Analysis	
GIPI-E38-B1-1	0.033	2/25/2002	Fixed Lab Analysis	
GIPI-E38-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E39-B1-S	0.158	2/25/2002	Fixed Lab Analysis	
GIPI-E39-B1-1	0.195	2/25/2002	Fixed Lab Analysis	
GIPI-E39-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E40-B1-S	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E40-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E40-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E41-B1-S	0.599	2/25/2002	Fixed Lab Analysis	
GIPI-E41-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E41-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E42-B1-S	0.513	2/25/2002	Fixed Lab Analysis	
GIPI-E42-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E42-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E43-B1-S	0.09	2/25/2002	Fixed Lab Analysis	
GIPI-E43-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-E43-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-F42-B1-S	0.276	2/25/2002	Fixed Lab Analysis	
GIPI-F42-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-F42-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-G42-B1-S	0.328	2/25/2002	Fixed Lab Analysis	
GIPI-G42-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-G42-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-H42-B1-S	1.075	2/25/2002	Fixed Lab Analysis	
GIPI-H42-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-H42-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-I42-B1-S	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-I42-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-I42-B1-2	10 U	2/25/2002	Fixed Lab Analysis	

Concrete Roadway				
Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory
GIPI-J42-B1-S	0.163	2/25/2002	Fixed Lab Analysis	
GIPI-J42-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-J42-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-K42-B1-S	0.215	2/25/2002	Fixed Lab Analysis	
GIPI-K42-B1-1	0.022	2/25/2002	Fixed Lab Analysis	
GIPI-K42-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-L42-B1-S	0.049	2/25/2002	Fixed Lab Analysis	
GIPI-L42-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-L42-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-M42-B1-S	0.07	2/25/2002	Fixed Lab Analysis	
GIPI-M42-B1-1	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-M42-B1-2	10 U	2/25/2002	Fixed Lab Analysis	
GIPI-O42-B1-S	0.103	2/26/2002	Fixed Lab Analysis	
GIPI-O42-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-O42-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-P42-B1-S	0.107	2/26/2002	Fixed Lab Analysis	
GIPI-P42-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-P42-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-Q37-B1-S	0.717	2/26/2002	Fixed Lab Analysis	
GIPI-Q37-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-Q37-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-Q38-B1-S	0.045	2/26/2002	Fixed Lab Analysis	
GIPI-Q38-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-Q38-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-Q39-B1-S	0.044	2/26/2002	Fixed Lab Analysis	
GIPI-Q39-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-Q39-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-Q41-B1-S	0.385	2/26/2002	Fixed Lab Analysis	
GIPI-Q41-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-Q41-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-AA25-B1-S	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-AA25-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-AA25-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-AA26-B1-S	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-AA26-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-AA26-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-AA27-B1-S	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-AA27-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-AA27-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-AA28-B1-S	0.048	2/26/2002	Fixed Lab Analysis	
GIPI-AA28-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-AA28-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-AA29-B1-S	0.05	2/26/2002	Fixed Lab Analysis	
GIPI-AA29-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-AA29-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-Z29-B1-S	0.021	2/26/2002	Fixed Lab Analysis	
GIPI-Z29-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-Z29-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-Y30-B1-S	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-Y30-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-Y30-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-T16-B1-S	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-T16-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-T16-B1-2	10 U	2/26/2002	Fixed Lab Analysis	

Concrete Roadway				
Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory
GIPI-S17-B1-S	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-S17-B1-1	10 U	2/26/2002	Fixed Lab Analysis	
GIPI-S17-B1-2	10 U	2/26/2002	Fixed Lab Analysis	
GIPII-FS3-SWN-CS1	10 U	8/8/2002	Fixed Lab Analysis	C
GIPII-FS3-SWE-CS1	10 U	8/8/2002	Fixed Lab Analysis	C
GIPII-FS3-SWS-CS1	10 U	8/8/2002	Fixed Lab Analysis	C
GIPII-FS3-SWW-CS1	10 U	8/8/2002	Fixed Lab Analysis	C
GIPII-FS3-BOT-CS1	10 U	8/8/2002	Fixed Lab Analysis	C
GIPII-FS5-SWN-CS1	10 U	8/8/2002	Fixed Lab Analysis	C
GIPII-FS5-SWE-CS1	10 U	8/8/2002	Fixed Lab Analysis	C
GIPII-FS5-SWS-CS1	10 U	8/8/2002	Fixed Lab Analysis	C
GIPII-FS5-SWW-CS1	10 U	8/8/2002	Fixed Lab Analysis	C
GIPII-FS5-BOT-CS1	10 U	8/8/2002	Fixed Lab Analysis	C
GIPII-FS6-SWN-CS1	10 U	8/8/2002	Fixed Lab Analysis	C
GIPII-FS6-SWE-CS1	0.059	8/8/2002	Fixed Lab Analysis	C
GIPII-FS6-SWS-CS1	10 U	8/8/2002	Fixed Lab Analysis	C
GIPII-FS6-SWW-CS1	10 U	8/8/2002	Fixed Lab Analysis	C
GIPII-FS6-BOT-CS1	10 U	8/8/2002	Fixed Lab Analysis	C

F2				
Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory
Soil Samples				
GIPII-F2-SWN-CS3	5.73	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-SWE-CS1	0.024	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-SWE-CS2	0.054	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-SWE-CS3	0.253	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-SWE-CS4	10 U	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-SWS-CS1	0.042	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-SWS-CS2	10 U	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-SWS-CS3	10 U	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-SWS-CS4	10 U	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-SWW-CS1A	10 U	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-SWW-CS2A	10 U	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-SWW-CS3A	10 U	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-SWW-CS4	0.105	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS1E	0.457	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS2A	0.871	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS3A	3.54	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS4A	0.021	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS5C	5.96	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS6B	3.36	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS7	4.14	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS8	0.362	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS9C	4.26	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS10	2.54	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS11	0.378	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS12	1.13	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS13A	0.23	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS14	1.42	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS15	0.13	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS16	0.043	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS17	4.1	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS18	0.045	9/6/2002	Fixed Lab Analysis	C
GIPII-F2-BOT-CS19A	4	9/6/2002	Fixed Lab Analysis	C

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Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium
GI-B56-CS-10	1.42	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B56-CS-11	0.23	4/12/2001	Fixed Lab Analysis	I	Soil
GIPI-56-B3-4	10 U	2/7/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B3-5	10 U	2/7/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B3-6	10 U	2/7/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B3-7	10 U	2/7/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B3-8	10 U	2/7/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B5-1	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B5-2	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B5-6	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B5-7	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B5-8	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B6-1	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B6-2	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B6-6	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B6-7	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B6-8	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B7-1	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B7-2	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B7-6	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B7-7	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B7-8	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B10-1	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B10-2	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B10-6	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B10-7	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B10-8	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B11-1	0.227	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B11-2	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B11-6	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B11-7	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B11-8	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B12-1	0.147	2/14/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B12-2	10 U	2/14/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B12-7	10 U	2/14/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B12-8	10 U	2/14/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B12-9	10 U	2/14/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B13-1	1.76	2/14/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B13-2	0.023	2/14/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B13-6	10 U	2/14/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B13-7	10 U	2/14/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B13-8	10 U	2/14/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B14-1	2.84	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B14-2	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B14-9	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B14-10	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B14-11	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B16-1	3.06	2/8/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B16-2	10 U	2/8/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B16-8	10 U	2/8/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B16-9	10 U	2/8/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B16-10	10 U	2/8/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B17-1	0.19	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B17-2	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B17-10	10 U	2/13/2002	Fixed Lab Analysis	?	Soil

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Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium
GIPI-56-B17-11	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B17-12	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B18-1	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B18-2	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B18-10	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B18-11	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B18-12	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B19-1	0.133	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B19-2	0.166	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B19-10	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B19-11	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B19-12	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B20-1	0.247	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B20-2	0.286	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B20-11	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B20-12	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B20-13	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B23-1	0.374	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B23-2	0.053	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B23-10	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B23-11	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B23-12	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B24-1	0.207	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B24-2	0.227	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B24-10	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B24-11	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B24-12	10 U	2/12/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B25-1	0.089	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B25-2	0.051	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B25-9	10 U	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B25-10	10 U	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B25-11	10 U	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B27-1	0.079	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B27-2	10 U	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B27-9	10 U	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B27-10	10 U	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B27-11	10 U	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B28-1	0.26	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B28-2	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B28-8	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B28-9	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B28-10	10 U	2/13/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B29-4	10 U	2/8/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B29-5	10 U	2/8/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B29-7	10 U	2/8/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B29-8	10 U	2/8/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B30-1	0.411	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B30-2	10 U	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B30-7	10 U	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B30-8	10 U	2/11/2002	Fixed Lab Analysis	?	Soil
GIPI-56-B30-9 2	10 U	2/11/2002	Fixed Lab Analysis	?	Soil
GIPII-B56-SWN-CS1	0.053	8/21/2002	Fixed Lab Analysis	C	Soil
GIPII-B56-SWN-CS2	10 U	8/21/2002	Fixed Lab Analysis	C	Soil
GIPII-B56-SWE-CS1	10 U	8/21/2002	Fixed Lab Analysis	C	Soil
GIPII-B56-SWE-CS2	10 U	8/21/2002	Fixed Lab Analysis	C	Soil

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Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium
GIPII-B56-SWS-CS1	10 U	8/21/2002	Fixed Lab Analysis	C	Soil
GIPII-B56-SWS-CS2	0.065	8/21/2002	Fixed Lab Analysis	C	Soil
GIPII-B56-SWW-CS1	10 U	8/21/2002	Fixed Lab Analysis	C	Soil
GIPII-B56-SWW-CS2	10 U	8/21/2002	Fixed Lab Analysis	C	Soil
GIPII-B56-BOT-CS1	0.094	8/21/2002	Fixed Lab Analysis	C	Soil
GIPII-B56-BOT-CS2	0.066	8/21/2002	Fixed Lab Analysis	C	Soil
GIPII-B56-BOT-CS3	10 U	8/21/2002	Fixed Lab Analysis	C	Soil
GIPII-B56-BOT-CS4	0.04	8/21/2002	Fixed Lab Analysis	C	Soil
GIPII-B56-BOT-CS5	10 U	8/21/2002	Fixed Lab Analysis	C	Soil

Building 59					
Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium

Building 59					
Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium
GI-B59-CS-2	0.344	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B59-CS-3	0.096	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B59-CS-4	0.494	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B59-CS-8	7.29	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B59-CS-9	0.278	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B59-CS-10	1.86	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B59-CS-11	1.88	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B59-CS-12	0.354	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B59-CS-13	6.13	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B59-CS-14	8.75	4/12/2001	Fixed Lab Analysis	I	Soil
GIPI-59-B1-8	0.032	1/10/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B1-9	0.057	1/10/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B1-10	0.031	1/10/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B1-11	0.02	1/10/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B1-12	0.021	1/10/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B1-13	10 U	1/10/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B1-14	0.075	1/10/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B3-11	10 U	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B4-12	10 U	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B5-11	10 U	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B6-1	2.96	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B6-2	0.034	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B6-11	10 U	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B7-1	0.107	2/26/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B7-2	10 U	2/26/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B7-6	10 U	2/26/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B8-1	0.195	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B8-2	10 U	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B8-6	10 U	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B9-3	0.242	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B9-4	0.017	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B10-3	1.1	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B10-4 2	0.057	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B11-1	354	3/4/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B11-2	0.333	3/4/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B11-9	0.229	3/4/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B12-1	1.16	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B12-2	10 U	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B12-6	10 U	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B13-6	10 U	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B14-1	10 U	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B14-2	10 U	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B14-6	10 U	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B15-1	0.325	2/26/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B15-2	10 U	2/26/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B15-11	10 U	2/26/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B16-1	0.375	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B16-2	10 U	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B16-11	10 U	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B17-1	0.13	2/28/2002	Fixed Lab Analysis	?	Soil

Building 59					
Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium
GIPI-59-B17-2	10 U	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B17-12	10 U	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B18-1	0.497	2/26/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B18-2	0.083	2/26/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B18-7	10 U	2/26/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B18-11	10 U	2/25/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B19-1	1.88	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B19-2	0.269	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B19-12	10 U	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B21-1	0.156	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B21-2	10 U	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B21-7	10 U	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B21-8	10 U	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B21-11	10 U	3/4/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B22-1	0.219	3/4/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B22-2	10 U	3/4/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B22-12	0.035	3/4/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B23-1	0.292	3/4/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B23-2	10 U	3/4/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B23-12	0.035	3/4/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B24-1	10 U	2/26/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B24-2	10 U	2/26/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B24-12	10 U	2/26/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B25-12	10 U	2/27/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B26-1	1.51	3/4/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B26-2	10 U	3/4/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B26-12	0.263	3/4/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B27-1	0.04	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B27-2	10 U	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B27-12	10 U	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B28-1	0.02	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B28-2	10 U	2/28/2002	Fixed Lab Analysis	?	Soil
GIPI-59-B28-12	10 U	2/28/2002	Fixed Lab Analysis	?	Soil
GIPII-B59-SWN-CS1	10 U	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-SWN-CS2	10 U	9/19/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-SWE-CS1	7.22	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-SWE-CS2	0.225	9/19/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-SWS-CS1	0.014	9/19/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-SWS-CS2	0.205	9/19/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-SWW-CS1	0.016	9/19/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-SWW-CS2	0.033	9/19/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-BOT-CS1	4.93	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-BOT-CS2	6.81	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-BOT-CS3	2.17	9/19/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-BOT-CS4	1.21	9/19/2002	Fixed Lab Analysis	C	Soil
Sump Samples					
GIPII-B59-SUMP-SWN	6.04	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-SUMP-SWE	0.029	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-SUMP-SWW	0.541	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-B59-SUMP-BOT	0.037	9/17/2002	Fixed Lab Analysis	C	Soil
Boring B10					
GIPII-59B10-SWE-CS1	0.928	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-59B10-SWS-CS1	0.451	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-59B10-BOT-CS1A	0.132	9/24/2002	Fixed Lab Analysis	C	Soil
Boring B11					

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Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium
GIPII-59B11-SWN-CS1	0.843	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-59B11-BOT-CS1A	0.39	9/24/2002	Fixed Lab Analysis	C	Soil
Boring B-25					
GIPII-59B25-SWN-CS1	0.082	9/19/2002	Fixed Lab Analysis	C	Soil
GIPII-59B25-SWS-CS1	10 U	9/19/2002	Fixed Lab Analysis	C	Soil
GIPII-59B25-SWW-CS1	0.031	9/19/2002	Fixed Lab Analysis	C	Soil
GIPII-59B25-BOT-CS1	0.11	9/19/2002	Fixed Lab Analysis	C	Soil
Boring Q26					
GIPII-Q26B-SWN-CS1	1.78	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-Q26B-SWE-CS1	10 U	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-Q26B-SWE-CS2	0.043	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-Q26B-SWE-CS3	0.088	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-Q26B-SWS-CS1	0.421	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-Q26B-BOT-CS1	0.279	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-Q26B-BOT-CS2	0.173	9/17/2002	Fixed Lab Analysis	C	Soil
GIPII-Q26B-BOT-CS3	0.4	9/17/2002	Fixed Lab Analysis	C	Soil

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Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium
GI-B60-CS-1	10 U	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B60-CS-4	0.585	4/16/2001	Fixed Lab Analysis	I	Soil
GI-B60-CS-5	0.931	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B60-CS-6	0.624	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B60-CS-7	0.99	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B60-CS-8	0.511	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B60-CS-9	1.57	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B60-CS-10	0.575	4/12/2001	Fixed Lab Analysis	I	Soil
GI-B60-CS-13	0.4	4/12/2001	Fixed Lab Analysis	I	Soil
GIPI-60-B1-8	2.15	1/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B1-9	0.302	1/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B1-10	0.024	1/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B2-1	0.028	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B2-2	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B2-3	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B2-4	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B2-5	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B2-6	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B2-7	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B3-1	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B3-2	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B3-3	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B3-4	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B3-5	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B3-6	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B3-7	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B4-1	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B4-2	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B4-3	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B4-4	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B4-5	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B4-6	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B4-7	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B5-1	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B5-2	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B5-3	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B5-4	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B5-5	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B5-6	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B5-7	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B6-1	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B6-2	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B6-3	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B6-4	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B6-5	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B6-6	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B6-7	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B7-1	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B7-2	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B7-3	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B7-4	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B7-5	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B7-6	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B7-7	10 U	2/14/2002	Fixed Lab Analysis	I	Soil

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Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium
GIPI-60-B8-1	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B8-2	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B8-3	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B8-4	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B8-5	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B8-6	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B8-7	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B9-1	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B9-2	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B9-3	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B9-4	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B9-5	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B9-6	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B9-7	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B10-1	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B10-2	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B10-3	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B10-4	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B10-5	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B10-6	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B10-7	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B11-1	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B11-2	0.025	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B11-3	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B11-4	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B11-5	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B11-6	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B11-7	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B12-1	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B12-2	0.058	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B12-3	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B12-4	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B12-5	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B12-6	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B12-7	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B13-3	0.083	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B13-4	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B13-5	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B16-6	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B13-7	0.027	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B14-3	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B14-4	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B14-5	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B14-6	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B14-7	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B15-3	7.68	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B15-4	0.031	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B15-5	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B15-6	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B15-7	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B16-1	0.06	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B16-2	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B16-3	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B16-4	10 U	2/14/2002	Fixed Lab Analysis	I	Soil

Building 60					
Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium
GIPI-60-B16-5	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B16-6	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B16-7	10 U	2/14/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B17-1	0.091	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B17-2	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B17-3	0.167	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B17-4	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B17-5	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B17-6	0.026	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B17-7	10 U	2/21/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B18-1	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B18-2	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B18-8	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B18-9	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B18-10	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B18-11	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B18-12	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B19-1	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B19-2	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B19-8	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B19-9	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B19-10	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B19-11	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B19-12	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B20-1	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B20-2	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B20-8	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B20-9	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B20-10	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B20-11	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B20-12	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B21-1	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B21-2	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B21-8	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B21-9	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B21-10	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B21-11	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B21-12	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B22-1	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B22-2	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B22-8	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B22-9	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B22-10	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B22-11	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B22-12	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B23-1	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B23-2	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B23-8	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B23-9	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B23-10	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B23-11	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B23-12	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B24-1	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B24-2	10 U	2/22/2002	Fixed Lab Analysis	I	Soil

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Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium
GIPI-60-B24-8	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B24-9	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B24-10	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B24-11	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B24-12	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B25-1	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B25-2	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B25-8	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B25-9	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B25-10	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B25-11	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B25-12	10 U	2/25/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B26-1	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B26-2	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B26-8	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B26-9	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B26-10	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B26-11	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPI-60-B26-12 2	10 U	2/22/2002	Fixed Lab Analysis	I	Soil
GIPII-B60-SWN-CS1	0.22	8/8/2002	Fixed Lab Analysis	C	Soil
GIPII-B60-SWE-CS1	10 U	8/8/2002	Fixed Lab Analysis	C	Soil
GIPII-B60-SWE-CS2	0.214	8/8/2002	Fixed Lab Analysis	C	Soil
GIPII-B60-SWS-CS1	0.085	8/8/2002	Fixed Lab Analysis	C	Soil
GIPII-B60-SWW-CS1	2.4	8/8/2002	Fixed Lab Analysis	C	Soil
GIPII-B60-SWW-CS2	0.117	8/8/2002	Fixed Lab Analysis	C	Soil
GIPII-B60-BOT-CS1	0.468	8/8/2002	Fixed Lab Analysis	C	Soil
GIPII-B60-BOT-CS2	0.052	8/8/2002	Fixed Lab Analysis	C	Soil
GIPII-60B14-SWN-CS1	0.019	8/8/2002	Fixed Lab Analysis	C	Soil
GIPII-60B14-SWW-CS1	0.098	8/8/2002	Fixed Lab Analysis	C	Soil
GIPII-60B14-BOT-CS1	10 U	8/8/2002	Fixed Lab Analysis	C	Soil
GIPII-60B15-SWS-CS1	5.16	8/8/2002	Fixed Lab Analysis	C	Soil
GIPII-60B15-SWS-CS1A	6.12	8/21/2002	Fixed Lab Analysis	C	Soil
GIPII-60B15-SWW-CS1	10 U	8/8/2002	Fixed Lab Analysis	C	Soil
GIPII-60B15-BOT-CS1	0.421	8/8/2002	Fixed Lab Analysis	C	Soil

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Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial / Confirmatory	Medium
GI-B61-CS-1	0.85	4/16/2001	Fixed Lab Analysis	I	Soil
GI-B61-CS-2	10 U	4/16/2001	Fixed Lab Analysis	I	Soil
GI-B61-CS-12	0.57	4/16/2001	Fixed Lab Analysis	I	Soil
GI-B61-CS-13	10 U	4/16/2001	Fixed Lab Analysis	I	Soil
GI-B61-CS-14	0.35	4/16/2001	Fixed Lab Analysis	I	Soil
GIPI-61-B1-8	0.06	1/14/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B2-1	2.35	2/28/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B2-2	2.68	2/28/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B2-5	0.65	2/28/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B3-1	0.48	3/4/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B4-1	0.05	3/4/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B4-2	0.27	3/4/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B5-1	10 U	2/28/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B5-2	10 U	2/28/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B5-5	10 U	2/28/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B6-1	10 U	2/27/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B6-2	10 U	2/27/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B6-5	10 U	2/27/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B7-1	10 U	2/27/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B7-2	10 U	2/27/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B7-5	10 U	2/27/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B8-1	10 U	2/27/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B8-2	10 U	2/27/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B8-3	10 U	2/27/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B8-4	10 U	2/27/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B9-1	0.51	2/27/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B9-2	10 U	2/27/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B9-5	10 U	2/27/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B14-1	10 U	3/4/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B14-2	10 U	3/4/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B14-3	10 U	3/4/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B14-4	10 U	3/4/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B15-1	0.46	3/4/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B15-2	2.29	3/4/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B15-3	10 U	3/4/2002	Fixed Lab Analysis	I	Soil
GIPI-61-B15-4	10 U	3/4/2002	Fixed Lab Analysis	I	Soil
GIPII-B61-SWN-CS1A	5.76	9/10/2002	Fixed Lab Analysis	C	Soil
GIPII-B61-SWE-CS1	0.16	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B61-SWS-CS1	0.363/0.121	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B61-SWW-CS1	0.334/0.200	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B61-BOT-CS1	0.273/0.065	8/14/2002	Fixed Lab Analysis	C	Soil
GIPII-B61-BOT-CS2	0.068/0.025D	8/14/2002	Fixed Lab Analysis	C	Soil

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Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial /progress/ Confirmatory	Medium
GIPI-54-B1-SW-13	6.28	1/16/2002	Fixed Lab Analysis	?	SED
GIPI-54-B1-1	10 U	2/3/2002	Fixed Lab Analysis	?	SED
GIPI-54-B1-2	10 U	2/3/2002	Fixed Lab Analysis	?	SED
GIPI-54-B1-6	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B1-7	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B1-8	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B1-9	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B1-10	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B1-11	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B1-12	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B2-1	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B2-2	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B2-6	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B2-7	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B2-8	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B2-9	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B2-10	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B2-11	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B2-12	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B3-1	10 U	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B3-2	10 U	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B3-5	10 U	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B3-6	10 U	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B3-7	10 U	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B3-8	10 U	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B3-9	10 U	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B4-1	0.209	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B4-2	10 U	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B4-5	10 U	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B4-6	10 U	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B4-7	10 U	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B4-8	10 U	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B4-9	10 U	2/7/2002	Fixed Lab Analysis	?	SED
GIPI-54-B5-1	0.045	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B5-2	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B5-5	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B5-6	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B5-7	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B5-8	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B5-9	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B6-1	0.017	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B6-2	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B6-5	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B6-6	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B6-7	0.031	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B6-8	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B6-9	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B7-1	0.089	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B7-2	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B7-5	0.167	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B7-6	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B7-7	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B7-8	0.033	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B7-9	0.041	1/29/2002	Fixed Lab Analysis	?	SED

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Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial /progress/ Confirmatory	Medium
GIPI-54-B7-10	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B7-11	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B7-12	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B8-1	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B8-2	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B8-5	0.232	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B8-6	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B8-7	0.061	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B8-8	0.02	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B8-9	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B8-10	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B8-11	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B8-12	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B9-1	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B9-2	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B9-5	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B9-6	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B9-7	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B9-8	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B9-9	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B9-10	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B9-11	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B9-12	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B10-1	0.028	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B10-2	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B10-5	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B10-6	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B10-7	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B10-8	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B10-9	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B10-10	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B10-11	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B10-12	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B11-1	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B11-2	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B11-5	0.017	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B11-6	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B11-7	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B11-8	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B11-9	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B11-10	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B11-11	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B11-12	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B12-1	0.081	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B12-2	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B12-5	0.025	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B12-6	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B12-7	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B12-8	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B12-9	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B12-10	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B12-11	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B12-12	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B13-1	10 U	1/31/2002	Fixed Lab Analysis	?	SED

Building 54					
Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial /progress/ Confirmatory	Medium
GIPI-54-B13-2	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B13-5	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B13-6	0.161	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B13-7	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B13-8	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B13-9	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B13-10	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B13-11	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B13-12	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B14-1	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B14-2	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B14-5	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B14-6	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B14-7	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B14-8	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B14-9	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B14-10	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B14-11	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B14-12	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B15-1	0.172	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B15-2	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B15-6	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B15-7	0.024	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B15-8	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B15-9	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B15-10	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B15-11	0.042	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B15-12	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B15-13	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B16-1	0.175	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B16-2	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B16-6	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B16-7	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B16-8	0.017	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B16-9	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B16-10	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B16-11	0.216	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B16-12	0.138	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B16-13	10 U	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B17-1	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B17-2	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B17-7	0.207	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B17-8	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B17-9	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B17-10	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B17-11	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B18-1	0.141	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B18-2	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B18-7	2.18	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B18-9	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B18-9	0.063	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B18-10	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B18-11	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B18-12	0.048	1/24/2002	Fixed Lab Analysis	?	SED

Building 54					
Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial /progress/ Confirmatory	Medium
GIPI-54-B18-13	10 U	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B18-14	10 U	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B19-1	0.028	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B19-2	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B19-3	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B19-4	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B19-5	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B19-6	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B19-7	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B19-8	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B19-9	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B20-1	0.037	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B20-2	0.077	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B20-3	0.876	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B20-4	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B20-5	1.77	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B20-6	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B20-7	3.68	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B20-8	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B20-9	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B21-1	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B21-2	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B21-3	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B21-4	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B21-5	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B21-6	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B21-7	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B21-8	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B22-1	0.086	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B22-2	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B22-3	0.033	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B22-4	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B22-5	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B22-6	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B22-7	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B23-1	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B23-2	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B23-3	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B23-4	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B23-5	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B23-6	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B23-7	10 U	2/4/2002	Fixed Lab Analysis	?	SED
GIPI-54-B24-1	1.25	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B24-2	0.017	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B24-3	0.112	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B24-4	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B25-1	0.089	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B25-2	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B25-3	0.549	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B25-4	0.048	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B25-5	0.111	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B25-6	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B25-7	0.4	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B25-8 1	10 U	1/25/2002	Fixed Lab Analysis	?	SED

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Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial /progress/ Confirmatory	Medium
GIPI-54-B25-9	10 U	1/25/2002	Fixed Lab Analysis	?	SED
GIPI-54-B27-1	0.027	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B27-2	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B27-3	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B27-4	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B27-5	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B27-6	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B27-7	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B28-1	0.017	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B28-2	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B28-3	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B28-4	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B29-3	0.261	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B29-4	0.954	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B29-5	1 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B29-6	0.02	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B29-7	1 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B30-1	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B30-2	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B30-3	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B30-4	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B30-5	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B30-6	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B30-7	10 U	2/6/2002	Fixed Lab Analysis	?	SED
GIPI-54-B32-1	0.336	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B32-2	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B32-3	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B32-4	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B32-5	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B32-6	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B32-7	10 U	1/30/2002	Fixed Lab Analysis	?	SED
GIPI-54-B33-1	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B33-2	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B33-3	0.379	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B33-4	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B33-5	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B33-6	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B33-7	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B33-8	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B34-1	2.03	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B34-1	0.217	2/26/2002	Fixed Lab Analysis	?	SED
GIPI-54-B34-2	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B34-3	0.074	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B34-4	0.034	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B34-5	1.02	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B34-6	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B34-7	0.291	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B34-8	0.382	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B34-9	0.275	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B35-1	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B35-2	5.45	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B35-3	0.024	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B35-4	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B35-5	0.083	1/29/2002	Fixed Lab Analysis	?	SED

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Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial /progress/ Confirmatory	Medium
GIPI-54-B35-6	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B35-7	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B35-8	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B35-9	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B35-10	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B36-1	1.54	1/17/2002	Fixed Lab Analysis	?	SED
GIPI-54-B36-2	1.01	1/17/2002	Fixed Lab Analysis	?	SED
GIPI-54-B36-4	0.275	1/17/2002	Fixed Lab Analysis	?	SED
GIPI-54-B36-5	0.071	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B36-6	0.6	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B36-7	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B36-8	10 U	1/17/2002	Fixed Lab Analysis	?	SED
GIPI-54-B36-9	0.061	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B36-10	0.224	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B36-11	6.07	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B37-1	0.275	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B37-2	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B37-5	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B37-6	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B37-7	0.049	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B37-8	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B37-9	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B37-10	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B37-11	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B37-12	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B38-1	0.14	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B38-2	0.163	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B38-6	0.078	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B38-7	0.21	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B38-8	0.249	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B38-9	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B38-10	10 U	1/22/2002	Fixed Lab Analysis	?	SED
GIPI-54-B38-11	0.085	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B38-12	1.84	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B38-13	0.081	1/24/2002	Fixed Lab Analysis	?	SED
GIPI-54-B39-1	5.99	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B39-2	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B39-5	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B39-6	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B39-7	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B39-8	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B39-9	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B39-10	0.071	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B39-11	10 U	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B39-12	0.215	1/28/2002	Fixed Lab Analysis	?	SED
GIPI-54-B41-1	0.394	1/14/2002	Fixed Lab Analysis	?	SED
GIPI-54-B41-2	0.028	1/14/2002	Fixed Lab Analysis	?	SED
GIPI-54-B41-3	0.104	1/14/2002	Fixed Lab Analysis	?	SED
GIPI-54-B41-4	0.03	1/14/2002	Fixed Lab Analysis	?	SED
GIPI-54-B42-3	1 U	1/14/2002	Fixed Lab Analysis	?	SED
GIPI-54-B42-4	0.023	1/14/2002	Fixed Lab Analysis	?	SED
GIPI-54-B45-5	1 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B45-6	1 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B45-7	0.021	1/31/2002	Fixed Lab Analysis	?	SED

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Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial /progress/ Confirmatory	Medium
GIPI-54-B45-8	0.096	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B46-1	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B46-2	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B46-3	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B46-4	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B46-5	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B46-6	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B46-7	10 U	1/31/2002	Fixed Lab Analysis	?	SED
GIPI-54-B47-1	0.015	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B47-2	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B47-3	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B47-4	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B47-5	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B47-6	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B47-7	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B48-3	1 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B48-4	1 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B48-5	1 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B48-6	1 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B48-7	1 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B49-1	0.139	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B49-2	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B49-3	0.072	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B49-4	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B49-5	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B49-6	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPI-54-B49-7	10 U	1/29/2002	Fixed Lab Analysis	?	SED
GIPII-54B29-SWN-CS1	1 U	9/5/2002	Fixed Lab Analysis	C	SED
GIPII-54B29-SWE-CS1	1 U	9/5/2002	Fixed Lab Analysis	C	SED
GIPII-54B29-SWW-CS1	0.044	9/5/2002	Fixed Lab Analysis	C	SED
GIPII-54B29-BOT-CS1	1 U	9/5/2002	Fixed Lab Analysis	C	SED
GIPII-54B40-SWN-CS1	0.109	9/5/2002	Fixed Lab Analysis	C	SED
GIPII-54B40-SWE-CS1	1 U	9/5/2002	Fixed Lab Analysis	C	SED
GIPII-54B40-SWS-CS1	0.016	9/5/2002	Fixed Lab Analysis	C	SED
GIPII-54B40-BOT-CS1	0.119	9/5/2002	Fixed Lab Analysis	C	SED
GIPII-54B42-SWN-CS1	1 U	9/5/2002	Fixed Lab Analysis	C	SED
GIPII-54B42-SWE-CS1	1 U	9/5/2002	Fixed Lab Analysis	C	SED
GIPII-54B42-SWS-CS1	0.188	9/5/2002	Fixed Lab Analysis	C	SED
GIPII-54B42-BOT-CS1	0.072	9/5/2002	Fixed Lab Analysis	C	SED
GIPII-54B45-SWN-CS1	0.289	9/6/2002	Fixed Lab Analysis	C	SED
GIPII-54B45-SWE-CS1	0.059	9/6/2002	Fixed Lab Analysis	C	SED
GIPII-54B45-SWS-CS1A	0.231	9/10/2002	Fixed Lab Analysis	C	SED
GIPII-54B45-SWW-CS1	0.389	9/6/2002	Fixed Lab Analysis	C	SED
GIPII-54B45-BOT-CS1	1 U	9/6/2002	Fixed Lab Analysis	C	SED
GIPII-54B48-SWN-CS1	1 U	9/6/2002	Fixed Lab Analysis	C	SED
GIPII-54B48-SWE-CS1	1U	9/6/2002	Fixed Lab Analysis	C	SED
GIPII-54B48-SWS-CS1	0.022	9/6/2002	Fixed Lab Analysis	C	SED
GIPII-54B48-SWW-CS1	0.226	9/6/2002	Fixed Lab Analysis	C	SED
GIPII-54B48-BOT-CS1	1 U	10/1/2002	Fixed Lab Analysis	C	SED
GIPII-B54-SWN-CS1	10 U	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWN-CS2	10 U	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWN-CS3	10 U	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWN-CS4	1.43	10/1/2002	Fixed Lab Analysis	C	SOIL

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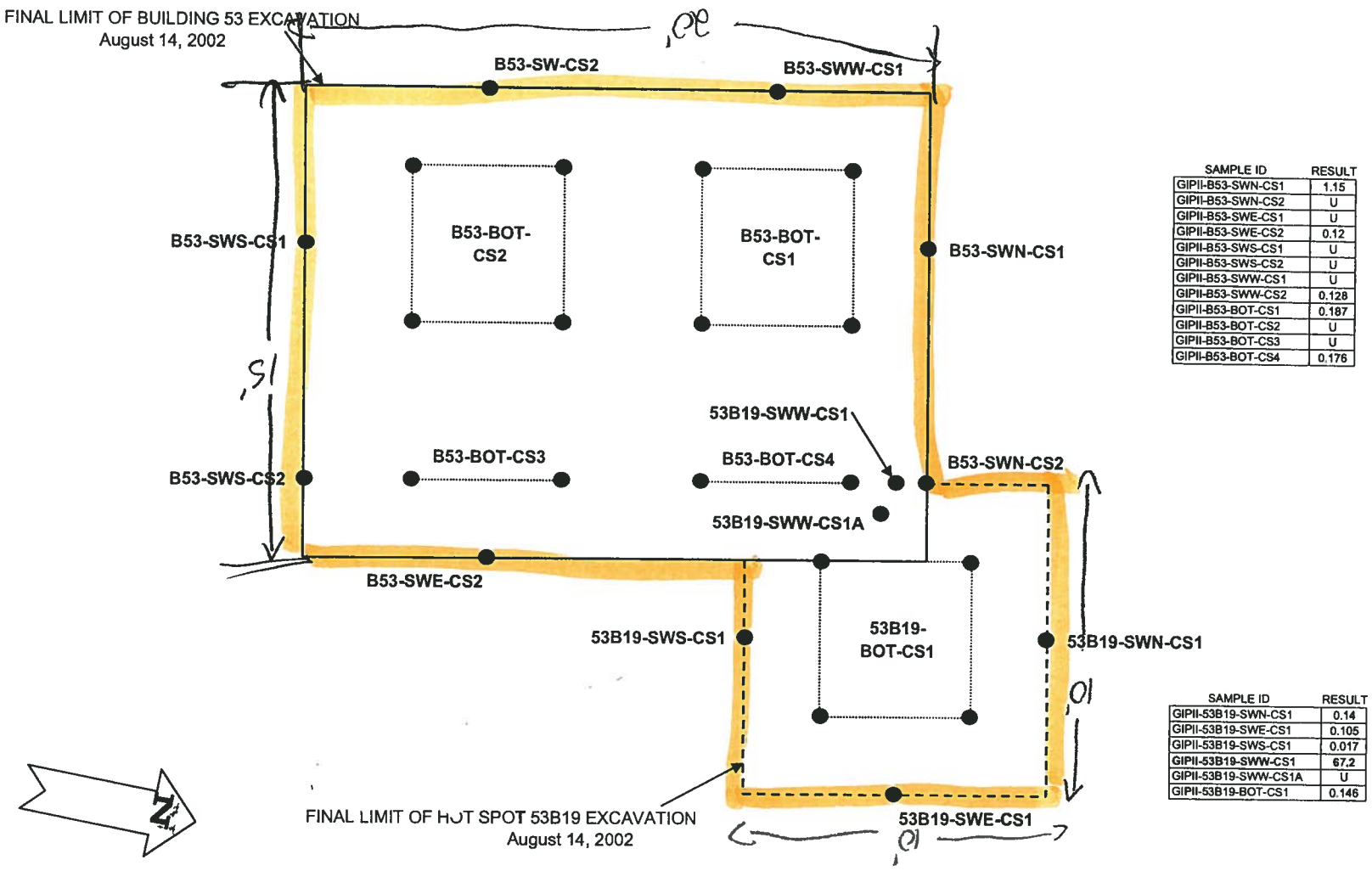
Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial /progress/ Confirmatory	Medium
GIPII-B54-SWE-CS1	10 U	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWE-CS2	10 U	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWE-CS3	0.489	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWE-CS4	0.115	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWS-CS1	0.314	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWS-CS2	10 U	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWS-CS3	10 U	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWS-CS4	10 U	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWW-CS1	10 U	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWW-CS2	10 U	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWW-CS3	0.109	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-SWW-CS4	0.03	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-BOT-CS1	0.389	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-BOT-CS2	3.72	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-BOT-CS3	3.99	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-BOT-CS4	6.33	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-BOT-CS5	1.82	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-BOT-CS9	0.157	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-BOT-CS10	3.81	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-BOT-CS14	0.656	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-BOT-CS15	3.87	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-B54-BOT-CS17	2.43	10/1/2002	Fixed Lab Analysis	C	SOIL
GIPII-SWN1A-TOP	10 U	8/27/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWN1A-BOT	0.337	8/27/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWN2-TOP	2.32	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWN2-BOT	8.23	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWN3-TOP	0.049	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWN3-BOT	3.4	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWN4-TOP	0.137	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWN4A-TOP	10 U	8/27/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWN4A-BOT	10 U	8/27/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWN5-TOP	0.478	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWN5-BOT	8.54	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWN6-TOP	0.068	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWN6-BOT	0.089	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWE1A-TOP	10 U	8/27/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWE1-BOT	2.67	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWE1A-BOT	0.126	8/27/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWE2-TOP	0.5	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWE2-BOT	0.044	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWS1-TOP	4.12	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWS1A-TOP	0.457	8/27/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWS2-BOT	0.538	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWS3-TOP	10 U	8/21/2003	Fixed Lab Analysis	C	SOIL
GIPII-SWS3-BOT	10 U	8/21/2003	Fixed Lab Analysis	C	SOIL
Bedrock samples					
GIPII-BED-CS1	0.261	8/21/2003	Fixed Lab Analysis	C	BEDROCK
GIPII-BED-CS2	0.133	8/21/2003	Fixed Lab Analysis	C	BEDROCK
GIPII-BED-CS3	0.479	8/21/2003	Fixed Lab Analysis	C	BEDROCK
GIPII-BED-CS4	0.177	8/21/2003	Fixed Lab Analysis	C	BEDROCK
GIPII-BED-CS5	1.56	8/21/2003	Fixed Lab Analysis	C	BEDROCK
GIPII-BED-CS6	0.304	8/21/2003	Fixed Lab Analysis	C	BEDROCK
GIPII-BED-CS7	5.52	8/21/2003	Fixed Lab Analysis	C	BEDROCK

Building 54					
Sample ID	PCB Concentration (ppm)	Collection Date	Data type	Initial /progress/ Confirmatory	Medium
GIPII-BED-CS8	1.53	8/21/2003	Fixed Lab Analysis	C	BEDROCK
GIPII-BED-CS9	6.23	8/21/2003	Fixed Lab Analysis	C	BEDROCK
GIPII-BED-CS10	0.651	8/21/2003	Fixed Lab Analysis	C	BEDROCK
GIPII-BED-CS11	0.558	8/21/2003	Fixed Lab Analysis	C	BEDROCK
GIPII-BED-CS12	0.259	8/21/2003	Fixed Lab Analysis	C	BEDROCK
GIPII-BED-CS13	0.322	8/21/2003	Fixed Lab Analysis	C	BEDROCK
GIPII-BED-CS14	10 u	8/21/2003	Fixed Lab Analysis	C	BEDROCK
GIPII-BED-CS15A	10 u	8/28/2003	Fixed Lab Analysis	C	BEDROCK

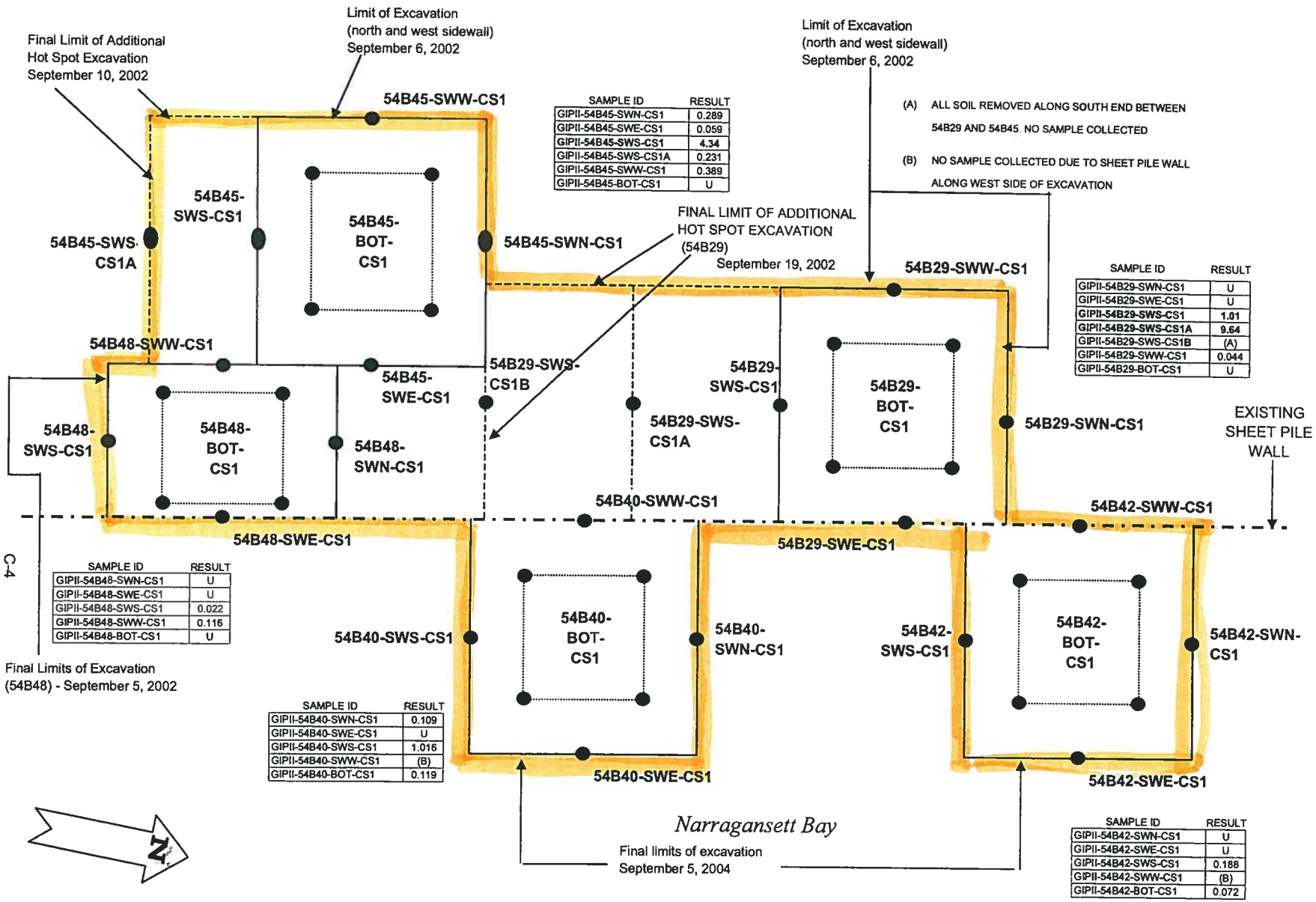


SAMPLE ID	RESULT
GIPII-B53-SWN-CS1	1.15
GIPII-B53-SWN-CS2	U
GIPII-B53-SWE-CS1	U
GIPII-B53-SWE-CS2	0.12
GIPII-B53-SWS-CS1	U
GIPII-B53-SWS-CS2	U
GIPII-B53-SWW-CS1	U
GIPII-B53-SWW-CS2	0.128
GIPII-B53-BOT-CS1	0.187
GIPII-B53-BOT-CS2	U
GIPII-B53-BOT-CS3	U
GIPII-B53-BOT-CS4	0.176

SAMPLE ID	RESULT
GIPII-53B19-SWN-CS1	0.14
GIPII-53B19-SWE-CS1	0.105
GIPII-53B19-SWS-CS1	0.017
GIPII-53B19-SWW-CS1	67.2
GIPII-53B19-SWW-CS1A	U
GIPII-53B19-BOT-CS1	0.146

Note: The final excavation depth was 10' B.G. for the building foundation area and 2'-4' B.G. for the B19 hot spot.

BUILDING 53 (TRANSFORMER VAULT)
CONFIRMATORY SAMPLING LOCATIONS
APPROXIMATE SCALE: 1" = 5'



SAMPLE ID	RESULT
GIPII-54B45-SWN-CS1	0.289
GIPII-54B45-SWE-CS1	0.059
GIPII-54B45-SWS-CS1	4.34
GIPII-54B45-SWS-CS1A	0.231
GIPII-54B45-SWW-CS1	0.389
GIPII-54B45-BOT-CS1	U

SAMPLE ID	RESULT
GIPII-54B29-SWN-CS1	U
GIPII-54B29-SWE-CS1	U
GIPII-54B29-SWS-CS1	1.01
GIPII-54B29-SWS-CS1A	9.64
GIPII-54B29-SWS-CS1B	(A)
GIPII-54B29-SWW-CS1	0.044
GIPII-54B29-BOT-CS1	U

SAMPLE ID	RESULT
GIPII-54B48-SWN-CS1	U
GIPII-54B48-SWE-CS1	U
GIPII-54B48-SWS-CS1	0.022
GIPII-54B48-SWW-CS1	0.116
GIPII-54B48-BOT-CS1	U

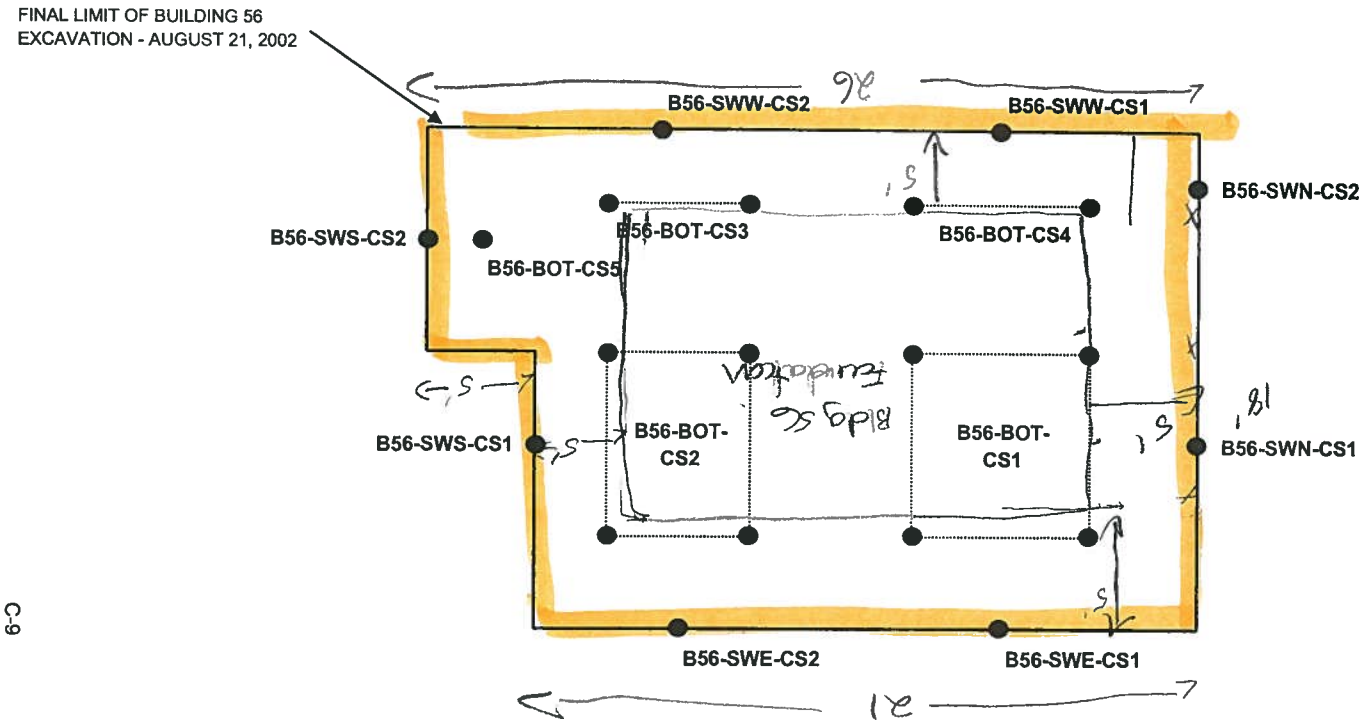
SAMPLE ID	RESULT
GIPII-54B40-SWN-CS1	0.109
GIPII-54B40-SWE-CS1	U
GIPII-54B40-SWS-CS1	1.016
GIPII-54B40-SWW-CS1	(B)
GIPII-54B40-BOT-CS1	0.119

SAMPLE ID	RESULT
GIPII-54B42-SWN-CS1	U
GIPII-54B42-SWE-CS1	U
GIPII-54B42-SWS-CS1	0.188
GIPII-54B42-SWW-CS1	(B)
GIPII-54B42-BOT-CS1	0.072

Note: Final excavtion depths were as follows:
B45 = 4' B.G.
B40 = 3' B.G.
B29 = 2' B.G.
B.42 = 2' B.G.
B48 = 2' B.G.

HOT SPOT LOCATION 54B29, 54B40, 54B42, 54B45 & 54B48
CONFIRMATORY SAMPLING LOCATIONS
APPROXIMATE SCALE: 1" = 6'

BUILDING 54 SHORELINE AREA



SAMPLE ID	RESULT
GIPII-B56-SWN-CS1	0.053
GIPII-B56-SWN-CS2	U
GIPII-B56-SWE-CS1	U
GIPII-B56-SWE-CS2	U
GIPII-B56-SWS-CS1	U
GIPII-B56-SWS-CS2	0.065
GIPII-B56-SWW-CS1	U
GIPII-B56-SWW-CS2	U
GIPII-B56-BOT-CS1	0.094
GIPII-B56-BOT-CS2	0.066
GIPII-B56-BOT-CS3	U
GIPII-B56-BOT-CS4	0.04
GIPII-B56-BOT-CS5	U

Note: Final excavation depth was 10' B.G.

BUILDING 56 (TRANSFORMER VAULT)
CONFIRMATORY SAMPLING LOCATIONS
APPROXIMATE SCALE:

SAMPLE ID	RESULT
GIPII-B59-SWN-CS1	U
GIPII-B59-SWN-CS2	U
GIPII-B59-SWE-CS1	7.22
GIPII-B59-SWE-CS2	0.225
GIPII-B59-SWS-CS1	0.014
GIPII-B59-SWS-CS2	0.205
GIPII-B59-SWW-CS1	0.016
GIPII-B59-SWW-CS2	0.033
GIPII-B59-BOT-CS1	4.93
GIPII-B59-BOT-CS2	6.81
GIPII-B59-BOT-CS3	2.17
GIPII-B59-BOT-CS4	1.21
GIPII-59B10-SWE-CS1	0.928
GIPII-59B10-SWS-CS1	0.451
GIPII-59B10-BOT-CS1	10.4
GIPII-59B10-BOT-CS1A	0.132
GIPII-59B11-SWN-CS1	0.843
GIPII-59B11-SWE-CS1	80.5
GIPII-59B11-SWE-CS1A	*
GIPII-59B11-BOT-CS1	61.3
GIPII-59B11-BOT-CS1A	0.39
GIPII-59B25-SWN-CS1	0.082
GIPII-59B25-SWS-CS1	U
GIPII-59B25-SWW-CS1	0.031
GIPII-59B25-BOT-CS1	0.11
GIPII-Q26B-SWN-CS1	1.76
GIPII-Q26B-SWE-CS1	U
GIPII-Q26B-SWE-CS2	0.043
GIPII-Q26B-SWE-CS3	0.088
GIPII-Q26B-SWS-CS1	0.421
GIPII-Q26B-BOT-CS1	0.279
GIPII-Q26B-BOT-CS2	0.173
GIPII-Q26B-BOT-CS3	0.4

* All soil removed along East side of excavation up to existing curbing. No sample collected.

C-10

EXISTING CURBING

FINAL LIMIT OF BUILDING 59 EXCAVATION August 21, 2002

FINAL LIMIT OF HOT SPOT 59B11 EXCAVATION September 24, 2002

FINAL LIMIT OF HOT SPOT 59B10 EXCAVATION September 24, 2002

FINAL LIMIT OF HOT SPOT Q26B EXCAVATION August 21, 2002

FINAL LIMIT OF HOT SPOT 59B25 EXCAVATION August 21, 2002

CONCRETE ROADWAY (PREVIOUSLY REMOVED)

B59-SWN-CS2 10' B59-SWN-CS1 10' 59B11-SWN-CS1

B59-SWW-CS1

B59-BOT-CS3

B59-BOT-CS1

59B11-BOT-CS1, 1A

B59-SWE-CS1

175'

Bldg 59 F.F. EL.

B59-SWW-CS2

B59-BOT-CS4

B59-BOT-CS2

59B10-BOT-CS1, 1A

B59-SWE-CS2

59B25-SWN-CS1

59B11-SWS-CS1

16'

B59-SWS-CS2

B59-SWS-CS1

59B25-BOT-CS1

59B25-SWW-CS1

59B25-SWS-CS1

75'

Q26B-SWN-CS1

Q26B-BOT-CS1

Q26B-SWE-CS1

59B11-SWE-CS1, 1A

Q26B-BOT-CS2

Q26B-SWE-CS2

59B10-SWE-CS1

Q26B-BOT-CS3

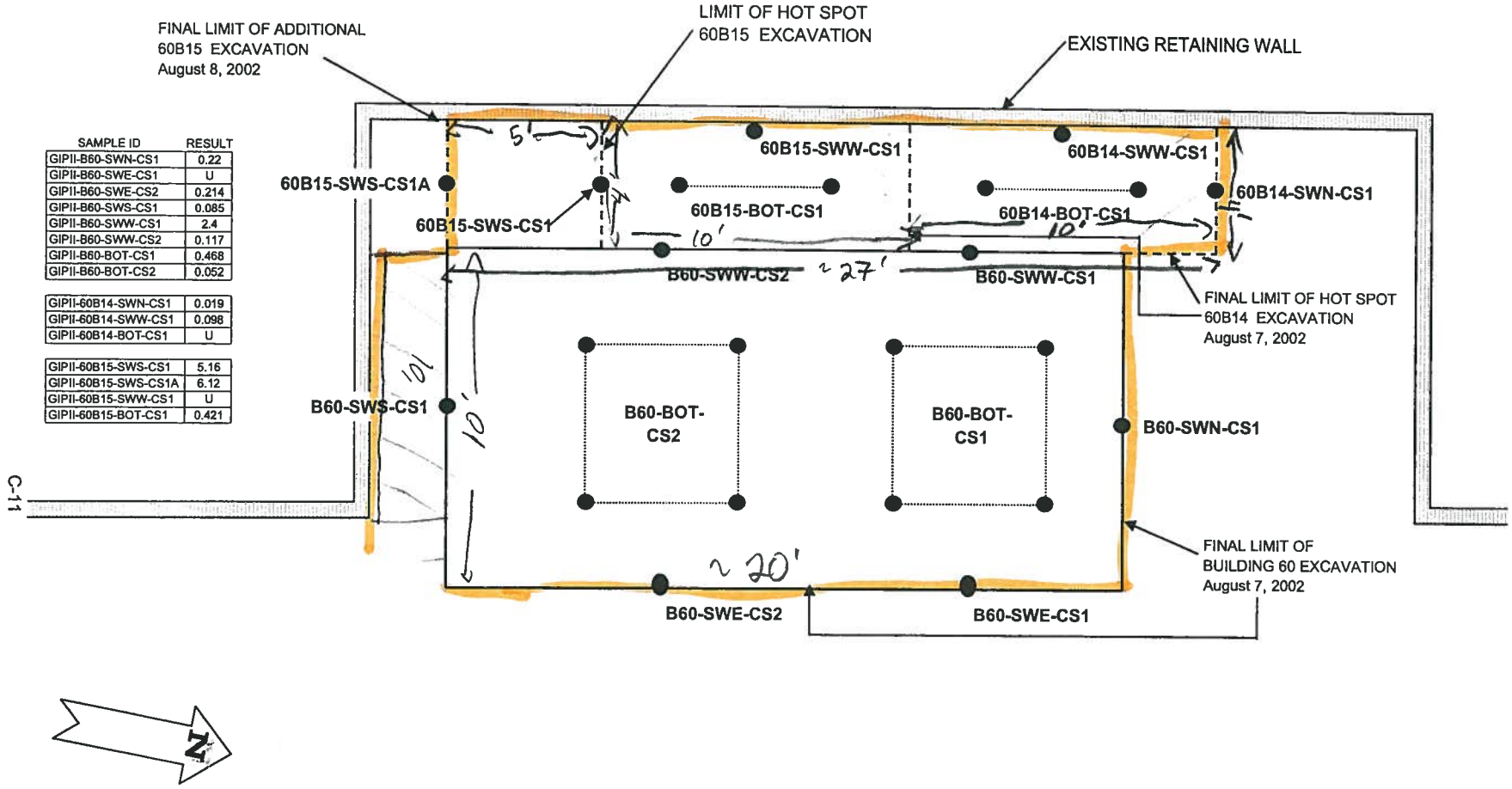
Q26B-SWE-CS3

Q26B-SWS-CS1

Note: Final excavation depth within the Building 59 excavation was 7' B.G. The depths for B25 and Q26B were 2' B.G. and 3' B.G. for B10 and B11.

BUILDING 59 (SWITCH HOUSE) CONFIRMATORY SAMPLING LOCATIONS

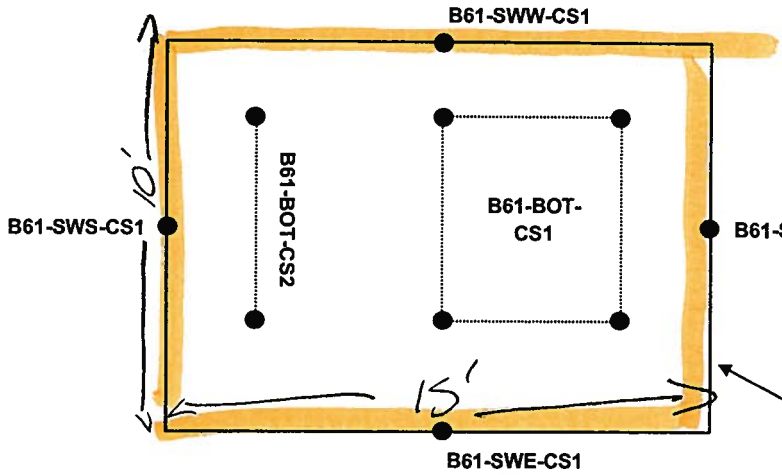
APPROXIMATE SCALE: 1" = 5'



SAMPLE ID	RESULT
GIPII-B60-SWN-CS1	0.22
GIPII-B60-SWE-CS1	U
GIPII-B60-SWE-CS2	0.214
GIPII-B60-SWS-CS1	0.085
GIPII-B60-SWW-CS1	2.4
GIPII-B60-SWW-CS2	0.117
GIPII-B60-BOT-CS1	0.468
GIPII-B60-BOT-CS2	0.052
GIPII-60B14-SWN-CS1	0.019
GIPII-60B14-SWW-CS1	0.098
GIPII-60B14-BOT-CS1	U
GIPII-60B15-SWS-CS1	5.16
GIPII-60B15-SWS-CS1A	6.12
GIPII-60B15-SWW-CS1	U
GIPII-60B15-BOT-CS1	0.421

Note: Final excavation depth was 7' B.G.

BUILDING 60 (TRANSFORMER VAULT)
CONFIRMATORY SAMPLING LOCATIONS
APPROXIMATE SCALE: 1" = 5'



SAMPLE ID	RESULT
GIPII-B61-SWN-CS1	19.9
GIPII-B61-SWN-CS1A	5.76
GIPII-B61-SWE-CS1	0.16
GIPII-B61-SWS-CS1	0.363
GIPII-B61-SWW-CS1	0.0334
GIPII-B61-BOT-CS1	0.0273
GIPII-B61-BOT-CS2	0.068

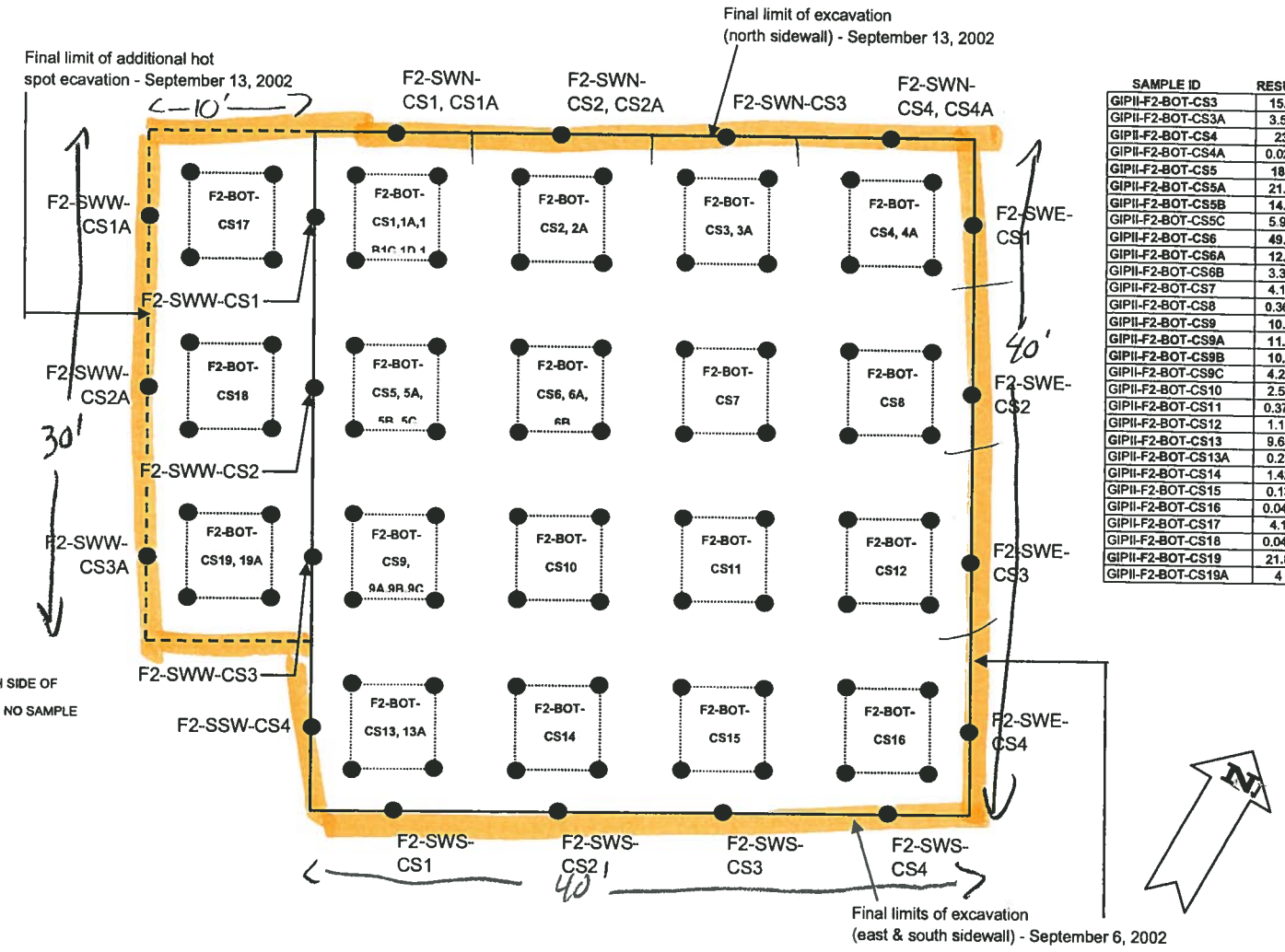
Note: Final excvation depth was 7' B.G.

BUILDING 61 (TRANSFORMER VAULT)
CONFIRMATORY SAMPLING LOCATIONS
APPROXIMATE SCALE: 1" = 5'

SAMPLE ID	RESULT
GIPII-F2-SWN-CS1	50.2
GIPII-F2-SWN-CS1A	*
GIPII-F2-SWN-CS2	117
GIPII-F2-SWN-CS2A	*
GIPII-F2-SWN-CS3	5.72
GIPII-F2-SWN-CS4	11.1
GIPII-F2-SWN-CS4A	*
GIPII-F2-SWE-CS1	0.024
GIPII-F2-SWE-CS2	0.054
GIPII-F2-SWE-CS3	0.253
GIPII-F2-SWE-CS4	U
GIPII-F2-SWS-CS1	0.042
GIPII-F2-SWS-CS2	U
GIPII-F2-SWS-CS3	U
GIPII-F2-SWS-CS4	U
GIPII-F2-SWW-CS1	51.5
GIPII-F2-SWW-CS1A	U
GIPII-F2-SWW-CS2	8400
GIPII-F2-SWW-CS2A	U
GIPII-F2-SWW-CS3	23.7
GIPII-F2-SWW-CS3A	U
GIPII-F2-SWW-CS4	0.105
GIPII-F2-BOT-CS1	57.4
GIPII-F2-BOT-CS1A	11
GIPII-F2-BOT-CS1B	28.5
GIPII-F2-BOT-CS1C	12.3
GIPII-F2-BOT-CS1D	30.4
GIPII-F2-BOT-CS1E	0.457
GIPII-F2-BOT-CS2	34.3
GIPII-F2-BOT-CS2A	0.871

C-2

* ALL SOIL REMOVED ALONG NORTH SIDE OF EXCAVATION (AGAINST SEAWALL). NO SAMPLE



SAMPLE ID	RESULT
GIPII-F2-BOT-CS3	15.4
GIPII-F2-BOT-CS3A	3.54
GIPII-F2-BOT-CS4	23
GIPII-F2-BOT-CS4A	0.021
GIPII-F2-BOT-CS5	185
GIPII-F2-BOT-CS5A	21.2
GIPII-F2-BOT-CS5B	14.8
GIPII-F2-BOT-CS5C	5.96
GIPII-F2-BOT-CS6	49.4
GIPII-F2-BOT-CS6A	12.5
GIPII-F2-BOT-CS6B	3.36
GIPII-F2-BOT-CS7	4.14
GIPII-F2-BOT-CS8	0.362
GIPII-F2-BOT-CS9	10.7
GIPII-F2-BOT-CS9A	11.2
GIPII-F2-BOT-CS9B	10.3
GIPII-F2-BOT-CS9C	4.26
GIPII-F2-BOT-CS10	2.54
GIPII-F2-BOT-CS11	0.378
GIPII-F2-BOT-CS12	1.13
GIPII-F2-BOT-CS13	9.65
GIPII-F2-BOT-CS13A	0.23
GIPII-F2-BOT-CS14	1.42
GIPII-F2-BOT-CS15	0.13
GIPII-F2-BOT-CS16	0.043
GIPII-F2-BOT-CS17	4.1
GIPII-F2-BOT-CS18	0.045
GIPII-F2-BOT-CS19	21.8
GIPII-F2-BOT-CS19A	4

NOTE: Final excavation depth was 8'-13' B.G.

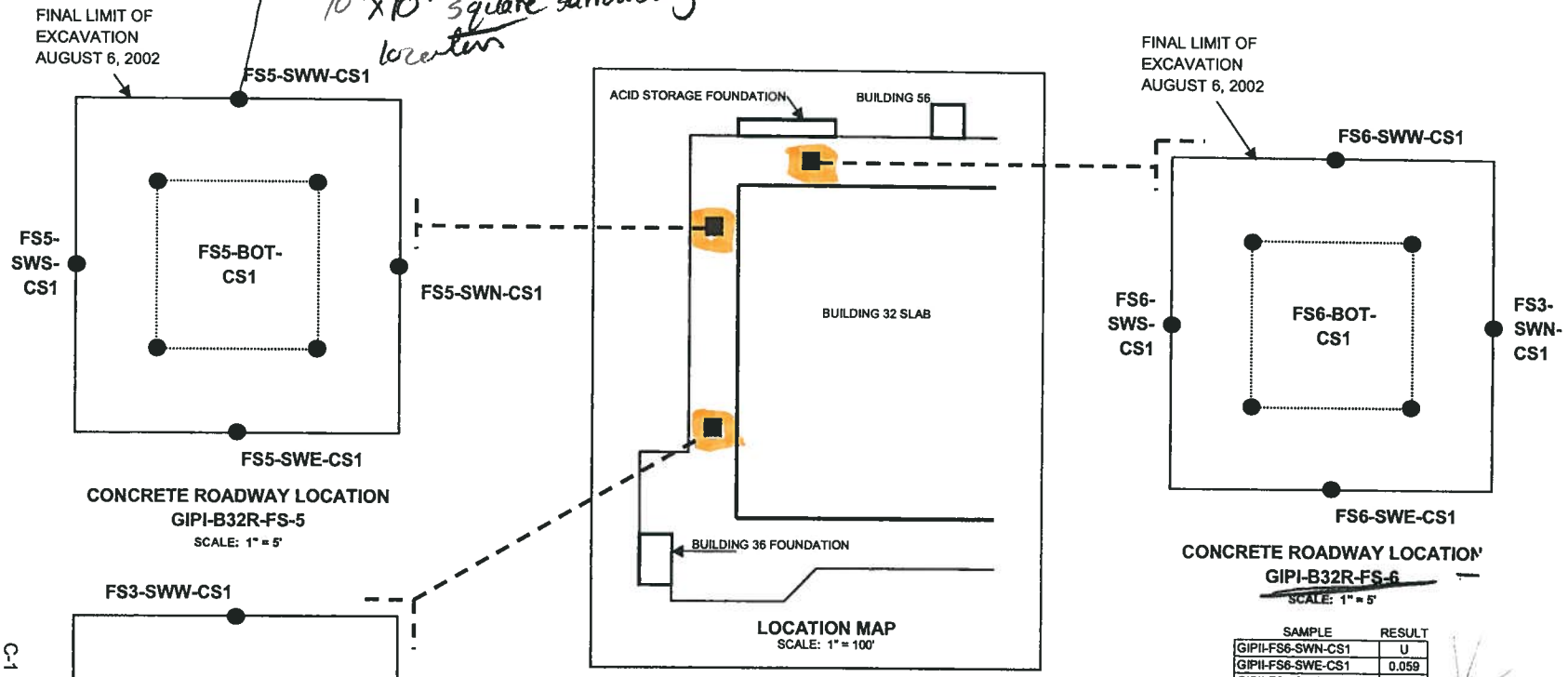
GRID/BORING LOCATION F2
CONFIRMATORY SAMPLING LOCATIONS
APPROXIMATE SCALE: 1' = 10'

Bldg 52

BUILDING 52/41 AREA

52.19
12.03

GIPI-B32R-FS5
10'x10' square surrounding location



C-1

SAMPLE	RESULT
GIPII-FS5-SWN-CS1	U
GIPII-FS5-SWE-CS1	U
GIPII-FS5-SWS-CS1	U
GIPII-FS5-SWW-CS1	U
GIPII-FS5-BOT-CS1	U

SAMPLE	RESULT
GIPII-FS6-SWN-CS1	U
GIPII-FS6-SWE-CS1	0.059
GIPII-FS6-SWS-CS1	U
GIPII-FS6-SWW-CS1	U
GIPII-FS6-BOT-CS1	U

SAMPLE	RESULT
GIPII-FS3-SWN-CS1	U
GIPII-FS3-SWE-CS1	U
GIPII-FS3-SWS-CS1	U
GIPII-FS3-SWW-CS1	U
GIPII-FS3-BOT-CS1	U

10'x10' squar

NOTE: All three areas (FS-3, FS-5, and FS-6) were excavated to 2' B.G.

2

CONCRETE ROADWAY LOCATION
GIPI-B32R-FS3, GIPI-B32R-FS5 AND GIPI-B32R-FS6
CONFIRMATORY SAMPLING LOCATIONS

SCALE: AS SHOWN

BLD 32 SOUTH ROADWAY

APPENDIX J

PHYSICAL SEDIMENT CONDITIONS,

JULY 2010

PHYSICAL SEDIMENT CONDITIONS
SITE 17 GOULD ISLAND
NAVSTA NEWPORT, JAMESTOWN RI
July 2010

1.0 INTRODUCTION

This Technical Memorandum was prepared by Tetra Tech, NUS (Tetra Tech), to describe the physical conditions of the marine sediment near Site 17, Gould Island. Gould Island is part of Naval Station Newport, and is located within the town of Jamestown, Rhode Island. This data was collected as a part of the Phase 2 Remedial Investigation and Baseline Ecological Risk Assessment, which is being conducted on behalf of the Navy's Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic, under the Comprehensive Long-term Environmental Action Navy (CLEAN) Contract No. N62467-04-D0055, Contract Task Order (CTO) 458.

Physical sediment conditions were measured as a part of a stepped process to conduct a Tier 2 sediment transport model for the marine sediments near Site 17. The Tier 2 sediment transport model was requested by the EPA based on the Tier 1 model prepared by the US Navy in 2006. The tier 1 model predicted that sediment erosion was not occurring under typical conditions, but identified the need to evaluate for extreme conditions and long term changes.

At the RPM Meeting held at NAVSTA Newport on May 19, 2010, Tetra Tech recommended the following data elements to support the Tier 2 sediment transport model:

1. Bathymetry and Topography
    a. Bathymetric survey data from the stillwater area, and 300 feet north of the piling wall as well as the Northeast and NW shoreline seaward to 300 feet to encompass the study area.
2. Fractional distribution of sediment sizes
    a. Sediment grain size distribution with hydrometer from all 33 ecological stations
    b. Similar data available from 2005 at Phase 1 stations (Tetra Tech 2006)
3. Current velocities at the sediment surface during different conditions
    a. ADCP direct data recorders set at up to four stations (two inside stillwater, two outside) to measure current flow over a 28 day period.
4. Wave Height measurements over time
    a. Similar data recorders measure wave height and direction over same 28 day period.

5. Measurement of Shear Stress of bedded sediment
    a. Box core samples collected from various locations and shear stress measured using a field vane shear apparatus.
6. Water column sampling (surface and bottom grabs) and analysis for total suspended solids

At that time, EPA repeated an earlier request to conduct sedflume analysis of box cores collected from key positions at the site. Tetra Tech noted limited availability and high cost of this technology, and proposed that the matter be discussed by the sediment modeling staff at a conference call. Refer to SEA Engineering at the link below:

http://www.seaengineering.com/Services/Sedflume/tabid/112/Default.aspx

After the meeting was held, Tetra Tech completed the data collection efforts that were already in progress (Items # 1, 2, and 5, above), and compiled that physical data with key chemical data available from the same locations. Chemical contaminant data for the purpose of this discussion is also compiled and presented as total PAHs and Total Aroclor measured in sediment. These are key contaminant groups found at the site. This data is being provided attached to this document to the project team in advance of the discussion on whether other data elements (#3, 4, and 6, as well as the sedflume tests described above) are needed for the sediment transport model.

The following attachments are provided:

A. Site map with sediment bathymetry, and key chemical information presented.
B. Table of key surface sediment characteristics, total PAH and Total PCBs presented.
C. Table of Total PAH and Total PCBs presented in deeper core samples collected.
D. Grain size distribution sample data sheets for Phase 2 ecological sediment sample stations
E. Photos of the shoreline structures and pilings

The Stillwater area was identified as the focus of the sediment transport model due to the presence of depositional sediments, the presence of elevated concentrations of contaminants (PCBs and PAHs) and deteriorating infrastructure (pilings and piers) that, if not maintained, could result in a change in hydrodynamics in this area. The other areas of the site (referred to as the Northeast Shoreline, Northwest Shoreline and Southern Area) were not targeted for the sediment transport model because the sediments in these areas are not depositional, but are made up of a mixture of sand, gravel and rock.

Initial assessment of the data has led to speculation that the rise in topography at the north boundary of the Stillwater basin is a dredge pile, tailings taken from the depression evident immediately north. The

north edge of this pile appears to be reinforced with stone or concrete blocks, found during detailed GPS survey of the pilings and repeated attempts to core sediment in this area. It is further speculated that the pilings were set into this elevated tailings pile for the purpose of creating the Stillwater area for barge and personnel boat traffic during naval operations at this portion of Gould Island.

ATTACHMENT A

ATTACHMENT B

TABLE 1
SUMMARY OF SURFACE SEDIMENT CHARACTERISTICS
SITE 17, GOULD ISLAND JAMESTOWN RI

Area	Sample ID	Coloc station	Gravel (%)	Sand (%)	Silt/Clay (%)	Total PCB (ug/kg)	Total PAH (ug/kg)	Shear Strength* (kPa)
Northeast Shoreline	SD 429	SD 429	2.1	88.9	9			
	SD 510	SD 310D	24.8	74.3	0.9	43 U	20168	
	SD 511	SD 304F	1.5	90.5	8	360	3096	
	SD 512	SD 309F	23.4	75.7	0.9	93.25	2442	
	SD 513	SD 309A	19.6	73.6	6.8	33 U	642	
	SD 514	SD 432	13.8	46.3	39.9	360	6485	
	SD 515	SD 434	6.1	67.1	26.8	400	3564	
	SD 517	SD 437	0.7	80.3	19	310	1294	
	SD 517D	SD 437	1.6	92.2	6.2			
	SD 518	SD 447	29	50.6	20.4	240	4598	
	SD 519	NA	2.2	93.6	4.2			
	SD 528	SD 306B	3.4	89.4	7.2	100	390	
	SD 530	SD 317	45.7	53.5	0.8	39 U	237	
	SD 531	SD 306F	0	91.9	8.1	190	681	
	SD566	SD 435	0	86.9	13.1	890	1277	
Stillwater Area	SD 501	SD 406	2.1	54.1	43.8	5100	80301	
	SD 502	SD 402	11.9	87.6	0.5	20500	7218.3	
	SD503	SD 419	12.9	75.3	11.8	61	11198	
	SD 504	SD 413	26.9	52.3	20.8	2800	5588	
	SD 505	SD404	0.2	61.6	38.2	2000	1852	1.9
	SD 506	SD 408	0	70.6	29.4	160	397	
	SD 507	SD 410	0	58.5	41.5	4100	945	2.4
	SD 508	NA	6.7	87.9	5.4			
	SD 508D	NA	16.8	80.1	3.1			
	SD 509	SD 411	1.7	72.1	26.2	570	4787	
	SD 509D	SD 411	0.5	74.3	25.2			
	SD 527	SD 414	13.2	56.5	30.3	300	2384	2.8
	SD532	SD 401	21.2	71.2	7.6	980	7903	3.1
	NA	SD416						0.7
	NA	SD417						0.4
	NA	SD418						0.9
	NA	SD412						No Reading
	NA	VS 01						1.3
	NA	VS 02						No Reading
	NA	VS 03						No Reading
	NA	VS 04						0.5
	NA	VS 05						1.4
	NA	VS 06						No Reading
	NA	VS 07						No Reading
	NA	VS 08						No Reading
Northwest Shoreline	SD520	SD 308E	26.4	72.9	0.7	33 U	15680	
	SD 521	SD 308F	11.7	83.1	5.2	33 U	10597	
	SD 522	SD 313D	5.2	82.9	11.9	33 U	749	
	SD 523	SD 313F	30.3	63.2	6.5	33 U	15295	
South	SD 529	SD 314	4.6	86.8	8.6	33 U	21.96	
Reference Area	SD 524	JPC 01	0.8	79.3	19.9	33 U	228.95	
	SD 525	JPC 02	3.8	55	41.2	33 U	263.2	
	SD 526	JCC04	2.9	83.8	13.3	33 U	113.3	

No Reading - unable to analyze shear strength because of unsuitable sediment characteristics

* Shear Strength readings are an average of all readings collected within the top 6in at each location

ATTACHMENT C

TABLE 2
ANALYTICAL RESULTS - SEDIMENT (SD_STILLWATER)
GOULD ISLAND, NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

SAMPLE ID	G32-SD312-		G32-SD312-		G32-SD316-		G32-SD316-		GI-SD401-		GI-SD401-		GI-SD401-		GI-SD402-
LOCATION ID	G32-SD312		G32-SD312		G32-SD316		G32-SD316		GI-SD401		GI-SD401		GI-SD401		GI-SD402
SAMPLE DATE	08/31/05		08/31/05		08/31/05		08/31/05		10/09/09		10/09/09		10/09/09		10/09/09
TOP DEPTH	0 FT		0.5 FT		0 FT		0.5 FT		0 FT		1.3 FT		2.6 FT		0 FT
BOTTOM DEPTH	0.5 FT		1 FT		0.5 FT		1 FT		1.3 FT		2.6 FT		4 FT		2 FT
SACODE	NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		ORIG
QC TYPE	NM		NM		NM		NM		NM		NM		NM		NM
SEMIVOLATILES (UG/KG)															
TOTAL PAHS	36366		88119		9235		4583.8		7903.1		2151.4		2434.7		7470
PESTICIDES/PCBS (UG/KG)															
TOTAL AROCLOR	8900		41000		22000		22000		980		600		2200		25000

TABLE 2
ANALYTICAL RESULTS - SEDIMENT (SD_STILLWATER)
GOULD ISLAND, NAVSTA NEWPORT, NEWPORT, RHODE ISLAND
PAGE 2 of 10

SAMPLE ID	GI-SD402-0006-	GI-SD402-0006-	GI-SD402-	GI-SD403-	GI-SD404-	GI-SD404-	GI-SD404-	GI-SD404-
LOCATION ID	GI-SD402	GI-SD402	GI-SD402	GI-SD403	GI-SD404	GI-SD404	GI-SD404	GI-SD404
SAMPLE DATE	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09	10/09/09
TOP DEPTH	0 FT	0 FT	2 FT	0 FT	0 FT	0.7 FT	2 FT	3.3 FT
BOTTOM DEPTH	2 FT	2 FT	4 FT	4 FT	0.7 FT	1.4 FT	2.8 FT	4 FT
SACODE	DUP	AVG	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE	FD	NM	NM	NM	NM	NM	NM	NM
SEMIVOLATILES (UG/KG)								
TOTAL PAHS	6966.5	7218.25	38073	1202.6	1852.4	2704.7	5642	10607
PESTICIDES/PCBS (UG/KG)								
TOTAL AROCLOR	16000	20500	55000	4800	2000	2500	1200	45

TABLE 2
ANALYTICAL RESULTS - SEDIMENT (SD_STILLWATER)
GOULD ISLAND, NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

SAMPLE ID		GI-SD405-		GI-SD405-0006-		GI-SD405-0006-		GI-SD405-		GI-SD405-		GI-SD406-		GI-SD406-		GI-SD407-
LOCATION ID		GI-SD405		GI-SD405		GI-SD405		GI-SD405		GI-SD405		GI-SD406		GI-SD406		GI-SD407
SAMPLE DATE		10/09/09		10/09/09		10/09/09		10/09/09		10/09/09		10/09/09		10/09/09		10/09/09
TOP DEPTH		0 FT		0 FT		0 FT		1.3 FT		2.6 FT		0 FT		2 FT		0 FT
BOTTOM DEPTH		1.3 FT		1.3 FT		1.3 FT		2.6 FT		4 FT		2 FT		4 FT		2 FT
SACODE		ORIG		DUP		AVG		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL
QC TYPE		NM		FD		NM		NM		NM		NM		NM		NM
SEMIVOLATILES (UG/KG)																
TOTAL PAHS		5874		5306		5590		639.2		19		80301		10873.3		883.8
PESTICIDES/PCBS (UG/KG)																
TOTAL AROCLOR		2100		2300		2200		250		33	U	5100		300		190

TABLE 2
ANALYTICAL RESULTS - SEDIMENT (SD_STILLWATER)
GOULD ISLAND, NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

SAMPLE ID		GI-SD407-		GI-SD408-		GI-SD408-		GI-SD408-		GI-SD409-		GI-SD409-		GI-SD409-		GI-SD409-	
LOCATION ID		GI-SD407		GI-SD408		GI-SD408		GI-SD408		GI-SD409		GI-SD409		GI-SD409		GI-SD409	
SAMPLE DATE		10/09/09		10/13/09		10/13/09		10/13/09		10/13/09		10/13/09		10/13/09		10/13/09	
TOP DEPTH		2 FT		0 FT		1.3 FT		2.5 FT		0 FT		0.5 FT		1.5 FT		3.5 FT	
BOTTOM DEPTH		4 FT		1.3 FT		2.5 FT		3.8 FT		0.5 FT		1 FT		2 FT		4 FT	
SACODE		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL	
QC TYPE		NM		NM		NM		NM		NM		NM		NM		NM	
SEMIVOLATILES (UG/KG)																	
TOTAL PAHS		8491.1		396.5		380.4		3.3	U	3.3	U	95.7		1409.1		4	
PESTICIDES/PCBS (UG/KG)																	
TOTAL AROCLOR		6000		160		96		33	U	33	U	40		310		320	

U - NOT DETECTED; UJ - DETECTION LIMIT APPROXIMATE; J - QUANTITATION LIMIT APPROXIMATE; R - REJECTED

TABLE 2
ANALYTICAL RESULTS - SEDIMENT (SD_STILLWATER)
GOULD ISLAND, NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD410-		GI-SD410-		GI-SD410-		GI-SD410-		GI-SD411-		GI-SD411-		GI-SD411-		GI-SD411-	
LOCATION ID	GI-SD410		GI-SD410		GI-SD410		GI-SD410		GI-SD411		GI-SD411		GI-SD411		GI-SD411	
SAMPLE DATE	10/13/09		10/13/09		10/13/09		10/13/09		10/13/09		10/13/09		10/13/09		10/13/09	
TOP DEPTH	0 FT		0.75 FT		2.25 FT		3.25 FT		0 FT		0.9 FT		1.7 FT		2.6 FT	
BOTTOM DEPTH	0.75 FT		1.5 FT		3 FT		4 FT		0.9 FT		1.7 FT		2.6 FT		3.4 FT	
SACODE	NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL	
QC TYPE	NM		NM		NM		NM		NM		NM		NM		NM	
SEMIVOLATILES (UG/KG)																
TOTAL PAHS	944.9		190.6		25.7		228.6		4787		47.6		4		45.8	
PESTICIDES/PCBS (UG/KG)																
TOTAL AROCLOR	4100		410		54		88		570		101		33	U	33	U

TABLE 2
ANALYTICAL RESULTS - SEDIMENT (SD_STILLWATER)
GOULD ISLAND, NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD412-		GI-SD412-		GI-SD412-		GI-SD412-		GI-SD413-		GI-SD413-		GI-SD414-		GI-SD414-0006-	
LOCATION ID	GI-SD412		GI-SD412		GI-SD412		GI-SD412		GI-SD413		GI-SD413		GI-SD414		GI-SD414	
SAMPLE DATE	10/09/09		10/09/09		10/09/09		10/09/09		10/06/09		10/06/09		10/12/09		10/12/09	
TOP DEPTH	0 FT		1 FT		2 FT		3 FT		0 FT		2 FT		0 FT		0 FT	
BOTTOM DEPTH	1 FT		2 FT		3 FT		4 FT		2 FT		4 FT		0.9 FT		0.9 FT	
SACODE	NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		ORIG		DUP	
QC TYPE	NM		NM		NM		NM		NM		NM		NM		FD	
SEMIVOLATILES (UG/KG)																
TOTAL PAHS	12598		7489		5149		2800		5588		3797.3		2383.8		2056.4	
PESTICIDES/PCBS (UG/KG)																
TOTAL AROCLOR	5300		7200		1720		129		2800		2400		300		480	

TABLE 2
ANALYTICAL RESULTS - SEDIMENT (SD_STILLWATER)
GOULD ISLAND, NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD414-0006-		GI-SD414-		GI-SD414-		GI-SD414-		GI-SD414-1824-		GI-SD414-1824-		GI-SD415-		GI-SD415-	
LOCATION ID	GI-SD414		GI-SD414		GI-SD414		GI-SD414		GI-SD414		GI-SD414		GI-SD415		GI-SD415	
SAMPLE DATE	10/12/09		10/12/09		10/12/09		10/12/09		10/12/09		10/12/09		10/12/09		10/12/09	
TOP DEPTH	0 FT		0.9 FT		1.9 FT		2.8 FT		2.8 FT		2.8 FT		0 FT		0.5 FT	
BOTTOM DEPTH	0.9 FT		1.9 FT		2.8 FT		3.7 FT		3.7 FT		3.7 FT		0.5 FT		1 FT	
SACODE	AVG		NORMAL		NORMAL		ORIG		DUP		AVG		NORMAL		NORMAL	
QC TYPE	NM		NM		NM		NM		FD		NM		NM		NM	
SEMIVOLATILES (UG/KG)																
TOTAL PAHS	2220.925		183.4		30.1		3.3	U	30.7		20.3		129.1		1241.6	
PESTICIDES/PCBS (UG/KG)																
TOTAL AROCLOR	390		33	U	33	U	33	U	33	U	33	U	33	U	35	

TABLE 2
ANALYTICAL RESULTS - SEDIMENT (SD_STILLWATER)
GOULD ISLAND, NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD415-		GI-SD415-		GI-SD415-4248-		GI-SD415-4248-		GI-SD416-		GI-SD416-		GI-SD416-		GI-SD417-	
LOCATION ID	GI-SD415		GI-SD415		GI-SD415		GI-SD415		GI-SD416		GI-SD416		GI-SD416		GI-SD417	
SAMPLE DATE	10/12/09		10/12/09		10/12/09		10/12/09		10/12/09		10/12/09		10/12/09		10/12/09	
TOP DEPTH	1.5 FT		3.5 FT		3.5 FT		3.5 FT		0 FT		1.5 FT		3 FT		0 FT	
BOTTOM DEPTH	2 FT		4 FT		4 FT		4 FT		1.5 FT		3 FT		4 FT		1.3 FT	
SACODE	NORMAL		ORIG		DUP		AVG		NORMAL		NORMAL		NORMAL		NORMAL	
QC TYPE	NM		NM		FD		NM		NM		NM		NM		NM	
SEMIVOLATILES (UG/KG)																
TOTAL PAHS	165.2		4.4		3.3	U	3.025		9519		8344		610.6		2274.3	
PESTICIDES/PCBS (UG/KG)																
TOTAL AROCLOR	33	U	33	U	33	U	33	U	33	U	33	U	33	U	33	U

TABLE 2
ANALYTICAL RESULTS - SEDIMENT (SD_STILLWATER)
GOULD ISLAND, NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD417-		GI-SD417-		GI-SD418-		GI-SD418-		GI-SD419-		GI-SD419-		GI-SD419-		GI-SD419-	
LOCATION ID	GI-SD417		GI-SD417		GI-SD418		GI-SD418		GI-SD419		GI-SD419		GI-SD419		GI-SD419	
SAMPLE DATE	10/12/09		10/12/09		10/13/09		10/13/09		10/13/09		10/13/09		10/13/09		10/13/09	
TOP DEPTH	1.3 FT		2.5 FT		0 FT		1.9 FT		0 FT		0.75 FT		2.25 FT		3.25 FT	
BOTTOM DEPTH	2.5 FT		3.8 FT		1.9 FT		3.7 FT		0.75 FT		1.5 FT		3 FT		4 FT	
SACODE	NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL	
QC TYPE	NM		NM		NM		NM		NM		NM		NM		NM	
SEMIVOLATILES (UG/KG)																
TOTAL PAHS	88.7		3.3	U	1980		235.3		11198		1141.9		5387		231	
PESTICIDES/PCBS (UG/KG)																
TOTAL AROCLOR	33	U	33	U	135		33	U	61		120		34		33	U

TABLE 2
ANALYTICAL RESULTS - SEDIMENT (SD_STILLWATER)
GOULD ISLAND, NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

SAMPLE ID	GI-SD420-		GI-SD420-0006-		GI-SD420-0006-		GI-SD420-	
LOCATION ID	GI-SD420		GI-SD420		GI-SD420		GI-SD420	
SAMPLE DATE	10/13/09		10/13/09		10/13/09		10/13/09	
TOP DEPTH	0 FT		0 FT		0 FT		1.6 FT	
BOTTOM DEPTH	1.6 FT		1.6 FT		1.6 FT		3.2 FT	
SACODE	ORIG		DUP		AVG		NORMAL	
QC TYPE	NM		FD		NM		NM	
SEMIVOLATILES (UG/KG)								
TOTAL PAHS	452		684.2		568.925		42	
PESTICIDES/PCBS (UG/KG)								
TOTAL AROCLOR	65		33	U	40.75		56	

ATTACHMENT D

GeoTesting express

WARRANTY and LIABILITY

GeoTesting Express (GTX) warrants that all tests it performs are run in general accordance with the specified test procedures and accepted industry practice. GTX will correct or repeat any test that does not comply with this warranty. GTX has no specific knowledge as to conditioning, origin, sampling procedure or intended use of the material.

GTX may report engineering parameters that require us to interpret the test data. Such parameters are determined using accepted engineering procedures. However, GTX does not warrant that these parameters accurately reflect the true engineering properties of the *in situ* material. Responsibility for interpretation and use of the test data and these parameters for engineering and/or construction purposes rests solely with the user and not with GTX or any of its employees.

GTX's liability will be limited to correcting or repeating a test which fails our warranty. GTX's liability for damages to the Purchaser of testing services for any cause whatsoever shall be limited to the amount GTX received for the testing services. GTX will not be liable for any damages, or for any lost benefits or other consequential damages resulting from the use of these test results, even if GTX has been advised of the possibility of such damages. GTX will not be responsible for any liability of the Purchaser to any third party.

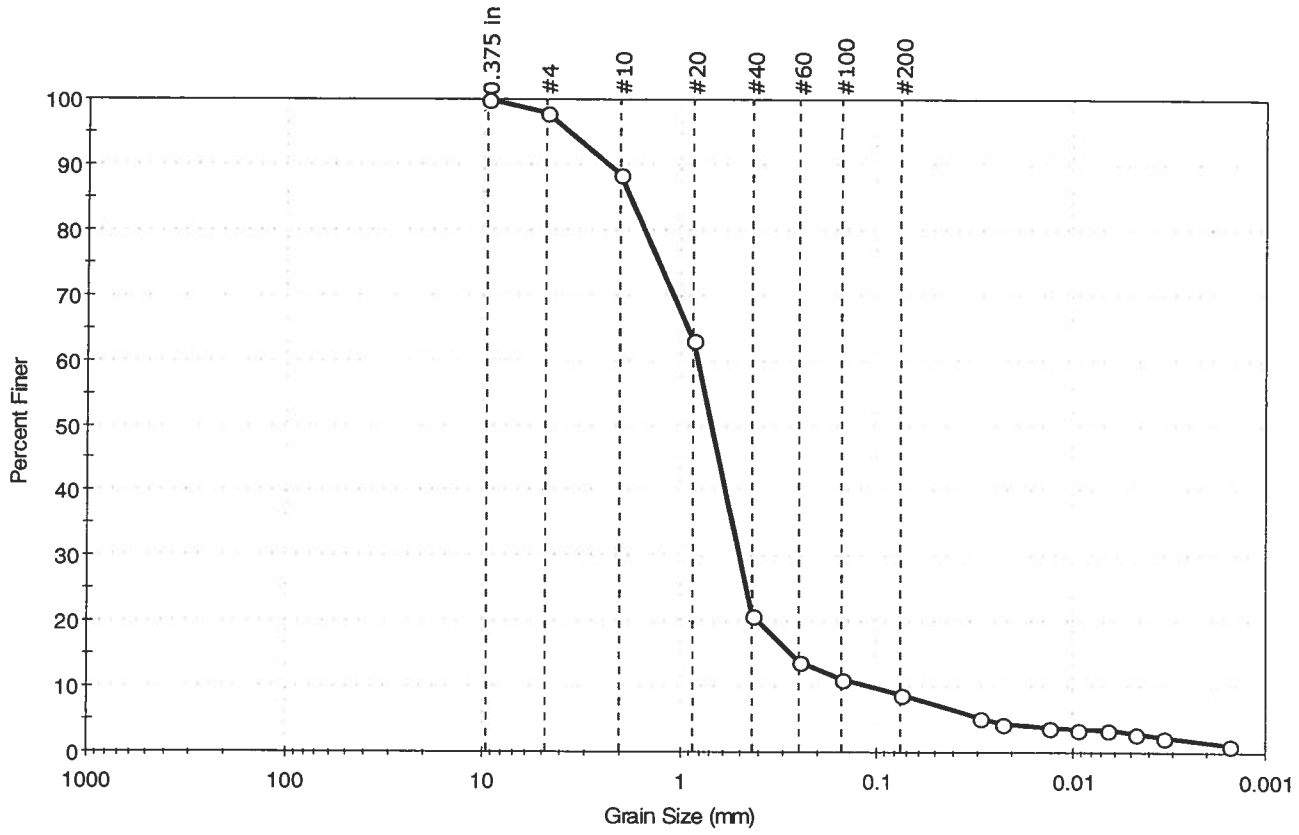
Commonly Used Symbols

A	pore pressure parameter for $\Delta\sigma_1 - \Delta\sigma_3$
B	pore pressure parameter for $\Delta\sigma_3$
CIU	isotropically consolidated undrained triaxial shear test
CR	compression ratio for one dimensional consolidation
C_c	coefficient of curvature, $(D_{30})^2 / (D_{10} \times D_{60})$
C_u	coefficient of uniformity, D_{60}/D_{10}
C_c	compression index for one dimensional consolidation
C_α	coefficient of secondary compression
c_v	coefficient of consolidation
c	cohesion intercept for total stresses
c'	cohesion intercept for effective stresses
D	diameter of specimen
D_{10}	diameter at which 10% of soil is finer
D_{15}	diameter at which 15% of soil is finer
D_{30}	diameter at which 30% of soil is finer
D_{50}	diameter at which 50% of soil is finer
D_{60}	diameter at which 60% of soil is finer
D_{85}	diameter at which 85% of soil is finer
d_{50}	displacement for 50% consolidation
d_{90}	displacement for 90% consolidation
d_{100}	displacement for 100% consolidation
E	Young's modulus
e	void ratio
e_c	void ratio after consolidation
e_o	initial void ratio
G	shear modulus
G_s	specific gravity of soil particles
H	height of specimen
PI	plasticity index
i	gradient
K_o	lateral stress ratio for one dimensional strain
k	permeability
LI	Liquidity Index
m_v	coefficient of volume change
n	porosity
PI	plasticity index
P_c	preconsolidation pressure
p	$(\sigma_1 + \sigma_3) / 2$, $(\sigma_v + \sigma_h) / 2$
p'	$(\sigma'_1 + \sigma'_3) / 2$, $(\sigma'_v + \sigma'_h) / 2$
p'_c	p' at consolidation
Q	quantity of flow
q	$(\sigma_1 - \sigma_3) / 2$
q_f	q at failure
q_o, q_i	initial q
q_c	q at consolidation
S	degree of saturation
SL	shrinkage limit
s_u	undrained shear strength
T	time factor for consolidation
T	temperature
t	time
U, UC	unconfined compression test
UU, Q	unconsolidated undrained triaxial test
u_a	pore gas pressure
u_e	excess pore water pressure
u, u_w	pore water pressure
V	total volume
V_g	volume of gas
V_s	volume of solids
V_v	volume of voids
V_w	volume of water
V_o	initial volume
v	velocity
W	total weight
W_s	weight of solids
W_w	weight of water
w	water content
w_c	water content at consolidation
w_f	final water content
w_l	liquid limit
w_n	natural water content
w_p	plastic limit
w_s	shrinkage limit
w_o, w_i	initial water content
α	slope of q_f versus p_f
α'	slope of q_f versus p_f'
γ_t	total unit weight
γ_d	dry unit weight
γ_s	unit weight of solids
γ_w	unit weight of water
ε	strain
ε_{vol}	volume strain
ε_h, ε_v	horizontal strain, vertical strain
μ	Poisson's ratio, also viscosity
σ	normal stress
σ'	effective normal stress
σ_c, σ'_c	consolidation stress in isotropic stress system
σ_h, σ'_h	horizontal normal stress
σ_v, σ'_v	vertical normal stress
σ_1	major principal stress
σ_2	intermediate principal stress
σ_3	minor principal stress
τ	shear stress
φ	friction angle based on total stresses
φ'	friction angle based on effective stresses
φ'_r	residual friction angle
φ_{ult}	φ for ultimate strength

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services		
Project:	R1002384		
Location:	---	Project No:	GTX-9850
Boring ID:	R1002384-003	Sample Type: jar	Tested By: jbr
Sample ID:	GI-SD429-0006	Test Date: 05/12/10	Checked By: jdt
Depth :	---	Test Id: 179569	
Test Comment:	---		
Sample Description:	Moist, black sand with silt		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	2.1	88.9	9.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	88		
#20	0.85	63		
#40	0.42	21		
#60	0.25	14		
#100	0.15	11		
#200	0.075	9		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0299	5		
---	0.0229	4		
---	0.0133	4		
---	0.0094	4		
---	0.0066	4		
---	0.0047	3		
---	0.0033	2		
---	0.0015	1		

Coefficients

D_{85} = 1.7849 mm D_{30} = 0.4928 mm
D_{60} = 0.8077 mm D_{15} = 0.2738 mm
D_{50} = 0.6851 mm D_{10} = 0.1042 mm
C_u = 7.751 C_c = 2.886

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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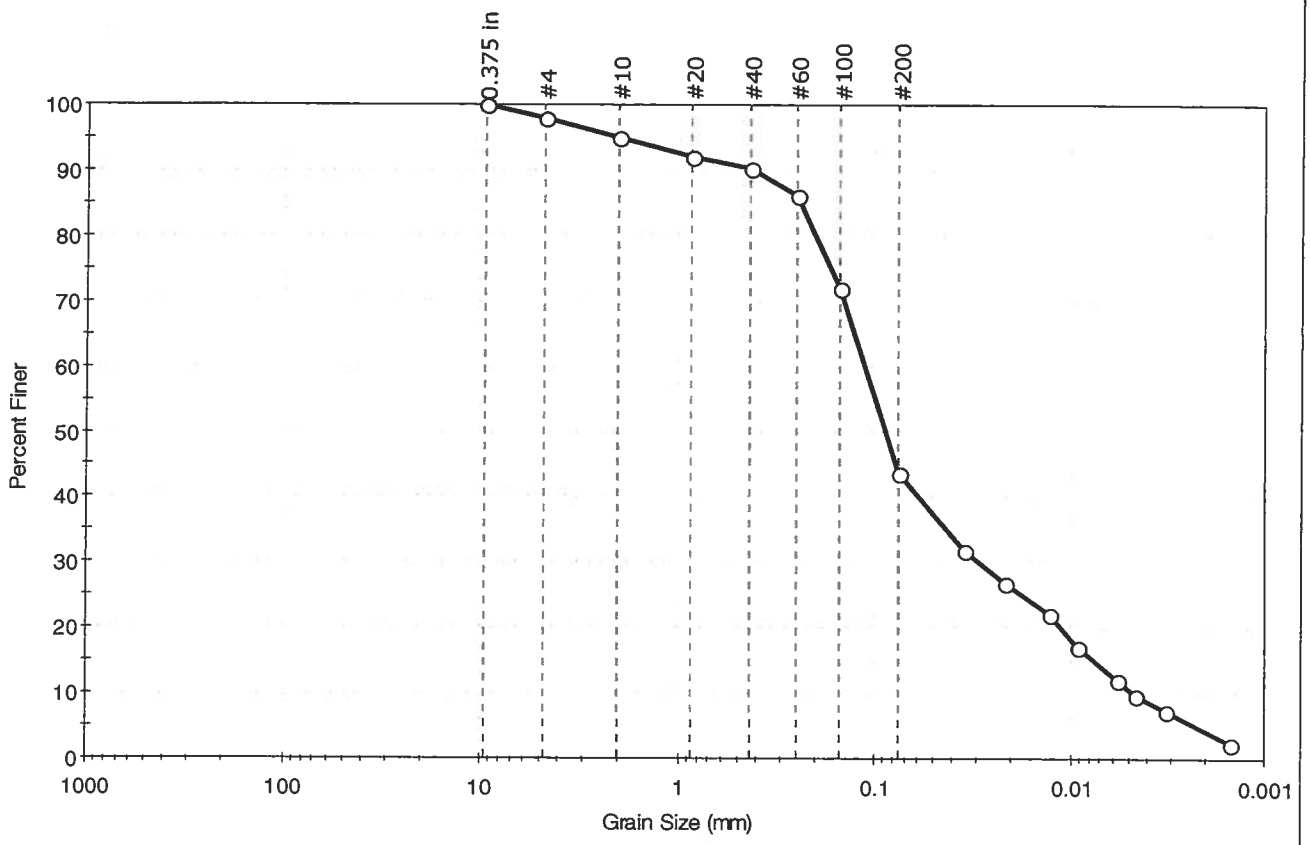
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-009	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD501-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179420		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	2.1	54.1	43.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	95		
#20	0.85	92		
#40	0.42	90		
#60	0.25	86		
#100	0.15	72		
#200	0.075	44		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0353	32		
---	0.0218	27		
---	0.0127	22		
---	0.0093	17		
---	0.0058	12		
---	0.0046	10		
---	0.0032	7		
---	0.0015	2		

Coefficients

D_{85} = 0.2405 mm D_{30} = 0.0295 mm
D_{60} = 0.1115 mm D_{15} = 0.0075 mm
D_{50} = 0.0873 mm D_{10} = 0.0047 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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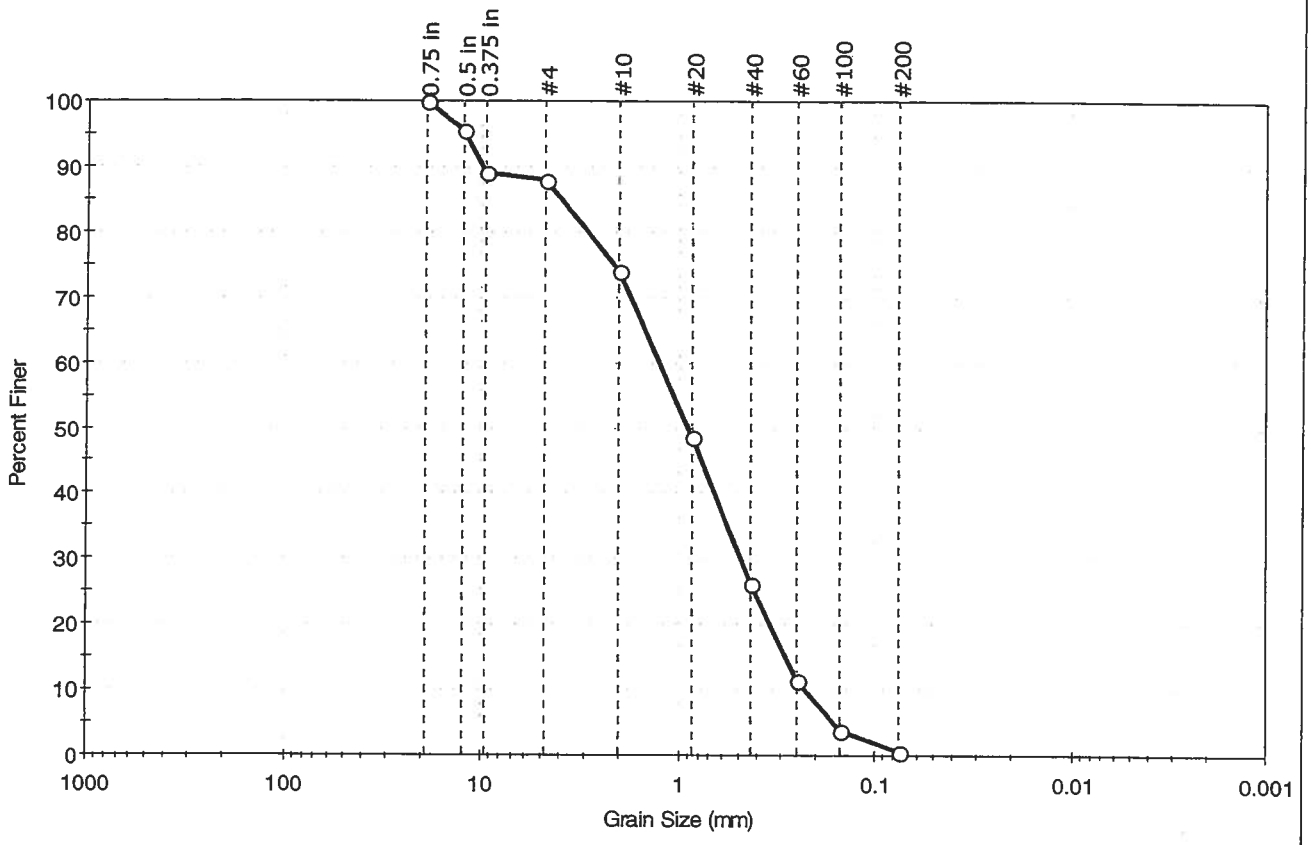
Client:	Columbia Analytical Services		
Project:	R1002348		
Location:	---	Project No:	GTX-9843
Boring ID:	R1002348-018	Sample Type: bag	Tested By: jbr
Sample ID:	GI-SD502-0006	Test Date: 05/10/10	Checked By: jdt
Depth :	---	Test Id: 179429	
Test Comment:	Insufficient fines, hydrometer not performed		
Sample Description:	Moist, black sand		
Sample Comment:	contains organics		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	11.9	87.6	0.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	96		
0.375 in	9.50	89		
#4	4.75	88		
#10	2.00	74		
#20	0.85	49		
#40	0.42	26		
#60	0.25	12		
#100	0.15	4		
#200	0.075	0		

Coefficients

D_{85} = 3.9430 mm	D_{30} = 0.4762 mm
D_{60} = 1.2473 mm	D_{15} = 0.2830 mm
D_{50} = 0.8880 mm	D_{10} = 0.2259 mm
C_u = 5.521	C_c = 0.805

Classification

ASTM: Poorly graded sand (SP)

AASHTO: Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

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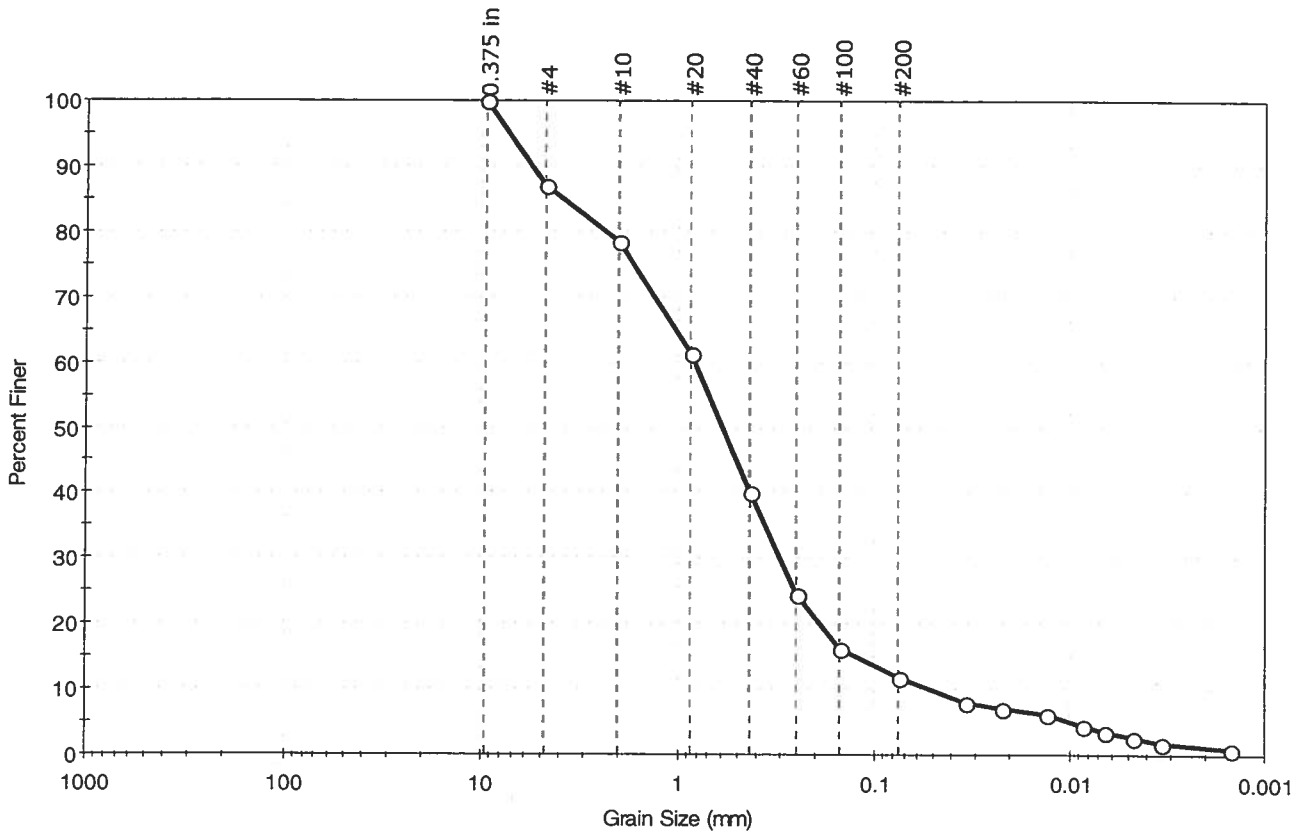
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-007	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD503-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179418		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	12.9	75.3	11.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	87		
#10	2.00	78		
#20	0.85	61		
#40	0.42	40		
#60	0.25	24		
#100	0.15	16		
#200	0.075	12		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0344	8		
---	0.0225	7		
---	0.0131	6		
---	0.0085	4		
---	0.0065	4		
---	0.0047	3		
---	0.0034	2		
---	0.0015	1		

Coefficients

D_{85} = 3.8555 mm	D_{30} = 0.3020 mm
D_{60} = 0.8122 mm	D_{15} = 0.1230 mm
D_{50} = 0.5871 mm	D_{10} = 0.0522 mm
C_u = 15.559	C_c = 2.151

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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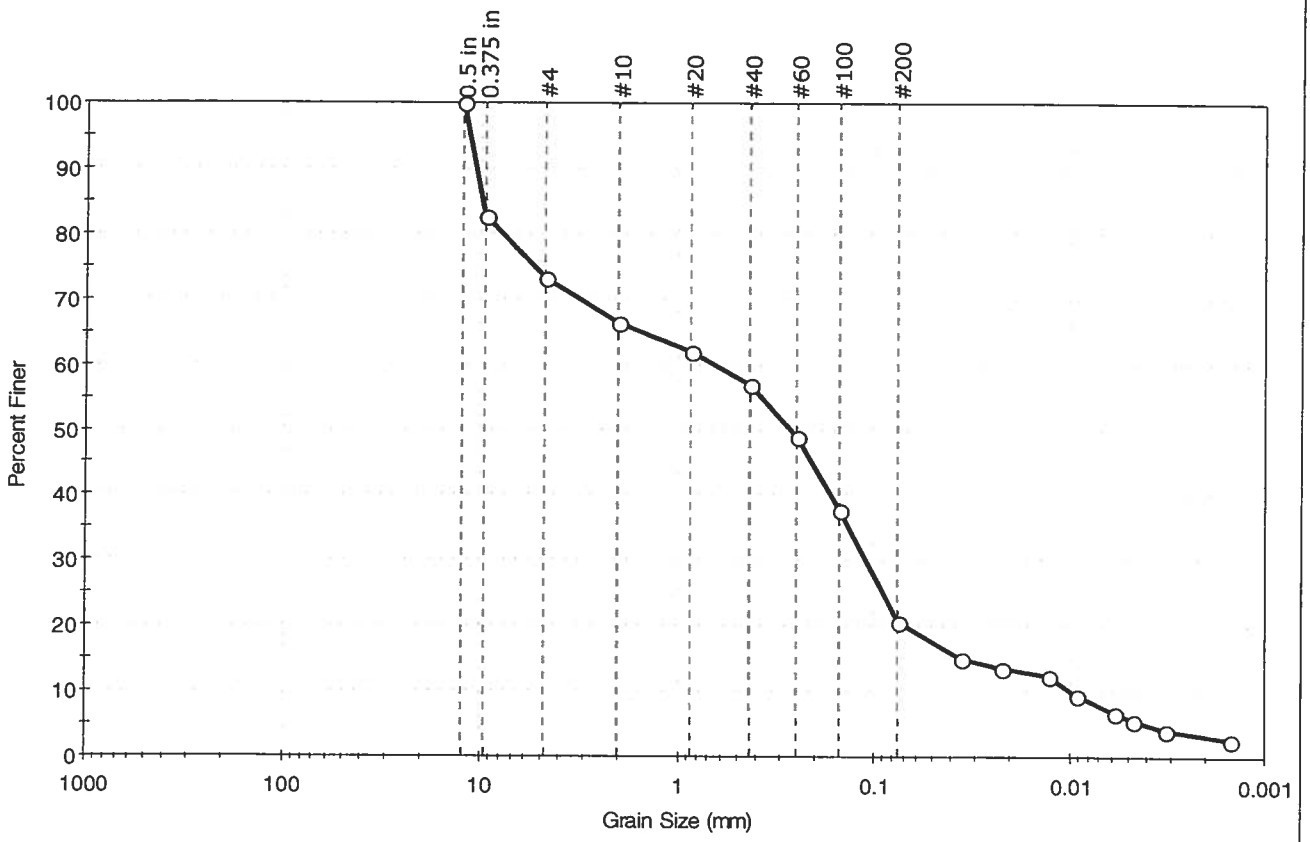
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-011	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD504-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179422		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	26.9	52.3	20.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	83		
#4	4.75	73		
#10	2.00	66		
#20	0.85	62		
#40	0.42	57		
#60	0.25	49		
#100	0.15	38		
#200	0.075	21		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0361	15		
---	0.0222	14		
---	0.0130	12		
---	0.0093	10		
---	0.0059	7		
---	0.0047	5		
---	0.0032	4		
---	0.0015	3		

Coefficients

D_{85} =9.8528 mm	D_{30} =0.1096 mm
D_{60} =0.6551 mm	D_{15} =0.0357 mm
D_{50} =0.2659 mm	D_{10} =0.0098 mm
C_u =N/A	C_c =N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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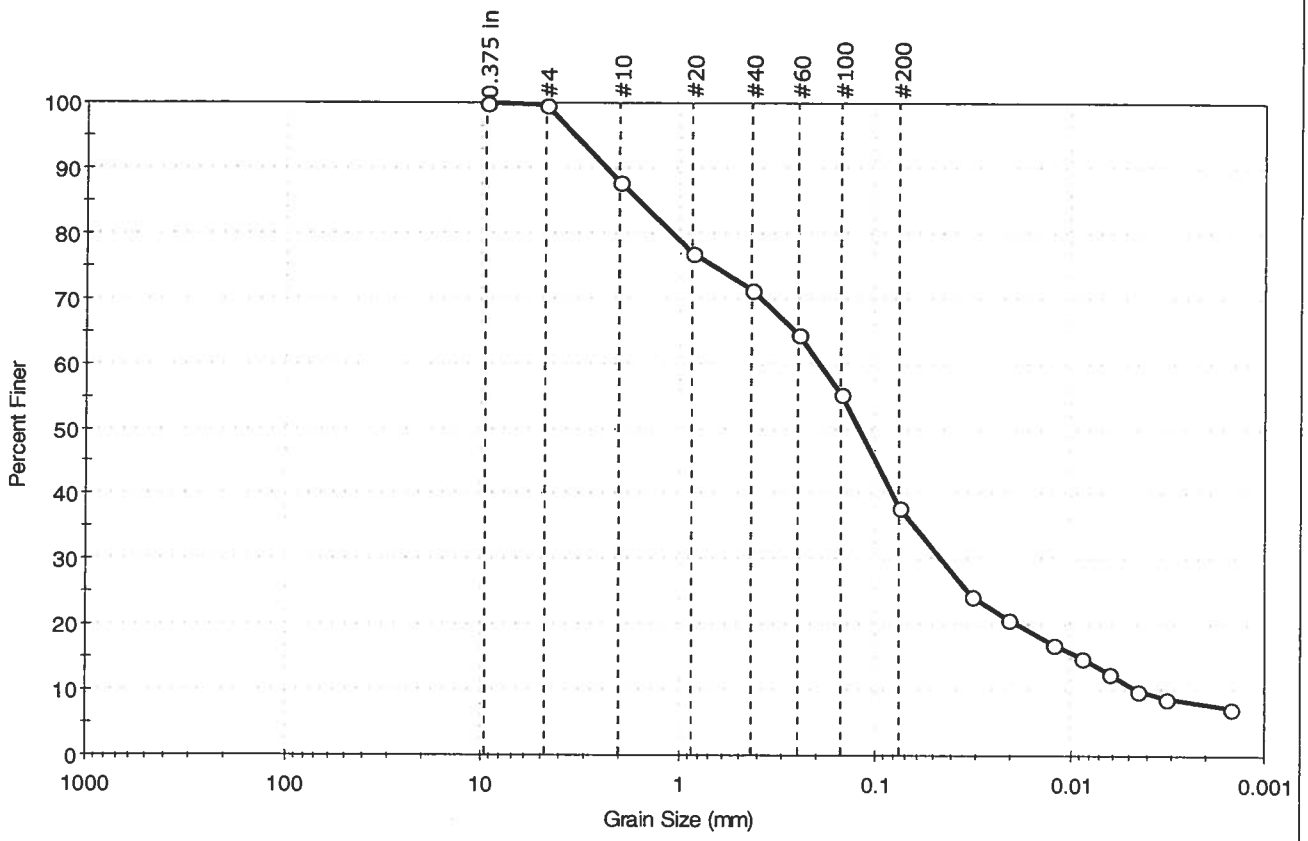
Client:	Columbia Analytical Services		
Project:	R1002384		
Location:	---	Project No:	GTX-9850
Boring ID:	R1002384-005	Sample Type: jar	Tested By: jbr
Sample ID:	GI-SD505-0006	Test Date: 05/12/10	Checked By: jdt
Depth :	---	Test Id: 179571	
Test Comment:	---		
Sample Description:	Moist, black silty sand		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.2	61.6	38.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	100		
#10	2.00	88		
#20	0.85	77		
#40	0.42	71		
#60	0.25	65		
#100	0.15	55		
#200	0.075	38		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0317	24		
---	0.0208	21		
---	0.0122	17		
---	0.0089	15		
---	0.0063	13		
---	0.0045	10		
---	0.0032	9		
---	0.0015	7		

Coefficients

D_{85} = 1.6052 mm	D_{30} = 0.0449 mm
D_{60} = 0.1938 mm	D_{15} = 0.0089 mm
D_{50} = 0.1205 mm	D_{10} = 0.0044 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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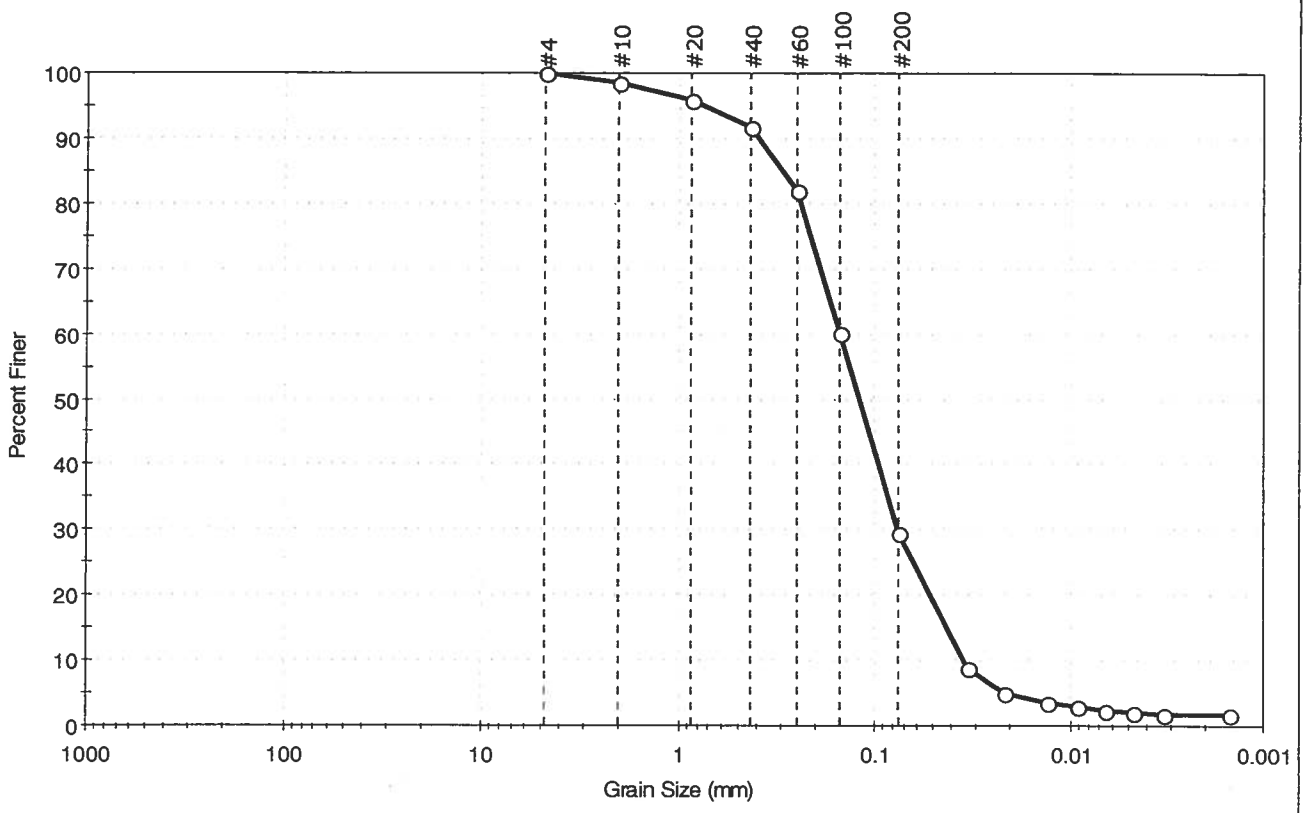
Client:	Columbia Analytical Services		
Project:	R1002384		
Location:	---	Project No:	GTX-9850
Boring ID:	R1002384-002	Sample Type: jar	Tested By: jbr
Sample ID:	GI-SD506-0006	Test Date: 05/12/10	Checked By: jdt
Depth :	---	Test Id: 179568	
Test Comment:	---		
Sample Description:	Moist, black silty sand		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	0.0	70.6	29.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	98		
#20	0.85	96		
#40	0.42	92		
#60	0.25	82		
#100	0.15	60		
#200	0.075	29		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0337	9		
---	0.0217	5		
---	0.0131	4		
---	0.0092	3		
---	0.0066	2		
---	0.0047	2		
---	0.0033	2		
---	0.0015	2		

Coefficients

D_{85} = 0.2952 mm D_{30} = 0.0761 mm
D_{60} = 0.1498 mm D_{15} = 0.0430 mm
D_{50} = 0.1195 mm D_{10} = 0.0354 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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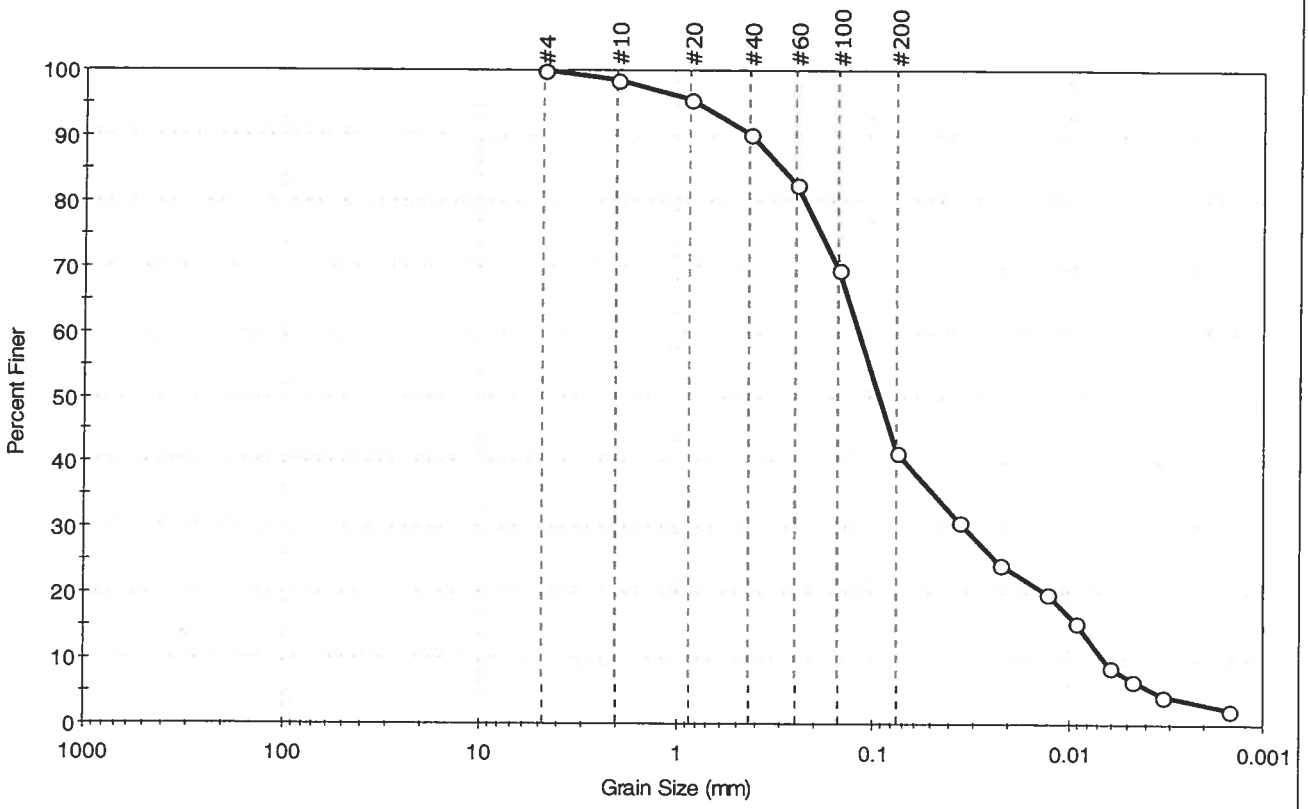
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-010	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD507-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179421		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	58.5	41.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	98		
#20	0.85	96		
#40	0.42	90		
#60	0.25	83		
#100	0.15	70		
#200	0.075	41		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0356	31		
---	0.0224	24		
---	0.0130	20		
---	0.0093	16		
---	0.0061	9		
---	0.0047	7		
---	0.0033	4		
---	0.0015	2		

Coefficients

D_{85} = 0.2957 mm	D_{30} = 0.0331 mm
D_{60} = 0.1184 mm	D_{15} = 0.0090 mm
D_{50} = 0.0925 mm	D_{10} = 0.0065 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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GeoTesting express
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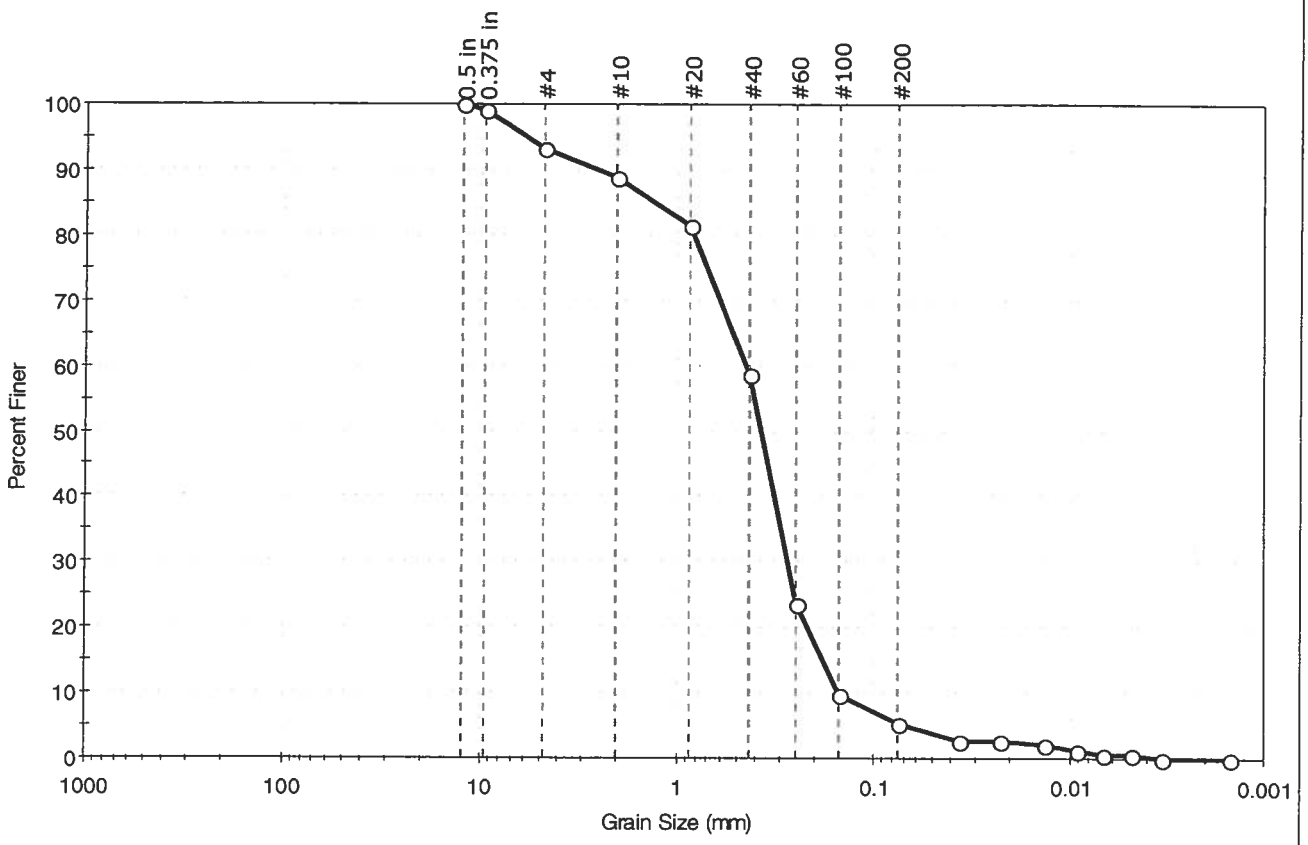
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-019	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD508-0006	Test Date:	05/11/10	Checked By:	jdt
Depth :	---	Test Id:	179430		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	6.7	87.9	5.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	99		
#4	4.75	93		
#10	2.00	89		
#20	0.85	82		
#40	0.42	59		
#60	0.25	24		
#100	0.15	10		
#200	0.075	5		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0363	3		
---	0.0227	3		
---	0.0135	2		
---	0.0091	1		
---	0.0068	1		
---	0.0048	1		
---	0.0034	0		
---	0.0015	0		

Coefficients

D_{85} = 1.2906 mm	D_{30} = 0.2756 mm
D_{60} = 0.4430 mm	D_{15} = 0.1824 mm
D_{50} = 0.3729 mm	D_{10} = 0.1517 mm
C_u = 2.920	C_c = 1.130

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

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GeoTesting express
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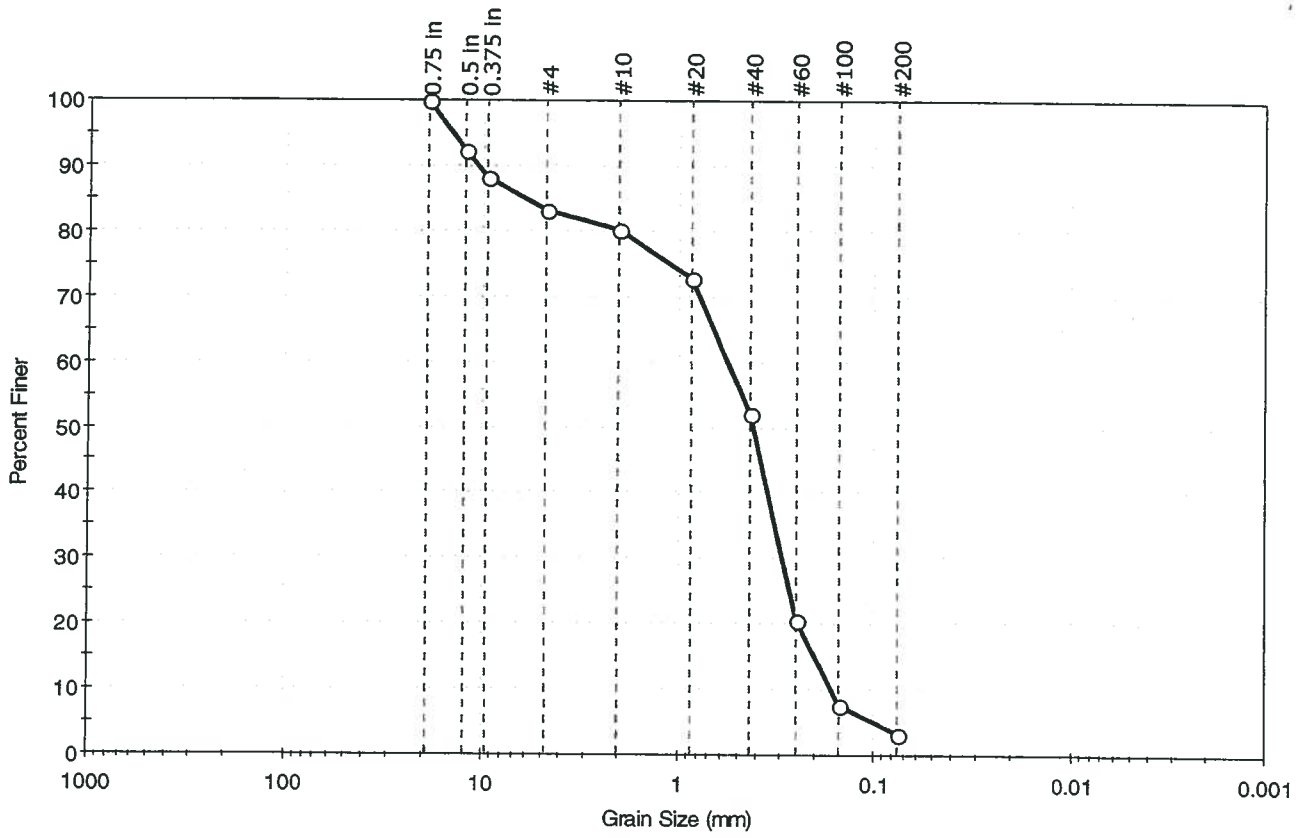
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	--- DUP OF GI-SD-509-0006			Project No:	GTX-9843
Boring ID:	R1002348-020	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD-DUP02-050310	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179431		
Test Comment:	Insufficient fines, Hydrometer not performed				
Sample Description:	Moist, black sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
--	16.8	80.1	3.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	92		
0.375 in	9.50	88		
#4	4.75	83		
#10	2.00	80		
#20	0.85	73		
#40	0.42	52		
#60	0.25	21		
#100	0.15	8		
#200	0.075	3		

Coefficients

D_{85} =6.1301 mm	D_{30} =0.2925 mm
D_{60} =0.5529 mm	D_{15} =0.2001 mm
D_{50} =0.4098 mm	D_{10} =0.1646 mm
C_u =3.359	C_c =0.940

Classification

ASTM Poorly graded sand with gravel (SP)

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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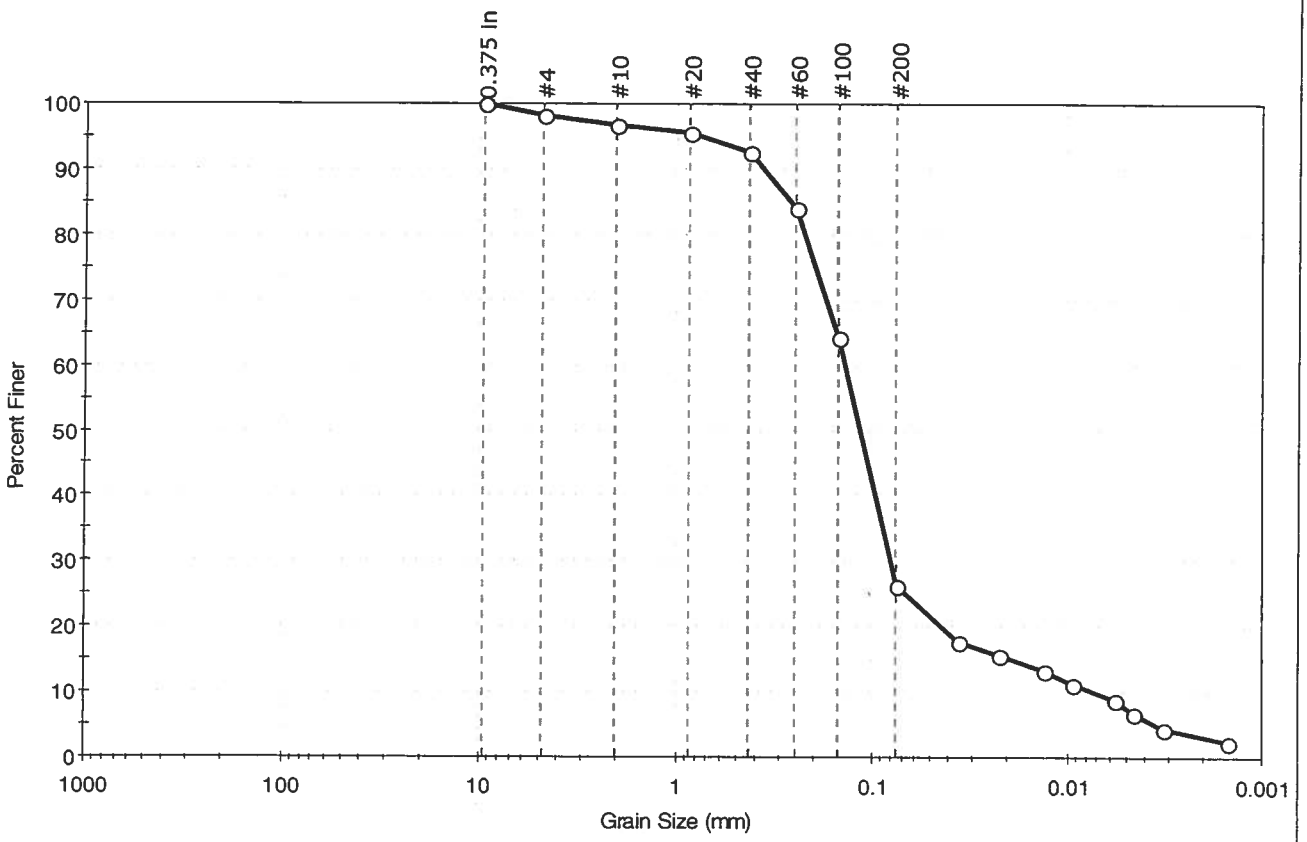
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-001	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD509-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179412		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	1.7	72.1	26.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	97		
#20	0.85	96		
#40	0.42	93		
#60	0.25	84		
#100	0.15	64		
#200	0.075	26		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0358	18		
---	0.0224	16		
---	0.0132	13		
---	0.0094	11		
---	0.0058	9		
---	0.0046	7		
---	0.0032	4		
---	0.0015	2		

Coefficients

D_{85} = 0.2652 mm	D_{30} = 0.0803 mm
D_{60} = 0.1388 mm	D_{15} = 0.0195 mm
D_{50} = 0.1157 mm	D_{10} = 0.0073 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting express
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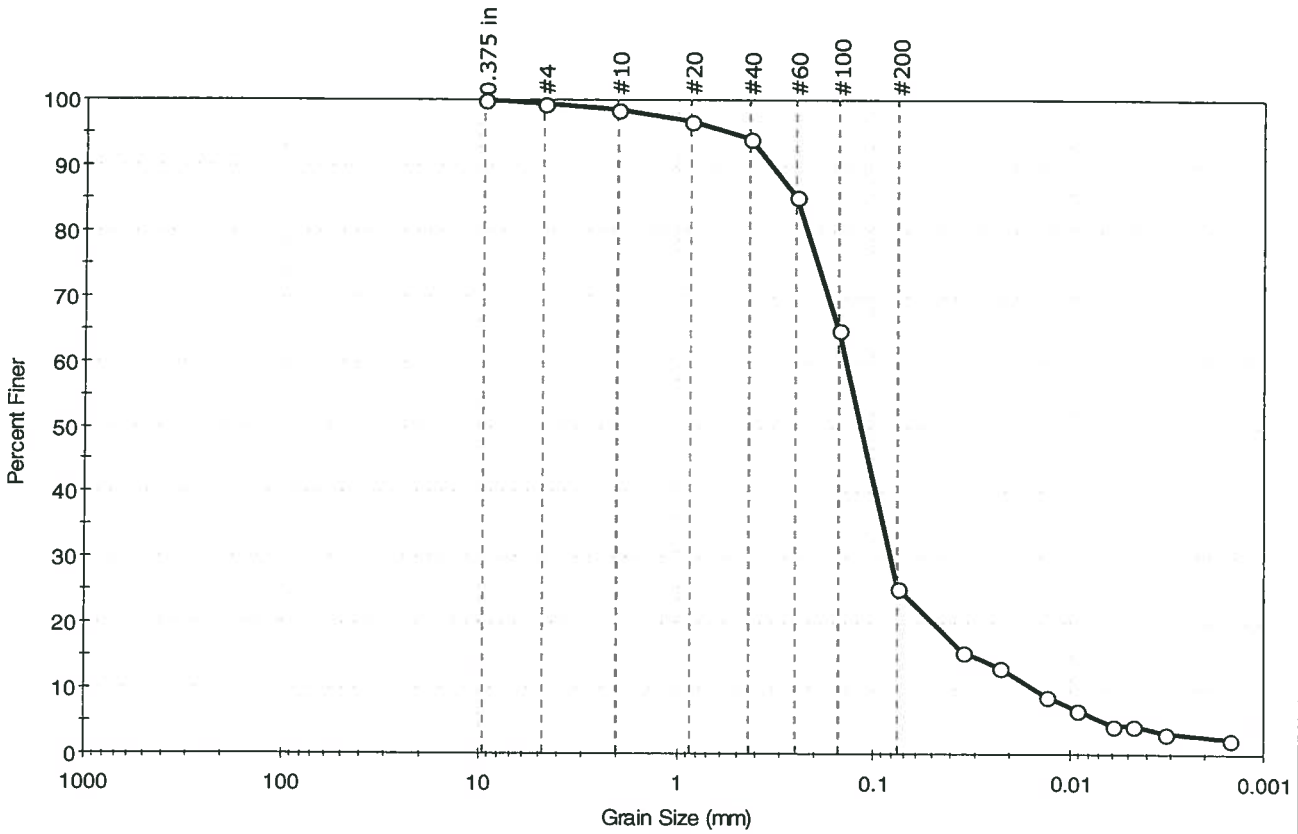
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	--- DUP OF GI-SD-509-0006		Project No:		GTX-9843
Boring ID:	R1002348-012	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD-DUP01-043010	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179423		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	0.5	74.3	25.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	97		
#40	0.42	94		
#60	0.25	85		
#100	0.15	65		
#200	0.075	25		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0352	16		
---	0.0230	13		
---	0.0133	9		
---	0.0093	7		
---	0.0059	4		
---	0.0047	4		
---	0.0032	3		
---	0.0015	2		

Coefficients

D_{85} = 0.2480 mm D_{30} = 0.0815 mm
D_{60} = 0.1375 mm D_{15} = 0.0311 mm
D_{50} = 0.1155 mm D_{10} = 0.0152 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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GeoTesting express
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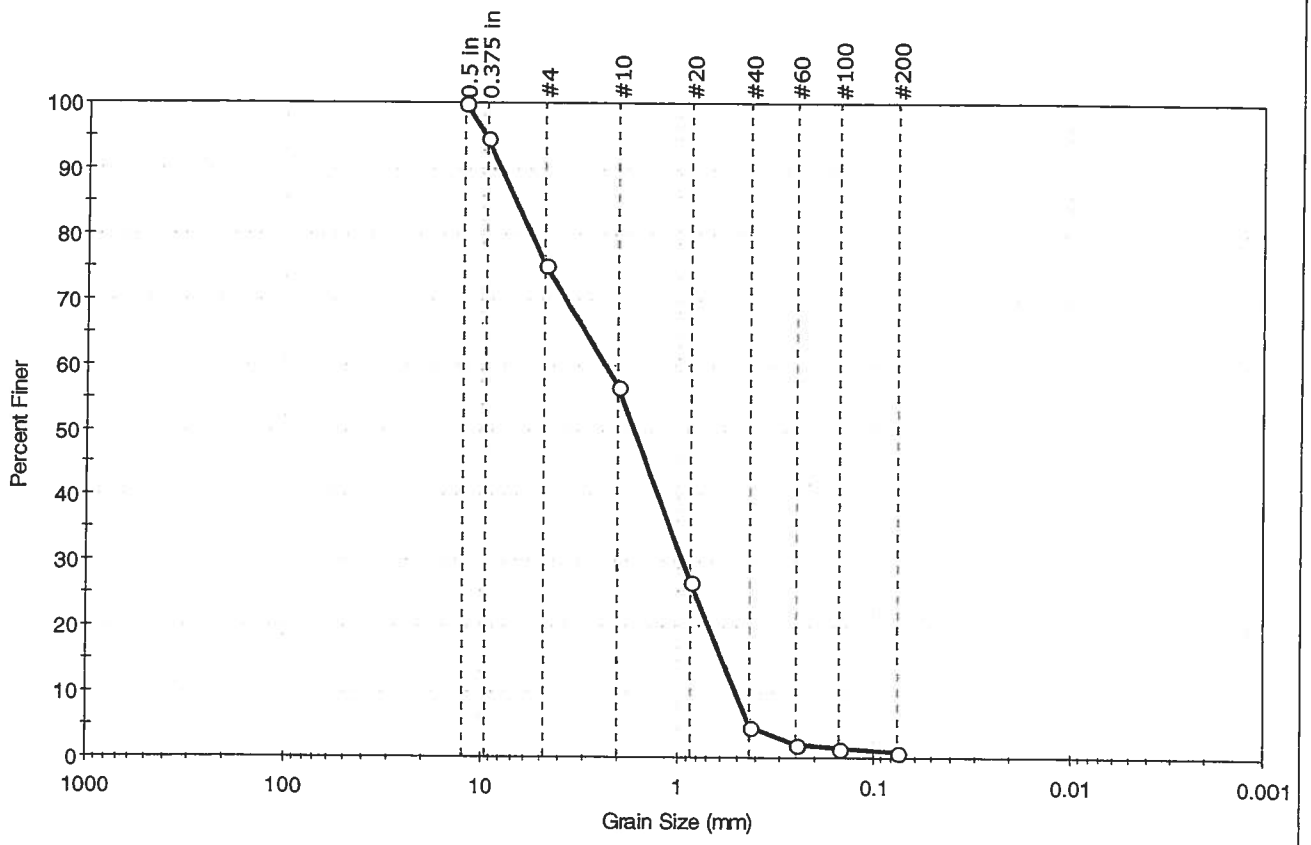
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-008	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD510-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179419		
Test Comment:	Insufficient fines, Hydrometer not performed				
Sample Description:	Moist, light gray sand with gravel				
Sample Comment:	contains shells				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	24.8	74.3	0.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	95		
#4	4.75	75		
#10	2.00	57		
#20	0.85	27		
#40	0.42	5		
#60	0.25	2		
#100	0.15	1		
#200	0.075	1		

Coefficients

D_{85} = 6.7251 mm	D_{30} = 0.9326 mm
D_{60} = 2.3363 mm	D_{15} = 0.5881 mm
D_{50} = 1.6531 mm	D_{10} = 0.5028 mm
C_u = 4.647	C_c = 0.740

Classification

ASTM — Poorly graded sand with gravel (SP)

AASHTO — Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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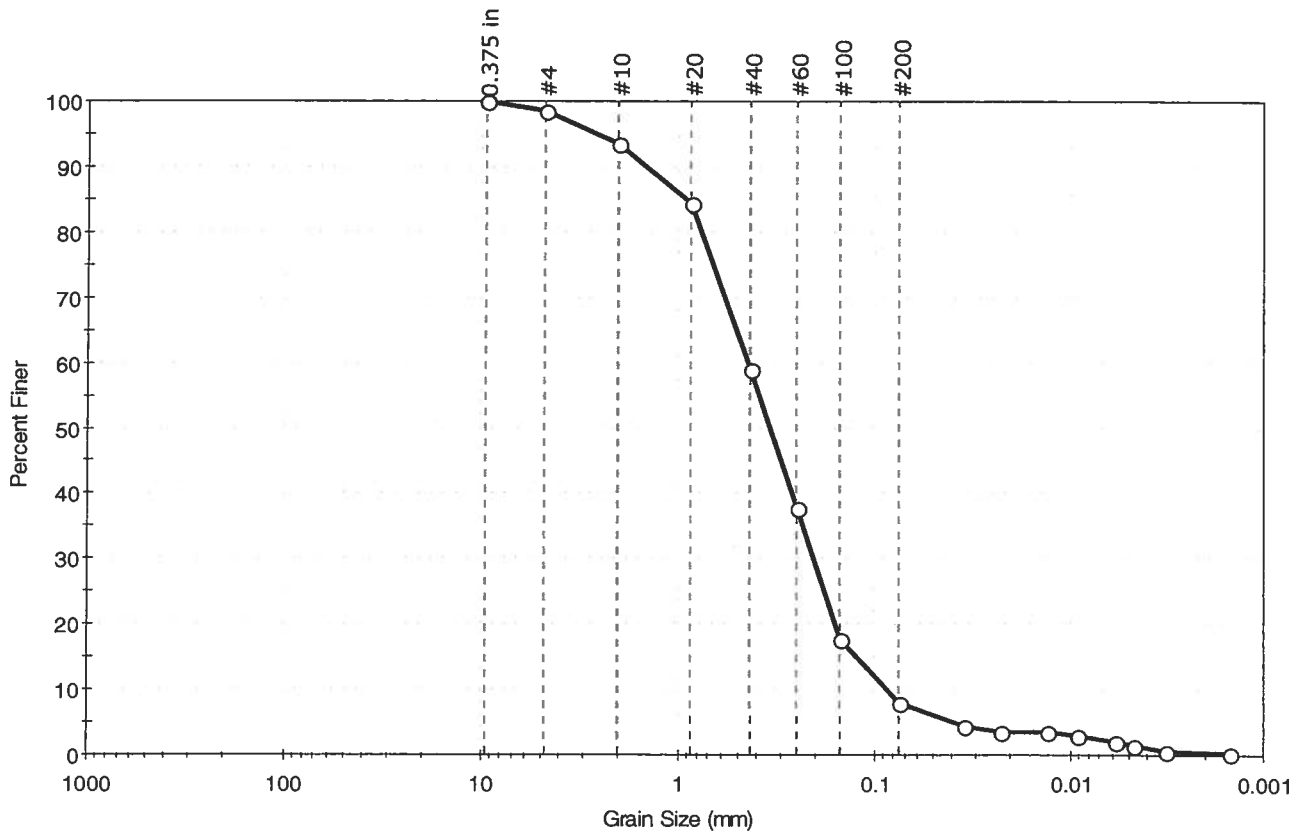
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-002	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD511-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179413		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	1.5	90.5	8.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	94		
#20	0.85	84		
#40	0.42	59		
#60	0.25	38		
#100	0.15	18		
#200	0.075	8		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0352	4		
---	0.0227	4		
---	0.0133	4		
---	0.0091	3		
---	0.0059	2		
---	0.0047	1		
---	0.0032	1		
---	0.0015	0		

Coefficients

D_{85} = 0.8997 mm D_{30} = 0.2054 mm
D_{60} = 0.4374 mm D_{15} = 0.1230 mm
D_{50} = 0.3402 mm D_{10} = 0.0864 mm
C_u = 5.062 C_c = 1.116

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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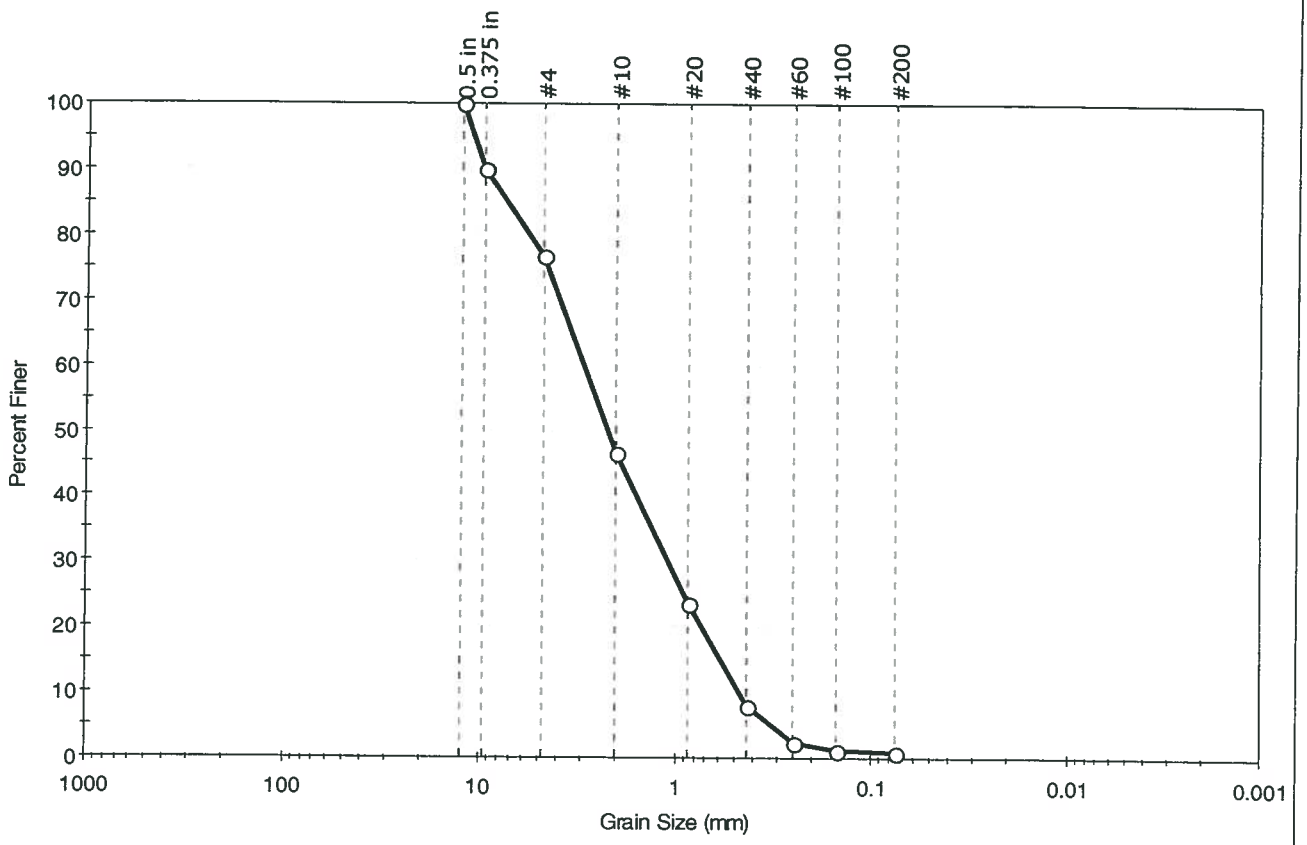
Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-008	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD512-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180700		
Test Comment:	---				
Sample Description:	Moist, dark brown sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	23.4	75.7	0.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	90		
#4	4.75	77		
#10	2.00	46		
#20	0.85	24		
#40	0.42	8		
#60	0.25	2		
#100	0.15	1		
#200	0.075	1		

Coefficients

D_{85} = 7.3661 mm	D_{30} = 1.0785 mm
D_{60} = 2.9491 mm	D_{15} = 0.5798 mm
D_{50} = 2.2122 mm	D_{10} = 0.4647 mm
C_u = 6.346	C_c = 0.849

Classification

ASTM: Poorly graded sand with gravel (SP)

AASHTO: Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting express
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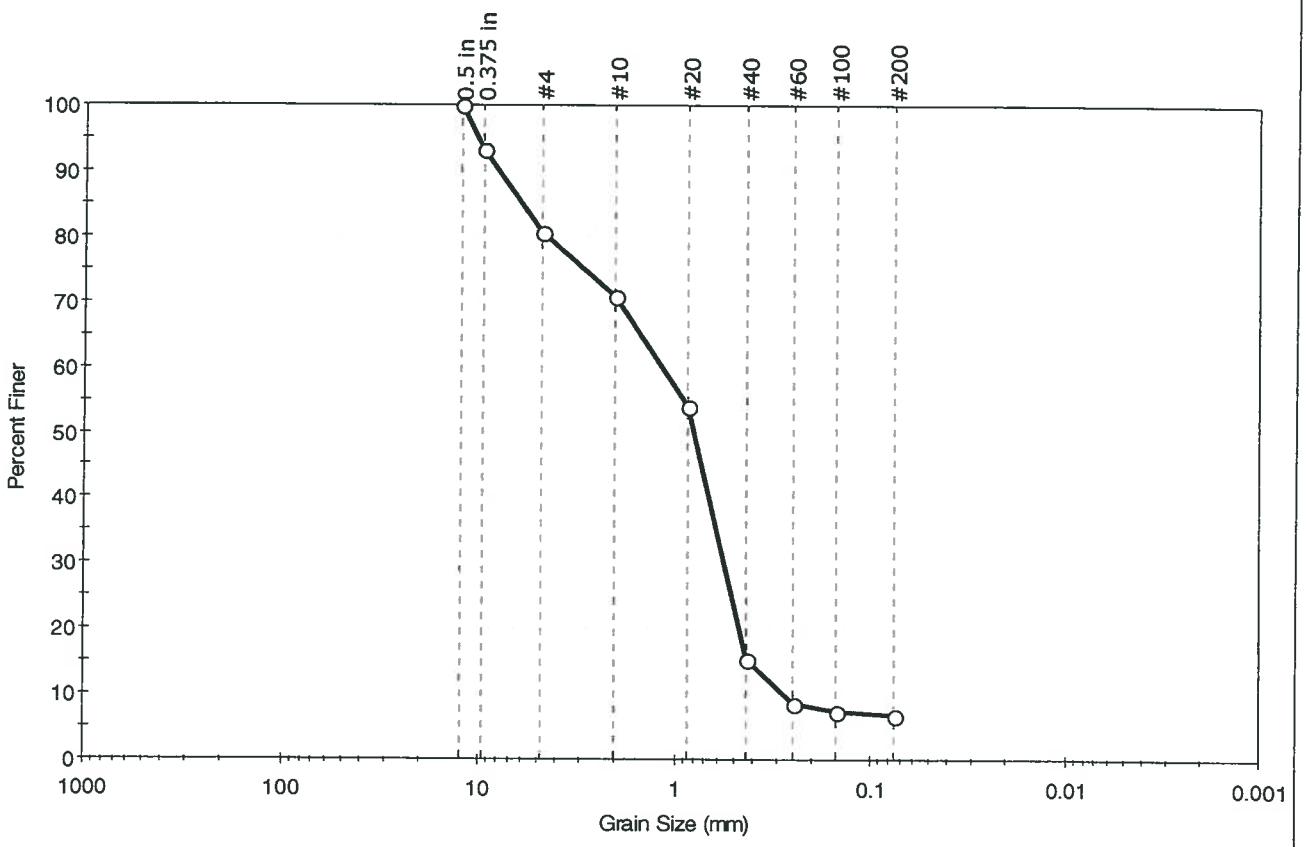
Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-009	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD513-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180701		
Test Comment:	---				
Sample Description:	Moist, dark brown sand with silt and gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	19.6	73.6	6.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	93		
#4	4.75	80		
#10	2.00	71		
#20	0.85	54		
#40	0.42	15		
#60	0.25	8		
#100	0.15	7		
#200	0.075	7		

Coefficients

D_{85} = 6.0765 mm	D_{30} = 0.5518 mm
D_{60} = 1.1522 mm	D_{15} = 0.4109 mm
D_{50} = 0.7900 mm	D_{10} = 0.2812 mm
C_u = 4.097	C_c = 0.940

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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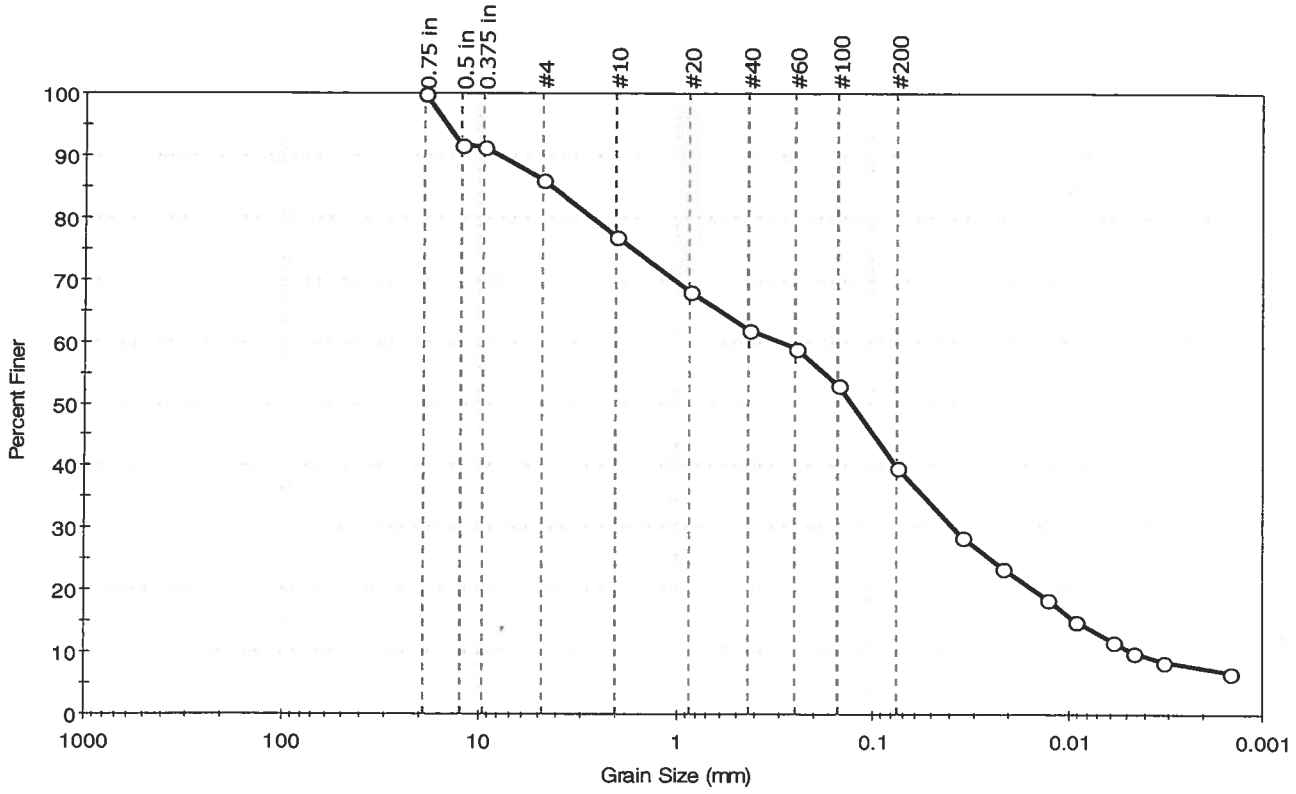
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-005	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD514-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179416		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	13.8	46.3	39.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	92		
0.375 in	9.50	92		
#4	4.75	86		
#10	2.00	77		
#20	0.85	68		
#40	0.42	62		
#60	0.25	59		
#100	0.15	53		
#200	0.075	40		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0346	29		
---	0.0216	24		
---	0.0127	19		
---	0.0092	15		
---	0.0059	12		
---	0.0046	10		
---	0.0032	8		
---	0.0015	7		

Coefficients

D_{85} =4.2384 mm	D_{30} =0.0380 mm
D_{60} =0.2958 mm	D_{15} =0.0090 mm
D_{50} =0.1280 mm	D_{10} =0.0045 mm
C_u =N/A	C_c =N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

GeoTesting express
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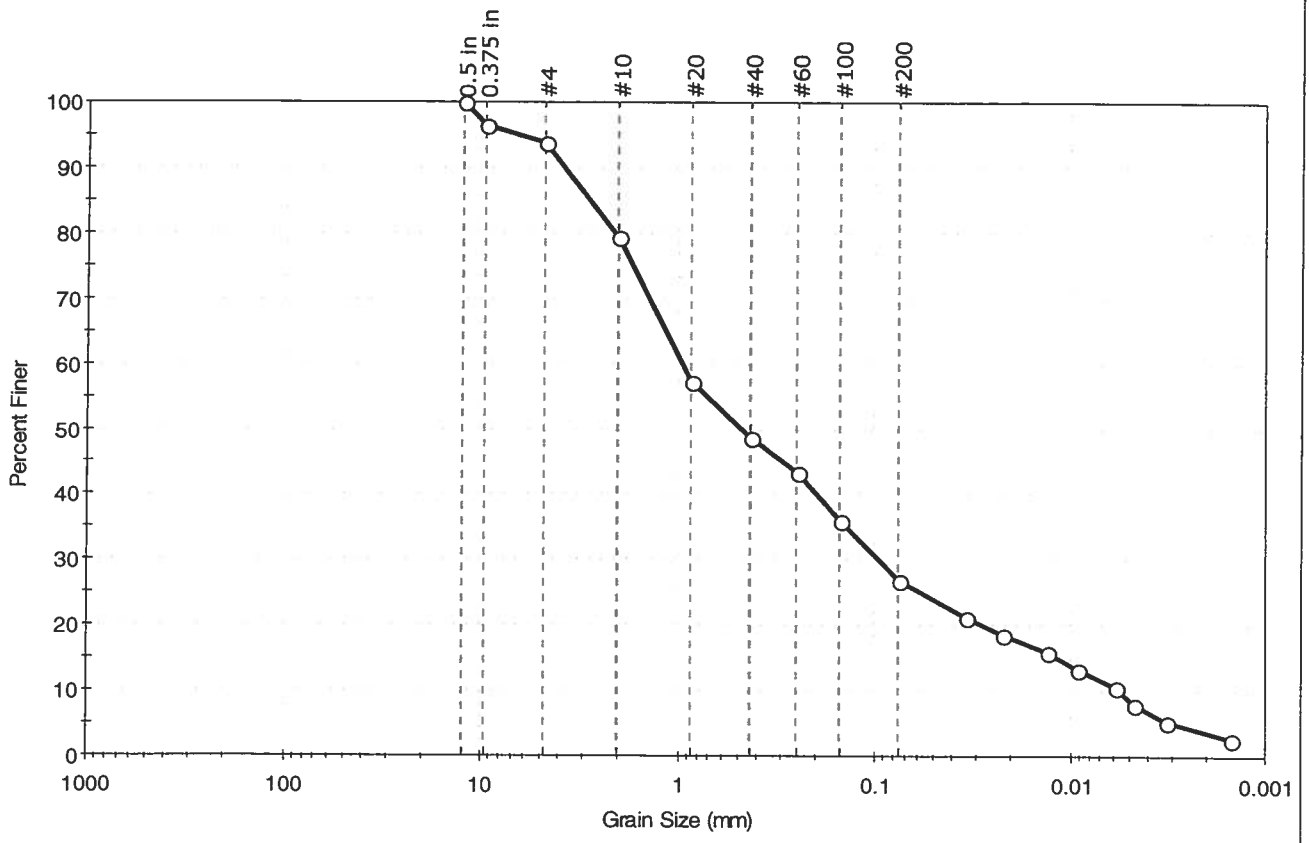
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-006	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD515-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179417		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	6.1	67.1	26.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	96		
#4	4.75	94		
#10	2.00	79		
#20	0.85	57		
#40	0.42	49		
#60	0.25	43		
#100	0.15	36		
#200	0.075	27		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0346	21		
---	0.0222	19		
---	0.0132	16		
---	0.0093	13		
---	0.0059	11		
---	0.0047	8		
---	0.0032	5		
---	0.0015	3		

Coefficients

D_{85} = 2.8071 mm D_{30} = 0.0953 mm
D_{60} = 0.9428 mm D_{15} = 0.0116 mm
D_{50} = 0.4772 mm D_{10} = 0.0056 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

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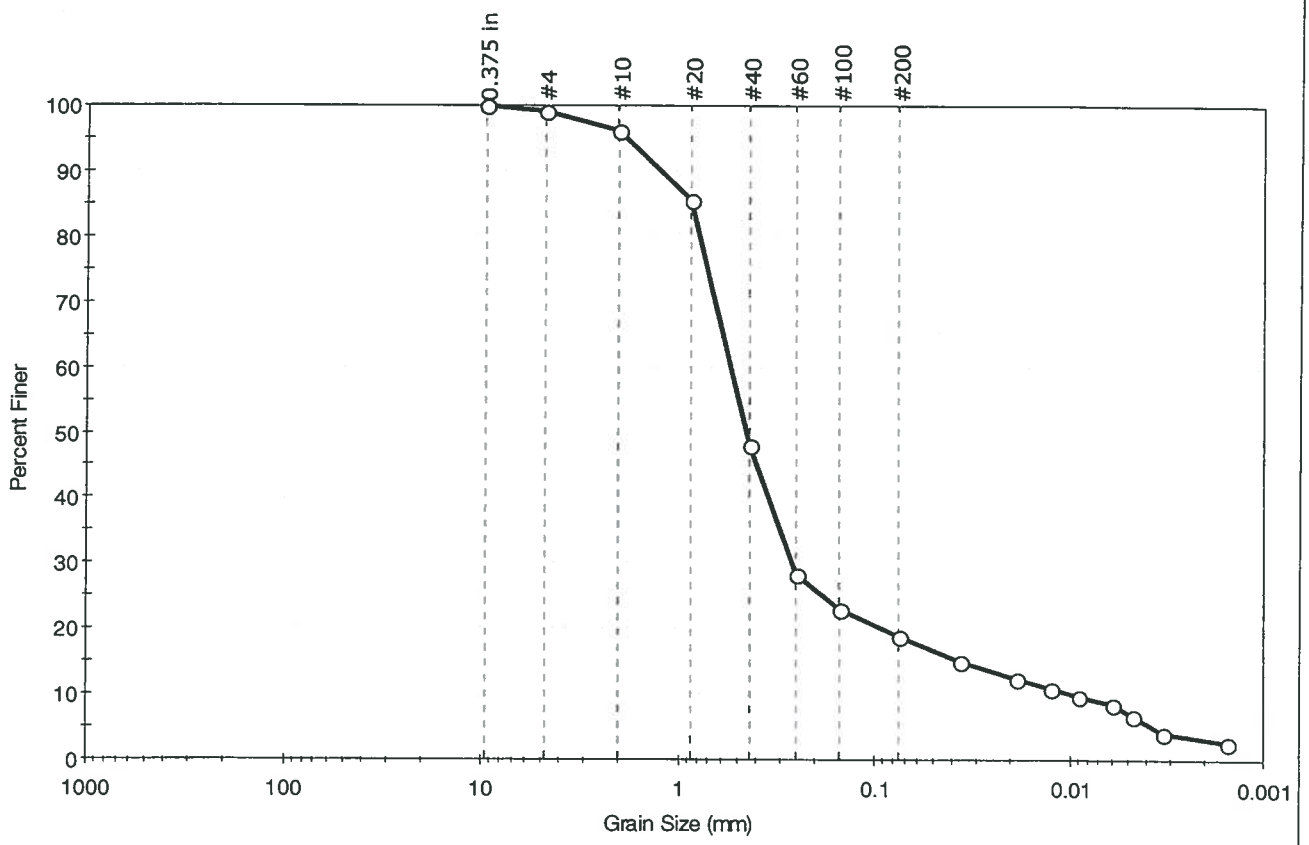
Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-010	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD517-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180702		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.7	80.3	19.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	96		
#20	0.85	86		
#40	0.42	48		
#60	0.25	28		
#100	0.15	23		
#200	0.075	19		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0366	15		
---	0.0186	12		
---	0.0124	11		
---	0.0090	10		
---	0.0059	9		
---	0.0047	7		
---	0.0033	4		
---	0.0015	3		

Coefficients

D_{85} = 0.8417 mm	D_{30} = 0.2623 mm
D_{60} = 0.5297 mm	D_{15} = 0.0361 mm
D_{50} = 0.4401 mm	D_{10} = 0.0093 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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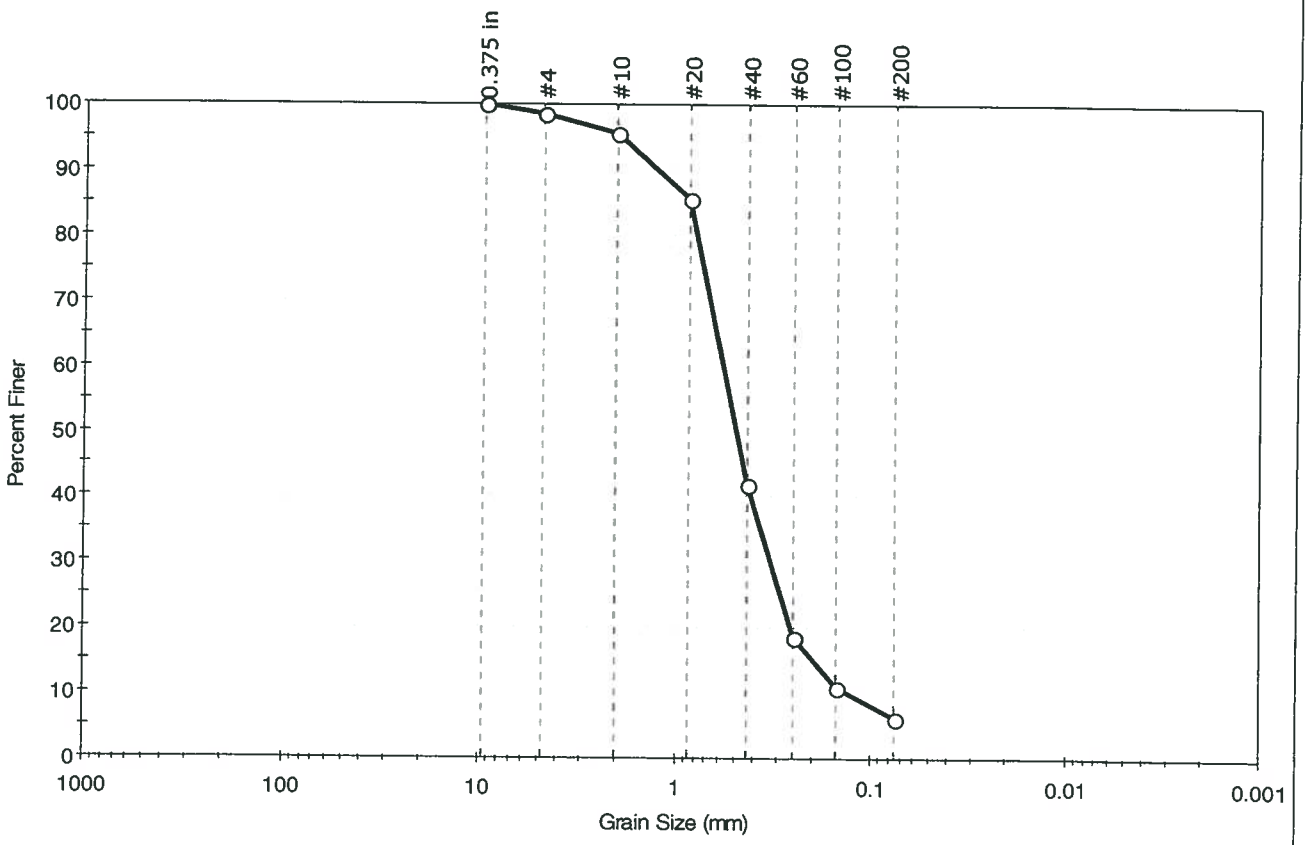
Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	--- DUP OF GI-SD-517-0006			Project No:	GTX-9886
Boring ID:	R1002638-014	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD-DUP03-051310	Test Date:	06/01/10	Checked By:	jdt
Depth :	---	Test Id:	181579		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	1.6	92.2	6.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	95		
#20	0.85	86		
#40	0.42	42		
#60	0.25	19		
#100	0.15	11		
#200	0.075	6		

Coefficients

D_{85} =0.8424 mm	D_{30} =0.3239 mm
D_{60} =0.5667 mm	D_{15} =0.1959 mm
D_{50} =0.4836 mm	D_{10} =0.1305 mm
C_u =4.343	C_c =1.419

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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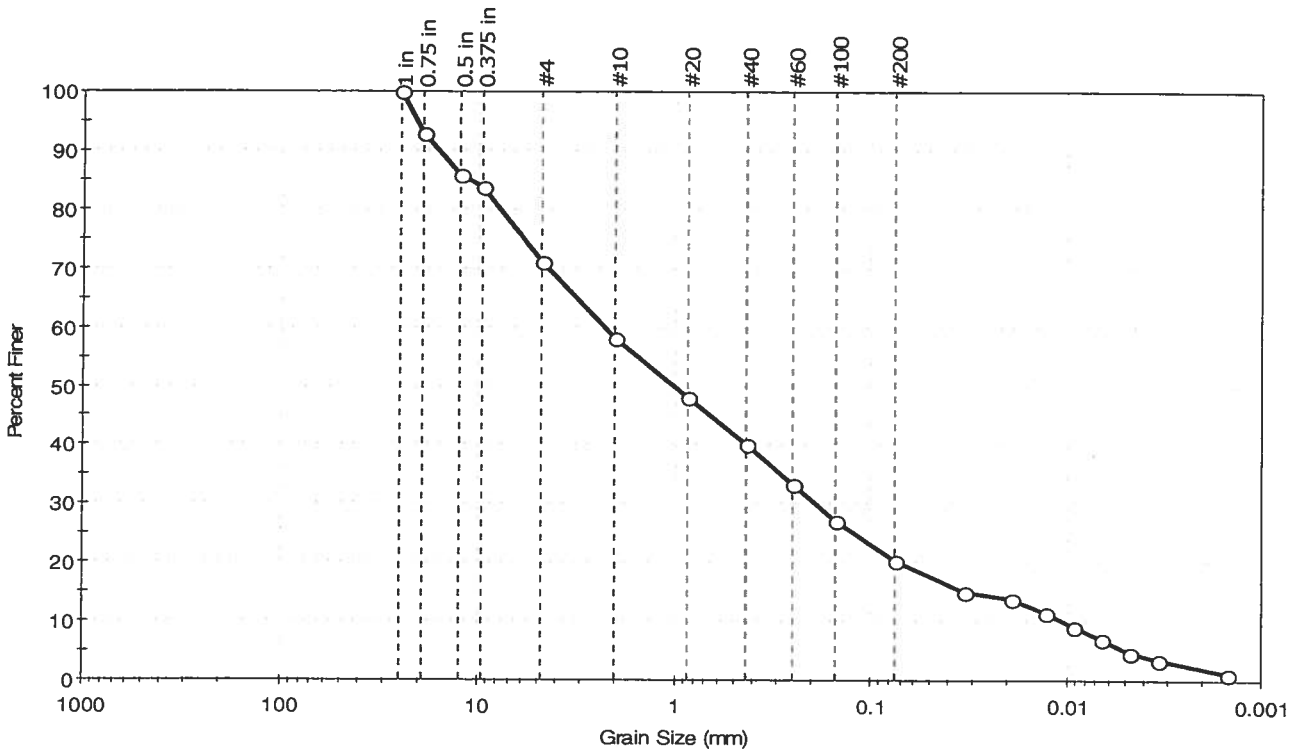
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-014	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD518-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179425		
Test Comment:	---				
Sample Description:	Moist, light gray silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	29.0	50.6	20.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	93		
0.5 in	12.50	86		
0.375 in	9.50	84		
#4	4.75	71		
#10	2.00	58		
#20	0.85	48		
#40	0.42	40		
#60	0.25	33		
#100	0.15	27		
#200	0.075	20		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0335	15		
---	0.0193	14		
---	0.0128	12		
---	0.0092	9		
---	0.0066	7		
---	0.0047	5		
---	0.0033	3		
---	0.0015	1		

Coefficients

D_{85} = 11.2112 mm	D_{30} = 0.1895 mm
D_{60} = 2.2535 mm	D_{15} = 0.0331 mm
D_{50} = 1.0023 mm	D_{10} = 0.0102 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting express
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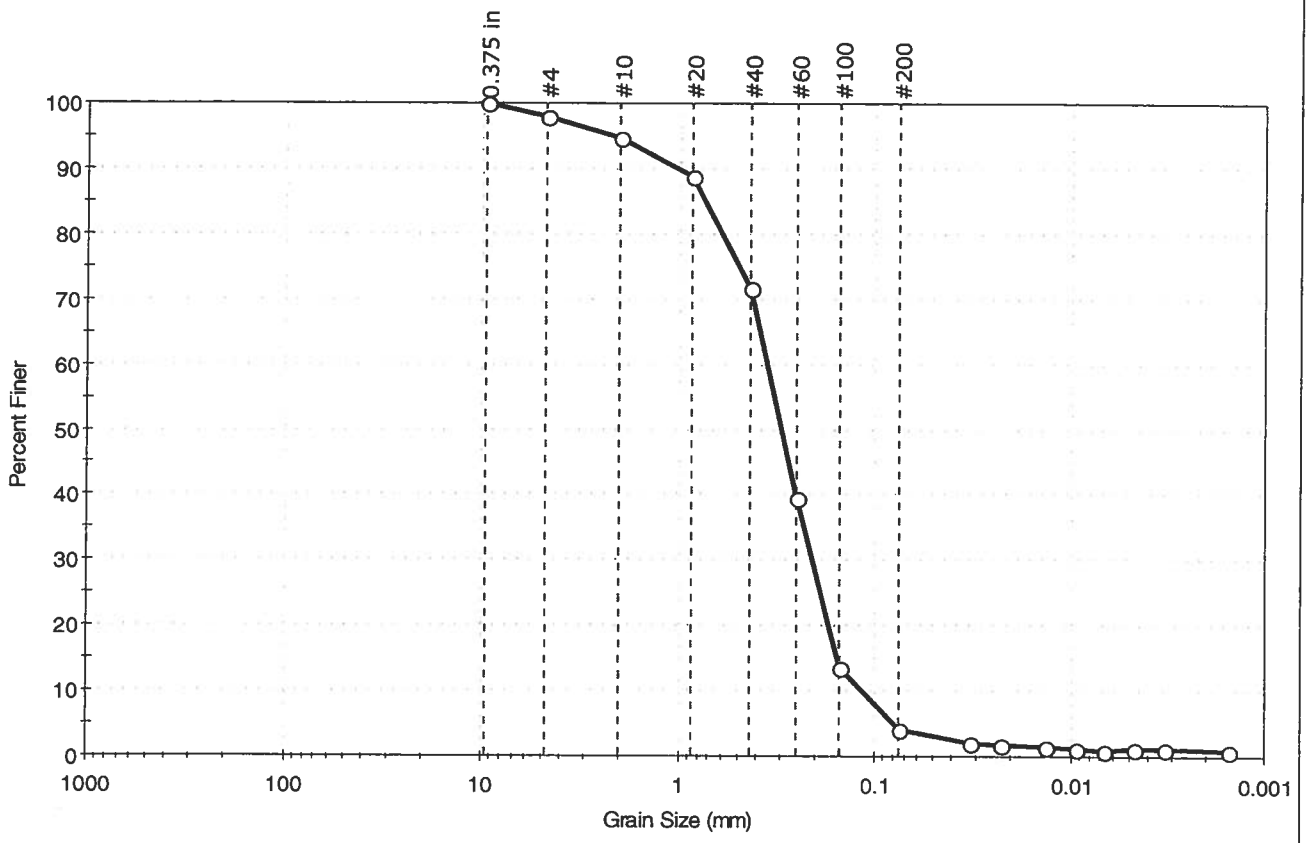
Client:	Columbia Analytical Services				
Project:	R1002384				
Location:	---			Project No:	GTX-9850
Boring ID:	R1002384-004	Sample Type:	jar	Tested By:	jbr
Sample ID:	GI-SD519-0006	Test Date:	05/12/10	Checked By:	jdt
Depth :	---	Test Id:	179570		
Test Comment:	---				
Sample Description:	Moist, dark brown sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	2.2	93.6	4.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	95		
#20	0.85	89		
#40	0.42	72		
#60	0.25	39		
#100	0.15	14		
#200	0.075	4		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0325	2		
---	0.0228	2		
---	0.0134	1		
---	0.0094	1		
---	0.0067	1		
---	0.0047	1		
---	0.0033	1		
---	0.0015	1		

Coefficients

D_{85} = 0.7261 mm	D_{30} = 0.2073 mm
D_{60} = 0.3502 mm	D_{15} = 0.1540 mm
D_{50} = 0.2972 mm	D_{10} = 0.1147 mm
C_u = 3.053	C_c = 1.070

Classification

ASTM Poorly graded sand (SP)

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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GeoTesting express
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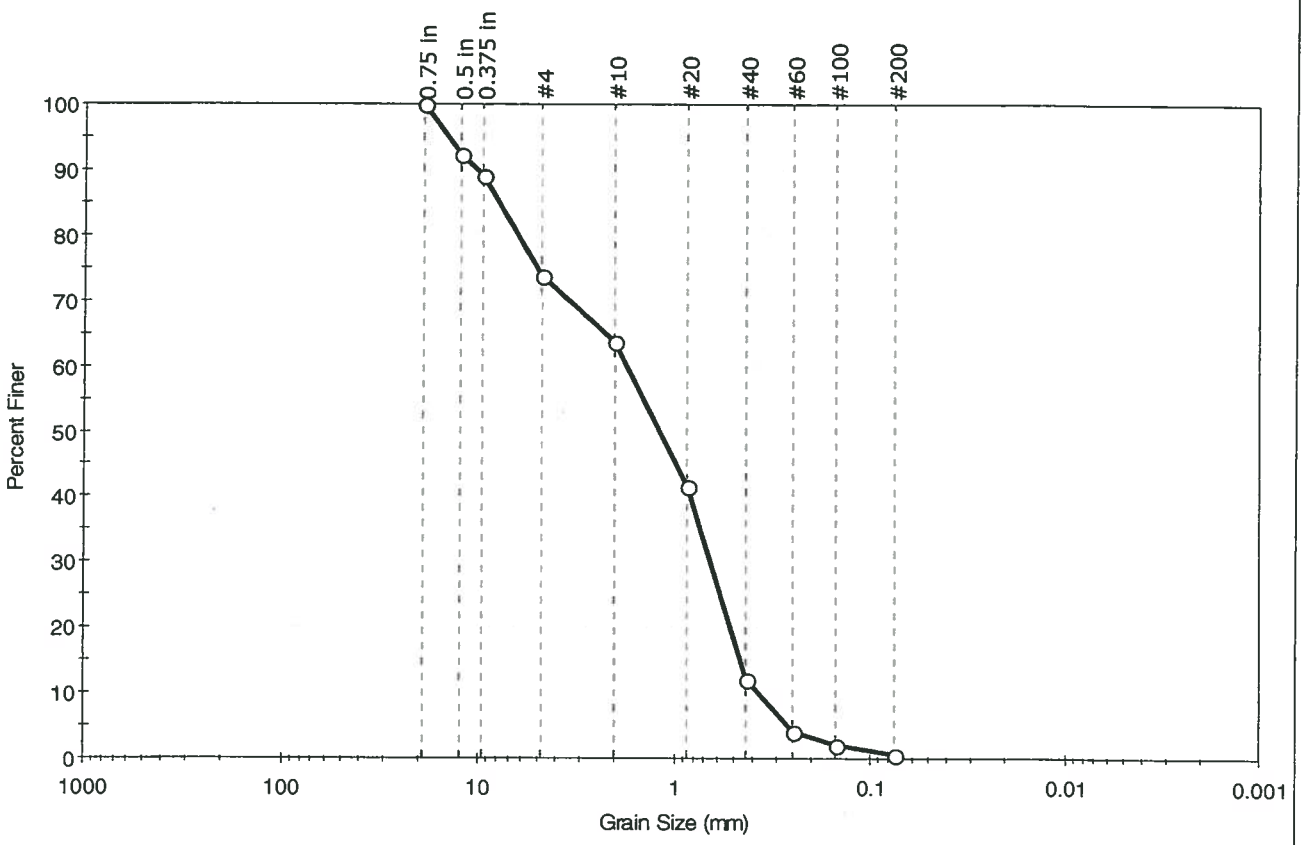
Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-011	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD520-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180703		
Test Comment:	---				
Sample Description:	Moist, black sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	26.4	72.9	0.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	92		
0.375 in	9.50	89		
#4	4.75	74		
#10	2.00	64		
#20	0.85	42		
#40	0.42	12		
#60	0.25	4		
#100	0.15	2		
#200	0.075	1		

Coefficients

D_{85} =7.9437 mm	D_{30} =0.6473 mm
D_{60} =1.7255 mm	D_{15} =0.4551 mm
D_{50} =1.1743 mm	D_{10} =0.3702 mm
C_u =4.661	C_c =0.656

Classification

ASTM — Poorly graded sand with gravel (SP)

AASHTO — Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting express
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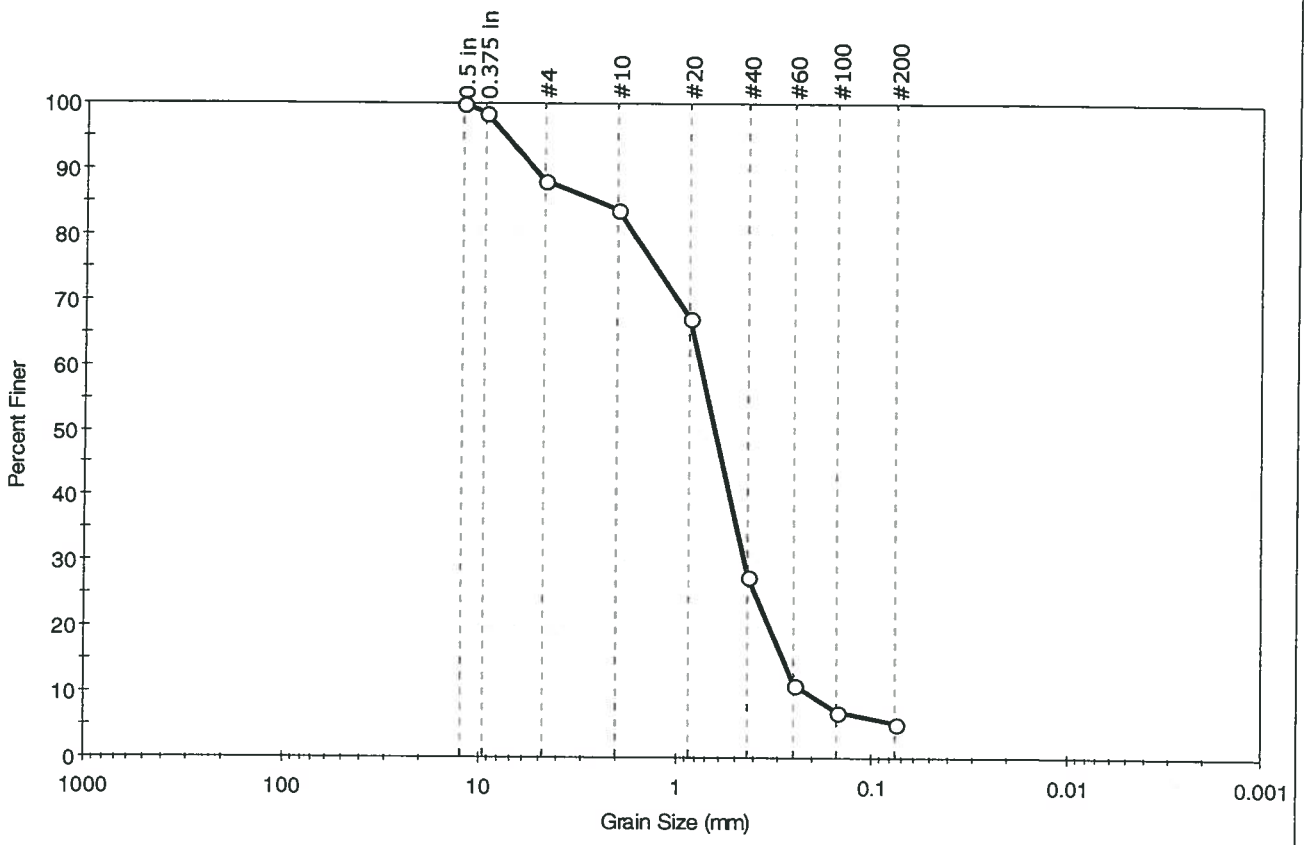
Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-007	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD521-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180699		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	11.7	83.1	5.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	99		
#4	4.75	88		
#10	2.00	84		
#20	0.85	67		
#40	0.42	28		
#60	0.25	11		
#100	0.15	7		
#200	0.075	5		

Coefficients

D_{85} = 2.4875 mm	D_{30} = 0.4423 mm
D_{60} = 0.7497 mm	D_{15} = 0.2819 mm
D_{50} = 0.6288 mm	D_{10} = 0.2151 mm
C_u = 3.485	C_c = 1.213

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

GeoTesting express
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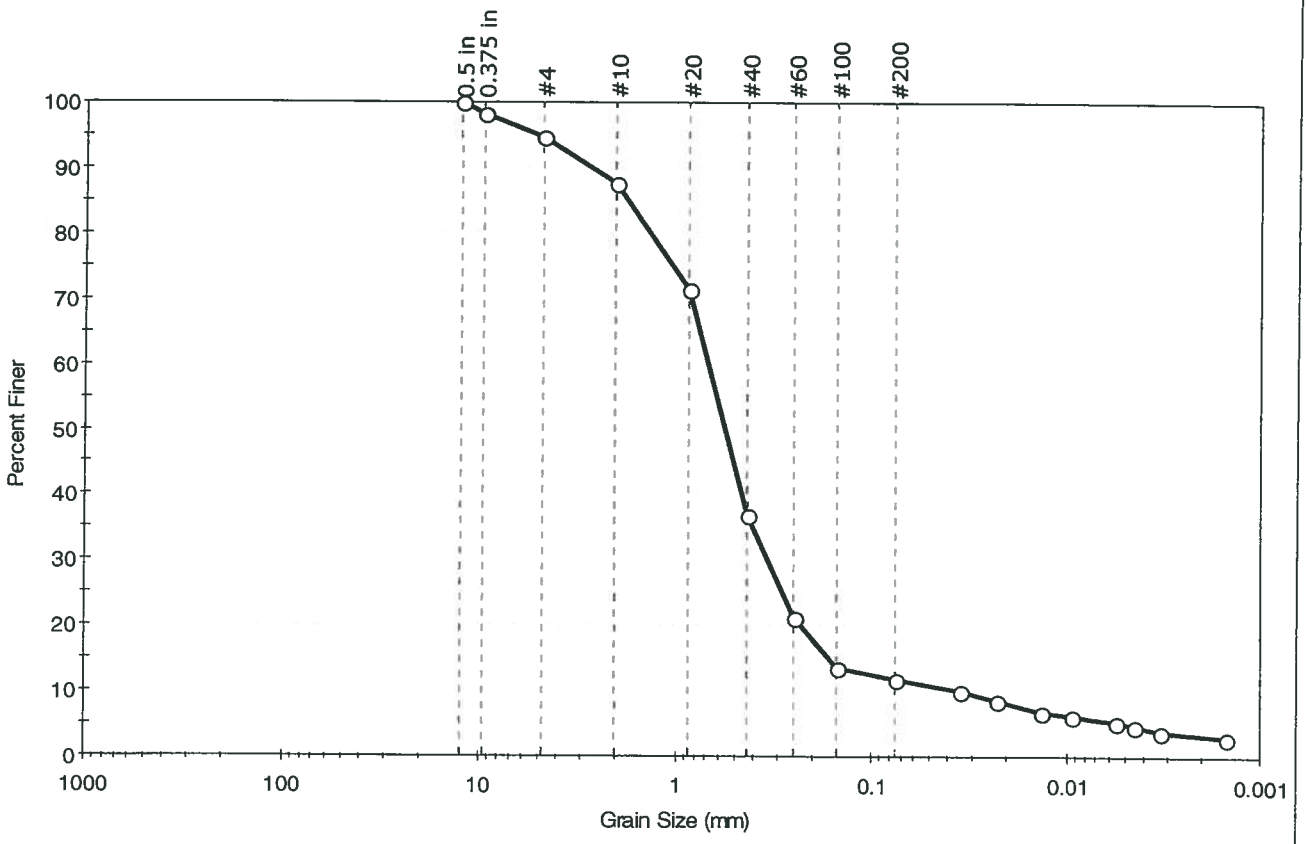
Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-013	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD522-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180705		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	5.2	82.9	11.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	98		
#4	4.75	95		
#10	2.00	88		
#20	0.85	71		
#40	0.42	37		
#60	0.25	21		
#100	0.15	14		
#200	0.075	12		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0354	10		
---	0.0228	8		
---	0.0133	7		
---	0.0094	6		
---	0.0056	5		
---	0.0045	5		
---	0.0033	4		
---	0.0015	3		

Coefficients

D_{85} = 1.7390 mm	D_{30} = 0.3364 mm
D_{60} = 0.6755 mm	D_{15} = 0.1641 mm
D_{50} = 0.5523 mm	D_{10} = 0.0357 mm
C_u = 18.922	C_c = 4.693

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

GeoTesting express
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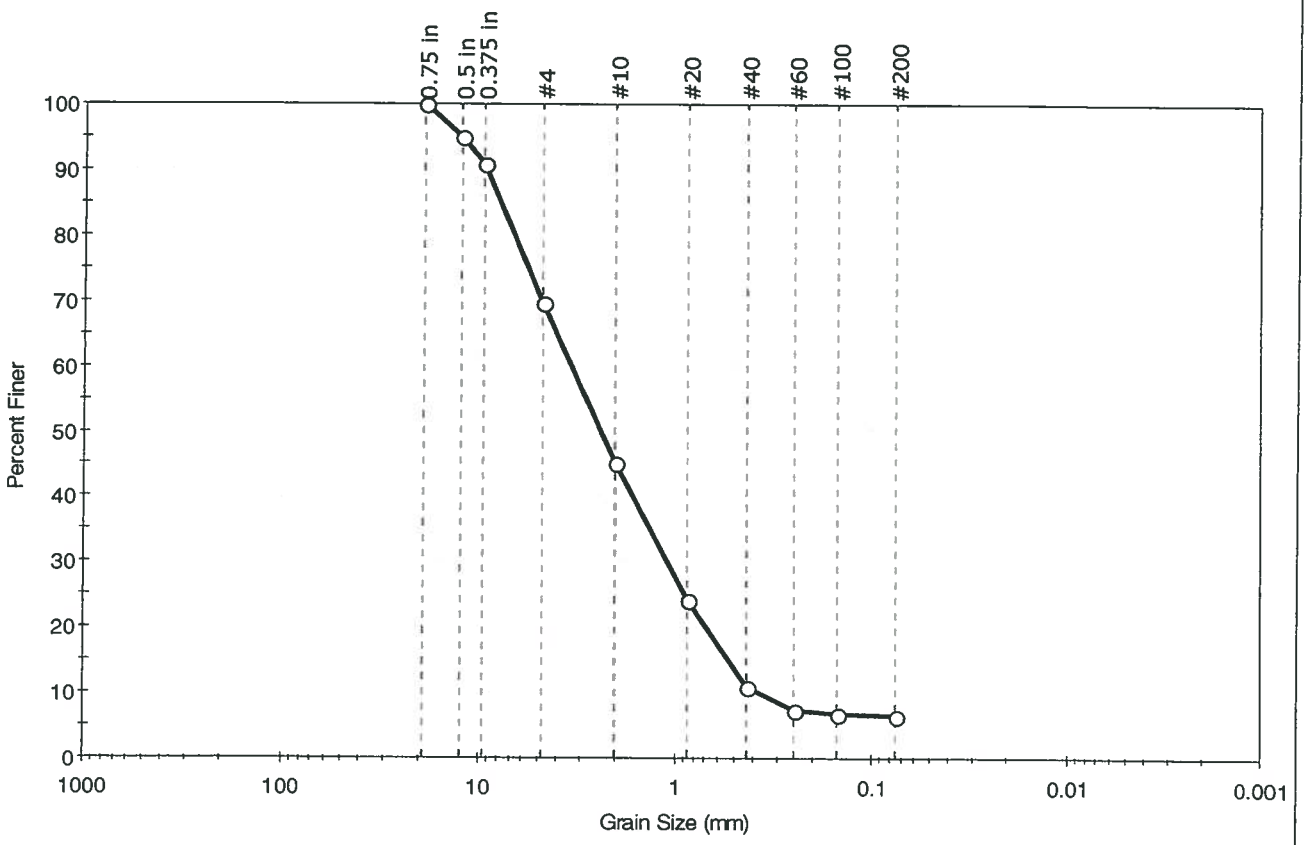
Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-012	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD523-0006	Test Date:	05/19/10	Checked By:	jdt
Depth :	---	Test Id:	180704		
Test Comment:	---				
Sample Description:	Moist, black sand with silt and gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	30.3	63.2	6.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	95		
0.375 in	9.50	91		
#4	4.75	70		
#10	2.00	45		
#20	0.85	24		
#40	0.42	11		
#60	0.25	7		
#100	0.15	7		
#200	0.075	7		

Coefficients

D_{85} = 7.8326 mm	D_{30} = 1.0803 mm
D_{60} = 3.3734 mm	D_{15} = 0.5288 mm
D_{50} = 2.3732 mm	D_{10} = 0.3758 mm
C_u = 8.977	C_c = 0.921

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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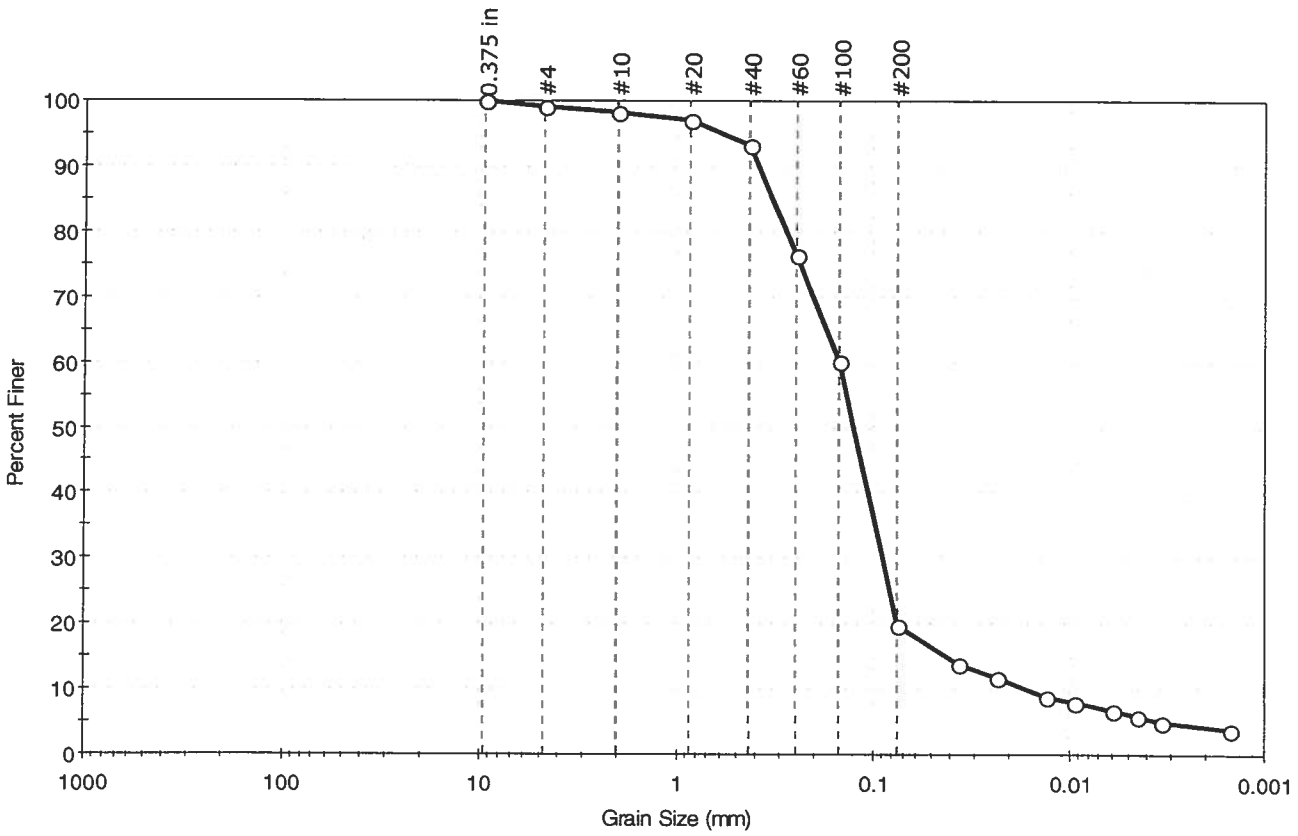
Client:	Columbia Analytical Services		
Project:	R1002348		
Location:	---	Project No:	GTX-9843
Boring ID:	R1002348-017	Sample Type: bag	Tested By: jbr
Sample ID:	GI-SD524-0006	Test Date: 05/10/10	Checked By: jdt
Depth :	---	Test Id: 179428	
Test Comment:	---		
Sample Description:	Moist, gray silty sand		
Sample Comment:	contains shells		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.8	79.3	19.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	97		
#40	0.42	93		
#60	0.25	76		
#100	0.15	60		
#200	0.075	20		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0365	14		
---	0.0231	12		
---	0.0132	9		
---	0.0094	8		
---	0.0060	7		
---	0.0045	6		
---	0.0034	5		
---	0.0015	4		

Coefficients

D_{85} = 0.3273 mm	D_{30} = 0.0892 mm
D_{60} = 0.1495 mm	D_{15} = 0.0418 mm
D_{50} = 0.1259 mm	D_{10} = 0.0162 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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GeoTesting express
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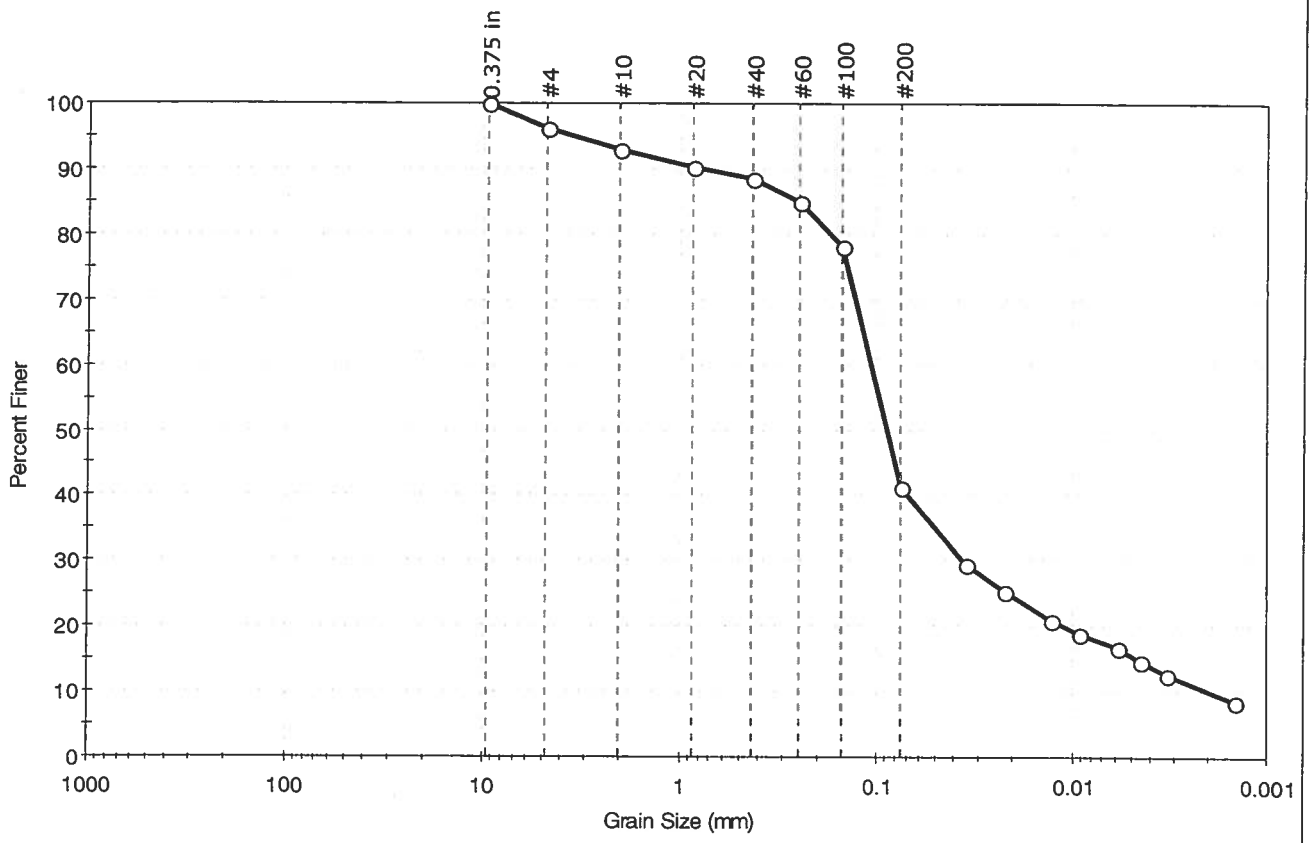
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-016	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD525-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179427		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand				
Sample Comment:	contains shells				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	3.8	55.0	41.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	96		
#10	2.00	93		
#20	0.85	90		
#40	0.42	88		
#60	0.25	85		
#100	0.15	78		
#200	0.075	41		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0353	29		
---	0.0224	25		
---	0.0128	21		
---	0.0092	19		
---	0.0059	17		
---	0.0045	15		
---	0.0033	13		
---	0.0015	8		

Coefficients

D_{85} = 0.2513 mm D_{30} = 0.0365 mm
D_{60} = 0.1067 mm D_{15} = 0.0046 mm
D_{50} = 0.0885 mm D_{10} = 0.0020 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

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GeoTesting express
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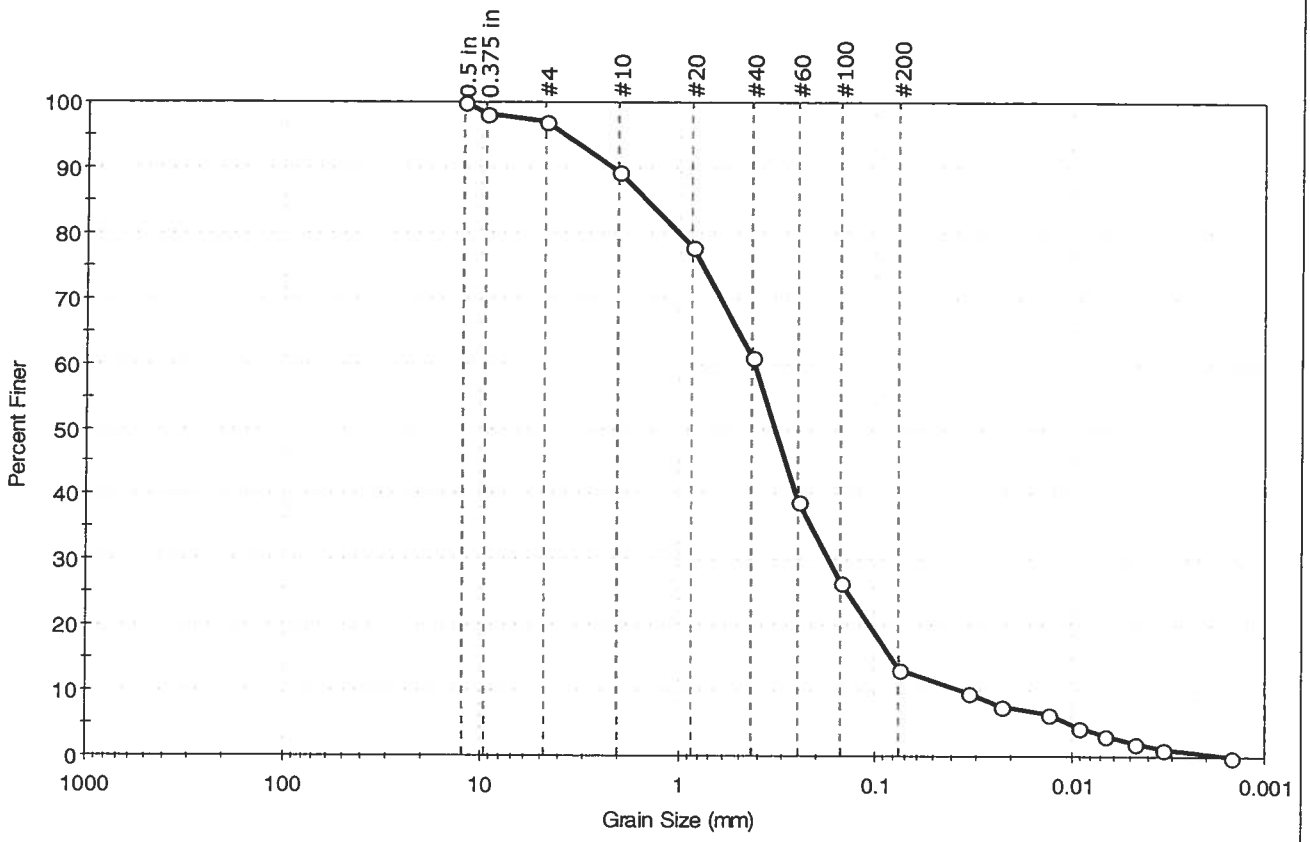
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-015	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD526-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179426		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand				
Sample Comment:	contains organics				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	2.9	83.8	13.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	98		
#4	4.75	97		
#10	2.00	89		
#20	0.85	78		
#40	0.42	61		
#60	0.25	39		
#100	0.15	26		
#200	0.075	13		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0336	10		
---	0.0230	8		
---	0.0132	6		
---	0.0092	4		
---	0.0067	3		
---	0.0048	2		
---	0.0034	1		
---	0.0015	0		

Coefficients

D_{85} = 1.4537 mm	D_{30} = 0.1733 mm
D_{60} = 0.4135 mm	D_{15} = 0.0822 mm
D_{50} = 0.3252 mm	D_{10} = 0.0358 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : SOFT

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GeoTesting express
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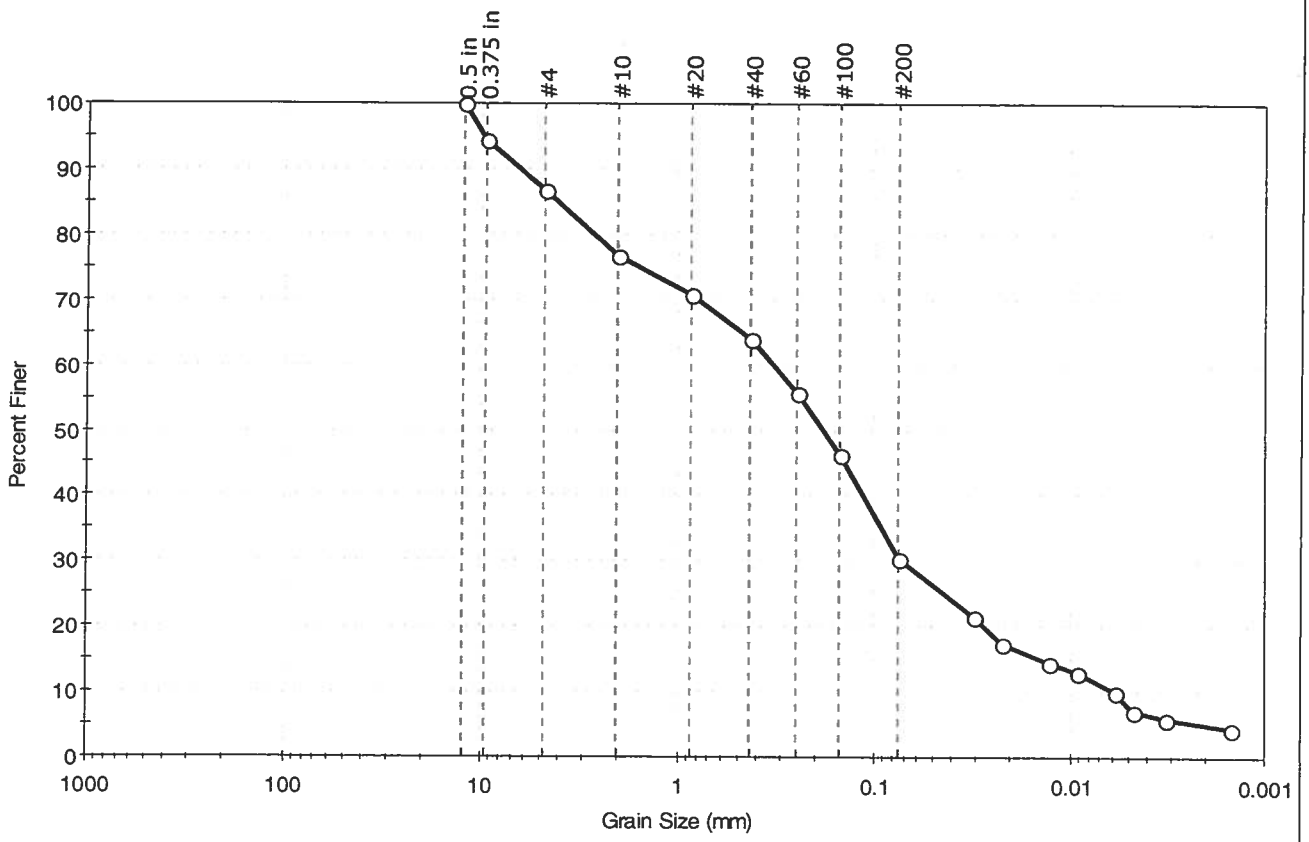
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-003	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD527-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179414		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	13.2	56.5	30.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	94		
#4	4.75	87		
#10	2.00	77		
#20	0.85	71		
#40	0.42	64		
#60	0.25	56		
#100	0.15	46		
#200	0.075	30		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0311	22		
---	0.0224	17		
---	0.0129	14		
---	0.0091	13		
---	0.0059	10		
---	0.0047	7		
---	0.0032	6		
---	0.0015	4		

Coefficients

D_{85} = 4.0582 mm D_{30} = 0.0725 mm
D_{60} = 0.3274 mm D_{15} = 0.0145 mm
D_{50} = 0.1837 mm D_{10} = 0.0059 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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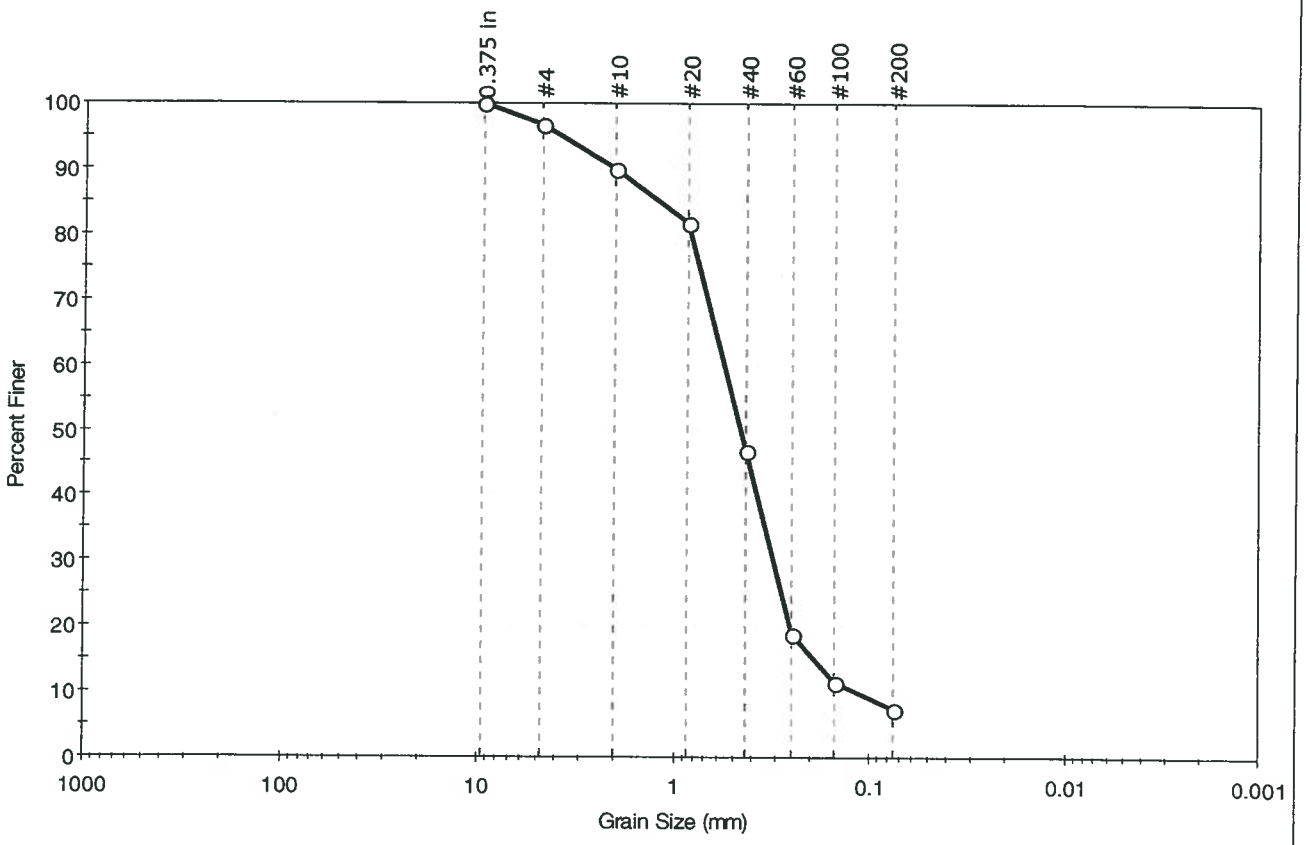
GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services		
Project:	R1002638		
Location:	---	Project No:	GTX-9886
Boring ID:	R1002638-005	Sample Type: bag	Tested By: jbr
Sample ID:	GI-SD528-0006	Test Date: 05/19/10	Checked By: jdt
Depth :	---	Test Id: 180697	
Test Comment:	---		
Sample Description:	Moist, dark grayish brown sand with silt		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	3.4	89.4	7.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	97		
#10	2.00	90		
#20	0.85	82		
#40	0.42	47		
#60	0.25	19		
#100	0.15	11		
#200	0.075	7		

Coefficients

D_{85} = 1.1961 mm D_{30} = 0.3089 mm
D_{60} = 0.5518 mm D_{15} = 0.1918 mm
D_{50} = 0.4521 mm D_{10} = 0.1180 mm
C_u = 4.676 C_c = 1.465

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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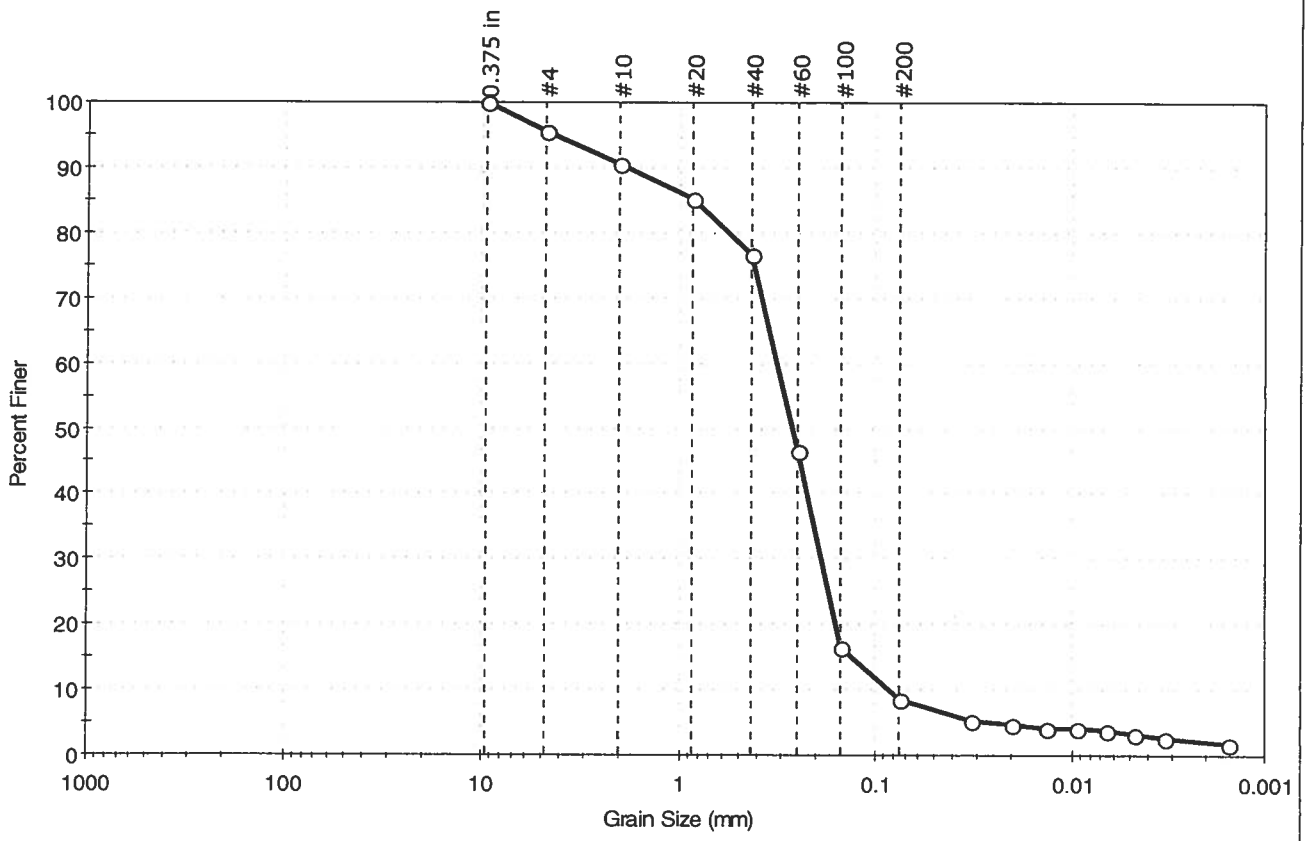
Client:	Columbia Analytical Services				
Project:	R1002384				
Location:	---			Project No:	GTX-9850
Boring ID:	R1002384-001	Sample Type:	jar	Tested By:	jbr
Sample ID:	GI-SD529-0006	Test Date:	05/12/10	Checked By:	jdt
Depth :	---	Test Id:	179567		
Test Comment:	---				
Sample Description:	Moist, black sand with silt				
Sample Comment:	contains shells				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	4.6	86.8	8.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	95		
#10	2.00	91		
#20	0.85	85		
#40	0.42	77		
#60	0.25	47		
#100	0.15	17		
#200	0.075	9		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0324	5		
---	0.0202	5		
---	0.0134	4		
---	0.0094	4		
---	0.0067	4		
---	0.0047	3		
---	0.0033	3		
---	0.0015	2		

Coefficients

D_{85} = 0.8258 mm D_{30} = 0.1883 mm
D_{60} = 0.3164 mm D_{15} = 0.1308 mm
D_{50} = 0.2650 mm D_{10} = 0.0844 mm
C_u = 3.749 C_c = 1.328

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

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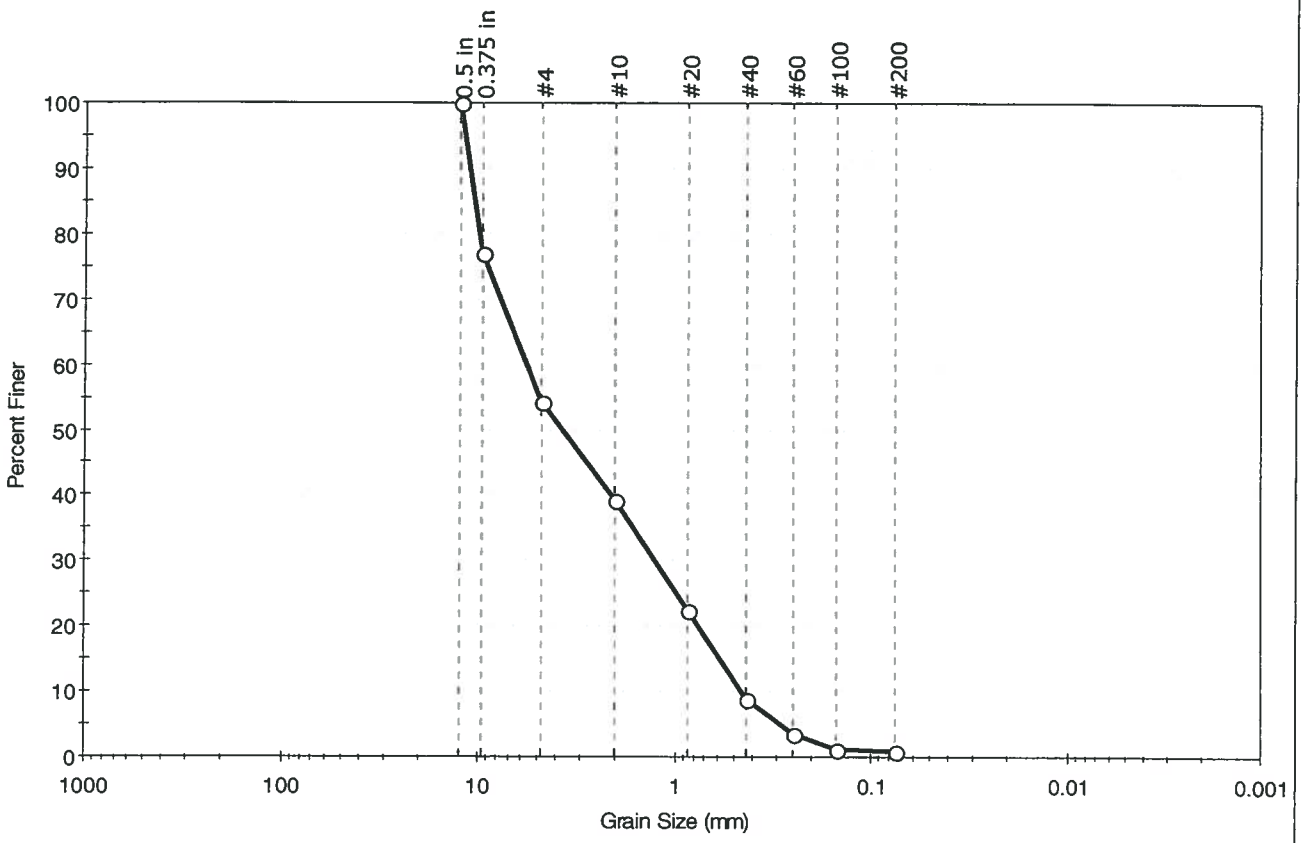
GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services				
Project:	R1002638				
Location:	---			Project No:	GTX-9886
Boring ID:	R1002638-006	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD530-0006	Test Date:	06/01/10	Checked By:	jdt
Depth :	---	Test Id:	181580		
Test Comment:	---				
Sample Description:	Moist, black sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	45.7	53.5	0.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	77		
#4	4.75	54		
#10	2.00	39		
#20	0.85	22		
#40	0.42	9		
#60	0.25	4		
#100	0.15	1		
#200	0.075	1		

Coefficients

D_{85} = 10.4561 mm	D_{30} = 1.2568 mm
D_{60} = 5.6560 mm	D_{15} = 0.5833 mm
D_{50} = 3.7165 mm	D_{10} = 0.4507 mm
C_u = 12.549	C_c = 0.620

Classification

ASTM: Poorly graded sand with gravel (SP)

AASHTO: Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

GeoTesting express
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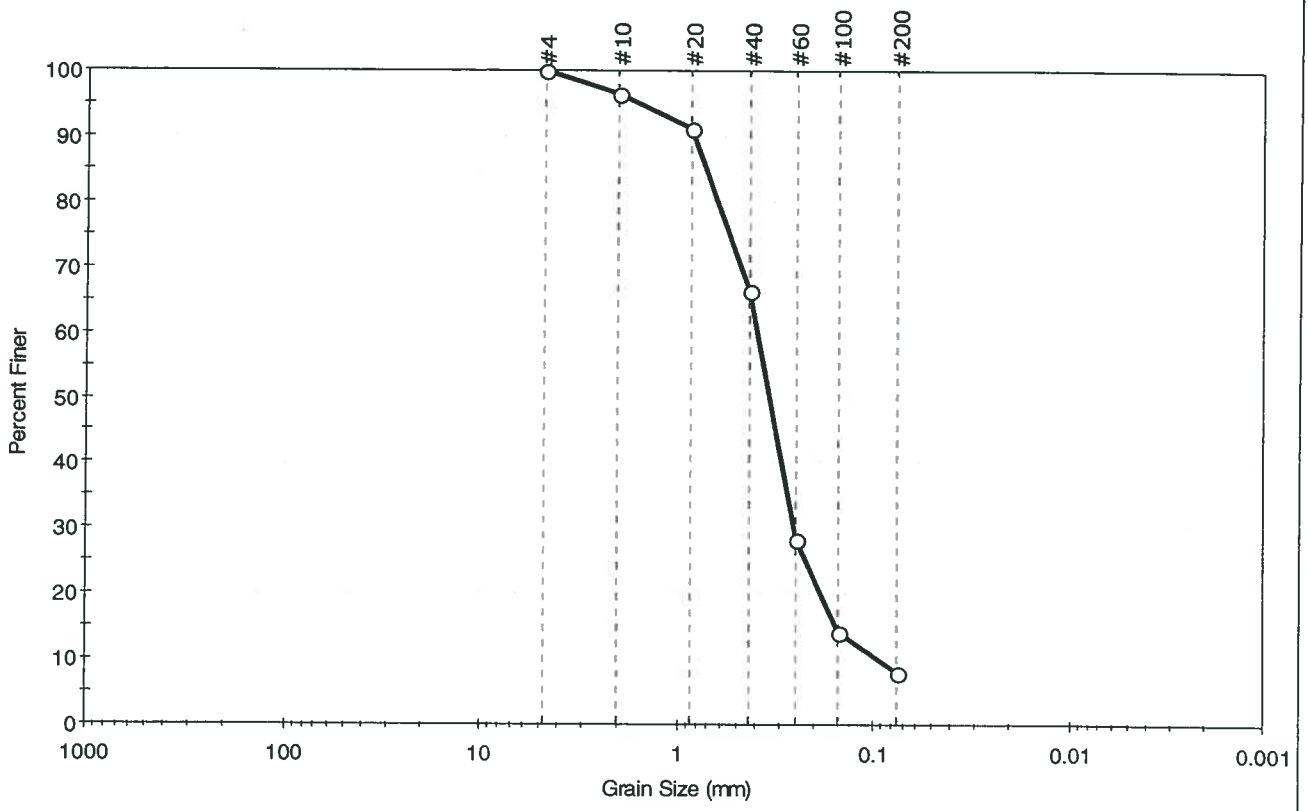
Client:	Columbia Analytical Services		
Project:	R1002638		
Location:	---	Project No:	GTX-9886
Boring ID:	R1002638-004	Sample Type: bag	Tested By: jbr
Sample ID:	GI-SD531-0006	Test Date: 05/19/10	Checked By: jdt
Depth :	---	Test Id: 180696	
Test Comment:	---		
Sample Description:	Moist, black sand with silt		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	—	91.9	8.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	97		
#20	0.85	91		
#40	0.42	66		
#60	0.25	28		
#100	0.15	14		
#200	0.075	8		

Coefficients

D_{85} = 0.7137 mm	D_{30} = 0.2560 mm
D_{60} = 0.3887 mm	D_{15} = 0.1546 mm
D_{50} = 0.3382 mm	D_{10} = 0.0934 mm
C_u = 4.162	C_c = 1.805

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

GeoTesting express
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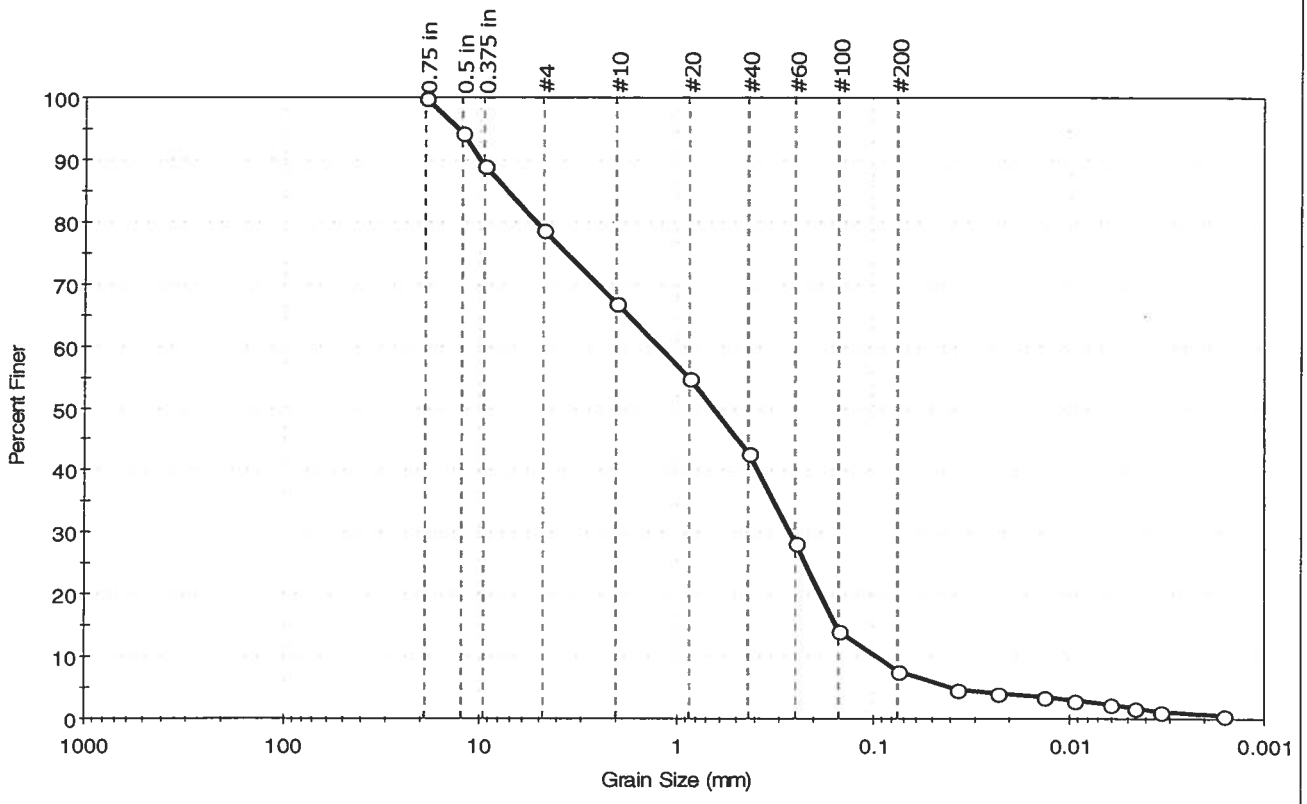
Client:	Columbia Analytical Services				
Project:	R1002348				
Location:	---			Project No:	GTX-9843
Boring ID:	R1002348-013	Sample Type:	bag	Tested By:	jbr
Sample ID:	GI-SD532-0006	Test Date:	05/10/10	Checked By:	jdt
Depth :	---	Test Id:	179424		
Test Comment:	---				
Sample Description:	Moist, light brown sand with silt and gravel				
Sample Comment:	shells in sample				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	21.2	71.2	7.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	94		
0.375 in	9.50	89		
#4	4.75	79		
#10	2.00	67		
#20	0.85	55		
#40	0.42	43		
#60	0.25	28		
#100	0.15	14		
#200	0.075	8		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0374	5		
---	0.0234	4		
---	0.0135	4		
---	0.0095	3		
---	0.0061	2		
---	0.0046	2		
---	0.0034	1		
---	0.0016	1		

Coefficients

D_{85} = 7.2280 mm	D_{30} = 0.2669 mm
D_{60} = 1.2192 mm	D_{15} = 0.1551 mm
D_{50} = 0.6407 mm	D_{10} = 0.0971 mm
C_u = 12.556	C_c = 0.602

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

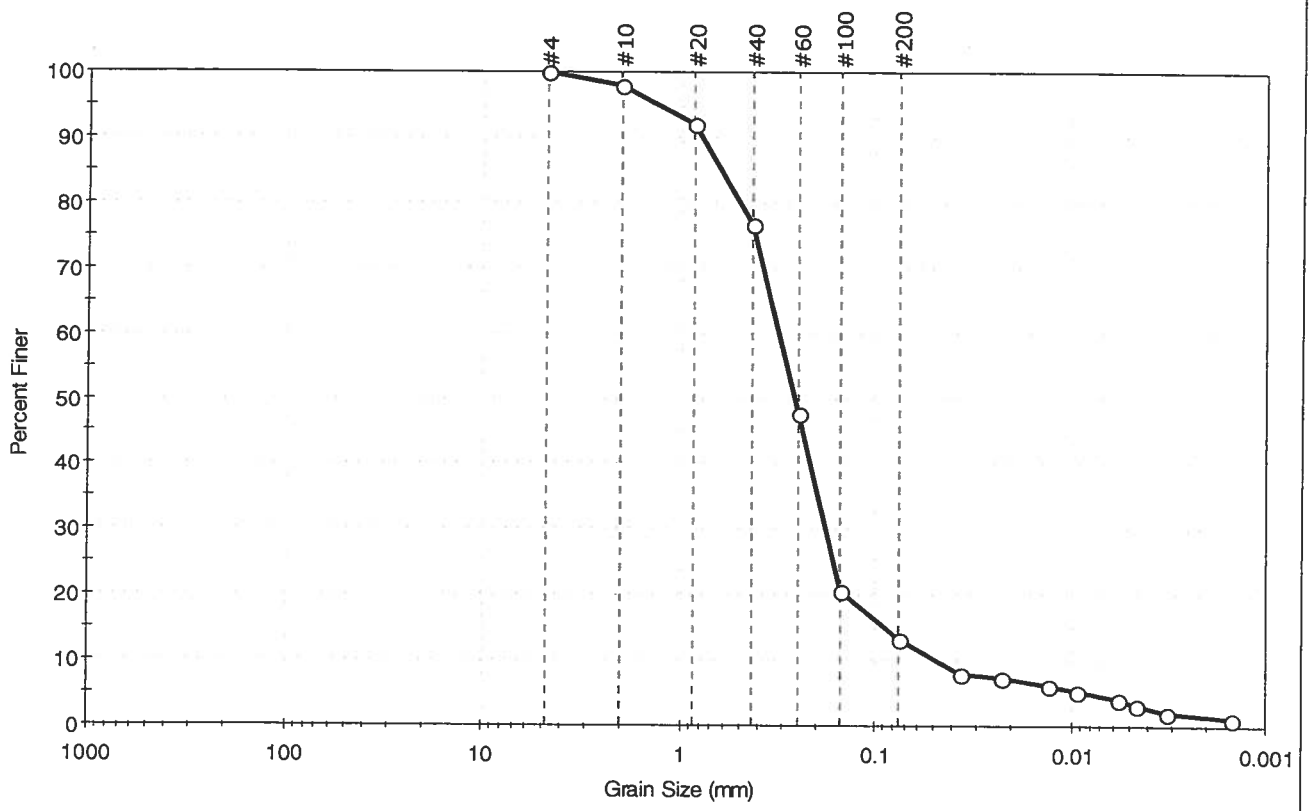
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Columbia Analytical Services		
Project:	R1002348		
Location:	---	Project No:	GTX-9843
Boring ID:	R1002348-004	Sample Type: bag	Tested By: jbr
Sample ID:	GI-SD566-0006	Test Date: 05/10/10	Checked By: jdt
Depth :	---	Test Id: 179415	
Test Comment:	---		
Sample Description:	Moist, black silty sand		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	—	86.9	13.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	98		
#20	0.85	92		
#40	0.42	77		
#60	0.25	48		
#100	0.15	21		
#200	0.075	13		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0370	8		
---	0.0226	7		
---	0.0132	6		
---	0.0094	5		
---	0.0057	4		
---	0.0046	3		
---	0.0032	2		
---	0.0015	1		

Coefficients

D_{85} = 0.6215 mm D_{30} = 0.1787 mm
D_{60} = 0.3134 mm D_{15} = 0.0888 mm
D_{50} = 0.2609 mm D_{10} = 0.0492 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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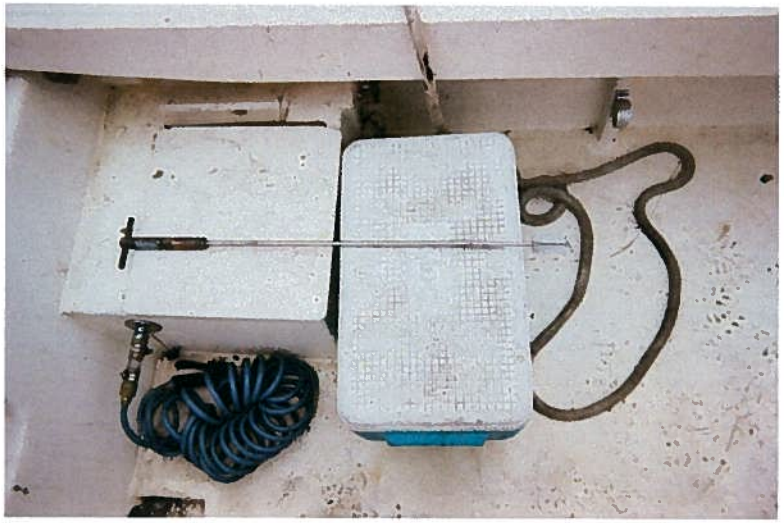
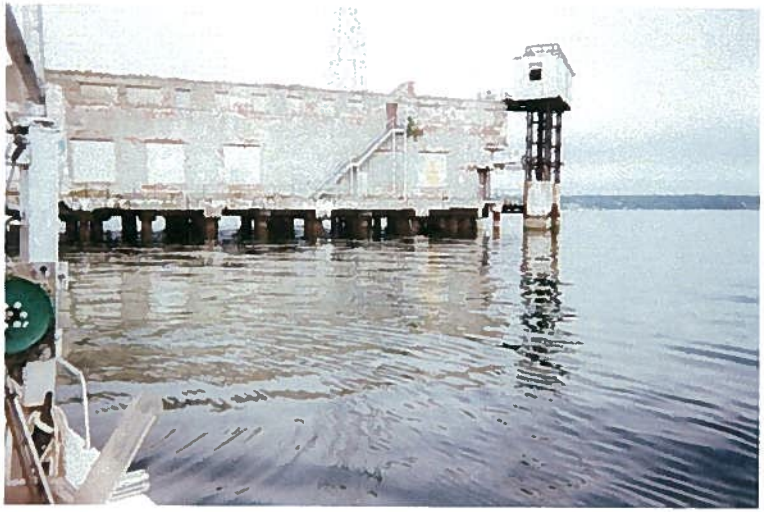
ATTACHMENT E

P. 1 Typical core and tube after collection



P.2 Vane shear device

P.3 Building 35, west side, view to the north



P.4 - Building 35, East Side, view to the west

P.5 - Building 35, South-East Side, view to the west
Piling line is in the foreground

P.6 - Building 35, East Side, and piling line that forms the stillwater area. View to the Northwest

P.7 - Building 35, West Side, view to the Northeast

P.8 - Piling Line from Building 35, View is to the east

P.9 - Building 35, East Side, view to the west.

P.10 - Building 35, and pier from barge landing. View is to the north

P.11 - Piling line forming the Stillwater area. View is to the south.